



**Government of Kerala**

**Report on**  
**Waste Management & Disposal Survey 2014-15**  
**Kasaragod & Kottayam**

**Survey Design Division**

**Directorate of Economics & Statistics**

**June 2016**

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The Department of Economics & Statistics, Government of Kerala is the nodal agency for collection, compilation and analysis of statistics relating to various sectors of Kerala Economy. The Department is also conducting ad-hoc surveys and studies on subjects of importance for planning and development purposes by considering data needs and relevance.

2. Waste management is one of the major problems faced by the State in recent period. Plastic waste, E-waste and other solid and degradable waste are accumulating and it creates severe health hazards and hygiene problems in the society. For planning the disposal measures of waste, data pertaining to the quantity of waste produced in household and commercial establishments are needed.

3. In this context, the Department of Economics and Statistics decided to conduct a sample survey on "Waste Management and Disposal" in household sector as a pilot study in Kasaragod and Kottayam districts.

4. This report is prepared by Sri.Kiran.S, Research Officer under the guidance of Sri.P.V.Babu, Additional Director (State Income) and Smt.C.S.Lathakumari, Joint Director, Survey Design Division of the Directorate of Economics & Statistics. The schedule for data collection was prepared by Survey Design Division under the guidance of Survey Coordination Committee of the department. I record my gratitude to all the members of the survey coordination committee and staffs in the Survey Design Division of this office for their sincere efforts.

5. At district level, the survey was supervised by the Deputy Directors and Research Officers of Kasaragod and Kottayam district offices and at Taluk level, Taluk Statistical Officers and Statistical Inspectors. The data collection was carried out by the Statistical Investigators working in the various Taluk Statistical Offices of Kasaragod and Kottayam districts. I acknowledge the tireless work done by all of them to make the survey a success.

6. Admirable cooperation extended by the selected households of Kasaragod and Kottayam districts is also acknowledged. This document, I hope will be useful to the planners, policy makers, academicians and researchers. Comments and Suggestions for improvement of its content will be highly appreciated.



08.09.2016

V.Ramachandran  
Director General



## Contributions

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### Supervision & Data Collection

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| Supervision - District Level       | Deputy Directors & Research Officers                 |
| Supervision - Taluk Level          | Taluk Statistical Officers & Statistical Inspectors  |
| Primary Supervision and data entry | Statistical Investigators, Taluk Statistical Offices |
| Data Collection                    | Enumerators hired on contract basis                  |

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|           |                                 |           |
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# Chapter 1

## Introduction

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### 1.1. Survey on Waste Management and Disposal Survey

1.1.1 Department of Economics and Statistics conducts surveys and studies on subjects of importance for planning and development processes. Waste management is a very serious problem faced by the State in recent period. Plastic waste, E-waste and other solid waste are accumulating and it creates severe health hazards to the society. The State government and local bodies have come up with programs and initiatives to face the menace but it is not adequate to solve the problem.

1.1.2 It has been accepted that solid and liquid waste management are the essential components of societal hygiene. Department of Economics and Statistics taken up the “Survey on Waste Management and Disposal in Kottayam and Kasaragod District” to ascertain the different types of waste generated from households and its disposal methods as a pilot survey.

### 1.2. General Concepts and Definitions

1.2.0 Important concepts and definitions used in this survey are explained below.

1.2.1 **House:** Every structure, tent, shelter, etc. is a house irrespective of its use. It may be used for residential or non-residential purpose or both or even may be vacant.

1.2.2 **Household:** A group of persons normally living together and taking food from a common kitchen will constitute a household. The members of a household may or may not be related by blood or marriage to one another. Each inmate (including residential staff) of a hostel, mess, hotel, boarding and lodging house, etc., will constitute a single member household. If, however, a group of persons among them

normally pool their income for spending, they together will be treated as forming a single household.

1.2.3        **Household size:** The number of normally resident members of a household is its size. It will include temporary stay-aways (those whose total period of absence from the household is expected to be less than 6 months) but exclude temporary visitors and guests (expected total period of stay less than 6 months). A resident employee, or domestic servant, or a paying guest (but not just a tenant in the household) will be considered as a member of the household with whom he or she resides even though he or she is not a member of the same family. Even though the determination of the actual composition of a household will be left to the judgment of the head of the household.

1.2.4        **Average Monthly Per Capita Expenditure:** Household consumer expenditure is measured as the expenditure incurred by a household on domestic account during a month. It does not include the imputed values of goods and services, which are not purchased but procured otherwise for consumption. The imputed rent of owner-occupied houses is excluded from consumption expenditure. Average Monthly per capita expenditure (AMPE) is the household consumer expenditure over a period of 30 days divided by household size.

### **1.3 Objectives of the survey**

1.3.1 The main objectives of the Survey were to study

- i. The different types of waste generated in households.
- ii. Different Methods of waste disposed from households
- iii. The quantity of recyclable material
- iv.** Public awareness and attitudes on waste management and disposal.

## 1.4. Methodology

1.4.1 The survey was conducted using sampling method in Kasargod and Kottayam Districts. The data collected through direct enquiry method by Statistical Investigators working in the Taluk Statistical Offices under the Department of Economics and Statistics.

1.4.2 **Sample design:** A stratified multi-stage design was adopted for the survey. The first stage units (FSUs) are the 2011 Census Panchayath wards. The ultimate stage units are households.

1.4.3 **Sampling frame for first stage units:** The sampling frame consisted of the list of Panchayath wards.

1.4.4 **Allocation of FSU's among Strata:** A total of 533 Panchayath/Municipal wards were allocated for the survey (Kasaragod: 198 and Kottayam: 335). The total number of sample FSU's were allocated between two sectors (Rural & Urban) in proportion to population as per census 2011 with 1.5 weightage to urban (Municipal) areas. Within each sector, the sample size was allocated to the different strata in proportion to the stratum population as per census 2011.

1.4.5 **Selection of first-stage units:** From each Panchayath, 25% of the wards were selected, from which 4% of the households were visited for detailed survey. The Panchayath/Municipal wards were arranged in ascending order of ward number and FSU's were selected by circular systematic sampling method.

1.4.6 **Selection of Ultimate Stage Units (USUs) within an FSU:** Listing of households from the selected FSUs was done in schedule-I (Listing Schedule). All households listed in an FSU constitute the sampling frame of households and all the households listed in the selected FSU were stratified into 2 Second Stage Strata (SSS) as

per statement 1.1 below:

Statement 1.1: Stratification Criteria

| Second Stage Stratum (SSS) | Stratification Criteria |
|----------------------------|-------------------------|
| 1                          | Household Size $\leq 4$ |
| 2                          | Household Size $> 4$    |

1.4.7 **Selection of households:** 4% of the households selected from the 25% of the wards in the Panchayath were surveyed. Total households in the FSU, say H, are to be classified into two groups H1 & H2 as per the stratification criteria explained in statement 1.1 above, so that  $H1+H2=H$ . Households for detailed survey (h) are to be selected from the two stratum (h1 & h2) according to proportional allocation so that  $h1+h2=h$ .

Statement 1.2: Number of households surveyed (District wise).

| SI No. | District     | Type of Local body |              |               |
|--------|--------------|--------------------|--------------|---------------|
|        |              | Panchayath         | Municipality | Total         |
| 1      | Kasaragod    | 9,518              | 2,122        | 11,640        |
| 2      | Kottayam     | 17,179             | 3,496        | 20,675        |
|        | <b>Total</b> | <b>26,697</b>      | <b>5,618</b> | <b>32,315</b> |

Statement 1.3: Number of households surveyed (Stratum wise).

| SI No. | District  | Type of Local body | Household size |              |               |
|--------|-----------|--------------------|----------------|--------------|---------------|
|        |           |                    | 4 or less      | 5 or more    | Total         |
| 1      | Kasaragod | Panchayath         | 4,883          | 4,635        | 9,518         |
| 2      |           | Municipality       | 1,163          | 959          | 2,122         |
| 3      |           | <b>Total</b>       | <b>6,046</b>   | <b>5,594</b> | <b>11,640</b> |
| 4      | Kottayam  | Panchayath         | 11,040         | 6,139        | 17,179        |
| 5      |           | Municipality       | 2,376          | 1,120        | 3,496         |
| 6      |           | <b>Total</b>       | <b>13,416</b>  | <b>7,259</b> | <b>20,675</b> |

1.4.7 The field work of the survey was conducted during the month of January 2015 to February 2015. Data entry was done through the department's online web portal using the online data entry software developed by the Computer Division of the department. Data entry work was completed by the end of March 2015.

1.4.8 Statistical Inspectors working in the Taluk Statistical Offices of the department supervised the primary work under the directions and supervision of Taluk Statistical Officers. The responsibility of conducting the survey in the district was vested upon the Deputy Directors in the respective districts.

## **1.5 Contents of this Report**

1.5.1 This report brings out the results of "Waste Management and Disposal Survey 2014-15". Information on Waste Disposal and Management collected through detailed survey schedule is broadly classified into 6 groups. Firstly, information on the various characteristics of the household like, its location, structure, type and various drainage facilities etc., which were collected from all the selected households.

1.5.2 Waste segregation means dividing waste into degradable and solid (wet and dry). Degradable waste typically refers to organic waste usually generated from kitchen and dining area. Solid waste includes electronic waste, plastic and other non degradable waste. Disposal and management of both category of waste were studied in this survey.

1.5.3 Similarly, information on recyclable materials sold out during a year and Public Awareness and Attitudes on Solid Waste Management was collected from the selected households.

1.5.4 Since the tables, statements and charts in this report are presented as "Per 1000 or percentage distribution" or "proportion per 1000", the figures are rounded-off.

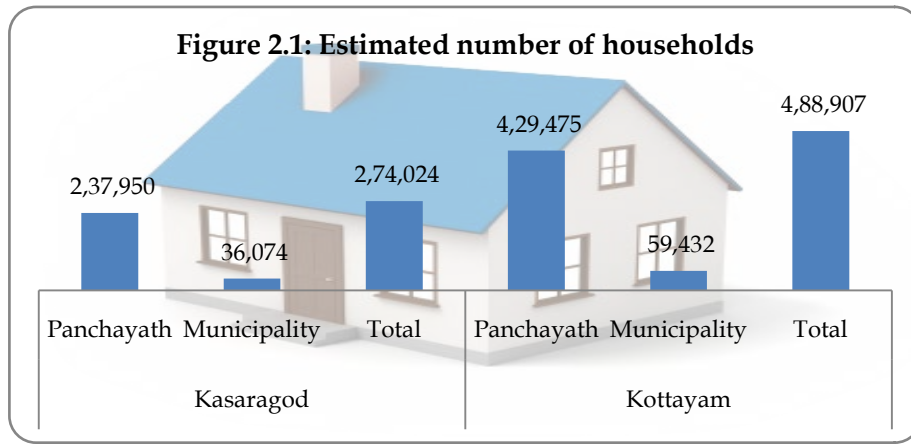
Thus, while using the ratios from the survey results, it is to be noted that the accuracy of these derived aggregates will be limited to the number of significant digits available in the ratios. It may also be kept in mind that the sample sizes for some characteristics may not be adequate enough for getting sufficiently reliable estimates and interpretation thereof should be made with caution.

## Chapter 2

# Household Characteristics

### 2.1. Household population

2.1.1 A total of 32,315 households (Kasaragod - 11,640 and Kottayam - 20,675) were visited for detailed survey. The estimated household population in the Kasaragod district found as 2.74 lakhs and that of Kottayam district 4.89 lakhs. In Kasaragod district, 13% of the households are in municipal areas and in the case of Kottayam, it is 12%.



2.1.2 It is seen that 52% of the households in Kasaragod district have household size 4 or less and in Kottayam district, 65% of the households have household size 4 or less. The average household size in respect of Kasaragod district found as 4.8 and 4.1 in Kottayam.

### 2.2. Housing status

2.2.1 It is seen that, 14.7% of the households in Kasaragod district are located near main road<sup>1</sup> while 77.6% of the households are located near other roads<sup>2</sup> and 6.4% of the households are located near water bodies, which include river, canal, lake, sea etc. In the case of Kottayam district, 21.5% of the households are located near main

<sup>1</sup> Main roads are motorable roads, with or without street light, and used for public conveyances.

<sup>2</sup> Other roads are motorable / non- motorable roads / lanes / constructed paths without public conveyances

roads while 86.2% of the households are located near other roads and 9.3 % of the households are located near water bodies. (It is to be noted that, location of a household may fall in more than one category viz main road, other road, Water bodies, forest, wetland or market)

2.2.2 In the case of housing status, it is seen that 965 out of 1000 houses in Kasaragod district are self-owned while in Kottayam, 960 out of 1000 houses are self owned. 61.7% of the buildings have pucca structure in Kasaragod while 81.5% of the buildings in Kottayam district have pucca structure.

2.2.3 The household type based on the means of livelihood of a household will be decided on the basis of the sources of the household's income during the 365 days proceeding to the date of survey. Housing type has been further categorized as Self-employed in agriculture<sup>3</sup>, Self-employed in non-agriculture, Casual labour in agriculture<sup>4</sup>, Casual labour in non-agriculture, Regular wage/salary earning<sup>5</sup> and others.

2.2.4 In Kasaragod district, 32.1% of the households belong to the "Casual labour in non-agriculture" type (in Panchayaths, the said percentage is 30 and 41.6 in Municipalities). In Kottayam district, 25.3% of the households belong to the "Casual labour in non-agriculture" category and 23.2% belong to "Self-employed in non-agriculture" category. 12.9% households in Kasaragod and 19.8% households in Kottayam are in the "Regular wage/salary earning" category.

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<sup>3</sup> Persons who operate their own farm or non-farm enterprises or are engaged independently in a profession or trade on own-account or with one or a few partners are self-employed in household enterprises.

<sup>4</sup> A person casually engaged in others farm or non-farm enterprises (both household and non-household) and getting in return wage according to the terms of the daily or periodic work contract is a casual wage labour.

<sup>5</sup> Persons working in others farm or non-farm enterprises (both household and non-household) and getting in return salary or wages on a regular basis (and not on the basis of daily or periodic renewal of work contract) are the regular salaried/wage employees.



Statement 2.1: Percentage distribution of household type.

| SI No. | Household type                   | Kasaragod    | Kottayam     |
|--------|----------------------------------|--------------|--------------|
| 1      | Self-employed in agriculture     | 13.4         | 18.5         |
| 2      | Self-employed in non-agriculture | 19.1         | 23.2         |
| 3      | Casual labour in agriculture     | 7.5          | 7.5          |
| 4      | Casual labour in non-agriculture | 32.1         | 25.3         |
| 5      | Regular wage/salary earning      | 12.9         | 19.8         |
| 6      | Others                           | 15.0         | 5.8          |
|        | <b>Total</b>                     | <b>100.0</b> | <b>100.0</b> |

(Refer: Table-9)

## 2.3. Drainage

2.3.1 A household will be considered to have drainage facility if there exists some method of removal of excess water from the house/plot. Natural drainage, i.e., normal outflow of excess water from the plot of land by virtue of its position, will not be considered as drainage facility.

2.3.2 Drainage types have been categorized as: (i) Underground: Drains or pipes laid below the earth surface (ii) Covered pucca: Covered drains made of pucca materials like pipes, bricks, stones, cement concrete, etc. (iii) Open pucca: Open drains made of pucca materials like pipes, bricks, stones, cement concrete, etc (iv) Open kutchra: Ordinary channels cut through the ground to allow water to pass and (v) No drainage.

Statement 2.2: Percentage distribution of Drainage type.

| SI No. | Drainage type | Kasaragod    | Kottayam     |
|--------|---------------|--------------|--------------|
| 1      | Underground   | 6.6          | 28.5         |
| 2      | Covered pucca | 19.4         | 37.1         |
| 3      | Open pucca    | 14.4         | 17.3         |
| 4      | Open kutchra  | 4.5          | 3.0          |
| 5      | No drainage   | 55.1         | 14.1         |
|        | <b>Total</b>  | <b>100.0</b> | <b>100.0</b> |

*(Refer: Table-11)*

2.3.3 It is seen from the survey results that 55.1% of the households in Kasaragod district have no drainage system while the percentage is 14.1 in the case of Kottayam. 37.1% of the households in Kottayam are equipped with 'covered pucca' drainage type and the 19.4 is the figure for Kasaragod.

# Chapter 3

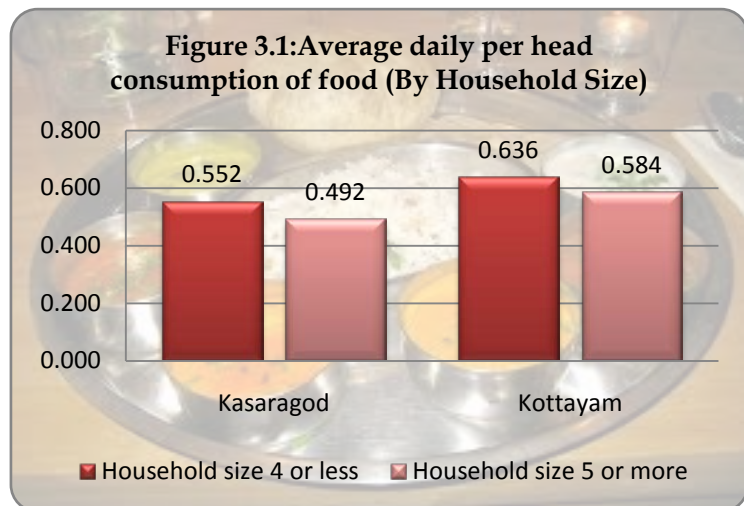
## Degradable Waste

### 3.1. Introduction

3.1.1 As mentioned in Chapter One, household waste is divided into degradable and solid. Degradable waste typically refers to organic waste usually generated from kitchen and dining area. This chapter presents estimates of some key indicators of wet waste (food waste)

### 3.2. Food Consumption and Waste generated.

3.2.1 Average daily & weekly consumption (in Kg.) of food items were collected during the survey. From statement 3.1, it is seen that, average consumption of food items per Households (daily and weekly) in respect of Kasaragod and Kottayam districts were almost 2.5 and 18 Kg respectively. While as per survey results, it is seen that, per head daily consumption of food in Kasaragod is only 85% of that of Kottayam. Detailed distribution of average daily and weekly consumption and average daily and weekly per head consumption of food items by Average Monthly Per Capita Expenditure (APME) is presented in Table 13 and that by household size is presented in Table 14.



Statement 3.1: Daily and weekly average Consumption of food items per Households and per head consumption (in Kg).

| SI No. | District  | Average Consumption of food items per Households (in Kg) |        | Per head consumption (in Kg) |        |
|--------|-----------|--|--------|------------------------------|--------|
|        |           | Daily  | Weekly | Daily                        | Weekly |
| 1      | Kasaragod | 2.451  | 17.636 | 0.523                        | 3.785  |
| 2      | Kottayam  | 2.477  | 18.316 | 0.618                        | 4.590  |

(Refer: Tables-13 & 14)

3.2.2 In Kasaragod district, daily and weekly average food waste generated per household found to be 0.502 and 3.533 Kg respectively. The figures for Kottayam district are 0.605 and 4.368 Kg respectively. Detailed distribution of average daily & weekly food waste generated per household and average daily & weekly per capita food waste generated by Average Monthly Per Capita Expenditure (APME) is presented in Table 15 and that by household size is presented in Table 16.

Statement 3.2: Daily and weekly average Waste generated from food per Households and per person (in Kg).

| SI No. | District  | Average Waste generated from food (in Kg) |        |            |        |
|--------|-----------|---|--------|------------|--------|
|        |           | Per households                            |        | Per person |        |
|        |           | Daily                                     | Weekly | Daily      | Weekly |
| 1      | Kasaragod | 0.502                                     | 3.533  | 0.106      | 0.751  |
| 2      | Kottayam  | 0.605                                     | 4.368  | 0.150      | 1.090  |

(Refer: Tables-15 & 16)

### 3.3 Disposal Methods of food waste disposal

3.3.1 Major food waste disposal methods practiced by households have been categorized into Picking up of waste from household, Dumping, Throw in the open space, Burning, Disposed off to river/lake/canal/sea, Composting, Burying, Feeding to animals, Manure to household plants/crops, Biogas and Dumping spot provided by residential group / local body.

3.3.2 It is seen from survey results that, kitchen waste are picked up from only 0.07% of the households of Kasaragod and 2.74% of the households of Kottayam district

by local bodies or Resident / group of residents or some other agencies. 0.03% of the households from Kasaragod and 2.16% of the households from Kottayam district are utilizing this facility with first priority.

3.3.3 Consider the households, where picking up of kitchen waste facility exists. In Kasaragod district, it is seen that 25% of the households are using the facility provided by group of residents, who pick up waste at least once in a week (it doesn't mean that waste is picked up only once in a week). Please refer statement 3.3 and Tables 17-B & 17-C for details.

Statement 3.3: Percentage distribution of frequency of collection of kitchen waste by arrangements made for collection (where picking up of kitchen waste from household facility exists).

| District  | Arrangements made for collection of waste from the household | Frequency of clearing waste |                         |             |              |
|-----------|--|-----------------------------|-------------------------|-------------|--------------|
|           |  | Daily                       | At least once in a week | Irregular   | Total        |
| Kasaragod | Local body   | -                           | -                       | -           | -            |
|           | Resident / group of residents                                | -                           | 100.0                   | -           | 100.0        |
|           | Others   | 50.0                        | 33.3                    | 16.7        | 100.0        |
|           | <b>Total</b>   | <b>37.5</b>                 | <b>50.0</b>             | <b>12.5</b> | <b>100.0</b> |
| Kottayam  | Local body   | 35.3                        | 64.7                    | -           | 100.0        |
|           | Resident / group of residents                                | 82.3                        | 16.8                    | 0.9         | 100.0        |
|           | Others   | 93.8                        | 5.5                     | 0.7         | 100.0        |
|           | <b>Total</b>   | <b>88.0</b>                 | <b>11.3</b>             | <b>0.7</b>  | <b>100.0</b> |

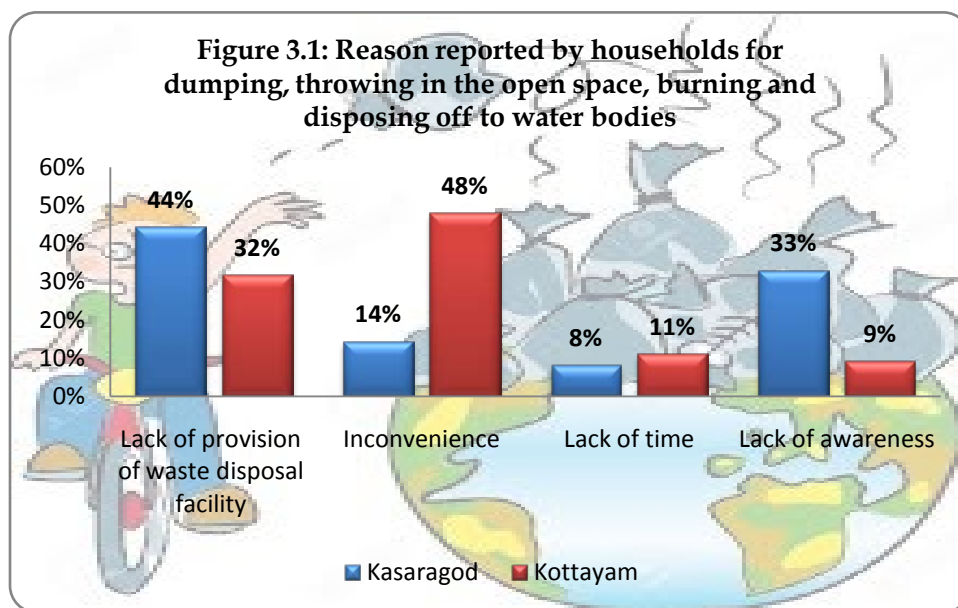
(Refer: Tables-17B & 17C)

3.3.4 People may not be interested in knowing the place where the waste collected from their house goes. This question was answered in the survey by those households, where picking up of kitchen waste facility exists, and it is seen that 38% of

the households in Kasaragod and 79% of the households in Kottayam district didn't know where the collected garbage disposes.

3.3.5 Throwing of waste in the open spaces in residential areas is a common scene in many parts of the State. Also dumping of waste in the water bodies like river, lake etc. creates lot of health problems to both human as well as aquatic species. Survey results show that 34.6% of the households in Kasaragod and 52.6% of the households in Kottayam district reported throwing of waste in open spaces which includes road side dumping. However, only 1.5% and 3.2% of the households of Kasaragod and Kottayam practice disposing waste off to water bodies. Reasons for practicing dumping, throwing in the open space, burning and disposing off to water bodies were collected from the households.

Lack of awareness was reported by 33% of the households in Kasaragod. Lack of waste disposal facility was the reason reported by 44%



households of Kasaragod and 32% of households of Kottayam districts.

3.3.6 Composting is nature's process of recycling decomposed organic materials into a rich soil known as compost. As per survey results, 3.89% households of Kasaragod district and 9.21% households of Kottayam district use composting as one of the waste disposal methods. It is also seen that the percentage of households practicing composting is found more in Municipalities than in Panchayaths in both the districts. It

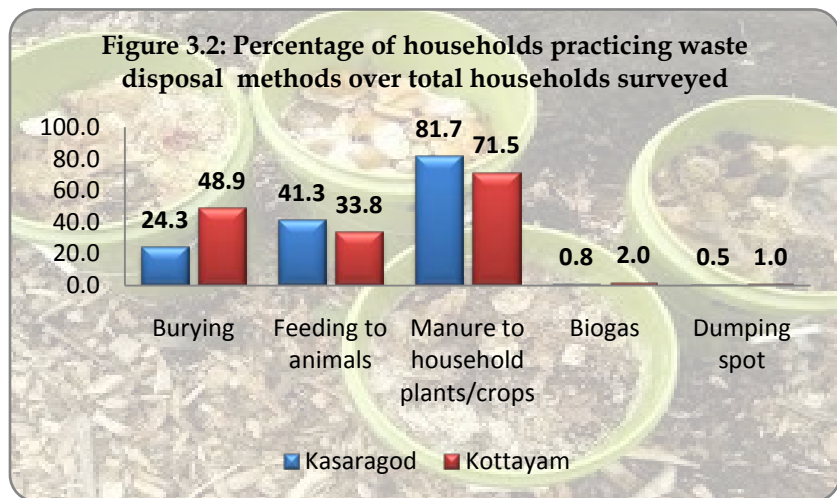
is also seen that Bio pedestal unit and pipe composting are most widely used in both the district.

Statement 3.4: Percentage of households practicing different type of composting.

| Sl No | Type of composting | Kasaragod | Kottayam |
|-------|--------------------|-----------|----------|
| 1     | Pipe compost       | 50.3      | 74.9     |
| 2     | Vermi compost      | 14.8      | 2.3      |
| 3     | Pot compost        | 5.5       | 1.1      |
| 4     | Ring compost       | 0.7       | 3.8      |
| 5     | Pit compost        | -         | 0.2      |
| 6     | Bio bin unit       | -         | 0.1      |
| 7     | Bio pedestal unit  | 40.2      | 18.1     |

(Refer: Tables-19A & 19B)

3.3.7 As we all know, some of the widely used methods of disposing food waste are burying, feeding waste to animals and using kitchen waste as manure to household plants. Among these, using kitchen waste as manure to plants is commonly practiced. 81.7% households of Kasaragod and 71.5% households of Kottayam practice this method along with other disposal methods. 48.6% households of Kasaragod and 21.7% households of Kottayam district practice this method with first priority.

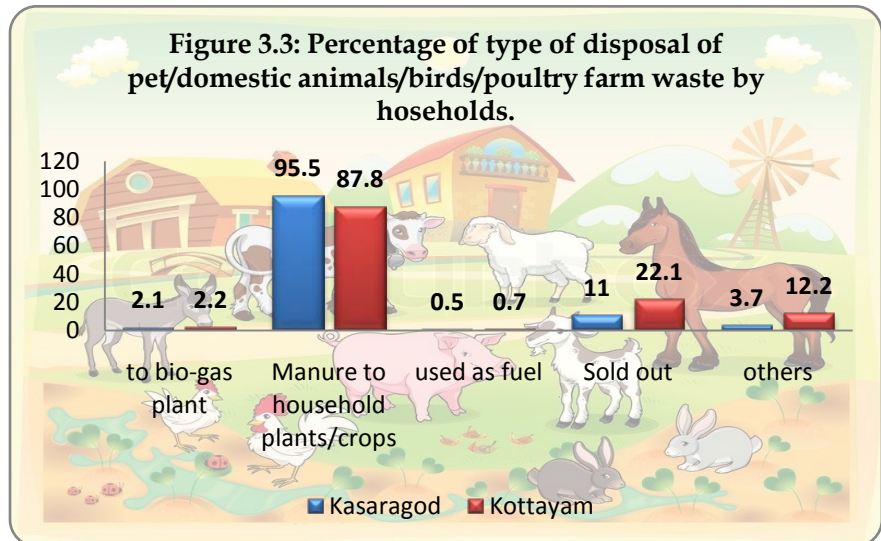


### 3.4 Rearing of Pet animals and waste management

3.4.1 It is seen that 35% households of Kasaragod and 34% households of Kottayam possess pet/domestic animals or birds/poulties. Among these households, around 4 to 5 percentage households don't have any animal shed or poultry farms while 85 to 90 percentage households have animal shed or poultry farms detached from their house.

3.4.2 Generally, the wastes produced out of animal rearing can be disposed by using it in bio-gas plant, manure to household plants/crops, as fuel or can be sold out for many purposes. As

per survey results, out of the households possessing pet/domestic animals or birds/poulties, 95.5% households of Kasaragod and 87.8% households of Kottayam are using the waste as manure to crops.





## Chapter 4

# Solid Waste

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*A LITTLE CAUTION ON OUR PART CAN MAKE A LOT OF DIFFERENCE.*

### 4.1. Introduction

4.1.1 As we discussed earlier, Waste from a house can be broadly classified in to two categories - wet waste and dry waste. Both need to be disposed and recycled differently. Wet or degradable waste (which includes cooked and uncooked food waste, waste from fruits and vegetables) and its disposal have already discussed in Chapter-3. Solid waste includes electronic, plastic, rubber, leather, wood and related products, metals and glass etc.

4.1.2 Solid waste is classified into Domestic Hazardous Waste, Electronic Waste, Plastic waste and other solid items which cannot be easily reused or recycled. In each category, a number of items can be included, but which is not feasible, particularly in a sample survey. Hence, a number of similar items, which can be grouped, are taken together as one question in the schedule of enquiry.

4.1.3 From Tables 24-A to 31, Average/Estimated solid waste from households during 2014 and methods of disposal are presented. It is to be noted here that a household may or may not practice more than one type of disposal method. Sample number of households from where the characteristics were collected and estimated number of households are included in each table. It is again iterated here that *“the sample sizes for some characteristics may not be adequate enough for getting sufficiently reliable estimates and interpretation thereof should be made with caution”*.

## **4.2. Domestic Hazardous Waste**

4.2.1 Domestic Hazardous waste is waste that is generated from residential households which poses substantial or potential threats to public health and environment.

4.2.2 Items included in this section are Rechargeable & Non-rechargeable alkaline batteries (like AA, AAA etc.) and other batteries (in numbers), Automobile batteries and inverter batteries etc. (in numbers), Paints, varnish, cleaners etc. (in liters) and Left over or unused pesticides (in liters) from households.

4.2.3 In Kasaragod district, it is seen that 5,106 sample households have thrown away an average 3 Rechargeable & Non-rechargeable alkaline batteries (like AA, AAA etc.) during 2014 and an average 3 batteries of the above kind were dumped in the 3,811 sample houses during the same period. In the case of Kottayam district also an average number of 3 such batteries were reported to be thrown away by 14,732 sample households and an average 3 such batteries were dumped in the houses of 13,446 sample households during the same period.

4.2.4 In Kottayam district, an average one litre of paint, varnish, cleaners etc. were reportedly dumped in the 2,080 sample houses and in Kasaragod district, an average 2 litres of such items were dumped in the 377 sample houses.

4.2.5 An average 1 litre of left over or unused pesticides were found thrown away by 84 sample households of Kasaragod district and an average 1 litre of such items were found dumped in the houses of 1,579 households in Kottayam.

## **4.3 Electronic Waste**

4.3.1 There is no generally accepted definition of e-waste. Electronic waste, or e-

waste, is a popular, informal name for electronic products that have become unwanted, non-working or obsolete, and have essentially reached the end of their useful life. Due to the advancement of technology at a high pace, many electronic devices become “trash” after a few short years of use. This kind of unwanted, obsolete or unusable electronic products such as computers, computer peripherals, televisions, VCRs, DVD Players, stereo equipments, hand cell phones are commonly referred to as ‘electronic waste’.

4.3.2 The items included in this section of the survey are OLD Type Unused TVs and computer monitors, NEW Type Unused TVs and computer monitors (LED, LCD etc), Unused electronic items such as computers, printers, PCBs (Printed Circuit Boards), Laptops, Camera etc. , Video/CD/DVD/Cassettes and Players, stereo equipments etc , Unused telephone/cell phones etc. , Unused invertors, cell phone charger, emergency lights, electronic choke etc., Electric equipments such as mixer grinder, refrigerator, washing machine, air conditioners, pump set, fan etc.

4.3.3 Unused TVs and computer monitors (both OLD and NEW Type) and Electric equipments like mixer grinder, refrigerator, washing machine, AC, pump set, fan etc were found disposed mostly by means of exchanging with shops while purchasing new one. Dumping and selling to scraps were also commonly found.

4.3.4 Unused telephone/mobile phones etc. were found dumped in a number of houses. It is estimated that around 0.28 Lakh Unused telephone/cell phones etc. were found dumped in the 0.23 Lakh houses in the Kasaragod district and around 2.25 Lakh such items found dumped in the 1.7 Lakh houses in the Kottayam district. It is estimated that around 0.18 Lakh such items were exchanged with shop to purchase new one by around 0.15 Lakh households of Kasaragod district and around 0.61 Lakh such items were exchanged with shop to purchase new one by around 0.54 Lakh households of Kottayam district.

4.3.5 Unused electronic items such as computers, printers, PCBs, Laptops, Camera etc., Video/CD/DVD/Cassettes and Players, stereo equipments etc. and unused invertors, cell phone charger, emergency lights, electronic choke etc. were found dumped in most of the households surveyed in Kasaragod and Kottayam districts. A fair number of sample households were found throwing<sup>1</sup> these items in the open spaces.

## 4.4 Plastic Waste

4.4.1 Plastic has become the most common material since the beginning of the 20th century and modern life is unthinkable without it. Unfortunately, what makes it so useful, such as its durability, light weight and low cost, also makes it problematic when it comes to its end of life phase. Plastic waste means any plastic product such as carry bags, pouches or multilayered packaging, which have been discarded after use or after their intended life is over.

4.4.2 The items included in this section of the survey are Carry bags with thickness below 40 microns, other plastic carry bags, Unusable grow bags etc., Unused plastic toys, Plastic items such as water/beverage bottles, buckets, furniture etc. and PVC items such as pipes, silpaulin sheets, footwear etc.

4.4.3 It is seen that majority of the carry bags and unusable grow bags are disposed by means of burning<sup>2</sup> in both Kasaragod and Kottayam districts. Dumping in houses and throwing away to barren or vacant land, roads and even in the house premises were also reported from a number of households.

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<sup>1</sup> *Obsolete electronic devices thrown away are rapidly filling the landfills of the State. Most electronics that are improperly thrown away contain some form of harmful materials, which might be trace elements, but when added up in volume, the threat to the environment is significant.*

<sup>2</sup> *The burning of plastic bags releases chemicals into the air that we all breathe, causing serious lung damage and contributing to other long-term health problems. For people with lung diseases such as asthma and Chronic Obstructive Pulmonary Disease, even a single exposure to this type of smoke can worsen their disease*

4.4.4 Majority of the unused Plastic items such as water/beverage bottles, buckets, furniture etc. were sold out as scrap from a number of households of both Kasaragod and Kottayam. It is estimated that around 247.4 ton<sup>3</sup> of such items were sold out as scrap from the 1.14 Lakh households of Kasaragod district and around 810.7 ton of such items were sold out as scrap from the 2.84 Lakh households of Kottayam district.

4.4.5 In the case of PVC items such as pipes, silpaulin sheets, footwear etc., the most popular method of disposal found differs in Kasaragod and Kottayam districts. While 120.5 ton of such items were sold out as scrap by the 0.71 Lakh households (i.e. 26% households) in Kasaragod district, 356.6 ton of such items were found dumped in the 2.3 Lakh houses (i.e. 47% houses) in Kottayam district.

#### **4.5. Other Dry Wastes**

4.5.1 In the case of Metals such as GI Pipe, Vehicle Spares, Kitchen Utensils etc., an estimated (weight of) 55.7 ton of these items were sold out as scrap by 0.28 Lakh households and 28.5 ton were reported dumped in the 0.21 Lakh houses in Kasaragod district during 2014. In Kottayam district, an estimated 291.9 ton of such items were sold out as scrap from 1.28 Lakh households while 282.9 tonnes were dumped in 1.24 Lakh houses.

4.5.2 It is often said widely that Waste glass is not just waste, but a new resource, as it can be recycled. Survey results shows that, majority of the houses are dumping the broken glasses in their houses. It is estimated that a total of around 146.1 ton of broken glasses, such as mirrors, glass plates, drinking glasses, aquariums, etc., are dumped in 0.96 Lakh houses of Kasaragod district and 251.1 ton of such items are dumped in 2.36 Lakh houses of Kottayam district during 2014.

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<sup>3</sup> 1 tone = 1000 Kilogram.

4.5.3 It is seen from the survey results that 47% households in Kasaragod and 59% households in Kottayam district are dumping damaged Incandescent (standard) light bulbs / florescent lights, CFL & LED<sup>4</sup> lights etc. in their houses. As per the survey results, an average 3 such items were dumped by these houses in Kasaragod and Kottayam districts during 2014. Also, it is estimated that around 203 Lakh such items were thrown away by 0.74 Lakh households of Kasaragod and 3.86 Lakh such items were thrown away by 2.89 Lakh households of Kottayam district during 2014.

4.5.4 It is seen from the survey results that 7% households of Kasaragod and 15% households of Kottayam district are dumping Bulky items such as non-plastic furniture, mattresses, carpet etc. in their houses. It is estimated that around 59.6 ton of such items were dumped in 0.19 Lakh houses in Kasaragod and 298.8 ton of such items dumped in 0.71 Lakh houses in Kottayam district during 2014.

4.5.5 With the rapidly growing number of vehicles, the disposal of unused tyres is a growing issue and these scrap vehicle tyres make significant contribution to the generation of waste. As per the survey results, an average 2 tyres (tyres of cycle or motor vehicles) were exchanged with shop, while purchasing new one, by around 0.44 Lakh households of Kottayam district during the year 2014. Also, it is estimated that around 0.2 Lakh unused tyres were dumped in the 0.10 Lakh houses in Kasaragod and 0.5 Lakh tyres were dumped in the 0.34 Lakh houses in Kottayam district during 2014.

## **4.6. Recycling**

4.6.1 Recycling is the processing of used materials (i.e. waste) into new, useful products. This is done to reduce the use of raw materials that would have been used for production of new items. Recycling offers less energy consumption and great way of preserving our environment and reduce air, water and land pollution.

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<sup>4</sup> Research shows that, though compact fluorescent bulbs (CFLs) and LEDs have better energy efficiency than incandescent bulbs, they have higher toxicity at the end-of-life phase.

4.6.2 In this survey, approximate weight ( in kg) of recyclable materials such as Newspapers, magazines & Other papers, Cardboard boxes, Glass bottles and jars, Plastic items including bottles, Tins and non-plastic cans, Clothing items including bedding and other items sold out during the year 2014 were collected.

4.6.3 Statement 4.1 gives the average approximate weight (in Kg) of the recyclable materials sold out per households during the year 2014.

Statement 4.1: Average approximate weight (in Kg.) of recyclable materials sold out during the year 2014 (Per household)

| Sl No. | Type of material                     | District  | Average Approximate weight of articles sold (in Kg.) |              |      |
|--------|--------------------------------------|-----------|--|--------------|------|
|        |                                      |           | Panchayath   | Municipality | All  |
| 1      | Newspapers, magazines & Other papers | Kasaragod | 20.9   | 20.1         | 20.7 |
|        |                                      | Kottayam  | 21.3   | 23.7         | 21.7 |
| 2      | Cardboard boxes                      | Kasaragod | 1.8  | 1.6          | 1.8  |
|        |                                      | Kottayam  | 3.5  | 2.5          | 3.1  |
| 3      | Glass bottles and jars               | Kasaragod | 1.9  | 1.4          | 1.7  |
|        |                                      | Kottayam  | 2.6  | 1.7          | 2.5  |
| 4      | Plastic items including bottles      | Kasaragod | 2.4  | 1.7          | 2.3  |
|        |                                      | Kottayam  | 2.9  | 3.4          | 3.0  |
| 5      | Tins and non-plastic cans            | Kasaragod | 2.2  | 1.5          | 2.0  |
|        |                                      | Kottayam  | 2.3  | 2.5          | 2.3  |
| 6      | Clothing items including bedding     | Kasaragod | 2.4  | 2.1          | 2.4  |
|        |                                      | Kottayam  | 5.1  | 2.2          | 4.5  |
| 7      | Others                               | Kasaragod | 2.9  | 4.0          | 2.9  |
|        |                                      | Kottayam  | 2.5  | 5.3          | 2.7  |

(Refer: Tables-32A to 32G)





# Chapter 5

## Citizen Perception

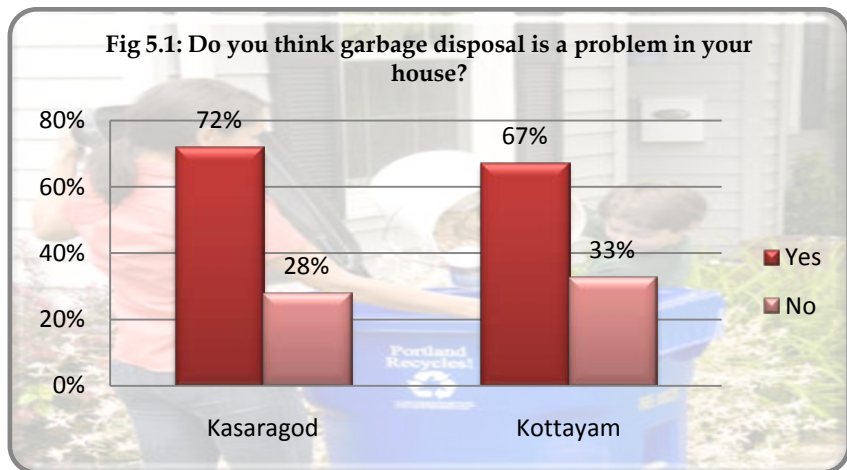
### 5.1. Introduction

5.1.1 Generally, citizen perception questions reveal good data in a stable environment. A set of citizen perception questionnaires were used in the survey for capturing citizen's voice on the Public Awareness and Attitudes on Waste management. The Public Awareness questions provide indicators for public perception about the attitudes on waste management.

5.1.2 The different questions used in the survey are discussed one by one below.

### 5.2. Public Awareness and Attitudes on Waste Management

5.2.1 Regarding garbage management problem, 72% of the respondents from Kasaragod district had expressed that garbage management in their house was a problem while 33% of the respondents from Kottayam district reported no concern over the same.

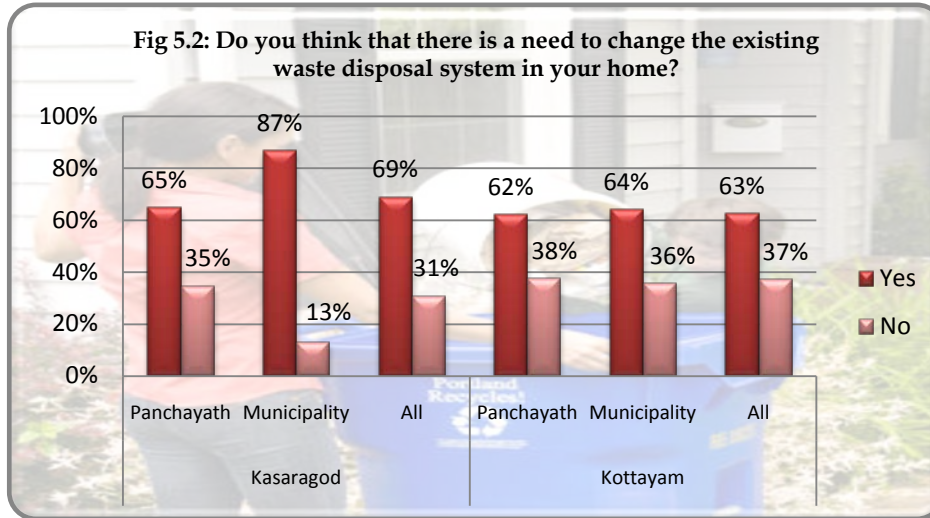


Distribution of this over Average Monthly Per Capita Expenditure (in Rupees) and local body type is presented in Table 33A.

5.2.2 With regard to awareness of health issues relating to garbage, 81% of the respondents of Kasaragod district and 83% of the respondents of Kottayam district

reported that they are aware of the issues.

5.2.3 The study on the opinion on changing the existing waste disposal system followed in their houses, 35% of the respondents from Panchayath area of Kasaragod



district opined that they are comfortable with the existing system while 87% of the respondents from Municipal area of the district said they need to

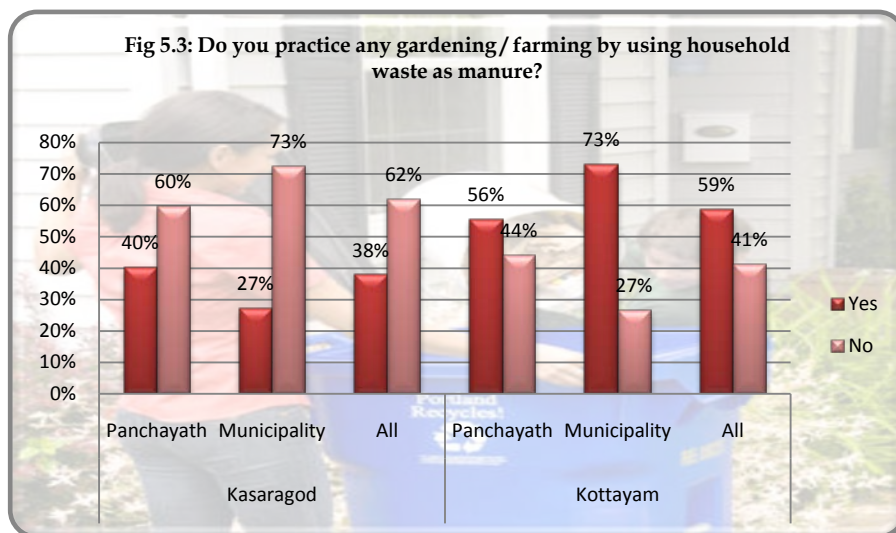
change the existing waste disposal system in their houses. In the case of Kottayam district, 63% of the households want to change the existing system.

5.2.4 Regarding awareness about composting, 48% of the households of Kasaragod district are unaware while 64% of the households of Kottayam are aware of composting. It is also seen that, in both the districts, people from Municipal area are more aware of composting than those from Panchayath area.

5.2.5 It is seen that 55% of the respondents from both Kasaragod and Kottayam districts are not willing to start any household composting methods. Please refer section 3.3.6 of chapter- 3 and Table:19-A for local body type wise Percentage of households practicing “composting” as kitchen waste disposal method over total households surveyed and percentage of households practicing the method with first priority.

5.2.6 75% households in Kasaragod district and 75% households in Kottayam district reported that they are not interested to install bio-gas plant in their house.

5.2.7 Regarding practice of using household waste as manure in gardening and farming activity, 59% of the households in Kottayam engaged in such activity. In the case of Kasaragod district, the said percentage is only 38. It is interesting to see that, the ratio of households practicing the activity to those who do not practice in the municipal areas of Kasaragod is 27:73 whereas that of Kottayam is 73:27.



5.2.8 The willingness of the respondents who are ready to pay for waste collection, if such facilities were provided was obtained during the study. About 47% of respondents of Kasaragod district expressed their willingness to pay for waste collection. However, 52% of respondents from Kottayam expressed their willingness to pay for waste collection, if that facility is provided to them.

Statement 5.1: Percentage distribution of household's willingness of utilization of a public waste bin, if it is installed at their locality.

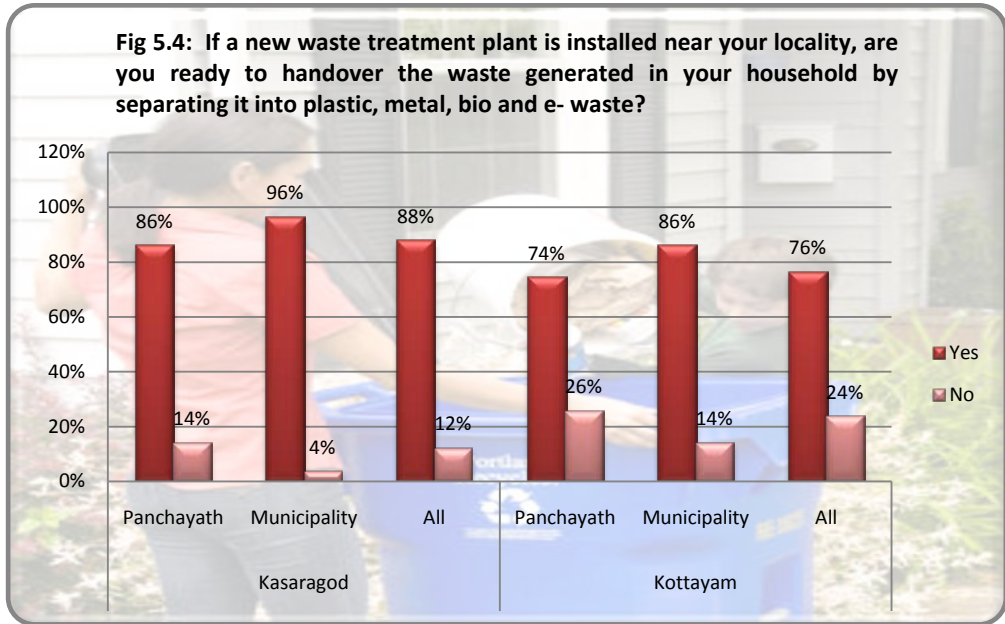
| Sl No. | District  | Type of Local body | Willingness of utilization of a public waste bin, if it is installed in the locality |     |       |
|--------|-----------|--------------------|--|-----|-------|
|        |           |                    | Yes  | No  | Total |
| 1      | Kasaragod | Panchayath         | 93%  | 7%  | 100%  |
| 2      |           | Municipality       | 98%  | 2%  | 100%  |
| 3      |           | All                | 94%  | 6%  | 100%  |
| 4      | Kottayam  | Panchayath         | 85%  | 15% | 100%  |
| 5      |           | Municipality       | 90%  | 10% | 100%  |
| 6      |           | All                | 86%  | 14% | 100%  |

(Refer :Table 33-I)

5.2.9 During the survey, question was asked about the willingness of utilization of a public waste bin, if it is installed at the respondent's locality. The feedback reflects that 94% of the respondents in Kasaragod and 86% of the respondents of Kottayam favoured to the proposed installation.

5.2.10 In response to the question "If a new waste treatment plant is installed near your locality, are you ready to handover the waste generated in your household by separating it

into plastic, metal, bio and e-waste", 88% of the respondents of Kasaragod and 76% of the respondents of Kottayam



district responded positively. It is also seen from the survey that, more positive response was received from the respondents of municipal areas of the both districts.

## *Chapter 6*

# *Summary of findings*

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### **6.1. Household Characteristic**

- 6.1.1 The average household size in respect of Kasaragod district found as 4.8 and 4.1 is that of Kottayam.
- 6.1.2 In Kasaragod district, 32.1% of the households belong to the “Casual labour in non-agriculture” type and in Kottayam district, 25.3% of the households belong to the “Casual labour in non-agriculture” category
- 6.1.3 55.1% of the households in Kasaragod district have no proper drainage system while the percentage is 14.1 in the case of Kottayam.

### **6.2. Degradable waste**

- 6.2.1. Average consumption of food items per Households (daily and weekly) in respect of Kasaragod and Kottayam districts were almost 2.5 and 18 Kg respectively.
- 6.2.2. In Kasaragod district, daily and weekly average food waste generated per household found as 0.502 and 3.533 Kg respectively and that for Kottayam district are 0.605 and 4.368 Kg respectively.
- 6.2.3. 34.6% of the households in Kasaragod and 52.6% of the households in Kottayam district reported throwing of waste in open spaces which includes road side dumping.
- 6.2.4. 3.89% households of Kasaragod district and 9.21% households of Kottayam district use composting as one of the waste disposal methods.
- 6.2.5. 81.7% households of Kasaragod and 71.5% households of Kottayam are using kitchen waste as manure to household plants along with other disposal methods.

6.2.6. 35% households of Kasaragod and 34% households of Kottayam possess pet/domestic animals or birds/poulties.

### **6.3. Solid waste**

- 6.3.1. An average 3 batteries (Rechargeable & Non-rechargeable alkaline batteries (like AA, AAA etc.)) were found to be thrown away and an average 3 such batteries were dumped in their houses in both Kasaragod and Kottayam districts.
- 6.3.2. Out of 84 sample households surveyed in Kasaragod district, an average 1 liter of left over or unused pesticides were found thrown away and in Kottayam district, out of 1,579 households surveyed, an average 1 liter of such items were found dumped in their houses.
- 6.3.3. Unused TVs and computer monitors (both OLD and NEW Type) and Electric equipments like mixer grinder, refrigerator, washing machine, AC, pump set, fan etc were found disposed mostly by means of exchanging with shops while purchasing a new one in both the districts.
- 6.3.4. It is estimated that around 0.18 Lakh unused telephone/cell phones etc. were exchanged with shop while purchasing new one by around 0.15 Lakh households of Kasaragod district and around 0.61 Lakh such items were exchanged with shop to purchase new one by around 0.54 Lakh households of Kottayam district.
- 6.3.5. Majority of the carry bags and unusable grow bags are disposed by means of burning in both Kasaragod and Kottayam districts.
- 6.3.6. Majority of the unused Plastic items such as water/beverage bottles, buckets, furniture etc. were sold out as scrap by a number of households of both Kasaragod and Kottayam.
- 6.3.7. An average 3 bulbs like damaged Incandescent (standard) light bulbs /florescent lights, CFL & LED lights etc items were dumped by the houses in

Kasaragod and Kottayam districts during 2014.

### **6.3. Citizen Perception**

- 6.4.1. 72% of the respondents from Kasaragod district had expressed that garbage management in their house was a problem while 33% of the respondents from Kottayam district reported no concern over the same.
- 6.4.2. People from Municipal area are more aware of composting than those from Panchayath area in both the districts.
- 6.4.3. About 53% of respondents of Kasaragod district were not favour of paying charges for waste collection where as 52% of respondents from Kottayam expressed their willingness to pay for waste collection, if that facility is provided to them.
- 6.4.4. 94% of the respondents in Kasaragod and 86% of the respondents of Kottayam agreed to utilize a public waste bin, if it is installed at the respondent's locality.







# DETAILED TABLES



Table A: Number of households surveyed (District wise).

| Sl No. | District     | Type of Local body |              |               |
|--------|--------------|--------------------|--------------|---------------|
|        |              | Panchayath         | Municipality | Total         |
| 1      | Kasaragod    | 9,518              | 2,122        | 11,640        |
| 2      | Kottayam     | 17,179             | 3,496        | 20,675        |
|        | <b>Total</b> | <b>26,697</b>      | <b>5,618</b> | <b>32,315</b> |

Table B: Number of households surveyed (Stratum wise).

| Sl No. | District  | Type of Local body | Household size |              |               |
|--------|-----------|--------------------|----------------|--------------|---------------|
|        |           |                    | 4 or less      | 5 or more    | Total         |
| 1      | Kasaragod | Panchayath         | 4,883          | 4,635        | 9,518         |
| 2      |           | Municipality       | 1,163          | 959          | 2,122         |
| 3      |           | <b>Total</b>       | <b>6,046</b>   | <b>5,594</b> | <b>11,640</b> |
| 4      | Kottayam  | Panchayath         | 11,040         | 6,139        | 17,179        |
| 5      |           | Municipality       | 2,376          | 1,120        | 3,496         |
| 6      |           | <b>Total</b>       | <b>13,416</b>  | <b>7,259</b> | <b>20,675</b> |

Table 1: District wise estimated number of persons (by local body type)

| Sl No. | District  | Type of Local body | Male             | Female           | Total            |
|--------|-----------|--------------------|------------------|------------------|------------------|
| 1      | Kasaragod | Panchayath         | 5,56,850         | 5,92,225         | 11,49,075        |
| 2      |           | Municipality       | 83,147           | 89,046           | 1,72,193         |
| 3      |           | <b>Total</b>       | <b>6,39,997</b>  | <b>6,81,271</b>  | <b>13,21,268</b> |
| 4      | Kottayam  | Panchayath         | 8,88,375         | 8,81,750         | 17,70,125        |
| 5      |           | Municipality       | 1,16,620         | 1,20,819         | 2,37,439         |
| 6      |           | <b>Total</b>       | <b>10,04,995</b> | <b>10,02,569</b> | <b>20,07,564</b> |
| 7      | Total     | Panchayath         | 14,45,225        | 14,73,975        | 29,19,200        |
| 8      |           | Municipality       | 1,99,767         | 2,09,865         | 4,09,632         |
| 9      |           | <b>Total</b>       | <b>16,44,992</b> | <b>16,83,840</b> | <b>33,28,832</b> |

Table 2: District wise estimated number of persons (by household size)

| Sl No. | District  | Household size | Male             | Female           | Total            |
|--------|-----------|----------------|------------------|------------------|------------------|
| 1      | Kasaragod | 4 or less      | 2,27,475         | 2,38,064         | 4,65,539         |
| 2      |           | 5 or more      | 4,12,522         | 4,43,207         | 8,55,729         |
| 3      |           | <b>Total</b>   | <b>6,39,997</b>  | <b>6,81,271</b>  | <b>13,21,268</b> |
| 4      | Kottayam  | 4 or less      | 5,18,537         | 5,15,966         | 10,34,503        |
| 5      |           | 5 or more      | 4,86,458         | 4,86,603         | 9,73,061         |
| 6      |           | <b>Total</b>   | <b>10,04,995</b> | <b>10,02,569</b> | <b>20,07,564</b> |
| 7      | Total     | 4 or less      | 7,46,012         | 7,54,030         | 15,00,042        |
| 8      |           | 5 or more      | 8,98,980         | 9,29,810         | 18,28,790        |
| 9      |           | <b>Total</b>   | <b>16,44,992</b> | <b>16,83,840</b> | <b>33,28,832</b> |

Table 3: District wise estimated number of households (by Local body type)

| Sl No. | District     | Type of Local body |               |                 |
|--------|--------------|--------------------|---------------|-----------------|
|        |              | Panchayath         | Municipality  | Total           |
| 1      | Kasaragod    | 2,37,950           | 36,074        | 2,74,024        |
| 2      | Kottayam     | 4,29,475           | 59,432        | 4,88,907        |
|        | <b>Total</b> | <b>6,67,425</b>    | <b>95,506</b> | <b>7,62,931</b> |

Table 4: District wise estimated number of households (by Local body type)

| Sl No. | District     | Household size  |                 |                 |
|--------|--------------|-----------------|-----------------|-----------------|
|        |              | 4 or less       | 5 or more       | Total           |
| 1      | Kasaragod    | 1,41,846        | 1,32,178        | 2,74,024        |
| 2      | Kottayam     | 3,16,392        | 1,72,515        | 4,88,907        |
|        | <b>Total</b> | <b>4,58,238</b> | <b>3,04,693</b> | <b>7,62,931</b> |

Table 5: Percentage of households according to location of house.

| Sl No. | District  | Type of Local body | Location of house: Near (figures in %) |             |              |            |             |            |
|--------|-----------|--------------------|--|-------------|--------------|------------|-------------|------------|
|        |           |                    | main road                              | other road  | Water bodies | forest     | wetland     | market     |
| 1      | Kasaragod | Panchayath         | 17.1                                   | 75.9        | 6.8          | 0.7        | 12.7        | 0.4        |
| 2      |           | Municipality       | 4.0                                    | 84.9        | 4.7          | 0.1        | 16.7        | 0.3        |
| 3      |           | <b>Total</b>       | <b>14.7</b>                            | <b>77.6</b> | <b>6.4</b>   | <b>0.6</b> | <b>13.5</b> | <b>0.4</b> |
| 4      | Kottayam  | Panchayath         | 22.7                                   | 85.9        | 10.0         | 0.1        | 20.0        | 0.3        |
| 5      |           | Municipality       | 15.6                                   | 87.5        | 5.8          | 0.2        | 24.0        | 1.2        |
| 6      |           | <b>Total</b>       | <b>21.5</b>                            | <b>86.2</b> | <b>9.3</b>   | <b>0.1</b> | <b>20.6</b> | <b>0.5</b> |

Table 6: Distribution (Per 1000) of households by type of Local body according to housing status.

| Sl No.   | Housing status | District     |              |                 |              |              |                 |
|----------|----------------|--------------|--------------|-----------------|--------------|--------------|-----------------|
|          |                | Kasaragod    |              |                 | Kottayam     |              |                 |
|          |                | Panchayath   | Municipality | Total           | Panchayath   | Municipality | Total           |
| 1        | Owned          | 974          | 924          | <b>965</b>      | 970          | 911          | <b>960</b>      |
| 2        | Leased/Rented  | 24           | 75           | <b>34</b>       | 27           | 87           | <b>37</b>       |
| 3        | Others         | 2            | 1            | <b>1</b>        | 2            | 2            | <b>2</b>        |
| <b>4</b> | <b>Total</b>   | <b>1,000</b> | <b>1,000</b> | <b>1,000</b>    | <b>1,000</b> | <b>1,000</b> | <b>1,000</b>    |
| 5        | Sample         | 9,518        | 2,122        | <b>11,640</b>   | 17,179       | 3,496        | <b>20,675</b>   |
| 6        | Estimated      | 2,37,950     | 36,074       | <b>2,74,024</b> | 4,29,475     | 59,432       | <b>4,88,907</b> |

Table 7: Distribution (Per 1000) households by type of Local body according to the condition of the building.

| Sl No. | Building structure | Kasaragod    |              |              | Kottayam     |              |              |
|--------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|
|        |                    | Panchayath   | Municipality | Total        | Panchayath   | Municipality | Total        |
| 1      | Pucca              | 615          | 624          | 617          | 821          | 786          | 815          |
| 2      | Semi-Pucca         | 348          | 355          | 349          | 174          | 208          | 179          |
| 3      | Kutcha             | 38           | 21           | 35           | 6            | 6            | 6            |
| 4      | <b>Total</b>       | <b>1,000</b> | <b>1,000</b> | <b>1,000</b> | <b>1,000</b> | <b>1,000</b> | <b>1,000</b> |
| 5      | Sample             | 9,518        | 2,122        | 11,640       | 17,179       | 3,496        | 20,675       |
| 6      | Estimated          | 2,37,950     | 36,074       | 2,74,024     | 4,29,475     | 59,432       | 4,88,907     |

Table 8: Distribution (Per 1000) households by type of Local body according to building type.

| Sl No. | Building type     | Kasaragod    |              |              | Kottayam     |              |              |
|--------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|
|        |                   | Panchayath   | Municipality | Total        | Panchayath   | Municipality | Total        |
| 1      | Independent house | 988          | 972          | 985          | 996          | 983          | 994          |
| 2      | Flat              | 8            | 8            | 8            | 2            | 16           | 4            |
| 3      | Others            | 4            | 20           | 7            | 2            | 1            | 2            |
| 4      | <b>Total</b>      | <b>1,000</b> | <b>1,000</b> | <b>1,000</b> | <b>1,000</b> | <b>1,000</b> | <b>1,000</b> |
| 5      | Sample            | 9,518        | 2,122        | 11,640       | 17,179       | 3,496        | 20,675       |
| 6      | Estimated         | 2,37,950     | 36,074       | 2,74,024     | 4,29,475     | 59,432       | 4,88,907     |

Table 9: Distribution (Per 1000) households by type of Local body according to household type.

| Sl No. | Household type                   | Kasaragod    |              |                 | Kottayam     |              |                 |
|--------|----------------------------------|--------------|--------------|-----------------|--------------|--------------|-----------------|
|        |                                  | Panchayath   | Municipality | Total           | Panchayath   | Municipality | Total           |
| 1      | Self-employed in agriculture     | 156          | 37           | <b>134</b>      | 211          | 57           | <b>185</b>      |
| 2      | Self-employed in non-agriculture | 201          | 143          | <b>191</b>      | 221          | 283          | <b>232</b>      |
| 3      | Casual labour in agriculture     | 85           | 29           | <b>75</b>       | 78           | 59           | <b>75</b>       |
| 4      | Casual labour in non-agriculture | 300          | 416          | <b>321</b>      | 263          | 207          | <b>253</b>      |
| 5      | Regular wage/salary earning      | 101          | 259          | <b>129</b>      | 185          | 261          | <b>198</b>      |
| 6      | Others                           | 157          | 117          | <b>150</b>      | 42           | 135          | <b>58</b>       |
| 7      | <b>Total</b>                     | <b>1,000</b> | <b>1,000</b> | <b>1,000</b>    | <b>1,000</b> | <b>1,000</b> | <b>1,000</b>    |
| 8      | Sample                           | 9,518        | 2,122        | <b>11,640</b>   | 17,179       | 3,496        | <b>20,675</b>   |
| 9      | Estimated                        | 2,37,950     | 36,074       | <b>2,74,024</b> | 4,29,475     | 59,432       | <b>4,88,907</b> |

Table 10: Number per 1000 households according to Use of building.

| Sl No. | District  | Type of Local body | Main use of building |                            |                        |              | Sample        | Estimated       |
|--------|-----------|--------------------|----------------------|----------------------------|------------------------|--------------|---------------|-----------------|
|        |           |                    | Residential only     | Residential-cum-commercial | Residential-cum-others | Total        |               |                 |
| 1      | Kasaragod | Panchayath         | 997                  | 2                          | 2                      | 1,000        | 9,518         | 2,37,950        |
| 2      |           | Municipality       | 994                  | 5                          | 0                      | 1,000        | 2,122         | 36,074          |
| 3      |           | <b>Total</b>       | <b>996</b>           | <b>2</b>                   | <b>1</b>               | <b>1,000</b> | <b>11,640</b> | <b>2,74,024</b> |
| 4      | Kottayam  | Panchayath         | 993                  | 6                          | 1                      | 1,000        | 17,179        | 4,29,475        |
| 5      |           | Municipality       | 987                  | 13                         | 1                      | 1,000        | 3,496         | 59,432          |
| 6      |           | <b>Total</b>       | <b>992</b>           | <b>7</b>                   | <b>1</b>               | <b>1,000</b> | <b>20,675</b> | <b>4,88,907</b> |

Table 11: Number per 1000 households according to Major source of Drainage.

| Sl No. | District  | Type of Local body | Drainage type |               |            |              |             | Sample       | Estimated     |                 |
|--------|-----------|--------------------|---------------|---------------|------------|--------------|-------------|--------------|---------------|-----------------|
|        |           |                    | Under ground  | Covered pucca | Open pucca | Open kutchra | No drainage |              |               | Total           |
| 1      | Kasaragod | Panchayath         | 66            | 150           | 145        | 54           | 584         | 1,000        | 9,518         | 2,37,950        |
| 2      |           | Municipality       | 65            | 389           | 141        | 2            | 403         | 1,000        | 2,122         | 36,074          |
| 3      |           | <b>Total</b>       | <b>66</b>     | <b>194</b>    | <b>144</b> | <b>45</b>    | <b>551</b>  | <b>1,000</b> | <b>11,640</b> | <b>2,74,024</b> |
| 4      | Kottayam  | Panchayath         | 266           | 381           | 179        | 33           | 141         | 1,000        | 17,179        | 4,29,475        |
| 5      |           | Municipality       | 378           | 323           | 146        | 12           | 141         | 1,000        | 3,496         | 59,432          |
| 6      |           | <b>Total</b>       | <b>285</b>    | <b>371</b>    | <b>173</b> | <b>30</b>    | <b>141</b>  | <b>1,000</b> | <b>20,675</b> | <b>4,88,907</b> |



Table 12: Number per 1000 households according to Disposal of household waste water.

| Sl No. | District  | Type of Local body | Type of waste water disposal |             |               |              |       | Sample        | Estimated       |
|--------|-----------|--------------------|------------------------------|-------------|---------------|--------------|-------|---------------|-----------------|
|        |           |                    | To public drainage system    | Closed tank | To open space | Water bodies | Total |               |                 |
| 1      | Kasaragod | Panchayath         | 1                            | 51          | 909           | 39           | 1,000 | 9,518         | 2,37,950        |
| 2      |           | Municipality       | 1                            | 139         | 838           | 21           | 1,000 | 2,122         | 36,074          |
| 3      |           | <b>Total</b>       | 1                            | 67          | 896           | 36           | 1,000 | <b>11,640</b> | <b>2,74,024</b> |
| 4      | Kottayam  | Panchayath         | 12                           | 511         | 459           | 18           | 1,000 | 17,179        | 4,29,475        |
| 5      |           | Municipality       | 16                           | 648         | 316           | 21           | 1,000 | 3,496         | 59,432          |
| 6      |           | <b>Total</b>       | 13                           | 534         | 435           | 18           | 1,000 | <b>20,675</b> | <b>4,88,907</b> |

Table 13: Average daily consumption and average daily per head consumption of food items (By AMPE)

| District  | Average Monthly Per Capita Expenditure (in Rupees) | Type of Local body  |                            |   |                            |   |                            |
|-----------|--|---|----------------------------|---|----------------------------|---|----------------------------|
|           |  | Panchayath  |                            | Municipality  |                            | Total   |                            |
|           |  | Daily Average Consumption of food items per Households (in Kg.) | Per head DAILY consumption | Daily Average Consumption of food items per Households (in Kg.) | Per head DAILY consumption | Daily Average Consumption of food items per Households (in Kg.) | Per head DAILY consumption |
| Kasaragod | Below Rs.1100.00                                   | 2.6770  | .4800                      | 2.7451  | .4875                      | 2.6883  | .4812                      |
|           | 1101.00 - 1500.00                                  | 2.4416  | .5300                      | 2.5658  | .5870                      | 2.4611  | .5389                      |
|           | 1501.00 - 2000.00                                  | 2.1349  | .5736                      | 2.1689  | .5897                      | 2.1427  | .5773                      |
|           | Above Rs.2000.00                                   | 1.6014  | .5981                      | 1.7432  | .5445                      | 1.6462  | .5812                      |
|           | <b>Total</b>                                       | <b>2.4492</b>   | <b>.5186</b>               | <b>2.4578</b>   | <b>.5442</b>               | <b>2.4508</b>   | <b>.5233</b>               |
| Kottayam  | Below Rs.1100.00                                   | 2.9857  | .5978                      | 2.9661  | .5463                      | 2.9840  | .5935                      |
|           | 1101.00 - 1500.00                                  | 2.6786  | .6208                      | 2.8194  | .6119                      | 2.6999  | .6195                      |
|           | 1501.00 - 2000.00                                  | 2.3818  | .6069                      | 2.4022  | .6284                      | 2.3853  | .6107                      |
|           | Above Rs.2000.00                                   | 2.0252  | .6253                      | 2.1363  | .6801                      | 2.0505  | .6377                      |
|           | <b>Total</b>                                       | <b>2.4791</b>   | <b>.6143</b>               | <b>2.4654</b>   | <b>.6358</b>               | <b>2.4768</b>   | <b>.6179</b>               |
| Total     | Below Rs.1100.00                                   | 2.7927  | .5242                      | 2.7931  | .5003                      | 2.7928  | .5209                      |
|           | 1101.00 - 1500.00                                  | 2.5843  | .5847                      | 2.7162  | .6018                      | 2.6046  | .5873                      |
|           | 1501.00 - 2000.00                                  | 2.3345  | .6006                      | 2.3442  | .6188                      | 2.3363  | .6040                      |
|           | Above Rs.2000.00                                   | 1.9701  | .6217                      | 2.0617  | .6543                      | 1.9921  | .6295                      |
|           | <b>Total</b>                                       | <b>2.4685</b>   | <b>.5802</b>               | <b>2.4625</b>   | <b>.6012</b>               | <b>2.4674</b>   | <b>.5838</b>               |

Table 14: Average daily consumption and average daily per head consumption of food items (By Household Size)

| District  | Households size | Type of Local body  |                            |   |                            |   |                            |
|-----------|-----------------|---|----------------------------|---|----------------------------|---|----------------------------|
|           |                 | Panchayath  |                            | Municipality  |                            | Total   |                            |
|           |                 | Daily Average Consumption of food items per Households (in Kg.) | Per head DAILY consumption | Daily Average Consumption of food items per Households (in Kg.) | Per head DAILY consumption | Daily Average Consumption of food items per Households (in Kg.) | Per head DAILY consumption |
| Kasaragod | 4 or less       | 1.7585  | .5418                      | 1.8791  | .5943                      | 1.7817  | .5519                      |
|           | 5 or more       | 3.1770  | .4942                      | 3.1597  | .4833                      | 3.1740  | .4923                      |
|           | Total           | 2.4492  | .5186                      | 2.4578  | .5442                      | 2.4508  | .5233                      |
| Kottayam  | 4 or less       | 2.0280  | .6304                      | 2.1017  | .6623                      | 2.0411  | .6361                      |
|           | 5 or more       | 3.2904  | .5853                      | 3.2369  | .5797                      | 3.2821  | .5844                      |
|           | Total           | 2.4791  | .6143                      | 2.4654  | .6358                      | 2.4768  | .6179                      |
| Total     | 4 or less       | 1.9454  | .6032                      | 2.0286  | .6400                      | 1.9605  | .6099                      |
|           | 5 or more       | 3.2416  | .5461                      | 3.2013  | .5352                      | 3.2351  | .5444                      |
|           | Total           | 2.4685  | .5802                      | 2.4625  | .6012                      | 2.4674  | .5838                      |

Table 15: Average daily per head waste generated from kitchen (By AMPE)

| District  | Average Monthly Per Capita Expenditure (in Rupees) | Average daily kitchen waste generated per head (in Kg) |              |              |
|-----------|--|--|--------------|--------------|
|           |  | Panchayath   | Municipality | Total        |
| Kasaragod | Below Rs.1100.00                                   | .1019  | .0938        | .1005        |
|           | 1101.00 - 1500.00                                  | .1092  | .0987        | .1075        |
|           | 1501.00 - 2000.00                                  | .1135  | .1024        | .1110        |
|           | Above Rs.2000.00                                   | .1271  | .1147        | .1232        |
|           | <b>Total</b>                                       | <b>.1077</b>   | <b>.0995</b> | <b>.1062</b> |
| Kottayam  | Below Rs.1100.00                                   | .1363  | .1281        | .1356        |
|           | 1101.00 - 1500.00                                  | .1553  | .1548        | .1552        |
|           | 1501.00 - 2000.00                                  | .1598  | .1438        | .1570        |
|           | Above Rs.2000.00                                   | .1472  | .1299        | .1433        |
|           | <b>Total</b>                                       | <b>.1521</b>   | <b>.1412</b> | <b>.1503</b> |
| Total     | Below Rs.1100.00                                   | .1148  | .1012        | .1129        |
|           | 1101.00 - 1500.00                                  | .1369  | .1319        | .1362        |
|           | 1501.00 - 2000.00                                  | .1509  | .1334        | .1477        |
|           | Above Rs.2000.00                                   | .1446  | .1270        | .1404        |
|           | <b>Total</b>                                       | <b>.1363</b>   | <b>.1254</b> | <b>.1344</b> |

Table 16: Average daily kitchen waste generated (By Local body type)

| District  | Households size | Average daily kitchen Waste generated (in Kg) |              |              |
|-----------|-----------------|---|--------------|--------------|
|           |                 | Panchayath                                    | Municipality | Total        |
| Kasaragod | 4 or less       | .3637   | .3322        | .3576        |
|           | 5 or more       | .6665   | .6113        | .6570        |
|           | <b>Total</b>    | <b>.5115</b>                                  | <b>.4583</b> | <b>.5018</b> |
| Kottayam  | 4 or less       | .5020   | .4524        | .4932        |
|           | 5 or more       | .8187   | .7730        | .8116        |
|           | <b>Total</b>    | <b>.6152</b>                                  | <b>.5552</b> | <b>.6050</b> |
| Total     | 4 or less       | .4596   | .4128        | .4511        |
|           | 5 or more       | .7531   | .6983        | .7442        |
|           | <b>Total</b>    | <b>.5782</b>                                  | <b>.5185</b> | <b>.5678</b> |

Table 17-A: Percentage of households practicing “picking up of kitchen waste from household” as kitchen waste disposal method over total households surveyed (A) and percentage of households practicing the method with first priority (B).

| Sl No. | District  | Type of Local body | Picking up of kitchen waste from household (figures in %) |      |
|--------|-----------|--------------------|---|------|
|        |           |                    | A   | B    |
| 1      | Kasaragod | Panchayath         | 0.08  | 0.03 |
| 2      |           | Municipality       | 0.00  | 0.00 |
| 3      |           | Total              | 0.07  | 0.03 |
| 4      | Kottayam  | Panchayath         | 2.97  | 2.35 |
| 5      |           | Municipality       | 1.60  | 1.26 |
| 6      |           | Total              | 2.74  | 2.16 |

Table 17-B: Percentage distribution of arrangements made for collection of kitchen waste from household (where picking up of kitchen waste from household facility exists).

| Sl No. | District  | Type of Local body | Collection of kitchen waste from the household - Arrangements made by: |                               |        |       |
|--------|-----------|--------------------|--|-------------------------------|--------|-------|
|        |           |                    | Local body   | Resident / group of residents | Others | Total |
| 1      | Kasaragod | Panchayath         | -  | 25.0                          | 75.0   | 100   |
| 2      |           | Municipality       | -  | -                             | -      | -     |
| 3      |           | Total              | -  | 25.0                          | 75.0   | 100   |
| 4      | Kottayam  | Panchayath         | 6.1  | 17.3                          | 76.7   | 100   |
| 5      |           | Municipality       | 5.4  | 44.6                          | 50.0   | 100   |
| 6      |           | Total              | 6.0  | 20.0                          | 74.0   | 100   |

Table 17-C: Percentage distribution of households (where picking up of kitchen waste from household facility exists) by Frequency of picking garbage.

| Sl No. | District  | Type of Local body | Frequency of picking kitchen waste (figures in %) |                         |           |       |
|--------|-----------|--------------------|---|-------------------------|-----------|-------|
|        |           |                    | Daily   | At least once in a week | Irregular | Total |
| 1      | Kasaragod | Panchayath         | 38  | 50                      | 13        | 100   |
| 2      |           | Municipality       | -   | -                       | -         | -     |
| 3      |           | Total              | 38  | 50                      | 13        | 100   |
| 4      | Kottayam  | Panchayath         | 88  | 11                      | 1         | 100   |
| 5      |           | Municipality       | 86  | 14                      | -         | 100   |
| 6      |           | Total              | 88  | 11                      | 1         | 100   |

Table 17-D: Percentage distribution of household's know-how on "Site where kitchen waste is deposited after collecting from the household" (where picking up of kitchen waste from household facility exists).

| Sl No. | District  | Type of Local body | Site where kitchen waste is deposited after collecting from the household (figures in%) |               |                  |                        |           | Total |
|--------|-----------|--------------------|---|---------------|------------------|------------------------|-----------|-------|
|        |           |                    | Treatment plant   | Bio-gas plant | Manure pit/plant | Community dumping spot | Not known |       |
| 1      | Kasaragod | Panchayath         | -   | 50            | -                | 13                     | 38        | 100   |
| 2      |           | Municipality       | -   | -             | -                | -                      | -         | -     |
| 3      |           | Total              | -   | 50            | -                | 13                     | 38        | 100   |
| 4      | Kottayam  | Panchayath         | 3   | 10            | 4                | -                      | 82        | 100   |
| 5      |           | Municipality       | 4   | 13            | 2                | 38                     | 45        | 100   |
| 6      |           | Total              | 3   | 11            | 4                | 4                      | 79        | 100   |

Table 18-A: Percentage of households practicing dumping, throwing in the open space, burning and disposing off to water bodies as kitchen waste disposal methods over total households surveyed (A) and percentage of households practicing the methods with first priority (B).

| Sl No. | District  | Type of Local body | A (figures in %) |                         |         |                              | B (figures in %) |                         |         |                              |
|--------|-----------|--------------------|------------------|-------------------------|---------|------------------------------|------------------|-------------------------|---------|------------------------------|
|        |           |                    | Dumping          | Throw in the open space | Burning | Disposed off to water bodies | Dumping          | Throw in the open space | Burning | Disposed off to water bodies |
| 1      | Kasaragod | Panchayath         | 20.6             | 35.4                    | 12.8    | 1.7                          | 8.7              | 7.9                     | 2.6     | 0.6                          |
| 2      |           | Municipality       | 49.1             | 30.9                    | 34.3    | 0.7                          | 12.0             | 1.6                     | 1.2     | 0.0                          |
| 3      |           | Total              | 25.8             | 34.6                    | 16.7    | 1.5                          | 9.3              | 6.8                     | 2.3     | 0.5                          |
| 4      | Kottayam  | Panchayath         | 29.5             | 52.3                    | 32.1    | 3.1                          | 9.2              | 15.2                    | 10.7    | 0.9                          |
| 5      |           | Municipality       | 31.5             | 53.8                    | 35.4    | 4.0                          | 6.5              | 13.0                    | 7.2     | 2.0                          |
| 6      |           | Total              | 29.8             | 52.6                    | 32.7    | 3.2                          | 8.7              | 14.9                    | 10.1    | 1.1                          |

Table 18-B: Percentage distribution of reason for dumping, throwing in the open space, burning and disposing off to water bodies

| Sl No. | District  | Type of Local body | Lack of provision of waste disposal facility | Inconvenience | Lack of time | Lack of awareness | Total (figures in %) |
|--------|-----------|--------------------|--|---------------|--------------|-------------------|----------------------|
| 1      | Kasaragod | Panchayath         | 39   | 13            | 9            | 39                | 100                  |
| 2      |           | Municipality       | 67   | 18            | 6            | 10                | 100                  |
| 3      |           | Total              | 44   | 14            | 8            | 33                | 100                  |
| 4      | Kottayam  | Panchayath         | 32   | 48            | 10           | 10                | 100                  |
| 5      |           | Municipality       | 32   | 48            | 14           | 6                 | 100                  |
| 6      |           | Total              | 32   | 48            | 11           | 9                 | 100                  |



Table 19-A: Percentage of households practicing “composting” as kitchen waste disposal method over total households surveyed (A) and percentage of households practicing the method with first priority (B).

| Sl No. | District  | Type of Local body | Composting (figures in %) |       |
|--------|-----------|--------------------|---------------------------|-------|
|        |           |                    | A                         | B     |
| 1      | Kasaragod | Panchayath         | 3.02                      | 1.13  |
| 2      |           | Municipality       | 7.82                      | 5.66  |
| 3      |           | Total              | 3.89                      | 1.96  |
| 4      | Kottayam  | Panchayath         | 8.66                      | 6.13  |
| 5      |           | Municipality       | 11.93                     | 10.67 |
| 6      |           | Total              | 9.21                      | 6.90  |

Table 19-B: Number per 1000 households by type of composting used

| Sl No     | Type of composting | Kasaragod  |              | Kottayam   |              |
|-----------|--------------------|------------|--------------|------------|--------------|
|           |                    | Panchayath | Municipality | Panchayath | Municipality |
| 1         | Pipe compost       | 376        | 723          | 709        | 894          |
| 2         | Vermi compost      | 202        | 54           | 22         | 24           |
| 3         | Pot compost        | 84         | 6            | 9          | 14           |
| 4         | Ring compost       | 10         | 0            | 36         | 46           |
| 5         | Pit compost        | 509        | 217          | 229        | 12           |
| 6         | Bio bin unit       | 0          | 0            | 1          | 7            |
| 7         | Bio pedestal unit  | 0          | 0            | 0          | 2            |
| Sample    |                    | 287        | 166          | 1,486      | 417          |
| Estimated |                    | 7,175      | 2,822        | 37,150     | 7,089        |

Table 20: Percentage of households practicing methods like “ burying, feeding to animals, Manure to household plants/crops, Biogas, Dumping spot provided by residential group / local body” as kitchen waste disposal method over total households surveyed (A) and percentage of households practicing the method with first priority (B).

| Sl No. | District  | Type of Local body | A (figures in %) |                    |                                  |        |   |
|--------|-----------|--------------------|------------------|--------------------|----------------------------------|--------|---|
|        |           |                    | Burying          | Feeding to animals | Manure to household plants/crops | Biogas | Dumping spot provided by residential group / local body |
| 1      | Kasaragod | Panchayath         | 20.60            | 43.92              | 80.62                            | 0.90   | 0.49  |
| 2      |           | Municipality       | 40.67            | 29.64              | 86.80                            | 0.24   | 0.80  |
| 3      |           | Total              | 24.26            | 41.31              | 81.74                            | 0.78   | 0.55  |
| 4      | Kottayam  | Panchayath         | 47.70            | 35.70              | 70.23                            | 1.61   | 0.78  |
| 5      |           | Municipality       | 54.98            | 24.40              | 77.83                            | 3.80   | 2.17  |
| 6      |           | Total              | 48.93            | 33.79              | 71.51                            | 1.98   | 1.02  |

| Sl No. | District  | Type of Local body | B (figures in %) |                    |                                  |        |   |
|--------|-----------|--------------------|------------------|--------------------|----------------------------------|--------|---|
|        |           |                    | Burying          | Feeding to animals | Manure to household plants/crops | Biogas | Dumping spot provided by residential group / local body |
| 1      | Kasaragod | Panchayath         | 7.96             | 22.16              | 47.01                            | 0.47   | 0.49  |
| 2      |           | Municipality       | 19.09            | 2.64               | 55.47                            | 0.24   | 0.80  |
| 3      |           | Total              | 9.99             | 18.60              | 48.55                            | 0.43   | 0.55  |
| 4      | Kottayam  | Panchayath         | 13.25            | 22.02              | 18.51                            | 1.16   | 0.78  |
| 5      |           | Municipality       | 3.83             | 12.81              | 37.47                            | 3.35   | 2.17  |
| 6      |           | Total              | 11.66            | 20.46              | 21.71                            | 1.53   | 1.02  |

Table 21: Distribution (Per 1000) Number of households having pet/domestic animals/birds/poultry farm

| Sl No. | District  | Type of Local body | Household having pet/domestic animals/birds/poultry farm |            |              | Sample        | Estimated       |
|--------|-----------|--------------------|--|------------|--------------|---------------|-----------------|
|        |           |                    | Yes  | No         | Total        |               |                 |
| 1      | Kasaragod | Panchayath         | 367  | 633        | 1,000        | 9,518         | 2,37,950        |
| 2      |           | Municipality       | 273  | 727        | 1,000        | 2,122         | 36,074          |
| 3      |           | <b>Total</b>       | <b>350</b>   | <b>650</b> | <b>1,000</b> | <b>11,640</b> | <b>2,74,024</b> |
| 4      | Kottayam  | Panchayath         | 354  | 646        | 1,000        | 17,179        | 4,29,475        |
| 5      |           | Municipality       | 255  | 745        | 1,000        | 3,496         | 59,432          |
| 6      |           | <b>Total</b>       | <b>337</b>   | <b>663</b> | <b>1,000</b> | <b>20,675</b> | <b>4,88,907</b> |

Table 22: Distribution (Per 1000) Number of households with existence of animal shed/poultry farm

| Sl No. | District  | Type of Local body | Existence of animal shed/poultry farm |                         |                             |              | Sample       | Estimated       |
|--------|-----------|--------------------|---------------------------------------|-------------------------|-----------------------------|--------------|--------------|-----------------|
|        |           |                    | Attached to the house                 | Detached from the house | no animal shed/poultry farm | Total        |              |                 |
| 1      | Kasaragod | Panchayath         | 109                                   | 842                     | 49                          | 1,000        | 3,493        | 87,325          |
| 2      |           | Municipality       | 35                                    | 931                     | 35                          | 1,000        | 579          | 9,843           |
| 3      |           | <b>Total</b>       | <b>98</b>                             | <b>855</b>              | <b>47</b>                   | <b>1,000</b> | <b>4,072</b> | <b>97,168</b>   |
| 4      | Kottayam  | Panchayath         | 64                                    | 906                     | 30                          | 1,000        | 6,074        | 1,51,850        |
| 5      |           | Municipality       | 56                                    | 820                     | 124                         | 1,000        | 893          | 15,181          |
| 6      |           | <b>Total</b>       | <b>63</b>                             | <b>895</b>              | <b>42</b>                   | <b>1,000</b> | <b>6,967</b> | <b>1,67,031</b> |

Table 23: Percentage of type of disposal of pet/domestic animals/birds/poultry farm waste from households having pet/domestic animals/birds/poultry farm etc.

| Sl No. | District  | Type of Local body | to bio-gas plant | Manure to household plants/crops | used as fuel | Sold out | others |
|--------|-----------|--------------------|------------------|----------------------------------|--------------|----------|--------|
| 1      | Kasaragod | Panchayath         | 2.4              | 95.9                             | 0.6          | 11.6     | 3.1    |
| 2      |           | Municipality       | 0.3              | 92.7                             | 0.0          | 6.9      | 7.4    |
| 3      |           | Total              | 2.1              | 95.5                             | 0.5          | 11.0     | 3.7    |
| 4      | Kottayam  | Panchayath         | 2.3              | 91.9                             | 0.6          | 23.0     | 8.4    |
| 5      |           | Municipality       | 1.7              | 59.8                             | 1.8          | 15.3     | 38.3   |
| 6      |           | Total              | 2.2              | 87.8                             | 0.7          | 22.1     | 12.2   |

**Domestic Hazardous Waste**

Table 24 A: Average solid waste from households during 2014 and methods of disposal (in numbers)

Type: Rechargeable & Non-rechargeable alkaline batteries (like AA, AAA etc.) & other batteries

| Sl No. | District  | Type of Local body | Statistics                 | Sold out as Scrap | Thrown away | Dumping  |
|--------|-----------|--------------------|----------------------------|-------------------|-------------|----------|
| 1      | Kasaragod | Panchayath         | Average                    | 2                 | 4           | 4        |
| 2      |           |                    | Sample Households          | 190               | 3,825       | 2,859    |
| 3      |           |                    | Estimated No of Households | 4,743             | 95,665      | 71,379   |
| 4      |           | Municipality       | Average                    | 4                 | 2           | 2        |
| 5      |           |                    | Sample Households          | 18                | 1,281       | 952      |
| 6      |           |                    | Estimated No of Households | 301               | 21,424      | 15,932   |
| 7      |           | Total              | Average                    | 2                 | 3           | 3        |
| 8      |           |                    | Sample Households          | 208               | 5,106       | 3,811    |
| 9      |           |                    | Estimated No of Households | 5,044             | 1,17,090    | 87,311   |
| 10     | Kottayam  | Panchayath         | Average                    | 3                 | 3           | 3        |
| 11     |           |                    | Sample Households          | 468               | 11,971      | 10,976   |
| 12     |           |                    | Estimated No of Households | 11,674            | 2,98,966    | 2,74,256 |
| 13     |           | Municipality       | Average                    | 2                 | 3           | 3        |
| 14     |           |                    | Sample Households          | 107               | 2,761       | 2,470    |
| 15     |           |                    | Estimated No of Households | 1,780             | 45,954      | 41,150   |
| 16     |           | Total              | Average                    | 3                 | 3           | 3        |
| 17     |           |                    | Sample Households          | 575               | 14,732      | 13,446   |
| 18     |           |                    | Estimated No of Households | 13,455            | 3,44,921    | 3,15,406 |

Table 24 B: Average solid waste from households during 2014 and methods of disposal (in numbers)

Type: Automobile batteries and inverter batteries etc.

| Sl No. | District  | Type of Local body | Statistics                 | Exchanged with shop | Sold out as Scrap | Thrown away | Dumping | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|---------------------|-------------------|-------------|---------|------------------------------|
| 1      | Kasaragod | Panchayath         | Average                    | 1                   | 1                 | 2           | 2       | 1                            |
| 2      |           |                    | Sample Households          | 56                  | 61                | 147         | 143     | 8                            |
| 3      |           |                    | Estimated No of Households | 1,399               | 1,523             | 3,674       | 3,569   | 200                          |
| 4      |           | Municipality       | Average                    | 1                   | 1                 | 2           | 2       | 0                            |
| 5      |           |                    | Sample Households          | 14                  | 22                | 15          | 23      | 0                            |
| 6      |           |                    | Estimated No of Households | 234                 | 369               | 251         | 385     | 0                            |
| 7      |           | Total              | Average                    | 1                   | 1                 | 2           | 2       | 1                            |
| 8      |           |                    | Sample Households          | 70                  | 83                | 162         | 166     | 8                            |
| 9      |           |                    | Estimated No of Households | 1,633               | 1,891             | 3,925       | 3,955   | 200                          |
| 10     | Kottayam  | Panchayath         | Average                    | 1                   | 1                 | 2           | 2       | 2                            |
| 11     |           |                    | Sample Households          | 1,453               | 404               | 239         | 727     | 90                           |
| 12     |           |                    | Estimated No of Households | 36,312              | 10,085            | 5,963       | 18,148  | 2,245                        |
| 13     |           | Municipality       | Average                    | 1                   | 1                 | 3           | 1       | 1                            |
| 14     |           |                    | Sample Households          | 407                 | 55                | 20          | 179     | 16                           |
| 15     |           |                    | Estimated No of Households | 6,786               | 916               | 333         | 2,981   | 266                          |
| 16     |           | Total              | Average                    | 1                   | 1                 | 2           | 2       | 2                            |
| 17     |           |                    | Sample Households          | 1,860               | 459               | 259         | 906     | 106                          |
| 18     |           |                    | Estimated No of Households | 43,098              | 11,001            | 6,296       | 21,129  | 2,511                        |

Table 24 C: Average liquid waste from households during 2014 and methods of disposal (in litres)

Type: Paints, varnish, cleaners etc.

| Sl No. | District  | Type of Local body | Statistics                 | Exchanged with shop | Thrown away | Dumping | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|---------------------|-------------|---------|------------------------------|
| 1      | Kasaragod | Panchayath         | Average                    | 2                   | 1           | 2       | 2                            |
| 2      |           |                    | Sample Households          | 7                   | 99          | 346     | 24                           |
| 3      |           |                    | Estimated No of Households | 175                 | 2,474       | 8,638   | 601                          |
| 4      |           | Municipality       | Average                    | 10                  | 1           | 2       | 0                            |
| 5      |           |                    | Sample Households          | 1                   | 8           | 31      | 0                            |
| 6      |           |                    | Estimated No of Households | 17                  | 134         | 518     | 0                            |
| 7      |           | Total              | Average                    | 3                   | 1           | 2       | 2                            |
| 8      |           |                    | Sample Households          | 8                   | 107         | 377     | 24                           |
| 9      |           |                    | Estimated No of Households | 192                 | 2,609       | 9,156   | 601                          |
| 10     | Kottayam  | Panchayath         | Average                    | 3                   | 1           | 1       | 1                            |
| 11     |           |                    | Sample Households          | 69                  | 225         | 1,661   | 192                          |
| 12     |           |                    | Estimated No of Households | 1,726               | 5,623       | 41,526  | 4,792                        |
| 13     |           | Municipality       | Average                    | 2                   | 1           | 1       | 1                            |
| 14     |           |                    | Sample Households          | 14                  | 14          | 419     | 9                            |
| 15     |           |                    | Estimated No of Households | 233                 | 233         | 6,986   | 150                          |
| 16     |           | Total              | Average                    | 3                   | 1           | 1       | 1                            |
| 17     |           |                    | Sample Households          | 83                  | 239         | 2,080   | 201                          |
| 18     |           |                    | Estimated No of Households | 1,959               | 5,856       | 48,512  | 4,941                        |

Table 24D: Average waste from households during 2014 and methods of disposal (in litres)

Type: Left over or unused pesticides.

| Sl No. | District  | Type of Local body | Statistics                 | Thrown away | Dumping | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|-------------|---------|------------------------------|
| 1      | Kasaragod | Panchayath         | Average                    | 1           | 1       | 1                            |
| 2      |           |                    | Sample Households          | 75          | 80      | 5                            |
| 3      |           |                    | Estimated No of Households | 1,873       | 1,994   | 125                          |
| 4      |           | Municipality       | Average                    | 1           | 1       | 0                            |
| 5      |           |                    | Sample Households          | 9           | 2       | 0                            |
| 6      |           |                    | Estimated No of Households | 151         | 33      | 0                            |
| 7      |           | Total              | Average                    | 1           | 1       | 1                            |
| 8      |           |                    | Sample Households          | 84          | 82      | 5                            |
| 9      |           |                    | Estimated No of Households | 2,023       | 2,028   | 125                          |
| 10     | Kottayam  | Panchayath         | Average                    | 1           | 1       | 1                            |
| 11     |           |                    | Sample Households          | 194         | 1,211   | 278                          |
| 12     |           |                    | Estimated No of Households | 4,848       | 30,244  | 6,939                        |
| 13     |           | Municipality       | Average                    | 1           | 0       | 0                            |
| 14     |           |                    | Sample Households          | 27          | 368     | 17                           |
| 15     |           |                    | Estimated No of Households | 449         | 6,142   | 283                          |
| 16     |           | Total              | Average                    | 1           | 1       | 1                            |
| 17     |           |                    | Sample Households          | 221         | 1,579   | 295                          |
| 18     |           |                    | Estimated No of Households | 5,297       | 36,386  | 7,223                        |



**Electronic Waste**

Table 25A: Average solid waste from households during 2014 and methods of disposal (in numbers)

Type: Unused TVs and computer monitors *OLD Type*.

| SI No. | District  | Type of Local body | Statistics                 | Exchanged with shop | Sold out as Scrap | Thrown away | Dumping | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|---------------------|-------------------|-------------|---------|------------------------------|
| 1      | Kasaragod | Panchayath         | Average                    | 1                   | 1                 | 2           | 1       | 1                            |
| 2      |           |                    | Sample Households          | 534                 | 143               | 7           | 98      | 137                          |
| 3      |           |                    | Estimated No of Households | 13,331              | 3,571             | 175         | 2,457   | 3,428                        |
| 4      |           | Municipality       | Average                    | 1                   | 1                 | 1           | 1       | 1                            |
| 5      |           |                    | Sample Households          | 141                 | 9                 | 1           | 23      | 6                            |
| 6      |           |                    | Estimated No of Households | 2,360               | 151               | 17          | 385     | 100                          |
| 7      |           | Total              | Average                    | 1                   | 1                 | 2           | 1       | 1                            |
| 8      |           |                    | Sample Households          | 675                 | 152               | 8           | 121     | 143                          |
| 9      |           |                    | Estimated No of Households | 15,691              | 3,722             | 192         | 2,842   | 3,529                        |
| 10     | Kottayam  | Panchayath         | Average                    | 1                   | 1                 | 1           | 1       | 1                            |
| 11     |           |                    | Sample Households          | 2,291               | 984               | 40          | 1,768   | 376                          |
| 12     |           |                    | Estimated No of Households | 57,233              | 24,602            | 1,000       | 44,122  | 9,398                        |
| 13     |           | Municipality       | Average                    | 1                   | 1                 | 1           | 1       | 1                            |
| 14     |           |                    | Sample Households          | 538                 | 104               | 4           | 354     | 48                           |
| 15     |           |                    | Estimated No of Households | 8,965               | 1,732             | 66          | 5,899   | 800                          |
| 16     |           | Total              | Average                    | 1                   | 1                 | 1           | 1       | 1                            |
| 17     |           |                    | Sample Households          | 2,829               | 1,088             | 44          | 2,122   | 424                          |
| 18     |           |                    | Estimated No of Households | 66,199              | 26,334            | 1,066       | 50,021  | 10,198                       |

Table 25B: Average solid waste from households during 2014 and methods of disposal (in numbers)

Type: Unused TVs and computer monitors *NEW Type* (LED, LCD etc.).

| Sl No. | District  | Type of Local body | Statistics                 | Exchanged with shop | Sold out as Scrap | Thrown away | Dumping | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|---------------------|-------------------|-------------|---------|------------------------------|
| 1      | Kasaragod | Panchayath         | Average                    | 1                   | 1                 | 1           | 1       | 1                            |
| 2      |           |                    | Sample Households          | 131                 | 41                | 14          | 67      | 17                           |
| 3      |           |                    | Estimated No of Households | 3,273               | 1,027             | 351         | 1,678   | 425                          |
| 4      |           | Municipality       | Average                    | 1                   | 1                 | 1           | 1       | 0                            |
| 5      |           |                    | Sample Households          | 20                  | 2                 | 1           | 7       | 0                            |
| 6      |           |                    | Estimated No of Households | 335                 | 33                | 17          | 117     | 0                            |
| 7      |           | Total              | Average                    | 1                   | 1                 | 1           | 1       | 1                            |
| 8      |           |                    | Sample Households          | 151                 | 43                | 15          | 74      | 17                           |
| 9      |           |                    | Estimated No of Households | 3,608               | 1,060             | 367         | 1,795   | 425                          |
| 10     | Kottayam  | Panchayath         | Average                    | 1                   | 1                 | 1           | 1       | 2                            |
| 11     |           |                    | Sample Households          | 1,178               | 198               | 14          | 554     | 133                          |
| 12     |           |                    | Estimated No of Households | 29,405              | 4,930             | 350         | 13,853  | 3,320                        |
| 13     |           | Municipality       | Average                    | 1                   | 1                 | 2           | 1       | 1                            |
| 14     |           |                    | Sample Households          | 182                 | 11                | 2           | 61      | 25                           |
| 15     |           |                    | Estimated No of Households | 3,031               | 183               | 33          | 1,015   | 416                          |
| 16     |           | Total              | Average                    | 1                   | 1                 | 1           | 1       | 1                            |
| 17     |           |                    | Sample Households          | 1,360               | 209               | 16          | 615     | 158                          |
| 18     |           |                    | Estimated No of Households | 32,437              | 5,113             | 383         | 14,868  | 3,736                        |

Table 25C: Estimated waste from households during 2014 and methods of disposal (in numbers)

Type: Unused electronic items such as computers, printers, PCBs, Laptops, Camera etc.

| Sl No. | District  | Type of Local body | Statistics                 | Exchanged with shop | Sold out as Scrap | Thrown away | Dumping | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|---------------------|-------------------|-------------|---------|------------------------------|
| 1      | Kasaragod | Panchayath         | Estimated Value (00 No's)  | 17                  | 22                | 17          | 91      | 9                            |
| 2      |           |                    | Sample Households          | 66                  | 46                | 36          | 250     | 28                           |
| 3      |           |                    | Estimated No of Households | 1,648               | 1,148             | 899         | 6,235   | 700                          |
| 4      |           | Municipality       | Estimated Value (00 No's)  | 6                   | 2                 | 0           | 6       | 0                            |
| 5      |           |                    | Sample Households          | 38                  | 11                | 0           | 31      | 2                            |
| 6      |           |                    | Estimated No of Households | 636                 | 184               | 0           | 519     | 33                           |
| 7      |           | Total              | Estimated Value (00 No's)  | 24                  | 24                | 17          | 97      | 9                            |
| 8      |           |                    | Sample Households          | 104                 | 57                | 36          | 281     | 30                           |
| 9      |           |                    | Estimated No of Households | 2,284               | 1,332             | 899         | 6,753   | 733                          |
| 10     | Kottayam  | Panchayath         | Estimated Value (00 No's)  | 155                 | 53                | 54          | 447     | 85                           |
| 11     |           |                    | Sample Households          | 497                 | 146               | 119         | 1,282   | 249                          |
| 12     |           |                    | Estimated No of Households | 12,406              | 3,642             | 2,971       | 32,025  | 6,216                        |
| 13     |           | Municipality       | Estimated Value (00 No's)  | 20                  | 6                 | 5           | 57      | 4                            |
| 14     |           |                    | Sample Households          | 120                 | 29                | 9           | 289     | 22                           |
| 15     |           |                    | Estimated No of Households | 1,998               | 482               | 150         | 4,812   | 367                          |
| 16     |           | Total              | Estimated Value (00 No's)  | 176                 | 59                | 60          | 505     | 89                           |
| 17     |           |                    | Sample Households          | 617                 | 175               | 128         | 1,571   | 271                          |
| 18     |           |                    | Estimated No of Households | 14,405              | 4,124             | 3,121       | 36,837  | 6,582                        |

Table 25D: Estimated solid waste from households during 2014 and methods of disposal (in numbers)

Type: Video/CD/DVD/Cassettes and Players, stereo equipment etc.

| Sl No. | District  | Type of Local body | Statistics                 | Exchanged with shop | Sold out as Scrap | Thrown away | Dumping  | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|---------------------|-------------------|-------------|----------|------------------------------|
| 1      | Kasaragod | Panchayath         | Estimated Value (00 No's)  | 33                  | 317               | 818         | 1,513    | 59                           |
| 2      |           |                    | Sample Households          | 123                 | 372               | 823         | 1,199    | 46                           |
| 3      |           |                    | Estimated No of Households | 3,069               | 9,277             | 20,573      | 29,945   | 1,151                        |
| 4      |           | Municipality       | Estimated Value (00 No's)  | 9                   | 38                | 175         | 219      | 1                            |
| 5      |           |                    | Sample Households          | 53                  | 106               | 530         | 546      | 2                            |
| 6      |           |                    | Estimated No of Households | 888                 | 1,776             | 8,861       | 9,139    | 33                           |
| 7      |           | Total              | Estimated Value (00 No's)  | 42                  | 355               | 993         | 1,732    | 59                           |
| 8      |           |                    | Sample Households          | 176                 | 478               | 1,353       | 1,745    | 48                           |
| 9      |           |                    | Estimated No of Households | 3,956               | 11,053            | 29,434      | 39,083   | 1,185                        |
| 10     | Kottayam  | Panchayath         | Estimated Value (00 No's)  | 276                 | 1,076             | 3,618       | 10,425   | 1,282                        |
| 11     |           |                    | Sample Households          | 690                 | 770               | 2,992       | 6,460    | 1,173                        |
| 12     |           |                    | Estimated No of Households | 17,271              | 19,214            | 74,762      | 1,61,398 | 29,303                       |
| 13     |           | Municipality       | Estimated Value (00 No's)  | 37                  | 121               | 557         | 2,184    | 155                          |
| 14     |           |                    | Sample Households          | 188                 | 327               | 634         | 2,152    | 307                          |
| 15     |           |                    | Estimated No of Households | 3,135               | 5,443             | 10,555      | 35,856   | 5,126                        |
| 16     |           | Total              | Estimated Value (00 No's)  | 313                 | 1,197             | 4,175       | 12,609   | 1,437                        |
| 17     |           |                    | Sample Households          | 878                 | 1,097             | 3,626       | 8,612    | 1,480                        |
| 18     |           |                    | Estimated No of Households | 20,406              | 24,657            | 85,317      | 1,97,254 | 34,429                       |

Table 25E: Estimated waste from households during 2014 and methods of disposal (in numbers)

Type: Unused telephone/cell phones etc.

| Sl No. | District  | Type of Local body | Statistics                 | Exchanged with shop | Sold out as Scrap | Thrown away | Dumping  | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|---------------------|-------------------|-------------|----------|------------------------------|
| 1      | Kasaragod | Panchayath         | Estimated Value (00 No's)  | 165                 | 182               | 63          | 251      | 18                           |
| 2      |           |                    | Sample Households          | 575                 | 552               | 193         | 792      | 66                           |
| 3      |           |                    | Estimated No of Households | 14,344              | 13,758            | 4,822       | 19,781   | 1,650                        |
| 4      |           | Municipality       | Estimated Value (00 No's)  | 16                  | 18                | 3           | 32       | 0                            |
| 5      |           |                    | Sample Households          | 95                  | 83                | 10          | 172      | 1                            |
| 6      |           |                    | Estimated No of Households | 1,591               | 1,391             | 167         | 2,878    | 17                           |
| 7      |           | Total              | Estimated Value (00 No's)  | 181                 | 200               | 66          | 283      | 18                           |
| 8      |           |                    | Sample Households          | 670                 | 635               | 203         | 964      | 67                           |
| 9      |           |                    | Estimated No of Households | 15,935              | 15,148            | 4,989       | 22,659   | 1,667                        |
| 10     | Kottayam  | Panchayath         | Estimated Value (00 No's)  | 506                 | 152               | 360         | 1,999    | 196                          |
| 11     |           |                    | Sample Households          | 1,763               | 486               | 1,157       | 5,949    | 653                          |
| 12     |           |                    | Estimated No of Households | 44,105              | 12,126            | 28,857      | 1,48,486 | 16,305                       |
| 13     |           | Municipality       | Estimated Value (00 No's)  | 105                 | 32                | 13          | 251      | 24                           |
| 14     |           |                    | Sample Households          | 624                 | 186               | 67          | 1,295    | 134                          |
| 15     |           |                    | Estimated No of Households | 10,394              | 3,097             | 1,114       | 21,574   | 2,233                        |
| 16     |           | Total              | Estimated Value (00 No's)  | 611                 | 184               | 373         | 2,250    | 220                          |
| 17     |           |                    | Sample Households          | 2,387               | 672               | 1,224       | 7,244    | 787                          |
| 18     |           |                    | Estimated No of Households | 54,499              | 15,223            | 29,970      | 1,70,061 | 18,538                       |

Table 25F: Estimated waste from households during 2014 and methods of disposal (in numbers)

Type: Unused invertors, cell phone charger, emergency lights, electronic choke etc.

| Sl No. | District  | Type of Local body | Statistics                 | Exchanged with shop | Sold out as Scrap | Thrown away | Dumping  | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|---------------------|-------------------|-------------|----------|------------------------------|
| 1      | Kasaragod | Panchayath         | Estimated Value (00 No's)  | 73                  | 407               | 256         | 602      | 14                           |
| 2      |           |                    | Sample Households          | 266                 | 1,239             | 609         | 1,774    | 48                           |
| 3      |           |                    | Estimated No of Households | 6,645               | 30,902            | 15,215      | 44,366   | 1,200                        |
| 4      |           | Municipality       | Estimated Value (00 No's)  | 7                   | 58                | 162         | 127      | 1                            |
| 5      |           |                    | Sample Households          | 40                  | 262               | 496         | 551      | 2                            |
| 6      |           |                    | Estimated No of Households | 669                 | 4,388             | 8,292       | 9,218    | 34                           |
| 7      |           | Total              | Estimated Value (00 No's)  | 79                  | 465               | 418         | 729      | 14                           |
| 8      |           |                    | Sample Households          | 306                 | 1,501             | 1,105       | 2,325    | 50                           |
| 9      |           |                    | Estimated No of Households | 7,315               | 35,289            | 23,507      | 53,584   | 1,233                        |
| 10     | Kottayam  | Panchayath         | Estimated Value (00 No's)  | 370                 | 326               | 700         | 3,332    | 268                          |
| 11     |           |                    | Sample Households          | 1,223               | 779               | 1,952       | 8,506    | 758                          |
| 12     |           |                    | Estimated No of Households | 30,597              | 19,483            | 48,743      | 2,12,477 | 18,931                       |
| 13     |           | Municipality       | Estimated Value (00 No's)  | 51                  | 47                | 100         | 450      | 30                           |
| 14     |           |                    | Sample Households          | 295                 | 196               | 352         | 1,699    | 156                          |
| 15     |           |                    | Estimated No of Households | 4,911               | 3,261             | 5,856       | 28,294   | 2,604                        |
| 16     |           | Total              | Estimated Value (00 No's)  | 421                 | 374               | 800         | 3,783    | 297                          |
| 17     |           |                    | Sample Households          | 1,518               | 975               | 2,304       | 10,205   | 914                          |
| 18     |           |                    | Estimated No of Households | 35,508              | 22,744            | 54,600      | 2,40,770 | 21,536                       |

Table 25G: Estimated waste from households during 2014 and methods of disposal (in numbers)

Type: Electric equipments like mixer grinder, refrigerator, washing machine, AC, pump set, fan etc.

| Sl No. | District  | Type of Local body | Statistics                 | Exchanged with shop | Sold out as Scrap | Thrown away | Dumping  | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|---------------------|-------------------|-------------|----------|------------------------------|
| 1      | Kasaragod | Panchayath         | Estimated Value (00 No's)  | 228                 | 413               | 34          | 188      | 45                           |
| 2      |           |                    | Sample Households          | 848                 | 1,231             | 89          | 550      | 152                          |
| 3      |           |                    | Estimated No of Households | 21,181              | 30,704            | 2,226       | 13,774   | 3,805                        |
| 4      |           | Municipality       | Estimated Value (00 No's)  | 89                  | 14                | 2           | 46       | 1                            |
| 5      |           |                    | Sample Households          | 521                 | 83                | 6           | 261      | 3                            |
| 6      |           |                    | Estimated No of Households | 8,719               | 1,390             | 100         | 4,365    | 50                           |
| 7      |           | Total              | Estimated Value (00 No's)  | 316                 | 427               | 35          | 234      | 45                           |
| 8      |           |                    | Sample Households          | 1,369               | 1,314             | 95          | 811      | 155                          |
| 9      |           |                    | Estimated No of Households | 29,900              | 32,094            | 2,327       | 18,140   | 3,855                        |
| 10     | Kottayam  | Panchayath         | Estimated Value (00 No's)  | 1,580               | 523               | 76          | 1,358    | 186                          |
| 11     |           |                    | Sample Households          | 5,156               | 1,442             | 200         | 3,918    | 620                          |
| 12     |           |                    | Estimated No of Households | 1,28,857            | 36,070            | 5,004       | 97,938   | 15,505                       |
| 13     |           | Municipality       | Estimated Value (00 No's)  | 175                 | 64                | 5           | 254      | 38                           |
| 14     |           |                    | Sample Households          | 970                 | 363               | 27          | 1,298    | 199                          |
| 15     |           |                    | Estimated No of Households | 16,157              | 6,043             | 449         | 21,608   | 3,315                        |
| 16     |           | Total              | Estimated Value (00 No's)  | 1,755               | 587               | 81          | 1,612    | 224                          |
| 17     |           |                    | Sample Households          | 6,126               | 1,805             | 227         | 5,216    | 819                          |
| 18     |           |                    | Estimated No of Households | 1,45,014            | 42,113            | 5,453       | 1,19,546 | 18,820                       |

**Plastic Waste**

Table 26A: Average waste from households during 2014 and methods of disposal (in numbers)

Type: Carry bags with thickness below 40 microns.

| Sl No. | District  | Type of Local body | Statistics                 | Sold out as Scrap | Thrown away | Dumping  | Burning  |
|--------|-----------|--------------------|----------------------------|-------------------|-------------|----------|----------|
| 1      | Kasaragod | Panchayath         | Average                    | 66                | 64          | 61       | 135      |
| 2      |           |                    | Sample Households          | 223               | 4,113       | 4,796    | 7,294    |
| 3      |           |                    | Estimated No of Households | 5,583             | 1,02,753    | 1,19,813 | 1,82,286 |
| 4      |           | Municipality       | Average                    | 56                | 30          | 26       | 112      |
| 5      |           |                    | Sample Households          | 23                | 1,074       | 1,370    | 2,015    |
| 6      |           |                    | Estimated No of Households | 385               | 17,957      | 22,922   | 33,709   |
| 7      |           | Total              | Average                    | 65                | 57          | 53       | 130      |
| 8      |           |                    | Sample Households          | 246               | 5,187       | 6,166    | 9,309    |
| 9      |           |                    | Estimated No of Households | 5,968             | 1,20,710    | 1,42,734 | 2,15,995 |
| 10     | Kottayam  | Panchayath         | Average                    | 23                | 41          | 28       | 142      |
| 11     |           |                    | Sample Households          | 1,905             | 12,461      | 12,267   | 16,348   |
| 12     |           |                    | Estimated No of Households | 47,596            | 3,11,392    | 3,06,558 | 4,08,307 |
| 13     |           | Municipality       | Average                    | 59                | 64          | 38       | 114      |
| 14     |           |                    | Sample Households          | 1,025             | 2,416       | 2,446    | 3,247    |
| 15     |           |                    | Estimated No of Households | 17,081            | 40,212      | 40,743   | 54,070   |
| 16     |           | Total              | Average                    | 35                | 45          | 30       | 137      |
| 17     |           |                    | Sample Households          | 2,930             | 14,877      | 14,713   | 19,595   |
| 18     |           |                    | Estimated No of Households | 64,677            | 3,51,603    | 3,47,302 | 4,62,377 |



Table 26B: Average waste from households during 2014 and methods of disposal (in numbers)

Type: Plastic materials such as carry bags, Unusable grow bags etc.

| Sl No. | District  | Type of Local body | Statistics                 | Sold out as Scrap | Thrown away | Dumping  | Burning  |
|--------|-----------|--------------------|----------------------------|-------------------|-------------|----------|----------|
| 1      | Kasaragod | Panchayath         | Average                    | 18                | 23          | 22       | 41       |
| 2      |           |                    | Sample Households          | 210               | 2,696       | 4,110    | 5,493    |
| 3      |           |                    | Estimated No of Households | 5,252             | 67,320      | 1,02,715 | 1,37,296 |
| 4      |           | Municipality       | Average                    | 18                | 24          | 21       | 83       |
| 5      |           |                    | Sample Households          | 41                | 864         | 883      | 996      |
| 6      |           |                    | Estimated No of Households | 685               | 14,443      | 14,776   | 16,671   |
| 7      |           | Total              | Average                    | 18                | 23          | 22       | 47       |
| 8      |           |                    | Sample Households          | 251               | 3,560       | 4,993    | 6,489    |
| 9      |           |                    | Estimated No of Households | 5,938             | 81,762      | 1,17,492 | 1,53,967 |
| 10     | Kottayam  | Panchayath         | Average                    | 13                | 20          | 16       | 63       |
| 11     |           |                    | Sample Households          | 2,338             | 8,298       | 12,354   | 12,646   |
| 12     |           |                    | Estimated No of Households | 58,378            | 2,07,423    | 3,08,628 | 3,15,837 |
| 13     |           | Municipality       | Average                    | 32                | 65          | 26       | 72       |
| 14     |           |                    | Sample Households          | 1,237             | 1,384       | 2,220    | 2,395    |
| 15     |           |                    | Estimated No of Households | 20,614            | 23,031      | 36,963   | 39,895   |
| 16     |           | Total              | Average                    | 19                | 26          | 17       | 64       |
| 17     |           |                    | Sample Households          | 3,575             | 9,682       | 14,574   | 15,041   |
| 18     |           |                    | Estimated No of Households | 78,992            | 2,30,454    | 3,45,591 | 3,55,732 |

Table 26C: Average waste from households during 2014 and methods of disposal (in numbers)

Type: Unused plastic toys.

| Sl No. | District  | Type of Local body | Statistics                 | Sold out as Scrap | Thrown away | Dumping  | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|-------------------|-------------|----------|------------------------------|
| 1      | Kasaragod | Panchayath         | Average                    | 6                 | 4           | 5        | 5                            |
| 2      |           |                    | Sample Households          | 932               | 704         | 721      | 27                           |
| 3      |           |                    | Estimated No of Households | 23,273            | 17,580      | 18,031   | 676                          |
| 4      |           | Municipality       | Average                    | 3                 | 2           | 2        | 2                            |
| 5      |           |                    | Sample Households          | 271               | 330         | 214      | 13                           |
| 6      |           |                    | Estimated No of Households | 4,539             | 5,516       | 3,581    | 218                          |
| 7      |           | Total              | Average                    | 5                 | 3           | 4        | 4                            |
| 8      |           |                    | Sample Households          | 1,203             | 1,034       | 935      | 40                           |
| 9      |           |                    | Estimated No of Households | 27,812            | 23,096      | 21,612   | 894                          |
| 10     | Kottayam  | Panchayath         | Average                    | 4                 | 3           | 7        | 3                            |
| 11     |           |                    | Sample Households          | 1,394             | 1,718       | 3,589    | 538                          |
| 12     |           |                    | Estimated No of Households | 34,820            | 42,907      | 89,672   | 13,443                       |
| 13     |           | Municipality       | Average                    | 5                 | 3           | 5        | 5                            |
| 14     |           |                    | Sample Households          | 251               | 369         | 722      | 119                          |
| 15     |           |                    | Estimated No of Households | 4,178             | 6,142       | 12,033   | 1,985                        |
| 16     |           | Total              | Average                    | 4                 | 3           | 6        | 4                            |
| 17     |           |                    | Sample Households          | 1,645             | 2,087       | 4,311    | 657                          |
| 18     |           |                    | Estimated No of Households | 38,997            | 49,049      | 1,01,705 | 15,428                       |

Table 26D: Estimated waste from households during 2014 and methods of disposal (in Kg.)

Type: Plastic items such as water/beverage bottles, buckets, furniture etc.

| Sl No. | District  | Type of Local body | Statistics                 | Exchanged with shop | Sold out as Scrap | Thrown away | Dumping  | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|---------------------|-------------------|-------------|----------|------------------------------|
| 1      | Kasaragod | Panchayath         | Estimated Value (00 Kgs)   | 14                  | 2,186             | 324         | 752      | 108                          |
| 2      |           |                    | Sample Households          | 39                  | 3,683             | 763         | 1,501    | 199                          |
| 3      |           |                    | Estimated No of Households | 976                 | 92,029            | 19,086      | 37,513   | 4,976                        |
| 4      |           | Municipality       | Estimated Value (00 Kgs)   | 1                   | 288               | 7           | 131      | 0                            |
| 5      |           |                    | Sample Households          | 2                   | 1,369             | 18          | 618      | 1                            |
| 6      |           |                    | Estimated No of Households | 34                  | 22,900            | 301         | 10,333   | 17                           |
| 7      |           | Total              | Estimated Value (00 Kgs)   | 15                  | 2,474             | 331         | 883      | 108                          |
| 8      |           |                    | Sample Households          | 41                  | 5,052             | 781         | 2,119    | 200                          |
| 9      |           |                    | Estimated No of Households | 1,010               | 1,14,929          | 19,387      | 47,846   | 4,992                        |
| 10     | Kottayam  | Panchayath         | Estimated Value (00 Kgs)   | 40                  | 6,872             | 372         | 2,464    | 521                          |
| 11     |           |                    | Sample Households          | 77                  | 9,887             | 1,494       | 5,694    | 1,227                        |
| 12     |           |                    | Estimated No of Households | 1,924               | 2,46,926          | 37,323      | 1,42,299 | 30,689                       |
| 13     |           | Municipality       | Estimated Value (00 Kgs)   | 2                   | 1,235             | 69          | 361      | 96                           |
| 14     |           |                    | Sample Households          | 7                   | 2,254             | 378         | 1,435    | 171                          |
| 15     |           |                    | Estimated No of Households | 117                 | 37,536            | 6,288       | 23,905   | 2,859                        |
| 16     |           | Total              | Estimated Value (00 Kgs)   | 42                  | 8,107             | 441         | 2,825    | 617                          |
| 17     |           |                    | Sample Households          | 84                  | 12,141            | 1,872       | 7,129    | 1,398                        |
| 18     |           |                    | Estimated No of Households | 2,040               | 2,84,462          | 43,611      | 1,66,204 | 33,548                       |

Table 26E: Estimated waste from households during 2014 and methods of disposal (in Kg.)

Type: PVC items such as pipes, silpaulin sheets, footwear etc.

| Sl No. | District  | Type of Local body | Statistics                 | Sold out as Scrap | Thrown away | Dumping  | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|-------------------|-------------|----------|------------------------------|
| 1      | Kasaragod | Panchayath         | Estimated Value (00 Kgs)   | 892               | 231         | 1,022    | 109                          |
| 2      |           |                    | Sample Households          | 2,085             | 768         | 2,248    | 202                          |
| 3      |           |                    | Estimated No of Households | 52,014            | 19,198      | 56,252   | 5,054                        |
| 4      |           | Municipality       | Estimated Value (00 Kgs)   | 314               | 17          | 152      | 4                            |
| 5      |           |                    | Sample Households          | 1,136             | 108         | 661      | 31                           |
| 6      |           |                    | Estimated No of Households | 19,002            | 1,806       | 11,056   | 518                          |
| 7      |           | Total              | Estimated Value (00 Kgs)   | 1,205             | 248         | 1,173    | 113                          |
| 8      |           |                    | Sample Households          | 3,221             | 876         | 2,909    | 233                          |
| 9      |           |                    | Estimated No of Households | 71,016            | 21,004      | 67,308   | 5,572                        |
| 10     | Kottayam  | Panchayath         | Estimated Value (00 Kgs)   | 1,243             | 907         | 2,849    | 497                          |
| 11     |           |                    | Sample Households          | 3,268             | 2,998       | 7,835    | 736                          |
| 12     |           |                    | Estimated No of Households | 81,681            | 74,845      | 1,95,774 | 18,372                       |
| 13     |           | Municipality       | Estimated Value (00 Kgs)   | 114               | 232         | 717      | 9                            |
| 14     |           |                    | Sample Households          | 530               | 934         | 2,030    | 29                           |
| 15     |           |                    | Estimated No of Households | 8,811             | 15,544      | 33,818   | 484                          |
| 16     |           | Total              | Estimated Value (00 Kgs)   | 1,357             | 1,138       | 3,566    | 506                          |
| 17     |           |                    | Sample Households          | 3,798             | 3,932       | 9,865    | 765                          |
| 18     |           |                    | Estimated No of Households | 90,492            | 90,389      | 2,29,592 | 18,856                       |

**Other Dry Waste**

Table 27: Estimated waste from households during 2014 and methods of disposal (in Kg.)

Type: Metals such as GI Pipe, Vehicle Spares, Kitchen Articles etc.

| Sl No. | District  | Type of Local body | Statistics                 | Sold out as Scrap | Thrown away | Dumping  | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|-------------------|-------------|----------|------------------------------|
| 1      | Kasaragod | Panchayath         | Estimated Value (00 Kgs)   | 529               | 96          | 212      | 17                           |
| 2      |           |                    | Sample Households          | 1,078             | 277         | 575      | 34                           |
| 3      |           |                    | Estimated No of Households | 26,903            | 6,924       | 14,383   | 850                          |
| 4      |           | Municipality       | Estimated Value (00 Kgs)   | 27                | 93          | 73       | 0                            |
| 5      |           |                    | Sample Households          | 114               | 466         | 382      | 1                            |
| 6      |           |                    | Estimated No of Households | 1,911             | 7,791       | 6,393    | 17                           |
| 7      |           | Total              | Estimated Value (00 Kgs)   | 557               | 189         | 285      | 17                           |
| 8      |           |                    | Sample Households          | 1,192             | 743         | 957      | 35                           |
| 9      |           |                    | Estimated No of Households | 28,814            | 14,715      | 20,775   | 866                          |
| 10     | Kottayam  | Panchayath         | Estimated Value (00 Kgs)   | 2,703             | 200         | 2,599    | 142                          |
| 11     |           |                    | Sample Households          | 4,739             | 640         | 4,325    | 276                          |
| 12     |           |                    | Estimated No of Households | 1,18,417          | 15,989      | 1,08,013 | 6,900                        |
| 13     |           | Municipality       | Estimated Value (00 Kgs)   | 216               | 7           | 230      | 84                           |
| 14     |           |                    | Sample Households          | 595               | 32          | 962      | 302                          |
| 15     |           |                    | Estimated No of Households | 9,905             | 531         | 16,017   | 5,033                        |
| 16     |           | Total              | Estimated Value (00 Kgs)   | 2,919             | 207         | 2,829    | 227                          |
| 17     |           |                    | Sample Households          | 5,334             | 672         | 5,287    | 578                          |
| 18     |           |                    | Estimated No of Households | 1,28,322          | 16,520      | 1,24,030 | 11,933                       |

Table 28: Estimated waste from households during 2014 and methods of disposal (in Kg.)

Type: Broken glass (mirrors, glass plates, drinking glasses, aquariums, etc.)

| Sl No. | District  | Type of Local body | Statistics                 | Sold out as Scrap | Thrown away | Dumping  |
|--------|-----------|--------------------|----------------------------|-------------------|-------------|----------|
| 1      | Kasaragod | Panchayath         | Estimated Value (00 Kgs)   | 86                | 423         | 1,286    |
| 2      |           |                    | Sample Households          | 256               | 1,323       | 3,223    |
| 3      |           |                    | Estimated No of Households | 6,399             | 33,070      | 80,537   |
| 4      |           | Municipality       | Estimated Value (00 Kgs)   | 82                | 119         | 176      |
| 5      |           |                    | Sample Households          | 424               | 563         | 911      |
| 6      |           |                    | Estimated No of Households | 7,093             | 9,413       | 15,248   |
| 7      |           | Total              | Estimated Value (00 Kgs)   | 168               | 542         | 1,461    |
| 8      |           |                    | Sample Households          | 680               | 1,886       | 4,134    |
| 9      |           |                    | Estimated No of Households | 13,492            | 42,483      | 95,785   |
| 10     | Kottayam  | Panchayath         | Estimated Value (00 Kgs)   | 832               | 564         | 2,080    |
| 11     |           |                    | Sample Households          | 1,733             | 2,325       | 8,189    |
| 12     |           |                    | Estimated No of Households | 43,280            | 58,050      | 2,04,621 |
| 13     |           | Municipality       | Estimated Value (00 Kgs)   | 23                | 175         | 435      |
| 14     |           |                    | Sample Households          | 76                | 624         | 1,922    |
| 15     |           |                    | Estimated No of Households | 1,265             | 10,378      | 32,022   |
| 16     |           | Total              | Estimated Value (00 Kgs)   | 854               | 738         | 2,515    |
| 17     |           |                    | Sample Households          | 1,809             | 2,949       | 10,111   |
| 18     |           |                    | Estimated No of Households | 44,545            | 68,427      | 2,36,643 |

Table 29: Estimated waste from households during 2014 and methods of disposal (in numbers.)

Type: Incandescent (standard) light bulbs /florescent lights, CFL & LED lights

| District  | Type of Local body | Statistics                 | To Scrap | Thrown away | Dumping  |
|-----------|--------------------|----------------------------|----------|-------------|----------|
| Kasaragod | Panchayath         | Estimated Value (00 No's)  | 149      | 1,733       | 3,548    |
|           |                    | Sample Households          | 255      | 2,339       | 4,458    |
|           |                    | Estimated No of Households | 6,373    | 58,438      | 1,11,428 |
|           | Municipality       | Estimated Value (00 No's)  | 5        | 302         | 315      |
|           |                    | Sample Households          | 15       | 944         | 997      |
|           |                    | Estimated No of Households | 251      | 15,779      | 16,687   |
|           | Total              | Estimated Value (00 No's)  | 154      | 2,035       | 3,863    |
|           |                    | Sample Households          | 270      | 3,283       | 5,455    |
|           |                    | Estimated No of Households | 6,624    | 74,218      | 1,28,116 |
| Kottayam  | Panchayath         | Estimated Value (00 No's)  | 475      | 4,788       | 6,781    |
|           |                    | Sample Households          | 1,011    | 8,129       | 9,942    |
|           |                    | Estimated No of Households | 25,276   | 2,03,132    | 2,48,508 |
|           | Municipality       | Estimated Value (00 No's)  | 28       | 630         | 1,437    |
|           |                    | Sample Households          | 58       | 1,553       | 2,452    |
|           |                    | Estimated No of Households | 964      | 25,866      | 40,837   |
|           | Total              | Estimated Value (00 No's)  | 503      | 5,418       | 8,218    |
|           |                    | Sample Households          | 1,069    | 9,682       | 12,394   |
|           |                    | Estimated No of Households | 26,240   | 2,28,998    | 2,89,345 |

Table 30: Estimated waste from households during 2014 and methods of disposal (in Kg.)

Type: Bulky items such as non-plastic furniture, mattresses, carpet

| SI No. | District  | Type of Local body | Statistics                 | Exchanged with shop | Sold out as Scrap | Thrown away | Dumping | Burning | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|---------------------|-------------------|-------------|---------|---------|------------------------------|
| 1      | Kasaragod | Panchayath         | Estimated Value (00 Kgs)   | 3                   | 113               | 142         | 531     | 854     | 97                           |
| 2      |           |                    | Sample Households          | 7                   | 227               | 310         | 626     | 925     | 117                          |
| 3      |           |                    | Estimated No of Households | 175                 | 5,665             | 7,746       | 15,645  | 23,087  | 2,922                        |
| 4      |           | Municipality       | Estimated Value (00 Kgs)   | 0                   | 32                | 20          | 66      | 0       | 0                            |
| 5      |           |                    | Sample Households          | 0                   | 142               | 105         | 186     | 0       | 0                            |
| 6      |           |                    | Estimated No of Households | 0                   | 2,376             | 1,754       | 3,109   | 0       | 0                            |
| 7      |           | Total              | Estimated Value (00 Kgs)   | 3                   | 145               | 161         | 596     | 854     | 97                           |
| 8      |           |                    | Sample Households          | 7                   | 369               | 415         | 812     | 925     | 117                          |
| 9      |           |                    | Estimated No of Households | 175                 | 8,041             | 9,500       | 18,754  | 23,087  | 2,922                        |
| 10     | Kottayam  | Panchayath         | Estimated Value (00 Kgs)   | 69                  | 397               | 264         | 2,711   | 1,298   | 528                          |
| 11     |           |                    | Sample Households          | 157                 | 521               | 485         | 2,430   | 1,835   | 523                          |
| 12     |           |                    | Estimated No of Households | 3,914               | 13,020            | 12,099      | 60,677  | 45,859  | 13,074                       |
| 13     |           | Municipality       | Estimated Value (00 Kgs)   | 9                   | 33                | 14          | 277     | 222     | 102                          |
| 14     |           |                    | Sample Households          | 15                  | 48                | 30          | 636     | 639     | 161                          |
| 15     |           |                    | Estimated No of Households | 250                 | 799               | 498         | 10,593  | 10,645  | 2,690                        |
| 16     |           | Total              | Estimated Value (00 Kgs)   | 78                  | 431               | 279         | 2,988   | 1,521   | 630                          |
| 17     |           |                    | Sample Households          | 172                 | 569               | 515         | 3,066   | 2,474   | 684                          |
| 18     |           |                    | Estimated No of Households | 4,163               | 13,820            | 12,598      | 71,270  | 56,504  | 15,763                       |



Table 31: Estimated waste from households during 2014 and methods of disposal (in No's.)

Type: Unusable tyres of cycle and motor vehicles

| SI No. | District  | Type of Local body | Statistics                 | Exchanged with shop | Sold out as Scrap | Thrown away | Dumping | Burning | Given to others free of cost |
|--------|-----------|--------------------|----------------------------|---------------------|-------------------|-------------|---------|---------|------------------------------|
| 1      | Kasaragod | Panchayath         | Estimated Value (00 No's)  | 33                  | 89                | 104         | 185     | 152     | 22                           |
| 2      |           |                    | Sample Households          | 81                  | 200               | 246         | 393     | 302     | 51                           |
| 3      |           |                    | Estimated No of Households | 2,025               | 4,976             | 6,162       | 9,851   | 7,530   | 1,276                        |
| 4      |           | Municipality       | Estimated Value (00 No's)  | 0                   | 1                 | 1           | 2       | 0       | 0                            |
| 5      |           |                    | Sample Households          | 0                   | 6                 | 3           | 10      | 0       | 0                            |
| 6      |           |                    | Estimated No of Households | 0                   | 100               | 50          | 168     | 0       | 0                            |
| 7      |           | Total              | Estimated Value (00 No's)  | 33                  | 90                | 105         | 187     | 152     | 22                           |
| 8      |           |                    | Sample Households          | 81                  | 206               | 249         | 403     | 302     | 51                           |
| 9      |           |                    | Estimated No of Households | 2,025               | 5,077             | 6,212       | 10,019  | 7,530   | 1,276                        |
| 10     | Kottayam  | Panchayath         | Estimated Value (00 No's)  | 710                 | 223               | 31          | 459     | 37      | 220                          |
| 11     |           |                    | Sample Households          | 1,609               | 498               | 92          | 1,079   | 86      | 509                          |
| 12     |           |                    | Estimated No of Households | 40,232              | 12,466            | 2,301       | 26,952  | 2,149   | 12,711                       |
| 13     |           | Municipality       | Estimated Value (00 No's)  | 57                  | 15                | 36          | 91      | 3       | 27                           |
| 14     |           |                    | Sample Households          | 228                 | 77                | 185         | 438     | 19      | 112                          |
| 15     |           |                    | Estimated No of Households | 3,800               | 1,282             | 3,077       | 7,298   | 316     | 1,860                        |
| 16     |           | Total              | Estimated Value (00 No's)  | 767                 | 238               | 67          | 549     | 41      | 247                          |
| 17     |           |                    | Sample Households          | 1,837               | 575               | 277         | 1,517   | 105     | 621                          |
| 18     |           |                    | Estimated No of Households | 44,032              | 13,748            | 5,378       | 34,249  | 2,465   | 14,571                       |

Table 32A: Average approximate weight of recyclable materials sold out during 2014 (in Kg.)

Type: Newspapers, magazines &amp; other papers

| District  | Type of Local body | Statistics                 | Average Monthly Per Capita Expenditure (in Rupees) |                   |                   |                  |          |
|-----------|--------------------|----------------------------|--|-------------------|-------------------|------------------|----------|
|           |                    |                            | Below Rs.1100.00                                   | 1100.01 - 1500.00 | 1500.01 - 2000.00 | Above Rs.2000.00 | Total    |
| Kasaragod | Panchayath         | Average                    | 17.8   | 22.7              | 23.4              | 24.5             | 20.9     |
|           |                    | Sample Households          | 2,150  | 2,029             | 765               | 318              | 5,262    |
|           |                    | Estimated No of Households | 53,750   | 50,725            | 19,125            | 7,950            | 1,31,550 |
|           | Municipality       | Average                    | 20.3   | 19.9              | 20.6              | 19.0             | 20.1     |
|           |                    | Sample Households          | 662  | 520               | 296               | 222              | 1,700    |
|           |                    | Estimated No of Households | 11,254   | 8,840             | 5,032             | 3,774            | 28,900   |
|           | Total              | Average                    | 18.4   | 22.1              | 22.6              | 22.3             | 20.7     |
|           |                    | Sample Households          | 2,812  | 2,549             | 1,061             | 540              | 6,962    |
|           |                    | Estimated No of Households | 65,004   | 59,565            | 24,157            | 11,724           | 1,60,450 |
| Kottayam  | Panchayath         | Average                    | 20.1   | 21.0              | 21.4              | 22.4             | 21.3     |
|           |                    | Sample Households          | 1,900  | 4,473             | 4,511             | 3,369            | 14,253   |
|           |                    | Estimated No of Households | 47,500   | 1,11,825          | 1,12,775          | 84,225           | 3,56,325 |
|           | Municipality       | Average                    | 23.3   | 25.1              | 23.6              | 22.6             | 23.7     |
|           |                    | Sample Households          | 192  | 894               | 1,069             | 1,002            | 3,157    |
|           |                    | Estimated No of Households | 3,264  | 15,198            | 18,173            | 17,034           | 53,669   |
|           | Total              | Average                    | 20.4   | 21.7              | 21.8              | 22.4             | 21.7     |
|           |                    | Sample Households          | 2,092  | 5,367             | 5,580             | 4,371            | 17,410   |
|           |                    | Estimated No of Households | 50,764   | 1,27,023          | 1,30,948          | 1,01,259         | 4,09,994 |

Table 32 B: Average approximate weight of recyclable materials sold out during 2014 (in Kg.)

Type: Cardboard boxes

| District  | Type of Local body | Statistics                 | Average Monthly Per Capita Expenditure (in Rupees) |                   |                   |                  |        |
|-----------|--------------------|----------------------------|--|-------------------|-------------------|------------------|--------|
|           |                    |                            | Below Rs.1100.00                                   | 1100.01 - 1500.00 | 1500.01 - 2000.00 | Above Rs.2000.00 | Total  |
| Kasaragod | Panchayath         | Average                    | 1.7  | 1.8               | 2.2               | 2.7              | 1.8    |
|           |                    | Sample Households          | 532  | 338               | 153               | 39               | 1,062  |
|           |                    | Estimated No of Households | 13,300   | 8,450             | 3,825             | 975              | 26,550 |
|           | Municipality       | Average                    | 2.2  | 1.5               | 1.2               | 1.4              | 1.6    |
|           |                    | Sample Households          | 29   | 36                | 20                | 18               | 103    |
|           |                    | Estimated No of Households | 493  | 612               | 340               | 306              | 1,751  |
|           | Total              | Average                    | 1.7  | 1.8               | 2.1               | 2.3              | 1.8    |
|           |                    | Sample Households          | 561  | 374               | 173               | 57               | 1,165  |
|           |                    | Estimated No of Households | 13,793   | 9,062             | 4,165             | 1,281            | 28,301 |
| Kottayam  | Panchayath         | Average                    | 2.5  | 2.2               | 2.9               | 6.0              | 3.5    |
|           |                    | Sample Households          | 312  | 725               | 728               | 679              | 2,444  |
|           |                    | Estimated No of Households | 7,800  | 18,125            | 18,200            | 16,975           | 61,100 |
|           | Municipality       | Average                    | 2.7  | 2.5               | 2.5               | 2.4              | 2.5    |
|           |                    | Sample Households          | 114  | 433               | 429               | 428              | 1,404  |
|           |                    | Estimated No of Households | 1,938  | 7,361             | 7,293             | 7,276            | 23,868 |
|           | Total              | Average                    | 2.6  | 2.4               | 2.7               | 4.6              | 3.1    |
|           |                    | Sample Households          | 426  | 1,158             | 1,157             | 1,107            | 3,848  |
|           |                    | Estimated No of Households | 9,738  | 25,486            | 25,493            | 24,251           | 84,968 |

Table 32C: Average approximate weight of recyclable materials sold out during 2014 (in Kg.)

Type: Glass bottles and jars

| District  | Type of Local body | Statistics                 | Average Monthly Per Capita Expenditure (in Rupees) |                   |                   |                  |          |
|-----------|--------------------|----------------------------|--|-------------------|-------------------|------------------|----------|
|           |                    |                            | Below Rs.1100.00                                   | 1100.01 - 1500.00 | 1500.01 - 2000.00 | Above Rs.2000.00 | Total    |
| Kasaragod | Panchayath         | Average                    | 2.0  | 1.9               | 1.5               | 2.4              | 1.9      |
|           |                    | Sample Households          | 539  | 410               | 156               | 61               | 1,166    |
|           |                    | Estimated No of Households | 13,475   | 10,250            | 3,900             | 1,525            | 29,150   |
|           | Municipality       | Average                    | 1.4  | 1.4               | 1.4               | 1.2              | 1.4      |
|           |                    | Sample Households          | 467  | 307               | 125               | 47               | 946      |
|           |                    | Estimated No of Households | 7,939  | 5,219             | 2,125             | 799              | 16,082   |
|           | Total              | Average                    | 1.7  | 1.7               | 1.5               | 1.9              | 1.7      |
|           |                    | Sample Households          | 1,006  | 717               | 281               | 108              | 2,112    |
|           |                    | Estimated No of Households | 21,414   | 15,469            | 6,025             | 2,324            | 45,232   |
| Kottayam  | Panchayath         | Average                    | 2.2  | 2.2               | 2.5               | 3.5              | 2.6      |
|           |                    | Sample Households          | 503  | 1,250             | 1,350             | 958              | 4,061    |
|           |                    | Estimated No of Households | 12,575   | 31,250            | 33,750            | 23,950           | 1,01,525 |
|           | Municipality       | Average                    | 1.7  | 1.7               | 1.6               | 1.7              | 1.7      |
|           |                    | Sample Households          | 59   | 144               | 249               | 379              | 831      |
|           |                    | Estimated No of Households | 1,003  | 2,448             | 4,233             | 6,443            | 14,127   |
|           | Total              | Average                    | 2.1  | 2.2               | 2.4               | 3.0              | 2.5      |
|           |                    | Sample Households          | 562  | 1,394             | 1,599             | 1,337            | 4,892    |
|           |                    | Estimated No of Households | 13,578   | 33,698            | 37,983            | 30,393           | 1,15,652 |

Table 32 D: Average approximate weight of recyclable materials sold out during 2014 (in Kg.)

Type: Plastic items including bottles

| Sl No. | District  | Type of Local body | Statistics                 | Average Monthly Per Capita Expenditure (in Rupees) |                   |                   |                  |          |
|--------|-----------|--------------------|----------------------------|--|-------------------|-------------------|------------------|----------|
|        |           |                    |                            | Below Rs.1100.00                                   | 1100.01 - 1500.00 | 1500.01 - 2000.00 | Above Rs.2000.00 | Total    |
| 1      | Kasaragod | Panchayath         | Average                    | 2.3  | 2.6               | 2.4               | 2.5              | 2.4      |
| 2      |           |                    | Sample Households          | 1,906  | 1,832             | 607               | 238              | 4,583    |
| 3      |           |                    | Estimated No of Households | 47,650   | 45,800            | 15,175            | 5,950            | 1,14,575 |
| 4      |           | Municipality       | Average                    | 1.8  | 1.7               | 1.7               | 1.7              | 1.7      |
| 5      |           |                    | Sample Households          | 549  | 452               | 255               | 131              | 1,387    |
| 6      |           |                    | Estimated No of Households | 9,333  | 7,684             | 4,335             | 2,227            | 23,579   |
| 7      |           | Total              | Average                    | 2.2  | 2.4               | 2.2               | 2.2              | 2.3      |
| 8      |           |                    | Sample Households          | 2,455  | 2,284             | 862               | 369              | 5,970    |
| 9      |           |                    | Estimated No of Households | 56,983   | 53,484            | 19,510            | 8,177            | 1,38,154 |
| 10     | Kottayam  | Panchayath         | Average                    | 2.5  | 2.6               | 2.9               | 3.3              | 2.9      |
| 11     |           |                    | Sample Households          | 1,390  | 3,597             | 3,440             | 2,493            | 10,920   |
| 12     |           |                    | Estimated No of Households | 34,750   | 89,925            | 86,000            | 62,325           | 2,73,000 |
| 13     |           | Municipality       | Average                    | 3.8  | 3.8               | 3.4               | 2.8              | 3.4      |
| 14     |           |                    | Sample Households          | 206  | 860               | 1,017             | 825              | 2,908    |
| 15     |           |                    | Estimated No of Households | 3,502  | 14,620            | 17,289            | 14,025           | 49,436   |
| 16     |           | Total              | Average                    | 2.6  | 2.9               | 3.0               | 3.2              | 3.0      |
| 17     |           |                    | Sample Households          | 1,596  | 4,457             | 4,457             | 3,318            | 13,828   |
| 18     |           |                    | Estimated No of Households | 38,252   | 1,04,545          | 1,03,289          | 76,350           | 3,22,436 |

Table 32 E: Average approximate weight of recyclable materials sold out during 2014 (in Kg.)

Type: Tins and non-plastic cans

| District  | Type of Local body | Statistics                 | Average Monthly Per Capita Expenditure (in Rupees) |                   |                   |                  |          |
|-----------|--------------------|----------------------------|--|-------------------|-------------------|------------------|----------|
|           |                    |                            | Below Rs.1100.00                                   | 1100.01 - 1500.00 | 1500.01 - 2000.00 | Above Rs.2000.00 | Total    |
| Kasaragod | Panchayath         | Average                    | 2.1  | 2.2               | 2.2               | 2.7              | 2.2      |
|           |                    | Sample Households          | 1,093  | 939               | 302               | 146              | 2,480    |
|           |                    | Estimated No of Households | 27,325   | 23,475            | 7,550             | 3,650            | 62,000   |
|           | Municipality       | Average                    | 1.4  | 1.6               | 1.5               | 1.4              | 1.5      |
|           |                    | Sample Households          | 376  | 195               | 81                | 38               | 690      |
|           |                    | Estimated No of Households | 6,392  | 3,315             | 1,377             | 646              | 11,730   |
|           | Total              | Average                    | 1.9  | 2.1               | 2.1               | 2.4              | 2.0      |
|           |                    | Sample Households          | 1,469  | 1,134             | 383               | 184              | 3,170    |
|           |                    | Estimated No of Households | 33,717   | 26,790            | 8,927             | 4,296            | 73,730   |
| Kottayam  | Panchayath         | Average                    | 2.1  | 2.1               | 2.4               | 2.4              | 2.3      |
|           |                    | Sample Households          | 647  | 1,640             | 1,692             | 1,239            | 5,218    |
|           |                    | Estimated No of Households | 16,175   | 41,000            | 42,300            | 30,975           | 1,30,450 |
|           | Municipality       | Average                    | 2.3  | 2.9               | 2.2               | 2.4              | 2.5      |
|           |                    | Sample Households          | 107  | 301               | 346               | 400              | 1,154    |
|           |                    | Estimated No of Households | 1,819  | 5,117             | 5,882             | 6,800            | 19,618   |
|           | Total              | Average                    | 2.1  | 2.2               | 2.3               | 2.4              | 2.3      |
|           |                    | Sample Households          | 754  | 1,941             | 2,038             | 1,639            | 6,372    |
|           |                    | Estimated No of Households | 17,994   | 46,117            | 48,182            | 37,775           | 1,50,068 |

Table 32 F: Average approximate weight of recyclable materials sold out during 2014 (in Kg.)

Type: Clothing items including bedding

| District  | Type of Local body | Statistics                 | Average Monthly Per Capita Expenditure (in Rupees) |                   |                   |                  |        |
|-----------|--------------------|----------------------------|--|-------------------|-------------------|------------------|--------|
|           |                    |                            | Below Rs.1100.00                                   | 1100.01 - 1500.00 | 1500.01 - 2000.00 | Above Rs.2000.00 | Total  |
| Kasaragod | Panchayath         | Average                    | 2.5  | 2.3               | 2.2               | 2.3              | 2.4    |
|           |                    | Sample Households          | 666  | 382               | 142               | 53               | 1,243  |
|           |                    | Estimated No of Households | 16,650   | 9,550             | 3,550             | 1,325            | 31,075 |
|           | Municipality       | Average                    | 1.6  | 2.2               | 2.3               | 3.9              | 2.1    |
|           |                    | Sample Households          | 97   | 66                | 38                | 16               | 217    |
|           |                    | Estimated No of Households | 1,649  | 1,122             | 646               | 272              | 3,689  |
|           | Total              | Average                    | 2.4  | 2.3               | 2.2               | 2.6              | 2.4    |
|           |                    | Sample Households          | 763  | 448               | 180               | 69               | 1,460  |
|           |                    | Estimated No of Households | 18,299   | 10,672            | 4,196             | 1,597            | 34,764 |
| Kottayam  | Panchayath         | Average                    | 8.1  | 8.5               | 3.4               | 2.7              | 5.1    |
|           |                    | Sample Households          | 200  | 306               | 350               | 419              | 1,275  |
|           |                    | Estimated No of Households | 5,000  | 7,650             | 8,750             | 10,475           | 31,875 |
|           | Municipality       | Average                    | 1.9  | 2.5               | 1.7               | 2.6              | 2.2    |
|           |                    | Sample Households          | 17   | 44                | 133               | 138              | 332    |
|           |                    | Estimated No of Households | 289  | 748               | 2,261             | 2,346            | 5,644  |
|           | Total              | Average                    | 7.6  | 7.7               | 2.9               | 2.7              | 4.5    |
|           |                    | Sample Households          | 217  | 350               | 483               | 557              | 1,607  |
|           |                    | Estimated No of Households | 5,289  | 8,398             | 11,011            | 12,821           | 37,519 |

Table 32 G: Average approximate weight of recyclable materials sold out during 2014 (in Kg.)

Type: Others

| District  | Type of Local body | Statistics                 | Average Monthly Per Capita Expenditure (in Rupees) |                   |                   |                  |       |
|-----------|--------------------|----------------------------|--|-------------------|-------------------|------------------|-------|
|           |                    |                            | Below Rs.1100.00                                   | 1100.01 - 1500.00 | 1500.01 - 2000.00 | Above Rs.2000.00 | Total |
| Kasaragod | Panchayath         | Average                    | 2.8  | 3.0               | 2.9               | 3.4              | 2.9   |
|           |                    | Sample Households          | 131  | 85                | 34                | 8                | 258   |
|           |                    | Estimated No of Households | 3,275  | 2,125             | 850               | 200              | 6,450 |
|           | Municipality       | Average                    | 0.0  | 0.0               | 0.0               | 4.0              | 4.0   |
|           |                    | Sample Households          | 0  | 0                 | 0                 | 2                | 2     |
|           |                    | Estimated No of Households | 0  | 0                 | 0                 | 34               | 34    |
|           | Total              | Average                    | 2.8  | 3.0               | 2.9               | 3.5              | 2.9   |
|           |                    | Sample Households          | 131  | 85                | 34                | 10               | 260   |
|           |                    | Estimated No of Households | 3,275  | 2,125             | 850               | 234              | 6,484 |
| Kottayam  | Panchayath         | Average                    | 4.7  | 3.7               | 2.2               | 2.3              | 2.5   |
|           |                    | Sample Households          | 6  | 44                | 117               | 126              | 293   |
|           |                    | Estimated No of Households | 150  | 1,100             | 2,925             | 3,150            | 7,325 |
|           | Municipality       | Average                    | 10.0   | 2.5               | 2.5               | 5.5              | 5.3   |
|           |                    | Sample Households          | 1  | 2                 | 2                 | 22               | 27    |
|           |                    | Estimated No of Households | 17   | 34                | 34                | 374              | 459   |
|           | Total              | Average                    | 5.4  | 3.6               | 2.2               | 2.8              | 2.7   |
|           |                    | Sample Households          | 7  | 46                | 119               | 148              | 320   |
|           |                    | Estimated No of Households | 167  | 1,134             | 2,959             | 3,524            | 7,784 |



Table 33 A: Distribution (Per 100 households) of Public Awareness and Attitudes on Solid Waste Management

Question: Do you think garbage disposal is a problem?

| District  | Type of Local body | Sl No. | Average Monthly Per Capita Expenditure (in Rupees) | Public Awareness and Attitudes on Solid Waste Management |             |            |                   |                            |
|-----------|--------------------|--------|--|--|-------------|------------|-------------------|----------------------------|
|           |                    |        |  | Yes  | No          | Total      | Sample Households | Estimated no of households |
| Kasaragod | Panchayath         | 1      | Below Rs.1100.00                                   | 73.8   | 26.2        | 100        | 4,070             | 1,01,750                   |
|           |                    | 2      | 1100.01 - 1500.00                                  | 72.2   | 27.8        | 100        | 3,594             | 89,850                     |
|           |                    | 3      | 1500.01 - 2000.00                                  | 70.9   | 29.1        | 100        | 1,260             | 31,500                     |
|           |                    | 4      | Above Rs.2000.00                                   | 71.7   | 28.3        | 100        | 594               | 14,850                     |
|           |                    | 5      | <b>Total</b>                                       | <b>72.7</b>  | <b>27.3</b> | <b>100</b> | <b>9,518</b>      | <b>2,37,950</b>            |
|           | Municipality       | 6      | Below Rs.1100.00                                   | 78.4   | 21.6        | 100        | 807               | 13,719                     |
|           |                    | 7      | 1100.01 - 1500.00                                  | 61.2   | 38.8        | 100        | 667               | 11,339                     |
|           |                    | 8      | 1500.01 - 2000.00                                  | 59.6   | 40.4        | 100        | 374               | 6,358                      |
|           |                    | 9      | Above Rs.2000.00                                   | 69.7   | 30.3        | 100        | 274               | 4,658                      |
|           |                    | 10     | <b>Total</b>                                       | <b>68.6</b>  | <b>31.4</b> | <b>100</b> | <b>2,122</b>      | <b>36,074</b>              |
| Kottayam  | Panchayath         | 11     | Below Rs.1100.00                                   | 77.3   | 22.7        | 100        | 2,441             | 61,025                     |
|           |                    | 12     | 1100.01 - 1500.00                                  | 70.8   | 29.2        | 100        | 5,441             | 1,36,025                   |
|           |                    | 13     | 1500.01 - 2000.00                                  | 62.8   | 37.2        | 100        | 5,325             | 1,33,125                   |
|           |                    | 14     | Above Rs.2000.00                                   | 63.6   | 36.4        | 100        | 3,972             | 99,300                     |
|           |                    | 15     | <b>Total</b>                                       | <b>67.6</b>  | <b>32.4</b> | <b>100</b> | <b>17,179</b>     | <b>4,29,475</b>            |
|           | Municipality       | 16     | Below Rs.1100.00                                   | 71.9   | 28.1        | 100        | 224               | 3,808                      |
|           |                    | 17     | 1100.01 - 1500.00                                  | 72.2   | 27.8        | 100        | 972               | 16,524                     |
|           |                    | 18     | 1500.01 - 2000.00                                  | 65.1   | 34.9        | 100        | 1,131             | 19,227                     |
|           |                    | 19     | Above Rs.2000.00                                   | 60.5   | 39.5        | 100        | 1,169             | 19,873                     |
|           |                    | 20     | <b>Total</b>                                       | <b>66.0</b>  | <b>34.0</b> | <b>100</b> | <b>3,496</b>      | <b>59,432</b>              |

Table 33 B: Distribution (Per 100 households) of Public Awareness and Attitudes on Solid Waste Management

Question: Are you aware of any health issues relating to garbage?

| District  | Type of Local body | Sl No. | Average Monthly Per Capita Expenditure (in Rupees) | Public Awareness and Attitudes on Solid Waste Management |             |            |                   |                            |
|-----------|--------------------|--------|--|--|-------------|------------|-------------------|----------------------------|
|           |                    |        |  | Yes  | No          | Total      | Sample Households | Estimated no of households |
| Kasaragod | Panchayath         | 1      | Below Rs.1100.00                                   | 73.5   | 26.5        | 100        | 4,070             | 1,01,750                   |
|           |                    | 2      | 1100.01 - 1500.00                                  | 81.4   | 18.6        | 100        | 3,594             | 89,850                     |
|           |                    | 3      | 1500.01 - 2000.00                                  | 89.2   | 10.8        | 100        | 1,260             | 31,500                     |
|           |                    | 4      | Above Rs.2000.00                                   | 87.7   | 12.3        | 100        | 594               | 14,850                     |
|           |                    | 5      | <b>Total</b>                                       | <b>79.4</b>  | <b>20.6</b> | <b>100</b> | <b>9,518</b>      | <b>2,37,950</b>            |
|           | Municipality       | 6      | Below Rs.1100.00                                   | 91.9   | 8.1         | 100        | 807               | 13,719                     |
|           |                    | 7      | 1100.01 - 1500.00                                  | 84.4   | 15.6        | 100        | 667               | 11,339                     |
|           |                    | 8      | 1500.01 - 2000.00                                  | 85.0   | 15.0        | 100        | 374               | 6,358                      |
|           |                    | 9      | Above Rs.2000.00                                   | 87.6   | 12.4        | 100        | 274               | 4,658                      |
|           |                    | 10     | <b>Total</b>                                       | <b>87.8</b>  | <b>12.2</b> | <b>100</b> | <b>2,122</b>      | <b>36,074</b>              |
| Kottayam  | Panchayath         | 11     | Below Rs.1100.00                                   | 81.1   | 18.9        | 100        | 2,441             | 61,025                     |
|           |                    | 12     | 1100.01 - 1500.00                                  | 80.4   | 19.6        | 100        | 5,441             | 1,36,025                   |
|           |                    | 13     | 1500.01 - 2000.00                                  | 81.8   | 18.2        | 100        | 5,325             | 1,33,125                   |
|           |                    | 14     | Above Rs.2000.00                                   | 84.4   | 15.6        | 100        | 3,972             | 99,300                     |
|           |                    | 15     | <b>Total</b>                                       | <b>81.9</b>  | <b>18.1</b> | <b>100</b> | <b>17,179</b>     | <b>4,29,475</b>            |
|           | Municipality       | 16     | Below Rs.1100.00                                   | 84.4   | 15.6        | 100        | 224               | 3,808                      |
|           |                    | 17     | 1100.01 - 1500.00                                  | 94.2   | 5.8         | 100        | 972               | 16,524                     |
|           |                    | 18     | 1500.01 - 2000.00                                  | 94.6   | 5.4         | 100        | 1,131             | 19,227                     |
|           |                    | 19     | Above Rs.2000.00                                   | 82.2   | 17.8        | 100        | 1,169             | 19,873                     |
|           |                    | 20     | <b>Total</b>                                       | <b>89.7</b>  | <b>10.3</b> | <b>100</b> | <b>3,496</b>      | <b>59,432</b>              |

Table 33 C: Distribution (Per 100 households) of Public Awareness and Attitudes on Solid Waste Management

Question: Do you think that there is a need to change the existing waste disposal system in your home?

| District  | Type of Local body | Sl No.    | Average Monthly Per Capita Expenditure (in Rupees) | Public Awareness and Attitudes on Solid Waste Management |             |            |                   |                            |
|-----------|--------------------|-----------|--|--|-------------|------------|-------------------|----------------------------|
|           |                    |           |  | Yes  | No          | Total      | Sample Households | Estimated no of households |
| Kasaragod | Panchayath         | 1         | Below Rs.1100.00                                   | 65.4   | 34.6        | 100        | 4,070             | 1,01,750                   |
|           |                    | 2         | 1100.01 - 1500.00                                  | 65.1   | 34.9        | 100        | 3,594             | 89,850                     |
|           |                    | 3         | 1500.01 - 2000.00                                  | 63.9   | 36.1        | 100        | 1,260             | 31,500                     |
|           |                    | 4         | Above Rs.2000.00                                   | 65.7   | 34.3        | 100        | 594               | 14,850                     |
|           |                    | <b>5</b>  | <b>Total</b>                                       | <b>65.1</b>  | <b>34.9</b> | <b>100</b> | <b>9,518</b>      | <b>2,37,950</b>            |
|           | Municipality       | 6         | Below Rs.1100.00                                   | 87.9   | 12.1        | 100        | 807               | 13,719                     |
|           |                    | 7         | 1100.01 - 1500.00                                  | 87.1   | 12.9        | 100        | 667               | 11,339                     |
|           |                    | 8         | 1500.01 - 2000.00                                  | 83.2   | 16.8        | 100        | 374               | 6,358                      |
|           |                    | 9         | Above Rs.2000.00                                   | 88.7   | 11.3        | 100        | 274               | 4,658                      |
|           |                    | <b>10</b> | <b>Total</b>                                       | <b>86.9</b>  | <b>13.1</b> | <b>100</b> | <b>2,122</b>      | <b>36,074</b>              |
| Kottayam  | Panchayath         | 11        | Below Rs.1100.00                                   | 62.0   | 38.0        | 100        | 2,441             | 61,025                     |
|           |                    | 12        | 1100.01 - 1500.00                                  | 61.8   | 38.2        | 100        | 5,441             | 1,36,025                   |
|           |                    | 13        | 1500.01 - 2000.00                                  | 62.1   | 37.9        | 100        | 5,325             | 1,33,125                   |
|           |                    | 14        | Above Rs.2000.00                                   | 64.0   | 36.0        | 100        | 3,972             | 99,300                     |
|           |                    | <b>15</b> | <b>Total</b>                                       | <b>62.4</b>  | <b>37.6</b> | <b>100</b> | <b>17,179</b>     | <b>4,29,475</b>            |
|           | Municipality       | 16        | Below Rs.1100.00                                   | 64.3   | 35.7        | 100        | 224               | 3,808                      |
|           |                    | 17        | 1100.01 - 1500.00                                  | 70.7   | 29.3        | 100        | 972               | 16,524                     |
|           |                    | 18        | 1500.01 - 2000.00                                  | 66.2   | 33.8        | 100        | 1,131             | 19,227                     |
|           |                    | 19        | Above Rs.2000.00                                   | 57.1   | 42.9        | 100        | 1,169             | 19,873                     |
|           |                    | <b>20</b> | <b>Total</b>                                       | <b>64.3</b>  | <b>35.7</b> | <b>100</b> | <b>3,496</b>      | <b>59,432</b>              |

Table 33 D: Distribution (Per 100 households) of Public Awareness and Attitudes on Solid Waste Management

Question: Do you have any awareness about composting?

| District  | Type of Local body | Sl No. | Average Monthly Per Capita Expenditure (in Rupees) | Public Awareness and Attitudes on Solid Waste Management |             |            |                   |                            |
|-----------|--------------------|--------|--|--|-------------|------------|-------------------|----------------------------|
|           |                    |        |  | Yes  | No          | Total      | Sample Households | Estimated no of households |
| Kasaragod | Panchayath         | 1      | Below Rs.1100.00                                   | 39.1   | 60.9        | 100        | 4,070             | 1,01,750                   |
|           |                    | 2      | 1100.01 - 1500.00                                  | 49.8   | 50.2        | 100        | 3,594             | 89,850                     |
|           |                    | 3      | 1500.01 - 2000.00                                  | 50.6   | 49.4        | 100        | 1,260             | 31,500                     |
|           |                    | 4      | Above Rs.2000.00                                   | 48.5   | 51.5        | 100        | 594               | 14,850                     |
|           |                    | 5      | <b>Total</b>                                       | <b>45.3</b>  | <b>54.7</b> | <b>100</b> | <b>9,518</b>      | <b>2,37,950</b>            |
|           | Municipality       | 6      | Below Rs.1100.00                                   | 36.3   | 63.7        | 100        | 807               | 13,719                     |
|           |                    | 7      | 1100.01 - 1500.00                                  | 65.7   | 34.3        | 100        | 667               | 11,339                     |
|           |                    | 8      | 1500.01 - 2000.00                                  | 74.6   | 25.4        | 100        | 374               | 6,358                      |
|           |                    | 9      | Above Rs.2000.00                                   | 82.1   | 17.9        | 100        | 274               | 4,658                      |
|           |                    | 10     | <b>Total</b>                                       | <b>58.2</b>  | <b>41.8</b> | <b>100</b> | <b>2,122</b>      | <b>36,074</b>              |
| Kottayam  | Panchayath         | 11     | Below Rs.1100.00                                   | 42.5   | 57.5        | 100        | 2,441             | 61,025                     |
|           |                    | 12     | 1100.01 - 1500.00                                  | 54.3   | 45.7        | 100        | 5,441             | 1,36,025                   |
|           |                    | 13     | 1500.01 - 2000.00                                  | 64.5   | 35.5        | 100        | 5,325             | 1,33,125                   |
|           |                    | 14     | Above Rs.2000.00                                   | 73.0   | 27.0        | 100        | 3,972             | 99,300                     |
|           |                    | 15     | <b>Total</b>                                       | <b>60.1</b>  | <b>39.9</b> | <b>100</b> | <b>17,179</b>     | <b>4,29,475</b>            |
|           | Municipality       | 16     | Below Rs.1100.00                                   | 80.8   | 19.2        | 100        | 224               | 3,808                      |
|           |                    | 17     | 1100.01 - 1500.00                                  | 84.4   | 15.6        | 100        | 972               | 16,524                     |
|           |                    | 18     | 1500.01 - 2000.00                                  | 83.5   | 16.5        | 100        | 1,131             | 19,227                     |
|           |                    | 19     | Above Rs.2000.00                                   | 73.7   | 26.3        | 100        | 1,169             | 19,873                     |
|           |                    | 20     | <b>Total</b>                                       | <b>80.3</b>  | <b>19.7</b> | <b>100</b> | <b>3,496</b>      | <b>59,432</b>              |

Table 33 E: Distribution (Per 100 households) of Public Awareness and Attitudes on Solid Waste Management

Question: Do you like to start a household composting?

| District  | Type of Local body | Sl No. | Average Monthly Per Capita Expenditure (in Rupees) | Public Awareness and Attitudes on Solid Waste Management |             |             |            |                   |                            |
|-----------|--------------------|--------|--|--|-------------|-------------|------------|-------------------|----------------------------|
|           |                    |        |  | Yes  | No          | N.A.        | Total      | Sample Households | Estimated no of households |
| Kasaragod | Panchayath         | 1      | Below Rs.1100.00                                   | 40.4   | 58.2        | 1.3         | 100        | 4,070             | 1,01,750                   |
|           |                    | 2      | 1100.01 - 1500.00                                  | 46.4   | 49.9        | 3.6         | 100        | 3,594             | 89,850                     |
|           |                    | 3      | 1500.01 - 2000.00                                  | 38.6   | 55.8        | 5.6         | 100        | 1,260             | 31,500                     |
|           |                    | 4      | Above Rs.2000.00                                   | 30.6   | 64.1        | 5.2         | 100        | 594               | 14,850                     |
|           |                    | 5      | <b>Total</b>                                       | <b>41.8</b>  | <b>55.1</b> | <b>3.0</b>  | <b>100</b> | <b>9,518</b>      | <b>2,37,950</b>            |
|           | Municipality       | 6      | Below Rs.1100.00                                   | 28.1   | 66.9        | 5.0         | 100        | 807               | 13,719                     |
|           |                    | 7      | 1100.01 - 1500.00                                  | 48.7   | 42.4        | 8.8         | 100        | 667               | 11,339                     |
|           |                    | 8      | 1500.01 - 2000.00                                  | 42.2   | 46.8        | 11.0        | 100        | 374               | 6,358                      |
|           |                    | 9      | Above Rs.2000.00                                   | 27.7   | 62.8        | 9.5         | 100        | 274               | 4,658                      |
|           |                    | 10     | <b>Total</b>                                       | <b>37.0</b>  | <b>55.1</b> | <b>7.8</b>  | <b>100</b> | <b>2,122</b>      | <b>36,074</b>              |
| Kottayam  | Panchayath         | 11     | Below Rs.1100.00                                   | 31.9   | 63.0        | 5.0         | 100        | 2,441             | 61,025                     |
|           |                    | 12     | 1100.01 - 1500.00                                  | 31.2   | 60.5        | 8.4         | 100        | 5,441             | 1,36,025                   |
|           |                    | 13     | 1500.01 - 2000.00                                  | 34.0   | 55.1        | 10.9        | 100        | 5,325             | 1,33,125                   |
|           |                    | 14     | Above Rs.2000.00                                   | 41.0   | 50.7        | 8.3         | 100        | 3,972             | 99,300                     |
|           |                    | 15     | <b>Total</b>                                       | <b>34.4</b>  | <b>56.9</b> | <b>8.7</b>  | <b>100</b> | <b>17,179</b>     | <b>4,29,475</b>            |
|           | Municipality       | 16     | Below Rs.1100.00                                   | 50.4   | 38.8        | 10.7        | 100        | 224               | 3,808                      |
|           |                    | 17     | 1100.01 - 1500.00                                  | 49.8   | 36.6        | 13.6        | 100        | 972               | 16,524                     |
|           |                    | 18     | 1500.01 - 2000.00                                  | 49.4   | 40.1        | 10.4        | 100        | 1,131             | 19,227                     |
|           |                    | 19     | Above Rs.2000.00                                   | 30.6   | 57.1        | 12.2        | 100        | 1,169             | 19,873                     |
|           |                    | 20     | <b>Total</b>                                       | <b>43.3</b>  | <b>44.8</b> | <b>11.9</b> | <b>100</b> | <b>3,496</b>      | <b>59,432</b>              |

Table 33 F: Distribution (Per 100 households) of Public Awareness and Attitudes on Solid Waste Management

Question: Do you like to install bio-gas plant in your house?

| District  | Type of Local body | Sl No. | Average Monthly Per Capita Expenditure (in Rupees) | Public Awareness and Attitudes on Solid Waste Management |             |            |            |                   |                            |
|-----------|--------------------|--------|--|--|-------------|------------|------------|-------------------|----------------------------|
|           |                    |        |  | Yes  | No          | N.A.       | Total      | Sample Households | Estimated no of households |
| Kasaragod | Panchayath         | 1      | Below Rs.1100.00                                   | 28.7   | 70.9        | 0.4        | 100        | 4,070             | 1,01,750                   |
|           |                    | 2      | 1100.01 - 1500.00                                  | 23.8   | 75.4        | 0.8        | 100        | 3,594             | 89,850                     |
|           |                    | 3      | 1500.01 - 2000.00                                  | 23.3   | 74.4        | 2.3        | 100        | 1,260             | 31,500                     |
|           |                    | 4      | Above Rs.2000.00                                   | 27.8   | 69.9        | 2.4        | 100        | 594               | 14,850                     |
|           |                    | 5      | <b>Total</b>                                       | <b>26.1</b>  | <b>73.0</b> | <b>0.9</b> | <b>100</b> | <b>9,518</b>      | <b>2,37,950</b>            |
|           | Municipality       | 6      | Below Rs.1100.00                                   | 15.0   | 84.9        | 0.1        | 100        | 807               | 13,719                     |
|           |                    | 7      | 1100.01 - 1500.00                                  | 22.0   | 77.8        | 0.1        | 100        | 667               | 11,339                     |
|           |                    | 8      | 1500.01 - 2000.00                                  | 16.8   | 82.6        | 0.5        | 100        | 374               | 6,358                      |
|           |                    | 9      | Above Rs.2000.00                                   | 9.1  | 90.5        | 0.4        | 100        | 274               | 4,658                      |
|           |                    | 10     | <b>Total</b>                                       | <b>16.8</b>  | <b>83.0</b> | <b>0.2</b> | <b>100</b> | <b>2,122</b>      | <b>36,074</b>              |
| Kottayam  | Panchayath         | 11     | Below Rs.1100.00                                   | 27.6   | 70.9        | 1.5        | 100        | 2,441             | 61,025                     |
|           |                    | 12     | 1100.01 - 1500.00                                  | 23.1   | 75.3        | 1.6        | 100        | 5,441             | 1,36,025                   |
|           |                    | 13     | 1500.01 - 2000.00                                  | 26.0   | 72.3        | 1.7        | 100        | 5,325             | 1,33,125                   |
|           |                    | 14     | Above Rs.2000.00                                   | 29.6   | 68.7        | 1.7        | 100        | 3,972             | 99,300                     |
|           |                    | 15     | <b>Total</b>                                       | <b>26.2</b>  | <b>72.2</b> | <b>1.6</b> | <b>100</b> | <b>17,179</b>     | <b>4,29,475</b>            |
|           | Municipality       | 16     | Below Rs.1100.00                                   | 42.9   | 53.6        | 3.6        | 100        | 224               | 3,808                      |
|           |                    | 17     | 1100.01 - 1500.00                                  | 30.5   | 66.5        | 3.1        | 100        | 972               | 16,524                     |
|           |                    | 18     | 1500.01 - 2000.00                                  | 33.2   | 63.4        | 3.4        | 100        | 1,131             | 19,227                     |
|           |                    | 19     | Above Rs.2000.00                                   | 16.1   | 79.0        | 4.9        | 100        | 1,169             | 19,873                     |
|           |                    | 20     | <b>Total</b>                                       | <b>27.3</b>  | <b>68.9</b> | <b>3.8</b> | <b>100</b> | <b>3,496</b>      | <b>59,432</b>              |

Table 33 G: Distribution (Per 100 households) of Public Awareness and Attitudes on Solid Waste Management

Question: Do you practice any gardening / farming by using household waste as manure?

| District  | Type of Local body | Sl No. | Average Monthly Per Capita Expenditure (in Rupees) | Public Awareness and Attitudes on Solid Waste Management |             |            |                   |                            |
|-----------|--------------------|--------|--|--|-------------|------------|-------------------|----------------------------|
|           |                    |        |  | Yes  | No          | Total      | Sample Households | Estimated no of households |
| Kasaragod | Panchayath         | 1      | Below Rs.1100.00                                   | 35.5   | 64.5        | 100        | 4,070             | 1,01,750                   |
|           |                    | 2      | 1100.01 - 1500.00                                  | 40.4   | 59.6        | 100        | 3,594             | 89,850                     |
|           |                    | 3      | 1500.01 - 2000.00                                  | 48.9   | 51.1        | 100        | 1,260             | 31,500                     |
|           |                    | 4      | Above Rs.2000.00                                   | 53.9   | 46.1        | 100        | 594               | 14,850                     |
|           |                    | 5      | <b>Total</b>                                       | <b>40.3</b>  | <b>59.7</b> | <b>100</b> | <b>9,518</b>      | <b>2,37,950</b>            |
|           | Municipality       | 6      | Below Rs.1100.00                                   | 16.0   | 84.0        | 100        | 807               | 13,719                     |
|           |                    | 7      | 1100.01 - 1500.00                                  | 34.6   | 65.4        | 100        | 667               | 11,339                     |
|           |                    | 8      | 1500.01 - 2000.00                                  | 37.7   | 62.3        | 100        | 374               | 6,358                      |
|           |                    | 9      | Above Rs.2000.00                                   | 28.8   | 71.2        | 100        | 274               | 4,658                      |
|           |                    | 10     | <b>Total</b>                                       | <b>27.3</b>  | <b>72.7</b> | <b>100</b> | <b>2,122</b>      | <b>36,074</b>              |
| Kottayam  | Panchayath         | 11     | Below Rs.1100.00                                   | 42.6   | 57.4        | 100        | 2,441             | 61,025                     |
|           |                    | 12     | 1100.01 - 1500.00                                  | 55.3   | 44.7        | 100        | 5,441             | 1,36,025                   |
|           |                    | 13     | 1500.01 - 2000.00                                  | 60.8   | 39.2        | 100        | 5,325             | 1,33,125                   |
|           |                    | 14     | Above Rs.2000.00                                   | 57.8   | 42.2        | 100        | 3,972             | 99,300                     |
|           |                    | 15     | <b>Total</b>                                       | <b>55.8</b>  | <b>44.2</b> | <b>100</b> | <b>17,179</b>     | <b>4,29,475</b>            |
|           | Municipality       | 16     | Below Rs.1100.00                                   | 65.6   | 34.4        | 100        | 224               | 3,808                      |
|           |                    | 17     | 1100.01 - 1500.00                                  | 82.0   | 18.0        | 100        | 972               | 16,524                     |
|           |                    | 18     | 1500.01 - 2000.00                                  | 79.1   | 20.9        | 100        | 1,131             | 19,227                     |
|           |                    | 19     | Above Rs.2000.00                                   | 61.5   | 38.5        | 100        | 1,169             | 19,873                     |
|           |                    | 20     | <b>Total</b>                                       | <b>73.2</b>  | <b>26.8</b> | <b>100</b> | <b>3,496</b>      | <b>59,432</b>              |

Table 33 H: Distribution (Per 100 households) of Public Awareness and Attitudes on Solid Waste Management

Question: Are you willing to pay for waste collection, if that facility is provided?

| District  | Type of Local body | Sl No.    | Average Monthly Per Capita Expenditure (in Rupees) | Public Awareness and Attitudes on Solid Waste Management |             |            |                   |                            |
|-----------|--------------------|-----------|--|--|-------------|------------|-------------------|----------------------------|
|           |                    |           |  | Yes  | No          | Total      | Sample Households | Estimated no of households |
| Kasaragod | Panchayath         | 1         | Below Rs.1100.00                                   | 46.3   | 53.7        | 100        | 4,070             | 1,01,750                   |
|           |                    | 2         | 1100.01 - 1500.00                                  | 55.5   | 44.5        | 100        | 3,594             | 89,850                     |
|           |                    | 3         | 1500.01 - 2000.00                                  | 53.2   | 46.8        | 100        | 1,260             | 31,500                     |
|           |                    | 4         | Above Rs.2000.00                                   | 55.4   | 44.6        | 100        | 594               | 14,850                     |
|           |                    | <b>5</b>  | <b>Total</b>                                       | <b>51.3</b>  | <b>48.7</b> | <b>100</b> | <b>9,518</b>      | <b>2,37,950</b>            |
|           | Municipality       | 6         | Below Rs.1100.00                                   | 15.6   | 84.4        | 100        | 807               | 13,719                     |
|           |                    | 7         | 1100.01 - 1500.00                                  | 28.0   | 72.0        | 100        | 667               | 11,339                     |
|           |                    | 8         | 1500.01 - 2000.00                                  | 38.5   | 61.5        | 100        | 374               | 6,358                      |
|           |                    | 9         | Above Rs.2000.00                                   | 63.5   | 36.5        | 100        | 274               | 4,658                      |
|           |                    | <b>10</b> | <b>Total</b>                                       | <b>29.7</b>  | <b>70.3</b> | <b>100</b> | <b>2,122</b>      | <b>36,074</b>              |
| Kottayam  | Panchayath         | 11        | Below Rs.1100.00                                   | 56.4   | 43.6        | 100        | 2,441             | 61,025                     |
|           |                    | 12        | 1100.01 - 1500.00                                  | 54.8   | 45.2        | 100        | 5,441             | 1,36,025                   |
|           |                    | 13        | 1500.01 - 2000.00                                  | 54.9   | 45.1        | 100        | 5,325             | 1,33,125                   |
|           |                    | 14        | Above Rs.2000.00                                   | 51.0   | 49.0        | 100        | 3,972             | 99,300                     |
|           |                    | <b>15</b> | <b>Total</b>                                       | <b>54.2</b>  | <b>45.8</b> | <b>100</b> | <b>17,179</b>     | <b>4,29,475</b>            |
|           | Municipality       | 16        | Below Rs.1100.00                                   | 46.9   | 53.1        | 100        | 224               | 3,808                      |
|           |                    | 17        | 1100.01 - 1500.00                                  | 41.5   | 58.5        | 100        | 972               | 16,524                     |
|           |                    | 18        | 1500.01 - 2000.00                                  | 43.0   | 57.0        | 100        | 1,131             | 19,227                     |
|           |                    | 19        | Above Rs.2000.00                                   | 43.5   | 56.5        | 100        | 1,169             | 19,873                     |
|           |                    | <b>20</b> | <b>Total</b>                                       | <b>43.0</b>  | <b>57.0</b> | <b>100</b> | <b>3,496</b>      | <b>59,432</b>              |



Table 33 I: Distribution (Per 100 households) of Public Awareness and Attitudes on Solid Waste Management

Question: If a public waste bin is installed in your locality, will you utilize it?

| District  | Type of Local body | Sl No.    | Average Monthly Per Capita Expenditure (in Rupees) | Public Awareness and Attitudes on Solid Waste Management |             |            |                   |                            |
|-----------|--------------------|-----------|--|--|-------------|------------|-------------------|----------------------------|
|           |                    |           |  | Yes  | No          | Total      | Sample Households | Estimated no of households |
| Kasaragod | Panchayath         | 1         | Below Rs.1100.00                                   | 96.5   | 3.5         | 100        | 4,070             | 1,01,750                   |
|           |                    | 2         | 1100.01 - 1500.00                                  | 93.7   | 6.3         | 100        | 3,594             | 89,850                     |
|           |                    | 3         | 1500.01 - 2000.00                                  | 85.7   | 14.3        | 100        | 1,260             | 31,500                     |
|           |                    | 4         | Above Rs.2000.00                                   | 82.5   | 17.5        | 100        | 594               | 14,850                     |
|           |                    | <b>5</b>  | <b>Total</b>                                       | <b>93.1</b>  | <b>6.9</b>  | <b>100</b> | <b>9,518</b>      | <b>2,37,950</b>            |
|           | Municipality       | 6         | Below Rs.1100.00                                   | 97.8   | 2.2         | 100        | 807               | 13,719                     |
|           |                    | 7         | 1100.01 - 1500.00                                  | 99.1   | 0.9         | 100        | 667               | 11,339                     |
|           |                    | 8         | 1500.01 - 2000.00                                  | 97.9   | 2.1         | 100        | 374               | 6,358                      |
|           |                    | 9         | Above Rs.2000.00                                   | 98.2   | 1.8         | 100        | 274               | 4,658                      |
|           |                    | <b>10</b> | <b>Total</b>                                       | <b>98.3</b>  | <b>1.7</b>  | <b>100</b> | <b>2,122</b>      | <b>36,074</b>              |
| Kottayam  | Panchayath         | 11        | Below Rs.1100.00                                   | 91.2   | 8.8         | 100        | 2,441             | 61,025                     |
|           |                    | 12        | 1100.01 - 1500.00                                  | 87.6   | 12.4        | 100        | 5,441             | 1,36,025                   |
|           |                    | 13        | 1500.01 - 2000.00                                  | 86.7   | 13.3        | 100        | 5,325             | 1,33,125                   |
|           |                    | 14        | Above Rs.2000.00                                   | 76.4   | 23.6        | 100        | 3,972             | 99,300                     |
|           |                    | <b>15</b> | <b>Total</b>                                       | <b>85.2</b>  | <b>14.8</b> | <b>100</b> | <b>17,179</b>     | <b>4,29,475</b>            |
|           | Municipality       | 16        | Below Rs.1100.00                                   | 98.7   | 1.3         | 100        | 224               | 3,808                      |
|           |                    | 17        | 1100.01 - 1500.00                                  | 95.2   | 4.8         | 100        | 972               | 16,524                     |
|           |                    | 18        | 1500.01 - 2000.00                                  | 95.4   | 4.6         | 100        | 1,131             | 19,227                     |
|           |                    | 19        | Above Rs.2000.00                                   | 78.0   | 22.0        | 100        | 1,169             | 19,873                     |
|           |                    | <b>20</b> | <b>Total</b>                                       | <b>89.7</b>  | <b>10.3</b> | <b>100</b> | <b>3,496</b>      | <b>59,432</b>              |

Table 33 J: Distribution (Per 100 households) of Public Awareness and Attitudes on Solid Waste Management

Question: If a new waste treatment plant is installed near your locality, are you ready to handover the waste generated in your household by separating it into plastic, metal, bio and e- waste?

| District  | Type of Local body | Sl No.    | Average Monthly Per Capita Expenditure (in Rupees) | Public Awareness and Attitudes on Solid Waste Management |             |            |                   |                            |
|-----------|--------------------|-----------|--|--|-------------|------------|-------------------|----------------------------|
|           |                    |           |  | Yes  | No          | Total      | Sample Households | Estimated no of households |
| Kasaragod | Panchayath         | 1         | Below Rs.1100.00                                   | 88.8   | 11.2        | 100        | 4,070             | 1,01,750                   |
|           |                    | 2         | 1100.01 - 1500.00                                  | 86.0   | 14.0        | 100        | 3,594             | 89,850                     |
|           |                    | 3         | 1500.01 - 2000.00                                  | 80.2   | 19.8        | 100        | 1,260             | 31,500                     |
|           |                    | 4         | Above Rs.2000.00                                   | 79.0   | 21.0        | 100        | 594               | 14,850                     |
|           |                    | <b>5</b>  | <b>Total</b>                                       | <b>86.0</b>  | <b>14.0</b> | <b>100</b> | <b>9,518</b>      | <b>2,37,950</b>            |
|           | Municipality       | 6         | Below Rs.1100.00                                   | 95.5   | 4.5         | 100        | 807               | 13,719                     |
|           |                    | 7         | 1100.01 - 1500.00                                  | 96.0   | 4.0         | 100        | 667               | 11,339                     |
|           |                    | 8         | 1500.01 - 2000.00                                  | 97.6   | 2.4         | 100        | 374               | 6,358                      |
|           |                    | 9         | Above Rs.2000.00                                   | 98.2   | 1.8         | 100        | 274               | 4,658                      |
|           |                    | <b>10</b> | <b>Total</b>                                       | <b>96.4</b>  | <b>3.6</b>  | <b>100</b> | <b>2,122</b>      | <b>36,074</b>              |
| Kottayam  | Panchayath         | 11        | Below Rs.1100.00                                   | 81.6   | 18.4        | 100        | 2,441             | 61,025                     |
|           |                    | 12        | 1100.01 - 1500.00                                  | 75.9   | 24.1        | 100        | 5,441             | 1,36,025                   |
|           |                    | 13        | 1500.01 - 2000.00                                  | 77.4   | 22.6        | 100        | 5,325             | 1,33,125                   |
|           |                    | 14        | Above Rs.2000.00                                   | 63.9   | 36.1        | 100        | 3,972             | 99,300                     |
|           |                    | <b>15</b> | <b>Total</b>                                       | <b>74.4</b>  | <b>25.6</b> | <b>100</b> | <b>17,179</b>     | <b>4,29,475</b>            |
|           | Municipality       | 16        | Below Rs.1100.00                                   | 93.8   | 6.3         | 100        | 224               | 3,808                      |
|           |                    | 17        | 1100.01 - 1500.00                                  | 92.3   | 7.7         | 100        | 972               | 16,524                     |
|           |                    | 18        | 1500.01 - 2000.00                                  | 93.5   | 6.5         | 100        | 1,131             | 19,227                     |
|           |                    | 19        | Above Rs.2000.00                                   | 71.9   | 28.1        | 100        | 1,169             | 19,873                     |
|           |                    | <b>20</b> | <b>Total</b>                                       | <b>86.0</b>  | <b>14.0</b> | <b>100</b> | <b>3,496</b>      | <b>59,432</b>              |