

RESEARCH PAPER:

## Solid waste generation in different income groups of Gwalior city

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*Asian Journal of Environmental Science*, (June, 2010) Vol. 5 No. 1 : 37-40

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### SUMMARY

The paper discusses the outcome of a study carried out to estimate the amount of household solid waste generated by different income groups in Gwalior city. The findings revealed that Middle Income Group was generating more household solid waste than the High Income Group and the Low Income Group produced the least. The waste generation was relatively higher in autumn and lower in winter.

### Key words :

Income groups,  
Households, Solid  
waste

Every kind of human actions like commercial, domestic, recreational, agricultural and industrial etc. lead to the generation of solid wastes. The amount and nature of wastes generated differ with the activity and the height of technological improvement of a country (Garg, 2002). Still within a country, the nature of solid waste formed varies depending upon the climatic conditions, seasons, living standards, food habits, etc. Poor practices of collection, transportation and disposal of wastes in developing countries in general and in India in particular result in pollution and the allied problems and often open dumping of wastes provides breeding grounds for pathogenic microbes and their vectors (Jha, 1998).

Gwalior city of Madhya Pradesh, is a rapid budding city and massive quantities of Municipal Solid Wastes (MSW) are generated daily, some of which is disposed off in a dumping site located at Gwalior-Shivpuri road and the rest is indiscriminately disposed off in open spaces, water bodies, roads, by-lanes and open drains. No efficient work has so far been done to assess the amount of household solid waste generation in the city. To pack this gap in our understanding of the solid waste, disposal in the city, a survey was carried out. The data collected during this analysis are presented in the present communiqué.

### MATERIALS AND METHODS

After conducting a comprehensive study

in residential areas of old town, Lashkar, Morar, City centre of Gwalior city, 10 households each were chosen from High Income Group (HIG), Middle Income Group (MIG) and Low Income Group (LIG). Total number of members and other socio-economic characteristics of each family were recorded. The average per capita per day household solid waste generation was measured by taking weight of the samples from each household once in a month from September 2008 to February 2009. A polythene bag of 5 kg capacity was provided to each household early in the morning for keeping the solid waste and the wastes collected over a 24 hour period were weighed on the spot the next day in the morning. The methodology followed was that of Rampal *et al.* (2002) and Benitez *et al.* (2003).

### RESULTS AND DISCUSSION

The information on the household solid waste generation by various income groups of Gwalior city are summarized in Tables 1, 2 and 3, whereas the mean values of all the three groups are given in Fig.1. The data showed that per capita per day household solid waste generation by HIG (Table 1) ranged between 108.47g in December to 185.82g in October with an overall average of 144.44g/person/day. It was observed that the household with lowest number of family members showed the highest mean value (162.25g) per capita solid waste

Accepted :  
March, 2010