

Recyclable Household Solid Waste Generation and Collection in Beijing, China

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Abstract : The household solid waste generated by household in Beijing is increasing quickly due to rapid population growth and lifestyle changes. However, there are no rigorous data on the generation and collection of the recyclable household solid wastes. The Beijing city government needs this information to make appropriate policies and plans for waste management. To address this information need, we undertook the first comprehensive study of recyclable household solid waste for Beijing. We carried out a survey of 500 families across sixteen districts in Beijing. We also analyzed the quantities, spatial distribution and categories of collected waste handled by curbside recyclers and permanent recycling centers for 340 of the 9797 city-defined residential areas of Beijing. From our results, we estimate that the total quantity of recyclable household solid waste was 1.8 million tonnes generated by Beijing household in 2013 and 71.6% of that was collected. The main generation categories were waste paper (24.4%), waste glass bottle (23.7%) and waste furniture (14.3%). The recycling rate was varied among different kinds of municipal solid waste. Also based on our study, we estimate there were 22.8 thousand curbside recyclers and 5.7 thousand permanent recycling centers in Beijing. The problems of household solid waste collecting system were inadequacies of authorized collection centers, skewed ratios of curbside recyclers and authorized permanent recycling centers, weak recycling awareness of residents and lack of recycling resources statistics and appraisal system. According to the existing problems, we put forward the suggestions to improve household solid waste management.

Keywords : Municipal waste; Recyclable waste; Waste categories; Waste collection

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