

Plastic Waste Sorting by the People of Dakar

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Abstract : In Dakar, demographic and spatial growth was accompanied by a 50% increase in household waste between 1988 and 2008 in the city. In addition, a change in the nature of household waste was observed between 1990 and 2007. The share of plastic increased by 15% between 2004 and 2007 in Dakar. Plastics represent the seventh category of household waste, the most produced per year in Senegal. The share of plastic in household and similar waste is 9% in Senegal. Waste management in the city of Dakar is a complex process involving a multitude of formal and informal actors with different perceptions and objectives. The objective of this study was to understand the motivations that could lead to sorting action, as well as the perception of plastic waste sorting within the Dakar population (households and institutions). The problematic of this study was as follows: what may be the factors playing a role in the sorting action? In an attempt to answer this, two approaches have been developed: (1) An exploratory qualitative study by semi-structured interviews with two groups of individuals concerned by the sorting of plastic waste: on the one hand, the experts in charge of waste management and on the other the households-producers of waste plastics. This study served as the basis for formulating the hypotheses and thus for the quantitative analysis. (2) A quantitative study using a questionnaire survey method among households producing plastic waste in order to test the previously formulated hypotheses. The objective was to have quantitative results representative of the population of Dakar in relation to the behavior and the process inherent in the adoption of the plastic waste sorting action. The exploratory study shows that the perception of state responsibility varies between institutions and households. Public institutions perceive this as a shared responsibility because the problem of plastic waste affects many sectors (health, environmental education, etc.). Their involvement is geared more towards raising awareness and educating young people. As state action is limited, the emergence of private companies in this sector seems logical as they are setting up collection networks to develop a recycling activity. The state plays a moral support role in these activities and encourages companies to do more. The study of the understanding of the action of sorting plastic waste by the population of Dakar through a quantitative analysis was able to demonstrate the attitudes and constraints inherent in the adoption of plastic waste sorting. Cognitive attitude, knowledge, and visible consequences have been shown to correlate positively with sorting behavior. Thus, it would seem that the population of Dakar is more sensitive to what they see and what they know to adopt sorting behavior. It has also been shown that the strongest constraints that could slow down sorting behavior were the complexity of the process, too much time and the lack of infrastructure in which to deposit plastic waste.

Keywords : behavior, Dakar, plastic waste, waste management

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