

ILLEGAL DUMPING SITE: CASE STUDY IN THE DISTRICT OF JOHOR BAHRU TENGAH, JOHOR.

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Abstract

Problems on solid waste management become a global and universal issue nowadays. Inefficient management of solid waste has introduced new problem to the environment. Lately we heard and saw a lot of problem regarding illegal dumping sites which make our environment become unhealthy. This case study is focussing on collecting data on which areas are prone to be an illegal dumping site and types of solid waste being dumped. This case study is done in the district of Johor Bahru which is under the Majlis Perbandaran Johor Bahru (MPJBT) authority. Literature review, site visit and public survey have been done to obtain all the data. 46 illegal dumping were visited during the research. From the data, it is clearly seen that most of the illegal dumping site are located near to the road's side corridor. The wastes are mainly come from the domestic waste followed by construction waste and industrial waste which contributes 51%, 42% and 7% respectively.

Introduction

Solid wastes in the broadest sense include all the discarded materials from municipal, industrial and agricultural activities. For the discussion to follow, however, solid waste refers only to those solid wastes which are the responsibility of, and are usually collected by, a municipality, which broadly include refuse from household, non-hazardous solids from industrial and commercial establishment, refuse from institutions (including non-pathogenic wastes from hospitals) and yard wastes.

Illegal dumping causes severe environmental damage. Precautionary measures are no doubt important and several previous research efforts showed that both decrease in waste disposal fee and an increase in fines for illegal dumping were key factors in preventing illegal dumping. One reason is that waste disposal fee has increasing due to stricter regulations concerning waste treatment in the interest of better environmental conservation. An alternative measure against illegal dumping is surveillance.

This study focused on surveillance against illegal dumping and tried to provide another technique and complementary information for measured against illegal dumping. The first approach focused the number of illegal dumping sites, location and types of wastes, while the other focused on the size of the illegal dumping. The target area is the Johor Bahru Central District (MPJBT) authority, with a land area of about 456.3 km² and a population of about 626,376. There are about 62 housing, 20 villages and 11 industrial area.

Methodology

In this study, Johor Bahru Central District (MPJBT) authority was chosen as a representative sample of the current and future urbanization trend in Johor.

This study was carried out in two stages :

Stages 1: This stage involved a desk study in which documents and records relating in municipal solid wastes management in Johor Bahru Central District (MPJBT) authority. Interviews with head of Healthy Inspectorate Department, information obtained were used to update the data collected during the desk study.

Stages 2: A site visit was conducted to identify the location of illegal dumping sites. Local residents and a private municipal solid wastes (MSW) handling company were also interviewed. The questions asked during the interviews were tailored to derive information on MSW collection and disposal status and problems, illegal dumping, environmental fate of illegal dump and ways to alleviate illegal dumping problems.

Result

Local residents that were interviewed blamed the inappropriate disposal of MSW in paths, road reserve and roadsides on the failure of local authority to provide prompt collection services. From this study, roadsides or road reserve have a higher potential to be a illegal dumping. The result of occurrence illegal dumping based on location is shown in Fig. 1. Illegal dumping of MSW on the roadsides poses environmental and economic threats on nearby properties. The data in Fig. 2 show the sizes of illegal dumping. The result show that, the waste are mainly come from the domestic wastes followed by construction waste and industrial waste, are shown in Fig 3.

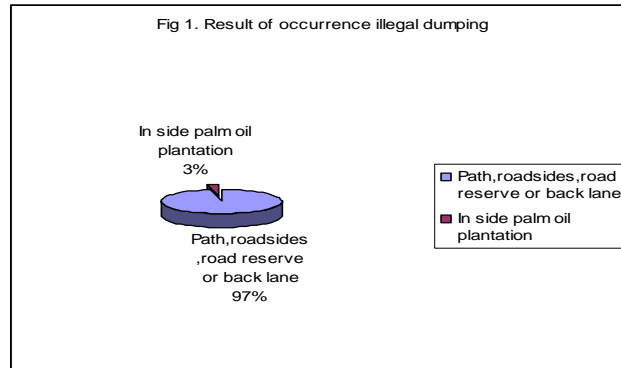


Fig. 1 Result of occurrence illegal dumping based on location.

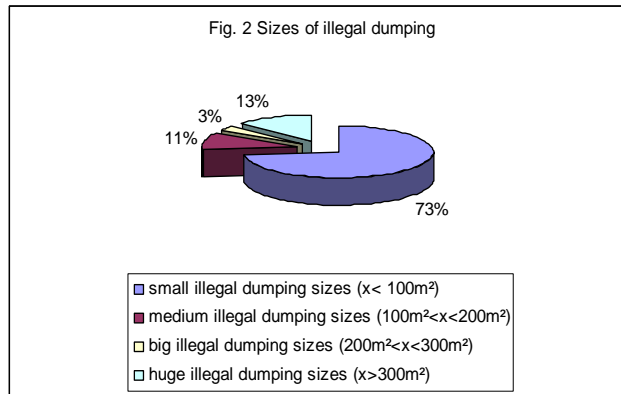


Fig. 2 Sizes of illegal dumping sites.

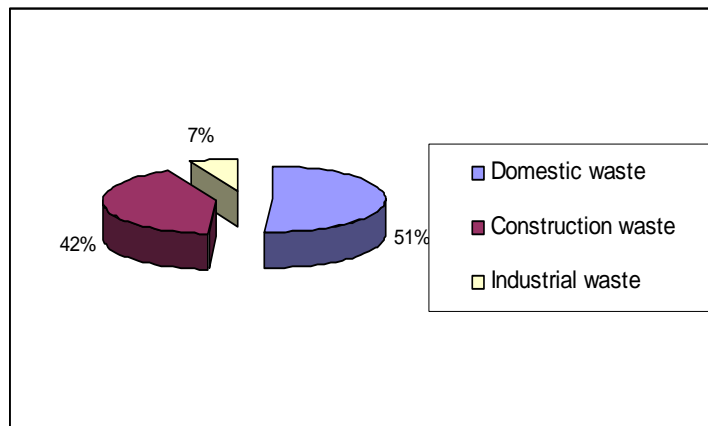


Fig. 3 Types of waste in illegal dumping

Conclusion

In this study, it was found that local authority is faced with illegal dumping problems causes of the human ethics. Local authority should undertake management reforms to bring an end to unsightly areas of illegal dumping. This would involve minimization of waste reaching the drop off points. The 3Rs approach – Reduce, Reuse and Recycle of wastes – is gaining acceptance. Other measures include cultivation of a sense of clean environment through clean community awareness programmers. These can go a long way in sensitizing people to keep the environmental clean. In general, the proper management of municipal solid waste in determined by the attitudes of people towards waste, such as the ability to refrain from indiscriminate dumping. Socio-economic characteristics may determine attitude such as the ability/willingness to recycle MSW. These attitudes, however, may be positively influenced by awareness-building campaigns and educational measures. In a word, it is the desire of the people that can keep the city clean.

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