

Composition of Solid Waste in the Berd Municipal Dump in Tavush Marz, Armenia

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The problems associated with open dumping in Armenia will become more severe as the growing economy increases the production of waste materials. Management of solid waste is dependent on the composition of trash in the waste stream, but there are few data for many cities in Armenia and no standard protocol for data collection.

Differences in composition and generation of wastes between Berd and the capital city of Yerevan suggest local methods of data collection are more accurate.

In the fall of 2007 and spring of 2008, the solid waste produced by Berd residents and business owners was analyzed for percent composition by both volume and weight.

The methods of waste sampling can be applied to all cities at minimal cost, using handsorting of 0.5 m samples. Waste generation rates are calculated from composition and volume data to be 0.55 kg/capita/day. A t-test indicates there is no seasonal difference in composition. Composition studies may occur without regard to season in medium-sized cities with similar socioeconomic conditions. The largest percentage of trash by volume was plastics (37%).

Together, food and other biodegradable materials comprised 44.2% of the total waste sampled by weight. Organic materials have the most potential to be removed from the waste stream.