Abstract

This thesis handles the Environmental assessment of Household Hazardous Waste Management (HHW) in Hebron city by finding out HHW types and proportions, and also by dedicating the level of awareness of household heads in regard to knowledge of risks and dangers associated with HHW items, knowledge how to handle, collect and dispose these substances, in addition to investigation of the accidents and injuries that are occurring because of these substances.

A questionnaire was distributed among households and there were 385 respondents, data was analyzed to figure out different indicators. Also, analysis of the generated SW was carried out during a fourteen working days period to detect different HHW components and their proportions. Through this analysis 115 samples weighing 14.56 tons of domestic solid waste at Hebron solid waste transfer station were analyzed.

Results show the great risk associated with HHW especially that kids are transferring SW from home to container (40.2%) with the potential risk of accident, containers in some cases are more than 150 m away from home (19%) increasing the potential risk. The risk is increased by knowing that 27.2% of kids are playing near the SW containers. These potential risks are real, as in 18.5% of houses there was an accident related to HHW risks. Accidents were either injuries (42%), or poisoning (36%) or burns (22%).

Socioeconomic factors were related to attitudes and practices of citizens in regard to HHW. Married citizens were more willing (73%) to separate HHW from other waste compared to single (60%). Larger families (more than 7 members) have the highest probability of HHW accident (34%), compared to small families (less than 5 members) where the percentage is only 10%. It was

interesting to find that kids from the medium income level (Income is 400-600 JD) have the highest percentage of playing near the containers 36%, compared with very low income level (less than 200JD) where the percentage is only 16%. Containers which size are insufficient and overflow were attracting kids to play around (32%) more than containers of sufficient size (20%).

Domestic waste contains 1% by weight HHW. Home products constitute the largest percentage of HHW (42.3%), followed by automotive products (17.2%), and personal care products (15.4%), and healthcare products (12.3%).

Personal care products are the most category of HHW that is thrown randomly (78.7%), while automotive products were the least (40.9%). Contrary, the automotive products category was the most kept for HHW collection (30.9%) and also for recycle (12.1%) compared to other categories.

To meet the challenges of the risks and dangers associated with HHW, organized awareness strategy should be adopted and implemented through institutional framework on all levels and through all means and to be directed to all stakeholders.

Integrated solid waste management approach should be adopted to cover all the SW issues from generation, handling and collecting, transfer, and disposal. Intervention and innovation solutions should be adopted, among these may be separation HHW at source, separation of HHW at landfill from other waste, and cooperation with private sector for economical reuse or recycle of HHW. Further studies on the issue of HHW should be carried out to focus on this subject that is neglected most of the time and in most places. Studies should cover the HHW accidents, detailed effect of citizens habits and demographic conditions on their practice and behavior toward HHW, and to detect differences due to geographic and urbanization variations.