

CONSTRUCTION WASTE FLOWS AND THE IMPACT ON THE ENVIRONMENT

Lilliana Abarca-Guerrero
Sheyla Rosales-Calvo
Ana Grettel Leandro-Hernandez

Costa Rica Institute of Technology, Costa Rica

Abstract

Historically the construction sector has been one of the most important contributors in the economy, since it generates many jobs, thus creating significant income and progress for the local economy. However, it causes environmental damage as it produces a large amount of waste, some of which are considered hazardous. This study intended to identify and evaluate the environmental impact of each of the hazardous wastes generated due to construction. A questionnaire was prepared and answered by members of micro, small, medium and big companies. Site visits were performed and the results were validated by members of the Costa Rican Construction Chamber.

The most important hazardous found during the study include: acids, solvents, detergents, additives for concrete, oil containers, lubricants, brake fluids, fuels, paint residues and their packaging plastic and metal buckets, treated wood with chemical compounds, welding residues, silicones and sealants, contaminated soil, utensils containing chemicals substances and mercury fluorescent tubes. Each of the hazardous materials identified is associated with negative environmental impacts in soil, water and air. Most of the participante companies have no programmes to recover, provide for recycling nor treatment to those materials.

Keywords: Hazardous waste, construction waste, developing countries, impact environment