
A balance of energy and resources in the face of geographic dispersion - Coimbra and Figueira da Foz countys

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Abstract

The present research aimed to draw a trajectory between society and the environment, obtaining a reflection that helps us to understand the interactions between the consumption in the transport of recyclable materials, the energy and the CO₂ emissions corresponding to its transport, in order to perceive What is the balance and contribution to a sustainable society, bearing in mind that the collection and transport of waste deposited in ecopoints has a great geographical dispersion.

This study was developed by analyzing the data "quantities of waste" from the selective collection of waste recycling bins, for Coimbra and Figueira da Foz counties and "mileage" for such waste and referral to the station screening, from 2009 to 2013 and previously reported data were obtained through the Internet site of the ERSUC, company. With the information collected from the type of truck collection and year of registration, it was used the COPERT IV program to obtain the quantities of CO₂ emitted with a waste stream and managed to take stock, using the site's software north American STOPWASTE.

It has been found that the quantities of waste from selective collection have been declining. This factor, we can affirm, is associated with the fact that the study was developed during the years in which the country was in economic crisis. On the other hand we can also say that the collection and transport of waste from the selective collection of ecopoints (glass, packaging and cardboard) emits less CO₂ and consumes less energy than the manufacture of the same amount of new materials.

Thus it was found that we have a very positive with regard to the quantities of CO₂ are saved with the recycling of waste from ecopoints compared to the amount of CO₂ emitted to the collection and forwarding to the screening station. It is true that in this study the mileage and consequently CO₂ emissions with transportation screening station at recycling companies were not included. But the balance is in such a positive way that even if we multiply two times issued, we would continue with a positive balance.

Keywords: Waste/CO₂/energie/county of Coimbra/countyof Figueira da Foz

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