



Project: Footwear Carbon Footprint (Reference: LIFE12 ENV/ES/000315 – CO2Shoe)

CO2SHOE DISSEMINATION IN UITIC NEWSLETTER

In March 2017, CO2Shoe project was disseminated in the International Union of Shoe Industry Technology (UITIC) newsletter No 19.

The screenshot shows the front page of the UITIC newsletter, issue No 19, dated March 2017. The page is titled 'News' and features a section for 'TECHNICAL INFORMATION'. The main article is titled 'CO2Shoe carbon footprint tool as an environmental indicator for the footwear industry' and includes a small Spanish flag icon. The article text is as follows:

Currently the carbon footprint is one of the main environmental indicators used to evaluate the environmental behaviour of a product (such as footwear).

The carbon footprint can be defined as a simplified version of the Life Cycle Analysis (LCA) where only one impact category is to be taken into account, the Global Warming Potential (GWP), throughout the quantification of the greenhouse gas (GHG) emissions produced along the whole footwear life cycle. Therefore, one obtains a simple result and this makes the interpretation of results much easier. In addition, as in the LCA, it is possible to analyse the environmental load of each life cycle stage (Figure 1). Thus, the results obtained can be used to detect the stages of footwear manufacture that contribute most to the carbon footprint of the footwear model under assessment. Thanks to the project "Footwear Carbon Footprint (CO2Shoe)", partially supported by the European Union through the LIFE programme, nowadays a carbon footprint tool specific for footwear is available. The project is coordinated by the Centre for Technology and Innovation (INESCOP) based in Spain and includes the participation of other European technological centres (CTCP in Portugal, IPS in Poland, CGS in Italy), the European Confederation for the Footwear Industry (CEC) and the Spanish Federation of Footwear Industries (FICE).

The calculation tool was developed using the product carbon footprint international standard (ISO/TS 14067:2013) as the reference methodology and was validated by the Spanish Standardisation Association (AENOR) to ensure the correct operation of the tool as well as the fact that it meets the requirements established in said standard.

Any footwear company interested in calculating the carbon footprint of their models has just to fill in a simple questionnaire, which is the life cycle inventory. Thus, data corresponding to all inputs (weight and type of raw materials, water and energy used, chemicals used, suppliers, etc.) and outputs (waste, wastewater, clients, etc.) are to be provided.

Subsequently, INESCOP enters these data in the footwear carbon footprint tool and, finally, the footwear manufacturer receives the carbon footprint results associated to the footwear model assessed.

In a first pilot stage, the footwear carbon footprint tool was used to evaluate the carbon footprint of 36 footwear models manufactured in different EU countries (Spain, Portugal, Italy and Poland). Global results obtained showed values between 1.3 and 25.3 kg CO₂e, with an average value of 10.6 kg CO₂e per pair of shoes. These carbon footprint results vary according to the complexity of footwear models, in that the nature and weight of the materials making up the model under study are significant aspects to be taken into account (take for instance a trekking boot and a flip-flop, which are quite different). For this reason, the carbon footprint results should not be used to compare different footwear models, but the results of a given model with improvements implemented over time.

Figure 2 shows the percentage environmental of some footwear lifecycle stages on the carbon footprint. The components manufacturing stage is one of those that contribute most to the total carbon footprint of footwear. Therefore, the measures to improve the environmental performance should focus on this stage.

ECODESIGN

One of the main features of the footwear industry is its dynamism, that is, it is characterised by the fact that a great number of models launched on the market, are constantly renewed following the latest fashion trends. Another advantage that the footwear carbon footprint tool proves is that it can be used as an ecodesign tool during the product design stage. Thanks to its inventory, the tool can be used to analyse in advance how certain changes in the shoes to be produced may affect the Environment in a different way, as for instance changes in the nature and/or the amount of the materials used, changes in suppliers, optimisation of transport routes, etc.

Further information:
Mrs. Ana Belén Muñoz-Milán
Head of the Environment Dept.
anabelen@inescop.es

INESCOP
FOOTWEAR TECHNOLOGICAL INSTITUTE

Figure 1. CO2Shoe dissemination in UITIC newsletter