

## ***P25: Carbon footprint of the School of Allied Health Technologies of Polytechnic Institute of Porto***

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**Introduction:** Higher education institutions have increased their responsibilities for the reduction of greenhouse gas emissions (GHG) in order to contribute to a more sustainable development. The School of Allied Health Technologies is a good example of an institution that has environmental concerns and has been developing initiatives and commitments for a more sustainable environmental future. The calculation of the carbon footprint of this institution is another step towards this commitment. The carbon footprint can be defined as a measure of the GHG that are directly and indirectly caused by an activity, expressed in carbon dioxide equivalents (CO<sub>2</sub>eq).

**Objectives:** The aim of this work was to determine the carbon footprint of the School of Allied Health Technologies, not only to give a number with which the university's carbon sustainability level can be compared with, but also to provide a baseline against which future mitigation efforts on university campus can be measured.

**Materials and Methods:** To develop the GHG emissions inventory, activity data was multiplied by an emission factor to yield emissions for that activity by specific GHG type. Each GHG type was converted to its CO<sub>2</sub> equivalent based on its Global Warming Potential (GWP) relative to CO<sub>2</sub>eq. All emissions were reported in a common unit of measurement. This normalization enabled each GHG type to be compared based on its global warming potential (IPCC, 2007).

**Results and Discussion:** This institution's carbon footprint for the year 2014 was found to be 221 tCO<sub>2</sub>-eq, including campus energy consumption, transportation and services, contributing about 80.6%, 0.3% and 19.1%, respectively.

**Conclusion:** The main conclusion of this research study was that electricity consumption has the higher contribution for the carbon footprint. However, there was a great difficulty in carrying out this analysis because some data were either totally unavailable or partially incomplete, leading to increased uncertainty.

### **References**

1. Wiedmann, M. & Minx, J. (2008). *A definition of 'Carbon Footprint'*. Research & Consulting UK, 11
2. IPCC (2007). *Climate Change 2007: Mitigation, Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate*. New York: Cambridge University Press.