conferenceseries.com

5th Global Summit on ENVIRONMENTAL HEALTH

October 14, 2024 | Madrid, Spain

Development of an environmental index for the classification of four-wheeled land transport vehicles

Aina Muñoz Franco

Polytechnic University of Catalonia Barcelona Tech – UPC, Spain

Statement of the Problem: As concerns about climate change and environmental sustainability grow, the automotive industry's contribution to carbon emissions has come under increased scrutiny. Starting with the European Union, governments have begun taking some measures to promote the development of more sustainable lifestyles and transportation. The creation of environmental labels, released to classify vehicle models according to their emissions impact and to help consumers acquire a certain vehicle based on informed choices regarding this topic, has become the main channel for the regulation and decrease of land transportation emissions. Nevertheless, their effectiveness and indexing criterion have caught the eye of many critics. This research aims to develop an environmental index for the classification of four-wheeled land transport vehicles, which intends to incorporate, besides CO_2 emissions, some other relevant parameters that make of this classification a more accurate and reliable tool

Methodology & Theoretical Orientation: The starting point will be to study the current existing alternatives for vehicle environmental labelling, followed by the establishment of parameters that have a direct effect on the car's emission of pollution, a simulation of the proposed index on a diversified fleet of vehicles, and the discussion and analysis of the results obtained. Finally, the new index will be compared to the actual Spanish index.

Findings: The findings demonstrate that the new index provides a more nuanced and equitable assessment of vehicles' environmental impact, highlighting significant discrepancies with existing labels. The study also suggests that there might be overdiscriminated cars in the actual labelling system and that the reality of emissions might go far beyond what is expected by most. The new system's broader scope ensures a fairer comparison between different vehicle types, promoting a real shift towards more sustainable transportation options.

Biography

Aina Muñoz Franco is a graduate in Industrial Technologies and Economic Analysis, with a passion for evaluating current sustainability measures and examining if their implementation is leading towards a real, effective and positive impact, focusing in the automotive industry. Her work began as the object of her bachelor's final thesis, where she developed a new environmental index to classify vehicles, as an alternative to the current labelling Spanish method, in collaboration with UPC Professor Lázaro V. Cremades Oliver, PhD. This index enhances existing classification systems by evaluating emissions across the entire vehicle life cycle, contributing to greater sustainability in the automotive industry.