Title: **Ecological footprint for air transport related to tourism activity: the case of Canary Islands**

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Abstract

The unconstrained mobility model emerging from the availability of cheap air transport has opened new tourism markets, which frequently in addition requires additional air transport expansion to accommodate it. The economic benefits of this model are evident: it not only allows local governments to stimulate regional economies through tourism activities but also helps air companies to promote their own business. However, this mobility model is far from being sustainable. The environmental impact at local and global levels increases steadily and, in a sustainable context, the above-mentioned external effects have to be evaluated in order to achieve their internalization.

The aim of this article is quantifying the trade-off between air transport expansion needs to accommodate tourism growth and the associated environmental impact. This work try to perform an alternative way (see Gösling, 2002; Hunter and Shaw, 2007) to estimate air transport related to tourism ecological footprint adjusting for each type of aircraft engine efficiency that circulates through Canary Island's airports and considering only tourist volume and the average load factor of the flights to these airports. Next, a tentative tax related to marginal cost of carbon dioxide emission will be estimated. Finally, some conclusions will be pointed out.