

Barriers and motivations impacting on the performance of voluntary environmental programs: the EVE program

Enzo Bivona¹

Gisele Mendy Bilek²

Gaetano Saporito¹

Federico Cosenz¹

Francesco Ceresia¹

Richard Calvi³

Youcef Mechouar⁴

¹UNIVERSITY OF PALERMO (ITALY)

²UPPA IAE BAYONNE LIREM (FRANCE)

³USMB, IREGE, IAE SAVOIE MONT BLANC (FRANCE)

⁴RITM, UNIVERSITY OF PARIS SACLAY

Abstract

The role of individual supply chain actors in carbon emissions reduction is well-documented. However, it is critical to identify conditions required to develop a systemic approach for encouraging actors to collaborate and to enrol in a Voluntary Environmental Program (VEP) of decarbonization. Using the VEP adopted in France as a basis to build a System Dynamics model, this paper highlights the main mechanisms underlying Logistic Service Providers' behaviour in adhering to VEPs. The SD model was used to identify alternative policies to improve the performance and the sustainability of the VEP program adopted in France.

Keywords: Carbon Emissions Reduction, Voluntary Environmental Program, Green Transportation, System Dynamics