

Design and Planning of Green Supply Chains: A Fuzzy Approach

Tânia Pinto-Varela,^{1,2} Ana Paula F. D. Barbósa-Póvoa^{§2} and Augusto Q. Novais¹

¹UMOSE,LNEG-INETI, Lisboa, Portugal

²Centro de Estudos de Gestão do IST, IST, Lisboa, Portugal

Abstract

Green SC can be seen as logistic structures that guarantee production and global distribution of products in an environmental manner. To achieve this goal companies must invest on the optimal design and planning of their logistic structures, while accounting for the trade-off between profits and environmental impacts. This is addressed using a generic and uniform mathematical framework, the RTN. For this bi-level optimization a SFLP approach is applied, where those objectives are treated as constraints and replaced by a new one, the aspiration level, which embodies a compromise between them.

Keywords: Fuzzy, Supply-Chain, Green, Planning, Design
