

Construction of a Supply Chain Model Using the PREVA Method: The Case of Innovative Sargasso Recovery Projects in Ther Lesser Antilles

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Abstract : Suddenly appeared in 2011, invasions of sargasso seaweeds Fluitans and Natans are a climatic hazard which causes many problems in the Caribbean. Faced with the growth and frequency of the phenomenon of massive sargasso stranding on their coasts, the French West Indies are moving towards the path of industrial recovery. In this context of innovative projects, we will analyze the necessary requirements for the management and performance of the supply chain, taking into account the observed volatility of the sargasso input. Our prospective approach will consist in studying the theoretical framework of modeling a hybrid supply chain by coupling the discreet event simulation (DES) with a valuation of the process costs according to the "activity-based costing" method (ABC). The PREVA approach (PRocess EVALuation) chosen for our modeling has the advantage of evaluating the financial flows of the logistic process using an analytical model chained with an action model for the evaluation or optimization of physical flows.

Keywords : sargasso, PREVA modeling, supply chain, ABC method, discreet event simulation (DES)

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