



3rd
INTERNATIONAL WORKSHOP
ADVANCES IN CLEANER PRODUCTION

“CLEANER PRODUCTION INITIATIVES AND CHALLENGES FOR A SUSTAINABLE WORLD”

Design Methodology of Life Cycle Assessment (LCA) of Ethanol Fuel by CML 2000 with SimaPRO

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Abstract

The aim of research is to study through life cycle assessment (LCA) economic and environmental aspects related to the production of fuel ethanol from sugarcane, fuel be auditable environmental improvements during its lifecycle and be forward alternative to fossil fuels is of great strategic importance for Brazil. The methodological framework is based on the recommendations of series ISO 14040 and CML method is used in 2000, life cycle assessment, identifying impacts the following categories: climate change; destruction of the ozone layer; acidification; eutrophication; ecotoxicity of freshwaters and human toxicity. This research identify the environmental impacts at each stage of the lifecycle of ethanol fuel, can contribute to the debate on the new forms of action of the State and of the challenges and market prospects for the sugar-alcohol sector, after the deregulation of agroindustry, seeking a better economic and environmental efficiency.

Keywords: *methodology. Life cycle assessment (LCA). Fuel ethanol. CML 2000. Agroindustry*

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