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Environmental Assessment of a Crude Palm Oil Production Process under North-Colombian conditions Using WAR Algorithm

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Abstract: The environmental assessment of a process allows detection of improvement areas from this point of view, serving as a tool for making decision and quantification of environmental benefits for a raw material transformation into a final product. In this work, a real crude palm oil extraction process found in North Colombian region was analyzed using WAR algorithm to evaluate 8 impact categories. Results show that in general terms, the process is environmentally beneficial. The total generated PEI is negative and 10^{-4} order, in addition, although output impacts occur, these are low compared to the PEI output of an oil extraction process with chemical solvents. Moreover, high emissions of greenhouse gases do not occur, however, if energy improvements in the process are carried out by changing the type of fuel, values for PEI output for atmospheric environmental impacts categories could be reduced considerable.
Keywords : WAR algorithm, Environmental evaluation, crude palm oil.

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