



## Social indicators of LPB - Liquid Packaging Board production from a life cycle perspective

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### Abstract

Despite sustainability needing to be analyzed through the integration of environmental, economic and social aspects, almost always only the first aspect is considered. The objective of the present article is to show partial results of a life cycle assessment study of the production of Liquid Packaging Board - LPB, concerning social aspects. The LCA study was carried out for Klabin, the biggest producer, exporter and recycler of paper in Brazil, with 17 industrial plants in Brazil and one in Argentina. The scope of this study includes data from the forest up to the rolls of finished carton leaving the production line ready for shipment, considering a cradle-to-gate approach. Social indicators based on qualification levels proposed by UNESCO (United Nations Education Science and Culture Organization) and income levels according to IBGE (Brazilian Institute of Geography and Statistics) were proposed. It was observed that 9 seconds of human labor was required to produce 1 kg of Liquid packaging Board in 2008. The level of professional and educational qualification of the employees was rather high, with 4% of the employees holding a post-graduate degree (M.Sc. or PhD.) and only 7% having just primary level education. The income-distribution profile shows that 94% of the employees receive more than double the monthly minimum salary, which is a factor of great significance in a country where 55% of the population receives less than this. It is very important that sustainability of products and processes should also be analyzed by their social contribution besides environmental aspects.

**Keywords:** *life cycle assessment, social indicators, packaging, beverage container*

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