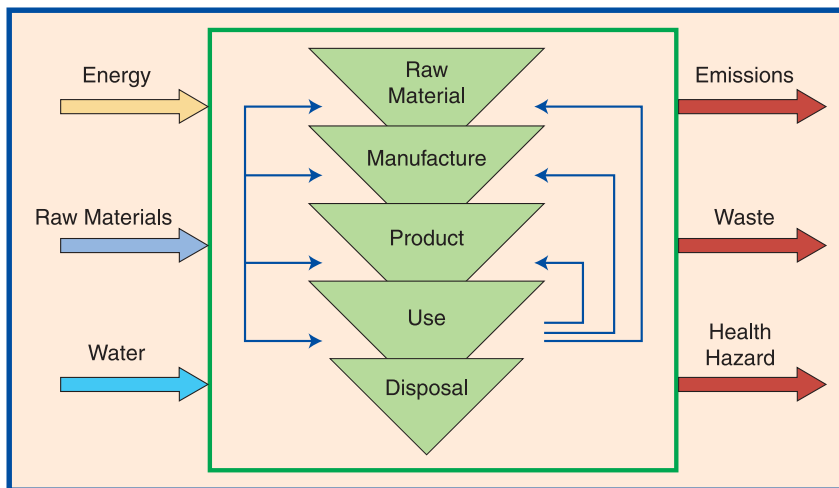


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time they are born to the end of their utility in the hope that environmental safeguards could be incorporated without hampering plastics' progressive role that it has been playing in sustainable development.

The basis of this study has been considered as one lakh (1,00,000) litres of 'Milk', one lakh metric tons of 'Atta' and one million metric tons of 'Lube Oil' respectively in keeping with the view of the consumption in order of magnitude.

Life Cycle Analysis of Plastics in Packaging in Terms of “Cradle to Grave” Approach

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Excerpts from Executive Summary of Study undertaken by IIT, Delhi, under the sponsorship of ICPE. Full Report will be available at ICPE

Plastic Pouch vis-à-vis Glass Bottle for Milk Packaging

The study discloses that for producing plastic pouches for packaging of one lakh litres of milk, the plastic raw material required is only 0.40 MT. But for packaging of same quantity of milk with glass bottles, the raw material required is 45.4 MT of glass. The results of this analysis

Life cycle analysis is an effective tool to measure the impact of a product or process on the environment. The present study covers the environmental and resource impact of plastic pouches vis-à-vis glass bottles used for packaging Milk; plastic film bags vis-à-vis jute bags used for packaging 'Atta'; HDPE cans vis-à-vis tin cans used for packaging 'Lube Oil', from the stage of raw material extraction, production, use and disposal, taking into account all the inputs such as materials, energy, capital equipment, man-hours, etc., and the outputs like products, by-products, waste materials, emissions at every stage.

This report documents the journey of the packaging materials from the

Table I: Life Cycle Data for Different Materials Used for Packaging One Lakh Litres of Milk

Material Required (MT)	Glass		Plastic Pouches	
	Energy*	Water*	Energy*	Water*
	45.4		0.40	
Phase I: Production of Raw Material	671.92	1608.0	32.22	25.6
Phase II: Production of Bottles/Pouches	530.27		4.56	
Total	1202.19	1608.0	36.78	25.6
Phase III: Filling and Distribution	Glass		Plastic Pouches	
	Fuel*	Energy* Single [Return]	Fuel*	Energy* Single [Return]
	2049	114.75 [213.43]	1120	62.73 [106.64]

*Units: Energy (GJ), Water (Thousand Litres), Fuel (Litres)

(Table - I contd. on page 2)