

Assessing the Social Impacts of a Circular Economy in the Global South

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Abstract : In the context of sustainable development and the transition towards a sustainable circular economy (CE), evaluating the social dimension remains a challenge. Therefore, developing a respective methodology is highly important. First, the change of the economic model may cause significant social effects, which today remain unaddressed. Second, following the current level of globalization, CE implementation requires targeting global material cycles and causes social impacts on potentially vulnerable social groups. A promising methodology is the Social Life Cycle Assessment (SLCA), which embraces the philosophy of life cycle thinking and provides complementary information to environmental and economic assessments. In this context, the present work uses the updated Social Life Cycle Assessment (SLCA) Guidelines 2020 to assess the social performance of the recycling system of Cuenca, Ecuador, to exemplify a social assessment method. Like many other developing countries, Ecuador heavily depends on the work of informal waste pickers (recyclers), who, even contributing to a CE, face harsh socio-economic circumstances, including inappropriate working conditions, social exclusion, exploitation, etc. Under a Reference Scale approach (Type 1), 12 impact subcategories were assessed through 73 site-specific inventory indicators, using an ascending reference scale ranging from -2 to +2. Findings reveal a social performance below compliance levels with local and international laws, basic societal expectations, and practices in the recycling sector; only eight and five indicators present a positive score. In addition, a social hotspot analysis depicts collection as the most time-consuming lifecycle stage and the one with the most hotspots, mainly related to working hours and health and safety aspects. This study provides an integrated view of the recyclers' contributions, challenges, and opportunities within the recycling system while highlighting the relevance of assessing the social dimension of CE practices. It also fosters an understanding of the social impact of CE operations in developing countries, highlights the need for a close north-south relationship in CE, and enables the connection among the environmental, economic, and social dimensions.

Keywords : SLCA, circular economy, recycling, social impact assessment

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