

## **SOCIAL ORGANISATIONAL LIFE CYCLE ASSESSMENT: AN APPROACH FOR THE QUALITY MANAGEMENT**

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### **ABSTRACT**

Human activities require the use of goods and services and this often generate negative impacts, such as pollution and the consumption of natural resources. Moreover, each production process requires the use of other goods and services from other production processes, creating supply chains that cross the global economy. Each process in these supply chains in turn generates its own negative impacts. (Norris G, 2015). It is the responsibility of organization to detect the negative impacts and/or hotspot, also in environmental and social level, and to intervene, with the ultimate goal of not only mitigating the impacts but also generating positive business impacts and therefore they improve human well-being. Social Organizational Life Cycle Assessment (SOLCA) is a collection and evaluation of the social, socio-economic and potential impacts of the activities associated with the organization adopting a life-cycle-perspective. SOLCA is created by Organizational Life Cycle Assessment (O-LCA) where the Product LCA is adapted to an organizational perspective (Martínez-Blanco J. et al., 2015). The goal of this paper is to analyze a new concept of quality integrating aspects of the sustainability.

**Keywords:** organizational life cycle assessment, social impacts, quality management.

### **INTRODUCTION**

Today's companies need to evaluate the social and socio-economic impacts of their own organizations in a life cycle perspective, in order to increase the awareness of the corporate sustainability and communicate it to their stakeholders (Draucker L., 2013). A strategy focused on the company is no longer enough, but it has to focus on the consumer in order to compete in the international arena (McGrath R.G.,2013). A life-cycle approach takes into consideration all stages from raw material acquisition through processing, distribution, use, and end-of-life processes, and all relevant related social impacts, in order to analyze both from the environmental and social point of view (JRC EC, 2012). Both SLCA and SOLCA provide a life cycle approach to assessment social impacts. Whereas the SLCA methodology is specific to individual product, the SOLCA approach "applies to organizational activities as a whole. In other words, to all activities associated with the goods and/or services the Organization provides from a supply-chain perspective (from extraction of raw materials, through use, to final waste management)"(JRC EC, 2012). An organizational approach is essential to achieve an effective sustainable management as important effects may occur "upstream" or "downstream" in the value chain and hence may not be immediately evident. In this manner the organization identifies which areas are at risk and how to improve social

positive impacts and increase its sustainability. In the organizational approach there is not just one product life cycle to follow but there are more than one department and business divisions involved in it. The life cycle approach of the product cannot be comprehensive, because the unit of analysis in the SOLCA is the totality of the goods and the services produced and sold in a year by a company (Guidelines O-LCA, 2015). This approach is also essential for making transparent any potential trade-offs between different types of social impacts associated with specific policy and management decisions (JRC EC, 2012).

On the basis of these guidelines an organizational approach is here proposed - the SOLCA adapts the O-LCA to the social perspective. Martínez-Blanco J. et al., give a first definition for SOLCA by merging the definition of O-LCA and Social Life Cycle Assessment (SLCA): “social organizational LCA is a compilation and evaluation of the social and socio-economic aspects and the positive and negative impacts of the activities associated with the organization as a whole or a portion thereof adopting a life cycle perspective” (Martínez-Blanco J. et al., 2015, p.1590). SOLCA helps organizations to understand the relation between the activities and the processes involved in the entire value chain and the social impacts of their product portfolio. Although it is recommended a full organizational assessment, the definition of organization by ISO/TS 14072:2014 allows several levels of assessment; therefore O-LCA may focus on the organization as a whole or portion thereof, for instance business unit, brands, regions or facilities (Guidelines O-LCA, 2015).

## **METHODOLOGICAL ISSUES**

The SOLCA approach proposed here gives the possibilities for organizations “to lay the ground for the progress, improvement, and dissemination of a life cycle-based social assessment by using the organizational level”(Martínez-Blanco J. et al., 2015, p.1596). The aim of this article is to analyze a new concept of quality integrating aspects of the sustainability.

Technical framework proposed in SOLCA is equal to O-LCA and SLCA, in fact four LCA phases are proposed here: goal and scope definition, life cycle inventory analysis (LCI), life cycle impact assessment (LCIA) and interpretation. This symbolizes “the backbone of three approaches”, and it generally includes the same elements (Martínez-Blanco J. et al., 2015, p.1590).

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