# THE SOCIAL LCA: THE STATE OF ART OF AN EVOLVING METHODOLOGY

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***Abstract:***
*The paper deals with the introduction and the discussion of the concept of Social Life Cycle Assessment (SLCA) – a new methodology which assesses social aspects of all life-cycle steps, from cradle to grave for the products and services. The peoples become more and more interested for the environmental problems and the scientific research have to provide appropriate and useful new tools.*

**Key words:** sustainable development, impact, Social Life Cycle Assessment, quantitatively indicators

**JEL Classification:** Q01

## 1.1 INTRODUCTION

In 1992 in Rio de Janeiro the United Nations have declared "sustainability" as the guiding principle for the 21st century, and the term has then become popular thanks to the Bruntland report of the World Commission on Environment and Development. (Klöpffer, 2002 - Klöpffer, 2008) In this report has been introduced, for the first time, the definition of sustainable development (" *the development that meets the needs of present without compromising the ability of future generation to meet their own needs*") and it has been emphasized the responsibility of human kind towards the future generation. (Klöpffer, 2002)

From a careful interpretation of the definition it has emerged that sustainability comprises three components, known as "*pillars of sustainability*", which have to be properly assessed and balanced if a new product has to be designed or an existing one has to be improved: *environment*, *economy* and *social aspects*. (Klöpffer, 2002 - Klöpffer, 2008)

There seems to be consensus about the three pillars, but not about the weights of these aspects. (Klöpffer, 2002)

As a result of globalization and of the increasing complexity of modern economies, a new concept has become a focus of interest, passing from a narrow and often marginalized notion, to a complex and multifaced concept: *corporate social responsibility* (CSR). (Fet, 2006 – Cochran, 2008)

Corporate social responsibility has become an important component in the management of relationship between companies and community, public, employees and shareholders, since companies who successfully pursue a strategy of seeking profits while solving social needs may earn better reputation and gain a competitive advantage over companies esteemed socially irresponsible. (Fet, 2006 – Cochran, 2007)

## 1.2 SOCIAL ASPECTS

A commonly accepted definition for the social dimension of sustainability doesn't exist, since it is a dimension characterized by particular features: it is *bipolar* (it refers both to individual and collective levels), it is *reflexive* (our perceptions and interpretations of the objective social conditions change the behaviour of individuals and social collectives) and it is *immaterial* (the social phenomena are difficult to grasp and analyse quantitatively). (Lehtonen, 2004)

Compared to environmental and economic aspects, social aspects present different problems because they can be highly diverse, they are weighted very differently by different interest groups

and in different countries and regions, and their evaluation is subject to swifter changes over time (it's sufficient to think, for example, to cultural changes). (Grieβhammer et al., 2006)

The aspects to consider in a social impact assessment study have to do with the scope of the study itself, and the social impacts, understood as "*the consequences on human population of any public or private actions that alter the ways in which people live, work, play, relate to one another, organize to meet their needs and generally cope as members of society*" (Interorganizational Committee on Guidelines and Principles for Social Impact Assessment, 1995 , pag. 11), will be different for each stage of a project or a policy, that is the initial planning, the implementation/construction, the operation/maintenance and the decommissioning/abandonment. (Interorganizational Committee on Guidelines and Principles for Social Impact Assessment, 1995)

An important distinction has to be made between *social change processes* (that can bring to social impacts, considering the features of the community and the mitigation measures) and *social impacts*. (Vanclay, 2002)

Among social change processes there are, for example, the *demographic processes* (changes in the number and composition of the family); the *economic processes* (relating to the way in which people make a living and economic activity in the society); the *geographical processes* (changes in land use patterns); the *institutional and legal processes* (relating to the efficiency and effectiveness of institutional structures, including governement and non government organisations); the *emancipatory and empowerment processes* (increasing influence in decision making processes); the *sociocultural processes* (affecting the culture of a society); and all the *other processes* are not included in the previous. As regards social impacts, on the contrary, according to Vanclay (2002) they can be subdivided into seven categories: the *indicative health and social well-being impacts* as for example the death in the community (where the death is considered as a loss of human and social capital), the nutrition (quality and adequacy of individual and household food supply), the mental health and subjective well-being (feelings of anxiety, stress, depression etc.), the uncertainty about the effects of planned interventions and so on; the *indicative quality of the living environment impacts* (exposure to dust, noise, risk, recreation opportunities etc.); the *indicative economic impacts and material weel-being impacts* (workload, access to public goods and services, income level of unemployment in the community etc.); the *indicative cultural impacts* (changes in cultural values such as moral rules, beliefs, language, cultural integrity etc.); the *indicative family and community impacts* (alterations in the family structure, family violence, social differentiation and inequity, social tension and violence etc.); the *indicative institutional, legal, political and equity impacts* (integrity of government and government agencies, loss of tenure or legal rights, violation of human rights, participation in decision making etc.) and the *indicative gender relations impacts* (personal autonomy of women, gendered division of production oriented labour, equity of educational achievement between girls and boys, political emancipation of women etc.). (Vanclay, 2002) The lists of social impacts are the product of the conceptualization of the authors who decide which impacts to include. Considering this, many publications have provided some general classifications concerning the types of social impacts that should be considered in a social impact assessment process (SIA). Audrey Amour, for example, has identified, as main social aspects, the *people's way of life* (how they live, work, play and interact with one another on a day-to-day basis), their *culture* (beliefs, customs and values) and their *community* (cohesion, stability, character, services and facilities); Vanclay has added to these aspects the *political systems of people* (the extent to which people are able to partecipate in decision that affect their lives, the level of democratisation and the resources provided for this purpose), their *environment* (the quality of the air and water they use, the availability and quality of the food that they eat, the level of hazard, dust and noise in which they are axposed to, the adequacy of sanitation, their physical safety and their access to and control over resources), their *health* and *well-being*, their *personal and property rights* (particularly whether people are economically affected, or experience personal dasadvantage which may include a violation of their civil liberties) and their *fears* and *aspirations*; Juslén, on the contrary, has identified seven main categories of impacts: the *"standard" social impacts*, concerning noise level, pollution and so on, the *psychosocial impacts* (community cohesion,

disruption of social networks), the *anticipatory fears*, the *impacts of carrying out the assessment*, the *impacts on state and private services* and the *impacts on mobility* (transportation, safety etc.) (Vanclay, 2002) The US Interorganizational Committee on Guidelines and Principles for Social Impact Assessment, at last, has included a list of social impact variables, that points to measure changes in human population, communities, and social relationships, resulting from a development project or policy change. These hypothetical variables regard: the *population characteristics* (present population and expected changes, racial and ethnic diversity, influxes and outflows of temporary residents as well as the arrival of seasonal or leisure residents); the *community* and the *institutional structures* (size, structure, and levels of organization of local government, including linkages to the larger political systems, historical and present patterns of employment and industrial diversification, the level of activity of voluntary associations, religious organizations and interests groups, relations among institutions ); the *political and social resources* (distribution of power authority, the leadership capability and capacity within the community or region); the *individual and family changes* (factors that influence the daily life of the individuals and families, including attitudes, perceptions, family characteristics and friendship networks); the *community resources* (include patterns of natural resource and land use, availability of housing and community services such as health, sanitation facilities, historical and cultural resources etc.). (Interorganizational Committee on Guidelines and Principles for Social Impact Assessment, 1995)

The concept of social impact assessment has been already mentioned in this work, but it has been no way of giving a definition yet. To better understand the topic of the next paragraph, concerning the Social LCA (regarding the application of a SIA to a product or service life cycle), it's necessary to outline its main aspects. The *social impact assessment* (SIA) has been defined in different ways from the authors and the lack of a commonly accepted definition has often led to the inadequacy of many studies. (Vanclay, 2002)

Social impact assessment can be defined as "*the process of identifying the future consequences of a current or proposed action which are related to individuals, or ganizations and social macrosystems*". (Becker, 2001, pag.312) The methodology consist of different phases that can be subdivided into two groups: the group concerning the initial phases that precede the assessment project and the group regarding the main phases of the same project. (Becker, 2001) To the first group belong the phases concerning the *problem analysis* and the *communication strategy* (it's necessary to understand the nature of the problem and why it has been judged serious enough to merit action), the *system analysis* (the boundaries of the system, its sub-systems and related phenomena), the *critical or base-line analysis* (regarding the existing conditions and past trends associated with the human environment in which the proposed activity has to take place, for example relationships with the biophysical environment, the historical background, the political and social resources, the culture, attitudes and social-psychological conditions, including attitudes toward the proposed actions, and the population characteristics), the *trend analysis* and the consequent *monitoring design* (able to provide informations about the development of action and its intended and unintended consequences) and the *project design*. (Interorganizational Committee on Guidelines and Principles for Social Impact Assessment, 1995 - Becker, 2001)

To the second group, on the contrary, belong phases such as the *scenario design* (necessary phase to provide simulations of what might happen to the system of interest), the *design of strategies* that might eliminate or mitigate the problem, the *assessment of impacts* and the consequent *ranking of strategies* (that are redesigned in order to mitigate negative impacts), the *reporting* and, finally, the *stimulation of project implementation* and the *auditing of the social impact assessment project*. (Interorganizational Committee on Guidelines and Principles for Social Impact Assessment, 1995 - Becker, 2001)

A particularly important aspect in the social impact assessment process, moreover, is the public involvement starting at the very beginning of planning for the proposed action, that is the involvement of all people who live nearby, who will hear, smell or see the project development, those who will be forced to relocate because of a project, those who normally use the land on which

the project will be located and so on. (Interorganizational Committee on Guidelines and Principles for Social Impact Assessment, 1995)

Social impact assessment has changed substantially. In many western countries, for example, it is nowadays obligatory in the preparation of governement actions, and many business corporations and no-profit organizations have adopted social impact assessment as a standard requirement in policies formation. The number of practitioners of social impact assessment is growing steadily all over the world; significant documents concerning social impact assessment have been published (it's sufficient to think, for example, to "*The international principles for social impact assessment*" and to "*The principles and guidelines for social impact assessment in the USA*", both of 2003 and, although they have been developed independently, they are both direct descendents of the "*Guidelines and principles for social impact assessment*" of 1993/1994); and more and more often, how we will see, the consideration of social impacts is incorporated in greater projects of environmental impacts assessment. (Becker, 2001 – Vanclay, 2006)

### 1.3 THE SOCIAL LCA

There has been way of outlining, in the previous paragraph, that social aspects have obtained, nowadays, an undoubted importance. More in particular recent years have seen an increasing interest, among policy makers and stakeholders, in the inclusion of social impacts in products or services environmental life cycle assessment, ant this interest has been made concrete whit the development of the so called *Social Life Cycle Assessment* (SLCA), a new methodology that has obtained more attention only over the last years. (Norris, 2006 – Hauschild et al., 2008) The social LCA assesses social aspects of all life-cycle steps, from cradle to grave, and it has been developed for including a great number of impacts, that vary from those concerning workers (accidents, remuneration, working conditions) and local communities (toxic pollutants, human rights abuses), to the greater consequences on the society (corruption, payment of taxes). (Grieβhammer et al., 2006 – Hauschild et al., 2008)

The importance of the methodology, however, is that Social LCA supplements the traditional environment-oriented LCA and the life cycle costing tools in support of sustainability management, addressing all three pillars of sustainability. (Hauschild et al.,2008)

The *Life Cycle Assessment* is a methodology that analyses quantitatively the behaviour of a product towards the environment, evaluating the socalled *"environmental shadow"* cast by the same product. (Heiskanen, 1999 - Bovea, 2004)

The *Life Cycle Costing*, on the contrary, can be defined as the assessment of all costs, internal and external, associated with the life cycle of a product, that is from those that are directly covered by any one or more of the actors in the product life cycle (suppliers, producers, users, end of life actors etc.), to those that, in the long term, fall back on society, since there is no governmental regulation or market that assigns them to the company, that, consequently, is not responsible for them (environmental degradation costs, adverse impacts on human beings, their property and their welfare). (Bovea, 2004 – Hunkeler and Rebitzer, 2005 – de Beer and Friend, 2006)

It has already been said that the LCA, the LCC and the SLCA are important methodologies for the environmental, economic and social assessment, and their integration allow to give a more complete assessment of product sustainability. (Hunkeler and Rebitzer, 2005)

As regards this integration two options have been proposed. According to the first one the *Life Cycle Sustainability Assessment* (LCSA) can be written as $LCSA = LCA + LCC + SLCA$. This option is based on three separate life cycle assessments with consistent system boundaries (this brings to build an independent dimension of sustainability, respecting an important principle of sustainable development which aims at balancing environmental, economic, and social considerations). (Hunkeler and Rebitzer, 2005 – Klöpffer, 2008)

According to the second option, on the contrary, the LCSA can be written as *LCSA = "LCA new"*.

In this case the Life Cycle Costing and the Social LCA are included as additional impact categories in Life Cycle Assessment and exists, consequently, an only one LCI model which has to be defined in the "Goal and Scoping" phase. (Klöpffer, 2008)

Before studying in detail the SLCA is important to make a specification in order to do not cause confusion afterwards. The acronym SLCA has been interpreted, depending on the authors, differently; some authors, as we have seen, have spoken of *Social LCA*, someone else, like for example Hunkeler, of *Societal LCA*. The same Hunkeler, in one of his works, has outlined the difference between the two terminologies, highlighting the micro-economic character of Societal LCA compared with that macro-economic of Social LCA. According to what affirms the author, the societal life cycle assessment differs from social LCA because it examines the effect of product substitution on the state of average workers in countries where the product life cycle has an effect. The Social LCA, therefore, covers explicitly the effect of government programs, while the Societal LCA covers them implicitly via overhead and taxes. (Hunkeler, 2006)

Even though not all the authors have dwelt upon the slim difference between the two terminologies, to consider this distinction is important in order to avoiding unnecessary doubts going forward in the work. Starting from the next paragraph, it will be described the framework of Social LCA and it will be introduced the considerations of different authors concerning this topic, in order to see how the Social LCA has been interpreted.

### 1.4 THE FRAMEWORK OF SLCA

As it has already been mentioned, the Social Life Cycle Assessment considers social aspects throughout the product life cycle and, as it happens in Life Cycle Assessment, it can be identified, for this methodology, two main classes of goals which should be seen as complementary: the first one regards product, process or company comparison, and the other one the identification of product or process potentials improvements. (Grieβhammer et al., 2006 – Jørgensen et al., 2008)

The Social LCA, corresponding to the LCA consists of the same phases of it, that is:

- Goal and scope definition;
- Inventory analysis;
- Impact assessment;
- Interpretation. (Grieβhammer et al., 2006)

The objective of the first phase is to identify the object of the study and to delimit the scope. It's necessary to define, in this phase:

- Goal of the study (for example the development, or the refinement of a product);
- Inventory scope and system boundaries (for example the determination of which countries or regions are covered, the evaluation of the existing situation, or of a prospective of development);
- Temporal scope;
- Functional unit;
- Alternatives/scenarios (including *benchmarks* and improvement options);
- Data quality requirements;
- Allocation procedures;
- Critical review (in the case of comparative evaluations and in the case of any pubblication). (Grieβhammer et al., 2006 - Jørgensen et al., 2008)

The second phase, regarding the inventory analysis, has the goal to collect objective data identified during the scope definition, and in this phase there is one of the more demanding aspects of Social LCA. (Jørgensen et al., 2008) As regards the collection and the availability of data, in fact, arise different problems, since it can happens that only a small part of data is available in processed form from statistical or other sources; that no input-output data are yet available for several processes and activities; or even, that several upstream chains can be involved, particularly in the case of complex industrial products. (Grieβhammer et al., 2006)

The impact assessment is the phase where the inventory information s are translated into impacts and, as in the LCA, it consists of four phases: *classification*, *characterisation*, *normalisation* and *evaluation of impacts*. (Grieβhammer et al., 2006 - Jørgensen et al., 2008)

The **classification** assigns individual aspects to groups of indicators and, with regard to it, a discussion has arisen concerning whether to follow the approach known from LCA (that is to classify on the basis of the different impact categories), or to classify according to the impacted stakeholders (in this case the UNEP/SETAC task force has agreed on a minimal list of stakeholders: workforce, local community, consumers (related only to the use stage) and society (nation al or global)). (Grieβhammer et al., 2006 - Jørgensen et al., 2008)

The purpose of **characterisation** is to aggregate the inventory results (types of jobs, job satisfaction etc.) within the same impact category, and this implies the conversion of inventory data to a common metric. Many times, in fact, results can not be simply added or aggregated and for this reason it's necessary an approach that allows it. (Grieβ hammer et al., 2006 - Jørgensen et al., 2008)

Weidema, for example, (as it will see later) calc ulates all impacts as a reduction in the average well-being, denoted *Quality Adjusted Life Years* (QALY), while Hunkeler relates one indicator, the *number of working hours* along the product chain, to several impact categories (housing, health care, educatio n and necessities). (Jørgensen et al., 2008)

As regards the **normalisation** and the **evaluation** in Social LCA, at last, very little works have been carried out and the general trend is that these phases have to be performed like in LCA. (Jørgensen et al., 2008) The normalisation, in particular, seems an optional step which has sense only with quantitative results; in this phase the outcomes for the individual indicators are placed in relation with a suitable reference value which has to correspond to that of LCA (for example the gross national product) and the goal is to establish the proportional importance of every problem. (Grieβhammer et al., 2006)

The final phase of the methodology, concerning the interpretation of results, at last, shoul include checks of *completeness* (or full coverage of areas of impact), *consistency*, *sensitivity*, *materiality* (relevance of provided informations) and of *responsiveness* (engagement of stakeholders). Key requirements for this phase, moreover, are the participation of stakeholders, the documentation of the evaluation process, the steps to ensure transparency and verifiability of results, as well the analysis concerning the conformity with the goal of the study and with the scope of inventory analysis. (Grieβ hammer et al., 2006)

In spite of the same methodological structure of LCA, however, in Social LCA there are some differences regarding, for example, the d efinition of product and boundaries system. If the product system in the Environmental LCA comprises all processes involved in the different stages of the product's life cycle, from the extraction of raw materials to final disposal, in the Social LCA it is represented by the companies engaged in the life cycle and in which industrial processes take place.

In Social LCA, therefore, the analysis is no more conducted at a process level, but of companies engaged in the life cycle and, more precisely, it focuses on the conduct of each company towards stakeholders. (Dreyer et al., 2006 - Jørgensen et al., 2008 – Hauschild et al., 2008)

As Dreyer, Spillemaeckers and other authors argue, most social impacts have no relation with processes that form the product or se rvice system, but rather with the conduct of companies performing the same process; this means that the causal link is not, like in the LCA, between process and impact, but between conduct of the company and impact. ( Jørgensen et al., 2008)

Analysing impacts at a company level instead of process level, however, makes difficult to define the relation between impacts and product; the link between the conduct of a company in the product life cycle and the product is not directly quantifiable as the physical l ink between process and product. (Dreyer et al., 2006)

A *share factor*, which represents the weight that is given to a company in the product or service chain, is used to solve the problem and to allocate social impacts, created by companies, to the product or service assessed. (Dreyer et al., 2006 - Hauschild et al., 2008 - Jørgensen et al., 2008)

The share factor can be calculated in different ways; it could be based, for example, on the *physical weight* (the contribution to the physical weight of the product), on the *cost* (the contribution to the cost of the product), on the *value creation* (the contribution to the product's value) or on the *number of working hours* spent per functional unit of the product, and the choice depends on two criteria: it is necessary that the bias, naturally introduced by the share factor, is known and accepted, and the data or information, needed for the calculation of the share factor, have to be available for all companies of the product chain. (Dreyer et al., 2006 - Hauschild et al., 2008 - Jørgensen et al., 2008)

As regards the boundaries of the product system, on the contrary, they are determined with respect to the influence that the product manufacturer exerts over the activities in the product chain and they have to be determined on a case-to-case basis, because Social LCA is highly *site-specific*. To conduct a Social LCA, in fact, simple general informations would not be useful, since aspects concerning the conduct of companies in the life cycle, or the impacts over stake holders are always specific. (Dreyer et al., 2006) Generally it can be affirmed that in a Social LCA are included all social impacts which occur in the material, manufacturing and distribution stage; should be considered social impacts of product use; and finally, in the disposal stage, their consideration depends on the local or regional community's choices on the matter of waste management (the influence of the product manufacturer in this stage, in fact, is restricted to the few case where he has influence on the choice of waste management companies, or where he is also the end-user of the product). (Dreyer et al., 2006)

Other important aspects to consider in a Social LCA are the *definition of assessment parameters*, the *identification of areas of protection* and the concept of *social indicator*. As regards the first aspect it can be said that the address changes depending on the approach type. In a *bottom-up* approach the definition of assessment parameters starts with the identification of social issues in the business context of the product manufacturer; in a *top-down* approach, on the contrary, the definition of assessment parameters starts with the identification of what is valuable to society (this ensures the inclusion of those impacts which are relevant from a societal point of view). In order to give importance to both company and society, a *two-layer Social LCA* has been suggested. This method consists of two layers of impact categories, an obligatory and normative one, concerning a predetermined set of categories expressing minimum expectations to conducting responsible business, and an optional one, regarding a self-determined set of categories expressing specific interests of the product manufacturer. (Dreyer et al., 2006) The obligatory categories are based on the Universal Declaration of Human Rights and they refer, for example, to the discrimination, the child labour, the forced labour and the freedom of association. (Hauschild et al., 2008) The optional categories, on the contrary, are more dependent on the context of the company in terms of geographical and cultural settings, but also from trade to trade and some examples are the physical working conditions, the working hours, the minimum wage, the training and education of employees, and so on. (Hauschild et al., 2008) As regards the areas of protection in the Social LCA to the four areas normally present in a process of environmental assessment (human health, natural environment, natural resources and man-made environment) it's necessary to add a new one (to supplement the human health of LCA): *Human dignity and well-being* (representing the value of a good and decent life and the fulfilment of the basic needs such as access to food, water, clothes, medical care etc.). (Dreyer et al., 2006 - Hauschild et al., 2008 – Jørgensen et al., 2008)

As regards social indicators, finally, they can be different. A first classification subdivides them in *midpoint indicators* and *endpoint indicators*, difference that refers to the location of the indicators in the impact pathway. (Jørgensen et al., 2008) Job creation, for example, is normally not considered a goal in itself but, through contributing to the family income and subsequent poverty reduction, it may improve the family's health conditions, which may be considered as an end goal. The job creation could, thus, be considered a midpoint indicator, and the health condition as an endpoint indicator. (Jørgensen et al., 2008)

Another important classification considers the different methodologies used in the formulation of indicators. The first relates whether the indicators are formulated in quantitative,

semi-quantitative or qualitative terms, and the second concerns whether the indicator measures the impact directly or via indirect indication or proxy measurements. (Jørgensen et al., 2008)

When formulating quantitative indicators it is assumed that the phenomenon to be measured can be directly quantified; a scoring system, based on semi-quantitative scales (for example ratings from good to bad, often expressed in corresponding numbers), on the other hand, is often applied if the phenomena to be measured are too complex to measure and express in simple physical units (such as the indicators used to measure the performance on occupational health and safety); the use of qualitative indicators, at last, does not set any restrictions on the types of information to include in the assessment, and thus they can be used in a more exploratory manner than both the quantitative and semi-quantitative indicators. (Jørgensen et al., 2008)

As regards the use of indicators that measure the phenomena directly, indirectly, or via proxy measurements, on the contrary, it can be given two examples. According to Dreyer it is well known, among companies which have experience with registration of working accidents, that the registered number of accidents cannot always be correlated with the quality of work environment in the company. The problem of using the number of accidents as an indicator is that this number is strongly influenced by how well reporting of working accidents is managed (a low number of reported incidents, in fact, may reflect both a very efficient management practice and a very poor management where incidents are simply not reported). Dreyer, therefore, introduces the idea of assessing the management efforts rather than the reported impacts. The indicator measurement, thereby, becomes an assessment of the will and ability of the company to avoid negative impacts, and not an assessment of the reported impacts themselves. (Jørgensen et al., 2008)

Weidema, on the contrary, gives an example of measurement via proxi and suggests a method of reverse compilation from available data sources. Reverse compilation, for example, could be used in relation to child labour: regional or national statistics on child labour are very scarce and, assuming that children are either in school or working during day hours, a proxy indicator measurement of the total extent of child labour in the region can be made on the basis of statistics on education and demography. (Jørgensen et al., 2008)

### 1.5 CONCLUSIONS

The social life cycle assessment of a product presents, as well as it happens in every methodology, some strenghts and weaknesses. The main problems regard, for example, how to relate quantitatively the existing indicators to the functional unit of the system, how to obtain specific data for the regional SLCA (it's to remind, in fact, the possibility of a scarce availability of data, or a total lack of them for different processes or activities), how to decide among qualitative or quantitative indicators, how to quantify all impacts properly, or more how to evaluate the results. (Klöpffer, 2008)

The strenght point of the methodology is that it makes the assessment of the product more complete, adding its social aspects to the environmental and economic ones. The Social LCA would allow companies to fully consider sustainability and, providing informations about the potential social impacts on people, caused by the activities in the life cycle of their product, it would facilitate them to conduct business in a socially responsible manner. (Dreyer et al., 2006 – Hauschild et al., 2008)

In spite of the admission of this importance the Social LCA is still in the phase of development, the one where different approaches emerge and hypotheses are tested and discussed, waiting to reach an agreement and achieve harmonization. Promoting the development of the methodology and its practical use it's more than ever necessary and to obtain this it should certainly adopt some actions; actions concerning, for example, the execution of case studies, the definition of the single indicators and of their measurement units, the improvement of existing databases (restricting the problem of the lack of data, previously considered), or more the creation of a code of practice for integrating social aspects into LCA or extending the existing code of practice of the LCA. (Grießhammer et al., 2006) A role of primary importance for the development of Social LCA

is occupied by values (defined by Vanclay as "*the statements about fundamental beliefs deeply held that determine principles from which guidelines can be written*" (Vanclay, 2006, pag. 9) ), by culture and by every individual and communities beliefs.

As it has already been said in this work, talking about the Kuhnian model, in fact, the actions of individuals are guided by their values and their beliefs and this means that only an understanding of the importance of concepts, like for example, in our case, the *intergenerational equity* or *better working conditions*, can help to change the norms which "condition" human activities, allowing to insert ethical aspects in the company.

As Lorna Beretta properly asserts, the starting point for obtaining a change is the personal learning experiences of those struggling for the change itself and this learning, given by the experience in relationship with others, has the potential to enhance individual and community lifes. (Beretta, 2007)

The importance of the consideration of social aspects in a life cycle context has to be understood first of all at a theoretical level by individual, and companies that make, for example, social reporting, or apply a management system such as SA8000, have to do it because they really have recognized its importance and not exclusively to obtain a competitive advantage over competitors. Only a manager that has really understood the importance of social aspects and of probable impacts that company activities may cause on various stakeholders who will have to do with it, can really work hard to try to avoid or to mitigate these impacts and only in this way the company will be able to fully enjoy all the benefits that it will register, for example, in the relationship with customers or employees (which certainly will work with more enthusiasm in a better context).

It's just, therefore, what Becker says, that is that "*the social impact assessment has to be discussed first of all as a moral obligation*" (Becker, 2001, pag. 318); a moral obligation to the base of which there must necessarily be the understanding and the convinction of why it must be so.

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