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Study of life cycle assessment

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Abstract
We give brief introduction regarding the previous work which is done by different authors and an institution in different area of sustainability and similarly in an area of Life Cycle Assessment. Many methodology or concept is developed under the shadow of sustainability or after the development of sustainability and LCA, like design for sustainability in this section we describe how sustainability is also depended on design also. These methodologies also lead towards the concept an approach for innovation with its advantages and disadvantages. In this chapter we also discuss about Sustainable product development, Eco-design or Design for environment, Dematerialization and materials inputs per units of services. At last we also give a brief introduction for Life Cycle Assessment (LCA) and its importance towards this research work.

Keywords: protest, social identity, emotion, injustice

Introduction

Literature Review

In reaction to the growing stresses coming from nationwide and worldwide protocols, and from public in general, corporations are increasingly pushed into the direction of accepting the values of both social and environmental responsibility within their strategies, structures and management systems. In fact, sustainable development cannot be achieved through isolated initiatives, but, rather requires an integrated effort at various levels, comprising social, environmental and financial aspects. As addressed in recent studies on the very nature of sustainability, "any foreseeable sustainable state will be the result of interactions between organizations, individuals, societies and states". In a biosphere with restricted resource and severe environmental impressions, it is understandable that a more sustainable lifecycle style would be imperative. So, the scientific research is shifted from environmental protection to sustainability. Sustainability is describe in 1987 by the world commission on environmental and development under the leadership of the former Norwegian Prime minster, Brundtland. Termed as 'Sustainable Development,' "SD" it is extensively discussed by eco-friendly policy researchers and non-governmental organizations (NGO), and it also appears within plenty of corporate assignment statements and Environmental charters, notably the Business Charter for Sustainable Development, which has been signed by over 1,500 companies.

The concept of Sustainability could be expressed as 'Create from Silviculture' which means that only as much wood is remove from the forests as grows again in the run [11]. Thus, Sustainable development is the development that meet the desires of present-day without compromising the ability of forthcoming generations to meet their own needs. Sustainability in every area has a lot to do with "doing excellent with less," and accepting a wider view of product development looking at the full lifecycle of the product and the impact that its design, manufacture, use, and end of life can have across the Triple Bottom Line (TBL).

The term "TBL" is used as a framework for measuring and reporting corporate performance against economic, social and environmental parameters as shown in Figure1 One of the most difficult stage for designer is to change the old tradition 'only consumer focus mentality' to 'something that benefit for all of us'. Often small changes may have large effects such as, selection of material may affect major changes in energy requirements and waste and end of life. It is an iterative process and not necessarily about new technologies by innovation and design. Sustainability, is also majorly associated with developing nations, which play vital role on a country's economy and on the conditions and standard of living.

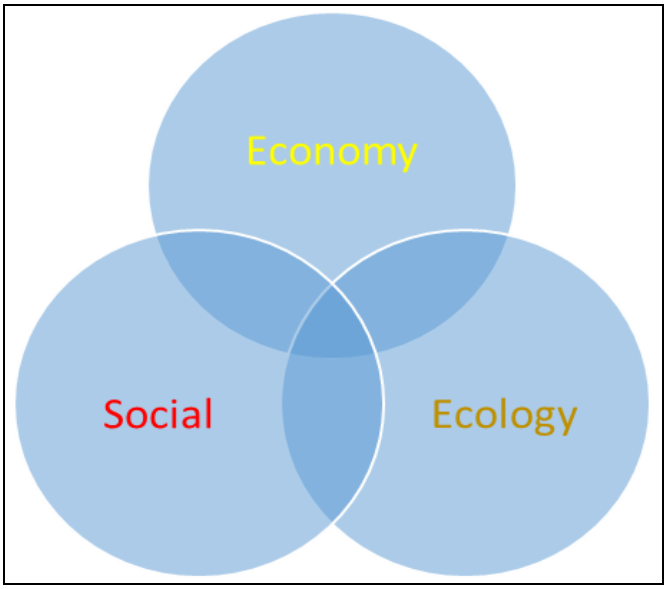

Fig 1

Life Cycle Assessment

Life cycle assessment is a tool or method through which we can assess the environmental impacts associated with the whole life cycle of a product from cradle to grave or cradle to cradle. During period of the renowned "Report to the Club of Rome" and at the time of first oil crisis.

All of a sudden it turn out to be observe that our asset will not life time and that the exponential trade and industry progress might result in social and an ecological disaster. When the OPEC cartel was smashed and the oil prices went down, Afterwards the second oil crisis.

The LCA activities were continued by a few experts in US and the in Europe, at least at a more moderate level, but without true growth. Invention of Life Cycle Assessment was done in an around 1970 in Midwest Research Institute of United States LCA. In European hemisphere as similar as LCA like work is started soon after Battelle Frankfurt, at EMPA in Switzerland and by Sandstorm in Sweden.

Basic idea regarding LCA

The sudden resurgence of LCA in the far 80's is very difficult to understand because not only the packing but all other products were also analysed from extraction of its material to end of life i.e. cradle to grave. The very basic idea of life cycle assessment is all the ecological burden is related to the product or may be related to its services have to be assessed back to the raw materials and down to wastage removal. In theory the inventory involves the assessment of input and output. But in practical case this is not possible in energy term. Basic idea is not false, actually LCA is the only environmental assessment tool which only comprises in the shifting of problems. The results of serious of workshop from which is held in 1990 to 93 is proved by the famous SETAC-triangle.

Hotspot Analysis

Life cycle assessment (LCA) is a tool or technique for an entire calculation of an ecological or environmental effect of products, services or processes by involving an each every stages of the product life cycle. In current years, LCA has renowned as a universally accepted tool or technique, also used broadly in the farming sector for entire calculation of the ecological effect. And for identification of a hotspot, In this work our aim to find out the hotspots using LCA.

Life cycle assessment (LCA) is a tool or technique for an entire calculation of an ecological or environmental effect of products, services or processes by involving an each every stages of the product life cycle. In current years, LCA has renowned as an universally accepted tool or technique, also used broadly in the farming sector for entire calculation of the ecological effect and for identification of a hotspot.

An European Union and the Dutch government introduced numerous ecological strategies, to improve the ecological effect of farming activities, such as milk production,. In selected organic farm farms concentrates was to be the hotspot area in off impact as well cellulose, where as in conventional farms purchased pest concentrates was found to be the hotspot in selected orthodox farms in off farm. For this study the guideline is: reduce the use of concentrate components those who have high ecological effect, reduce the use of concentrates per kg of milk. But further study is required because they didn't discuss about ingredients of concentrates and also on the cost of concentrates.. On the other hand construction is one of the largest end users of environmental resources and one of the largest polluters of manmade and natural environments. Concrete and cement sector is also contributed positively in Climate change. So, the requirement of R&D work is necessary to improve the old concrete technology with wide range of better stuff, with better separate stuffs, self-repairing, must be self-cleaning, and even more resistant to atmospheric degradation and to extremes of temperature.

In China's real estate's field, the ecological and health problems are fairly prominent. Still, current ecological building assessment method (BAM), have their restrictions which reducing their efficiency. To overcome this limitation we require better interaction, communication and recognition with member of the design team and other sector to promote BAM. The rigidity and complexity still major hurdles to the acceptance of ecological BAM. There is also some guideline provide by, savings, advantages and disadvantages offered by various technologies within sheet metal forming industries or field during the prime materials manufacturing up to reusing technologies.

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