

# **Green Logistics and Procurement and their Impact on Ecology and Biodiversity**

## **Introduction**

In the last decades the world has made a remarkable development in supply chain management. This rapid development has been necessitated by advancement in technology, wise use of resources and constant drive to attain competitive advantage in the market. It is prudent to note that businesses interlink and therefore anything which negatively affects the climate and environment has got direct and indirect impact on logistics. This is experienced in terms of cost, efficiency and availability of the needed resources. Economics of Ecosystem and Biodiversity is one of myriad entities by the UN to aid in servicing its main obligations. Environmental sustainability and business ethics are like two sides of a coin in corporate activities as stipulated in conventional Corporate Social Responsibilities, CSR in modern times. Sustainable business activities ought to put into consideration the dynamism of environmental sustainability and in achieving long term goals; business sustainability. The public are becoming more aware of ethical business practices; hence for all corporate organizations, this need must be reflected. In order to achieve global objectives, UN has calculated the value of natural service provision whose economic value ranging from \$2,000-\$5,000 billion per annum whereas the value from Trucost of green damage caused by major companies of the world stands at approximately \$3,500 billion. The smash up value does not take into account damage caused by small and medium business entities. As a result, the rate of extinction is growing higher and higher, currently at 1,000 times compared to the past times.

These amazing statistics mean that for the next generations' sake, something needs to be done. According to Williams and Saunders (p. 62), "...solution lies in a nationwide revolution in land use. We need to build ecologically sustainable landscape consisting of a mosaic of commercial land uses that can capture this leakage of carbon, water, nutrients and sediment..." The leakages of environmental damage can be turned into commercialized benefits by producing goods and services via more environmentally sustainable methods. These technologies should address the effective water use and minimal damage caused to land in a bid to come up with processes that compromise damage to our ecosystem. Green ecosystem services include: provision of hygienic water, zero tolerance to air pollution, and soil management strategies. Generally, efforts geared towards creation, substantiating and promotion of ecosystem services will be fundamental in achieving green goals, (Williams and Saunders, p. 62).

Environmentally sustainable practices can be achieved by corporate organizations. To fast track the rehabilitation process, there is need of amending traditional building codes to comply with the realities of environmental challenges. By just adopting energy saving strategies, nations can achieve carbon emission reductions that can surpass those proposed in the Kyoto Protocol and the recently held Copenhagen climatic talks. The greatest hurdle facing green goals is legislative measures. It is the responsibility of government bodies to propose laws that would be harmonious with UN and economic blocks' laws so as to address climatic change challenges most comprehensively.

Gleneagles, Scotland was the venue of July, 2005 meeting of the Group of Eight industrialized nations (G8) on measures to curb climatic changes, (Maltby, et al., pp. 71- 76). The meeting resolved that the G8 embark on scientific research to establish the causes of environmental degradation rather than streamlining a given course of dealing with the problem which has not yet been identified. Critics of the meeting were also against lack of discussion to tackle the increasing level of Green-House Gas (GHG) emission. In the contrary, the meeting realized some positive

results as the leaders including the United States agreed that human activities are the main causes of environmental degradation and changing climatic conditions. They also resolved to change action plans: adopting use of cleaner energy for a sustainable development and to have a dialogue on the same proposal.

The G8 summit was followed by the Stern Review that was commissioned by UK's Prime Minister Gordon Brown as part of Dialogue on Climate Change. It is argued that the Stern review was the best ever produced action plan that would address climate change given its concentration on economic assessment and how these economic activities influence climatic changes. The Stern Review was also criticized; however, it is significant because it has influenced the setting up of new policies on environment. Among the policies set is implementation of carbon pricing via building regulations, climatic change agreements, climatic change levy, and carbon trust among other pricing policies for businesses. There are also policies developed for agricultural activities, transport sector, domestic and public energy use monitoring.

In the US, the federal state has not developed any package to curb climatic changes, more so, in dealing with the emission of carbon. The Bush's administration did little towards achieving a reduced carbon emission but all that is bound to change under President Obama's reign. US Supreme Court seem to have included a discussion of climate change on government agenda, (Bouthilier, et al., p. 364). Climate Security Act (CSA) made a proposal to the Congress on the climate agenda and following adjustments to the bill by Senator Boxer; it was defeated fronting its reintroduction in the year 2009. Since then the US seem to be getting more and more concerned with threats posed by changing climatic conditions. The citizens of America want the federal government to come up with legislations that would ensure businesses adopt measures aimed at curbing environmental degradation.

Most stakeholders in the industrial sector made a proposal that US administration to impose stringent measures for developing countries whose products enter US market. These groups suggest that the countries' manufacturing processes adhere to climate change policies comparable to the ones applied in the US. The US House of Representatives formed a sub-committee from the Energy and Air Quality wing to prepare White Paper on Competitiveness. The committee came up with recommendations that would responsibly check climatic change challenges. The three recommendations are: use of green technologies in production of goods and services by developing countries, setting up of energy use and performance standards like 'polluter pays principle' that must be complied with by all sectors of the economy, and Border Adjustment Measures, BAMs, (Bouthilier, et al., pp. 364-365).

In New York City, the City Council passed legislation aimed at reducing emission of GHG especially from buildings which are the main source of heat-trapping gases. According to Mayor M. Bloomberg, this measure would see reduction of carbon footprint by 30% by the year 2030. The bill contains a section requiring building owners of more than or equal to 50,000 square feet to review their energy audits after a 10 years lapse, (Kugler, 2010). In whole of the US, this move by City Council of New York is the first to come with climate change policies applicable by building owners so as to attain green buildings that are friendlier to the environment than the typical ones.

The United Kingdom is one of nations that are at the fore front in curbing climate change resulting from Green House Gas (GHG) emissions. It has well developed building standards developed under command-and-control policies that include imposition of levies. The most striking and modest step the British administration has taken recently is a strategy to cut their carbon emission by 60% by the

year 2050, which surpasses European Union's 20% reduction of GHG by 2020. For the same time frame, Britain's target is 26-32% GHG emission cut. The Britain's draft Bill on Climate Change if passed is bound to affect lives of her citizens. Britain's environment minister, David Miliband said the bill was the first of its kind in the world over; given that its carbon footprint reduction targets are legally binding, (Cowell, 2009).

The measures that have been taken by Britain and other European nations comply with the recommendations made at the Kyoto Protocol. Indeed, they surpass the GHG emission reduction recommendation of the Kyoto Protocol. On the other hand, the US signed the agreement but the immediate former president was against the agreement. Indian and Chinese economies are growing at a very fast rate. This makes them potential polluters in the near future. Due to these unfolding events, the Britain's bill recommended that her authority be given power to influence other countries to come up with similar policies and laws.

It is point on for business entities to get involved in the development of biodiversity programs by using generic resources that protect the sensitive issue of protection of ecosystem and biodiversity. Firms have adopted landscape redesigning as a method of encouraging biodiversity while at the same time promoting effective land and water use. According to William and Saunders, (p. 68), "Part of the solution lies in restoring crucial elements of biodiversity to landscape and optimizing the ecosystem services the biodiversity provides." A suggested minimum requirements for a green firm include: 30% landscape cover consisting of natural vegetation, 20% vegetation cover comprising of deep-rooted trees among other plants that can raise revenue from grazing and forestry services, 30% annual crop cover, and 20% land cover for mixed cropping, (William and Saunders, p. 70). These requirements are applied in Australia and can be met by companies that specialize in agricultural production and if landscape redesigning is part of a company's long term goals, then biodiversity and ecological balance can be achieved.

There is rising awareness level of the value of operation and chain management in regard to opportunities created through carbon trading. Habitat Banking, HB is a scheme that allows company management to buy carbon credits from land owners who have made notable conservation efforts with notable impact on ecosystem and biodiversity. Case study in Latin America and Caribbean, LAC indicate that economic activities predominant in the area are detrimental to the environmental conservancy. "Pressures are coming from tourism, agriculture (including biofuels), mining and oil and gas extraction," (Bovarnick, et al., p. 12). In order to curb the adverse effects production externalities for firms and a possible diminishing output, proposals are underway to boost investment in habitat re-establishment in LAC. This follows after successful implementation of pilot projects in USA, Australia and Germany on HB. Citizens in LAC are bound to support HB plans because it is also a measure that minimizes consumption externalities; though, this depends on efforts aimed at popularizing the idea.

HB has both economic and ecological of payback and this makes it an important facet in modern business operation and chain management. Through creation of awareness of HB, both large and small scale business owners in the public and private domains will increase demand for carbon credits at regional and national levels. Gross Domestic Products, GDPs of nations in the in LAC will grow as HB develops and leading to creation of sub sectors like financial banking, insurance firms among other sectors whose services would be necessary. These benefits are guaranteed given that feasible studies carried out in LAC countries have shown great potential; though, in different sectors of economy. "Brazil, Costa Rica, Chile and Mexico were given a Tier 1 rating which indicate that most elements are in place for a banking scheme with Environmental Impact Assessment, EIA and

endangered species regulation adaptation needed,” (p. 18). This is a guarantee that Pareto optimality is achievable in HB. Besides, HB is a solution to change in environment and achieving balanced ecosystem and biodiversity. According to Naeem et al., (p. 293), “The value of ecosystems lies in their capacity to deliver services. Since the supporting services identified in the Millennium Assessment are just the processes that underpin ecosystem functioning, they are an integral part of the ecosystem as an asset.” It then follows that carbon trading is an essential protection against biodiversity loss.

## Conclusion

Business owners must practice environmental morality as a responsibility and for a sustainable competitive advantage. This is because of the economic advantages availed through HB and carbon trading in general. Green goals ensure minimum loss of biodiversity and ecological balance that has been under treat following degradation of the environment. Some countries have initiated carbon trading projects but the trend is yet to receive global support. International bodies like the UN should therefore move with speed to ensure that member countries benefit from this noble cause. However, the greatest responsibilities lie with political, economical, and legislative wings of governments in ensuring that green goals, ecological balance and loss of biodiversity are to be tackled and this will go a long way in improving supply chain management in all sectors.