The Chartered Institute of Logistics and Transport

Sustainability and Green Agenda

Nurturing Sustainable Practices in Logistics and Transport Organizations for Resilient Supply Chains

By

Tapiwa C. Mujakachi (CMILT) , mujakachitc@gmail.com, Charles Mazhazhate (CMILT), kmilogcs, cm.saberts@gmail.com Stewart Makaha, stewartmakaha@gmail.com, Vanincia Kefilwe Mosimanyana, mosvanny@gmail.com and Annie Harvan del2jem@yahoo.com

Abstract

This study focused on the need for logistics and transport companies to embrace the call to build sustainability and green agenda policies for the attainment of Sustainable Development Goals (SDGs). The timeframe of less than a decade to the targeted year of 2030, requires some sense of urgency and action to develop sustainable supply chain bases for the future of world economies. Nurturing the ideal professionals through continued professional development in green logistics is critical for policy formulation to support the green agenda and sustainability policy. This was a baseline survey of eighty organizations in Harare, Zimbabwe, targeting professionals in the middle and top management to check their level of preparedness to implement sustainability and green agenda policies in their organization. Sixty-three respondents successfully completed the structured questionnaire. The study found out that though the organizations had information on the need for sustainable development practices, level of preparedness was still low due to lack of know-how and cost. The study recommends Continued Professional Development (CPD) for all interested professionals in green logistics and for the module to become mandatory from Certificate to Advanced Diploma Level curricular. It is also recommended that companies design some performance measurement tools to check their progress toward building strong green skills.

Key Words: Sustainability, Green Agenda, Sustainable Development Goals, Continued Professional Development

1.0 Introduction

Ever since the convergence of great minds on the need to nurture sustainable development (SD) practices in all economies of the world, the business landscape has drastically change. The trend now points to

doing business with organizations that are pro-sustainability and green environment practices. It is in this vein that logistics and transport organizations, as key players in various supply chains, are now required to focus more on their business practices in order to uphold the SD philosophy so that it becomes part of their culture.

2.0 Literature Review

Sustainability and the green agenda has become a topical issue nowadays. All supply chains of the world, in their varied complexities, are called to be pro-sustainability and green agenda practices in order to help in the attainment of the Sustainable Development Goals (SDGs). Kuhlman and Farrington (2010:2) allude to the view that concept of Sustainability is "concerned with the well-being of future generations and in particular with irreplaceable natural resources "in which the well-being of the present generation is satisfactorily taken care of without depriving the future generations of their natural rights to inherit the world that is endowed with all resources they might need. Thus Sustainability is often associated with balancing what several scholars have referred to as the triple bottom-line namely the environment, society and industry. In line with the above understanding, Trivellas, Malindretos and Reklitis (2020:2) maintain that "stakeholders demand corporate responsibility to go beyond product quality and to extend to areas of environmental and social sustainability." The green agenda is qualified by the World Bank (2021) as referring to "a world in which natural resources, including oceans, land, and forests, are sustainably managed and conserved to improve livelihoods and ensure food security. It's a world in which healthy ecosystems increase all the economic returns from the activities they support'. It is this level of understanding and strategic thinking that all professionals in logistics and transport are required to operate at if a balance in the biodiversity is to be achieved. The push for sustainable supply chains and green agenda has been necessitated by the fact that "biodiversity continues to decline as a result of habitat destruction and degradation. Over the past 40 years, there have been significant declines in healthy ecosystems-e.g., forests, mangroves, sea grass beds, coral reefs-and their flora and fauna populations, with species loss affecting everything from fungi to insects, plants, frogs, tigers, and gorillas. Forests have seen annual losses of 5.2 million hectares between 2000 and 2010, despite declines in deforestation rates and increased forest plantations. As a result, the capacity of ecosystems to provide services such as water provisioning and flood control has declined significantly. Land degradation is also worsening as a result of deforestation and poor agricultural practices, with soil erosion, salinization, and nutrient depletion contributing to desertification. Freshwater supplies are seriously stressed, with 1.4 billion people living in river basins in which water use exceeds recharge rates. Oceans and shared seas are

also under stress from climate change, overharvesting, pollution, and coastal development. The decline of marine resources threatens the livelihoods of over 100 million men and women involved in fish processing." (https://www.worldbank.org/en/topic/environment/publication/environment-strategy-toward-clean-green-resilient-world, retrieved 12 April 2021). It follows then that there is need to evolve practical ways based on scientific evidence to protect the world if the dangers noted by the World Bank are to be addressed.

Zhang, et al, (2020) point out that the logistics industry is bedeviled by numerous challenges such the pollution of ecological environment through greenhouse gas emissions such as carbon dioxide and energy consumption such as fossil fuels. This causes serious ecological problems such as the greenhouse gas effect leading to global warming and climate change. It is a fact that the transportation industry relies on petrol and diesel in most developing economies such as that of Zimbabwe. This poses possible threats of carbon dioxide emissions among other pollutants. All transportation, warehousing and distribution activities create challenges to the environment which ought to be curbed otherwise their detrimental effects may continuously lead to severe threats to the physical environment. Generally logistics and transport companies are required to minimize or reduce their externalities on the environment such as all forms of pollution (atmospheric, land, water, vibrations) and cutting emissions to the lowest possible levels. They are also to reduce their energy consumption levels through migrating to green technologies and buy or outsource services or products from organizations with long term goals on environmental sustainability.

2.1 Theoretical Framework

The theory that underpins this study is The Sustainable Development Theory (SD), promulgated by The Brundtland Commission (1987). The Brundtland Commission defined SD as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". This implies that all businesses should analyze their resources base and ensure that their activities along the supply chain do not disrupt the natural environment in ways that frustrate the attainment of all 17 SDGs. Logistics and transport companies are therefore required to come up with policies and practices that translate into sustainable production along the supply chains such that both suppliers and customers build safety-nets across all spheres of life. There is need to ensure that all business activities balance the relationship between business, environment and society for sustainability to be realized. However, the

study concede that the external environment such as existence of requisite infrastructure, government regulations and policies also have a high impact on the desired culture inside the organization which may also affect the push toward the adoption of sustainable practices in organizations.

2.2 Sustainable Development Goals

In September 2015, 193 Member States consented to a blueprint document meant to transform the world through the setting of Sustainable Development Goals (SDGs) that set 17 objectives to be achieved by the year 2030 (United Nations, 2018). At the core of the objectives was the need to fight poverty through various developmental projects done in a sustainable way to eradicate poverty, inequality and all dangers to the universe that might affect both the flora and fauna. To put into perspective the discussion on why sustainability and green agenda are critical aspects to develop sustainable supply chains, a few SDGs have been selected. The SDGs that are of discussed in this paper are Goal 6, 7. 11, 13, and 14 to illustrate the importance of coming with sustainability and green agenda policy. All other SDGs not included for illustration are as important as any other SDG. The issue that is worrisome is the period left to 2030, less than ten years with so many logistics and transport organizations yet to build sustainability and green agenda culture. Going through the information contained in the Table 2.1 below should ring some sense of urgency in adopting sustainable business practices.

Table 2.1 Sustainable Development Goals Explained

SDG	Target
Goal 6 Clean water and sanitation Ensure availability and sustainable management of water and sanitation for all	Expected global population by 2050 is 9.6 billion. **Implication**- better management of water and sanitation is needed to sustain human wellbeing, while preserving the resilience of the ecosystem. Significant progress has been attained between 1990 and 2015, as the proportion of global population with access to improved drinking water sources has increased from 76 to 91 percent. Nevertheless, over 2.5 billion people still do not have access to basic sanitation facilities globally, and the access to water supply is unevenly distributed across the world. Especially in the developing world, this adversely affects economic and gender development, food security and water-borne diseases.
Goal 7 Affordable and Clean Energy Ensure access to affordable,	Global leaders to accelerate sustainable energy solutions, central to almost every major issue the world faces today. While significant improvements in energy supply have been made in many developing regions in the last decades,

reliable, sustainable and modern energy for all	one fifth of the global population (1.3 billion people) still lacks access to electricity. The quality of energy supply is another issue. As the global energy supply still consists of widespread use of fossil fuels (81.3 percent), the transition to renewable energy is at the heart of this SDG, using the diversity of resources, combined with modern energy efficient technologies that address climate change mitigation, efficient energy generation and demand, and resilient energy infrastructure.
Goal 11 Sustainable cities and communities	Over 3.5 billion people live in cities today, while by 2030, almost 75 percent of the world's population will be urban dwellers. The total area of cities is just 2 percent of the Earth's land cover; however, substantial activities and processes take place in this area, which are responsible for up to 80 percent of overall energy use and 75 percent of greenhouse gas emissions. The future achievements of the SDGs therefore largely depend on how cities and urban dwellers are able to transform their lifestyles towards sustainable practices.
Goal 13 Climate Action Take urgent action to combat climate change and its impacts	Greenhouse gas emissions from human activities continue to rise and accelerate climate change. Global carbon dioxide (CO2) emissions have increased by almost 50 percent since 1990 and are now at their highest levels in history. World's average temperature is projected to rise by more than 3 degrees Celsius in the 21st century.
Goal 14 Life below Water Conserve and sustainably use the oceans, seas and marine resources for sustainable development	The world's oceans are an essential global resource and vital to our own sustainable future. Oceans are a public good that contains over 200,000 identified species, and the most prevalent source of protein; more than 3 billion people depending on the oceans for their survival, while fisheries directly or indirectly employ over 200 million people. At the same time, over 40 percent of the world's oceans are strongly influenced by human activities, including contamination, loss of habitats and livestock depletion

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3.0 Research Methods

This study was carried out in order to answer three main questions:

1. Does your organization have a sustainability and green agenda policy that gives direction to its strategic thinking?
2. Is there any human capital development budget or plan for employees to acquire needed competencies to spearhead the sustainability and green agenda?
3. What strategies are in place to ensure minimization of logistics and transport externalities on the environment?

This was a case study of eighty logistics and transport companies based in Harare. According to Yin (2014) a case study research helps to obtain deeper insights into the phenomenon under study. An explanatory research design was used in order to unearth certain fundamental truths that would help in evolving strategies to assist in reduction of environmental challenges currently affecting the global ecosystems. The study targeted professionals in the logistics and transport industry to check on the existence of the above indicated research questions. Eighty structured questionnaires were electronically distributed based on a simple random sampling technique. Sixty-three respondents managed to completed and send them back giving a response rate of 78.8%. Data was analyzed using Microsoft Excel Software for simplicity of understanding.

4.0 Results, Discussion and Analysis

4.1 Does your organization have a sustainability and green agenda policy that gives direction to its strategic thinking?

Figure 4.1 below shows responses for the above variable which sought to establish if organizations understudy had sustainability and green agenda policy that directed their strategic thinking and strategy formulation. From the responses given twenty-three respondents (36%) indicated that they had the policy in place but was not supported by any budgetary instrument. This could show some conflicting challenges between the desire to grow financially as the main business goal against the culture of both preserving and protecting the environment. Three respondents (5%) indicated that there was no policy in place. Six respondents (10%) pointed out that in their organizations the sustainability and green agenda policy was operational and maybe these were some of the few entities in the domain of learning organizations whose concern is to not only make profit, but protect the environment. Thirty-one respondents (49%) were not sure about the existence of a sustainability and green agenda, though some indicated traditional transport policies that directed regulations and procedures were in place. From the above results it may be

concluded that the phenomenon of sustainability and green agenda, though not new, is being perceived differently and this negatively affects the performance of supply chains.

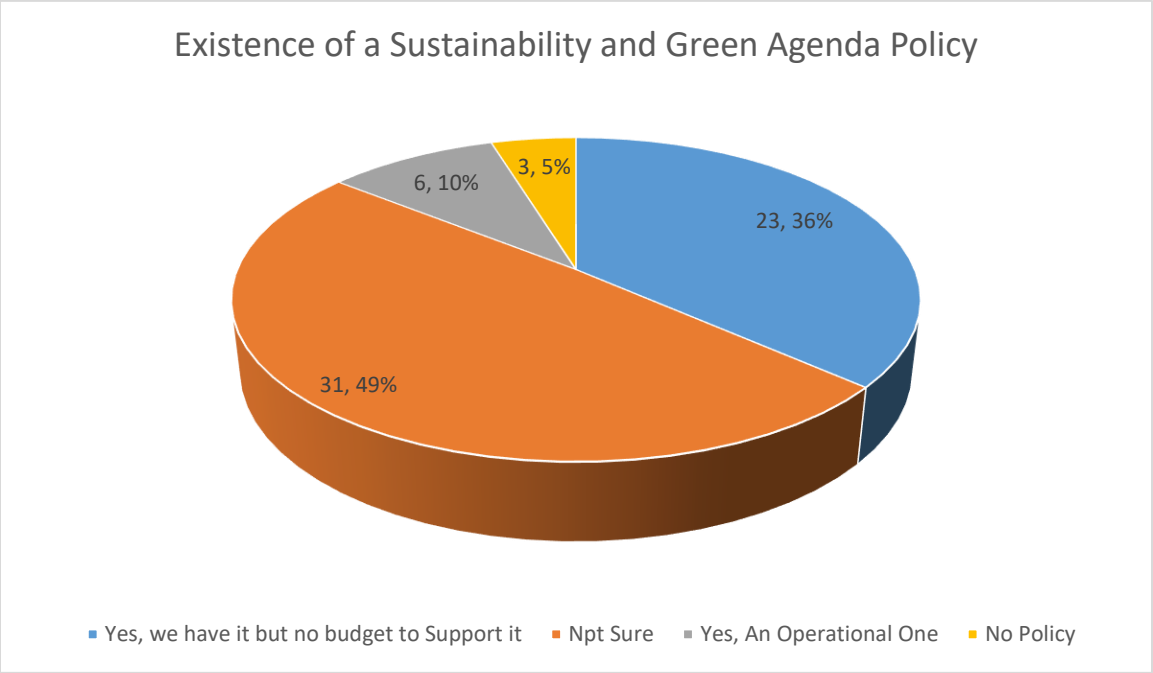

Figure 4.1 Sustainability and Green Agenda Policy

4.2 Is there any human capital development budget or plan for employees to acquire needed competencies to spearhead the sustainability and green agenda?

Figure 4.2 below indicates how human capital development is viewed in some logistics and transport organizations. For sustainability and green agenda to be realized, there is need for a cultural paradigm shift by organizations to embrace the new Sustainable Development Goals. This entails developing

organizational policies and culture that resonates with the external values on environmental protection without jeopardizing the business goals. Thirteen respondents indicated they encourage employees to take up professional courses that include the sustainability and green agenda discourse. However, even when such an endeavor is accomplished, junior employees may find it difficult to work the hierarchy in order to influence its strategic thinking and direction. Nine respondents mentioned the issue of in-house training programs via virtual learning programs, maybe now due to coronavirus challenges. Such an approach indicates some learning is being done and positive impacts expected in due course. Sixteen respondents stated that there were no human development programs, maybe their organizations treat training programs or sending employees for some related course as a cost and therefore would prefer to protect their revenues and invest them elsewhere. Twenty-five respondents indicated there were no budgets for that so personal employee efforts were encouraged not withstanding the direct benefits the organizations benefit from their employees.

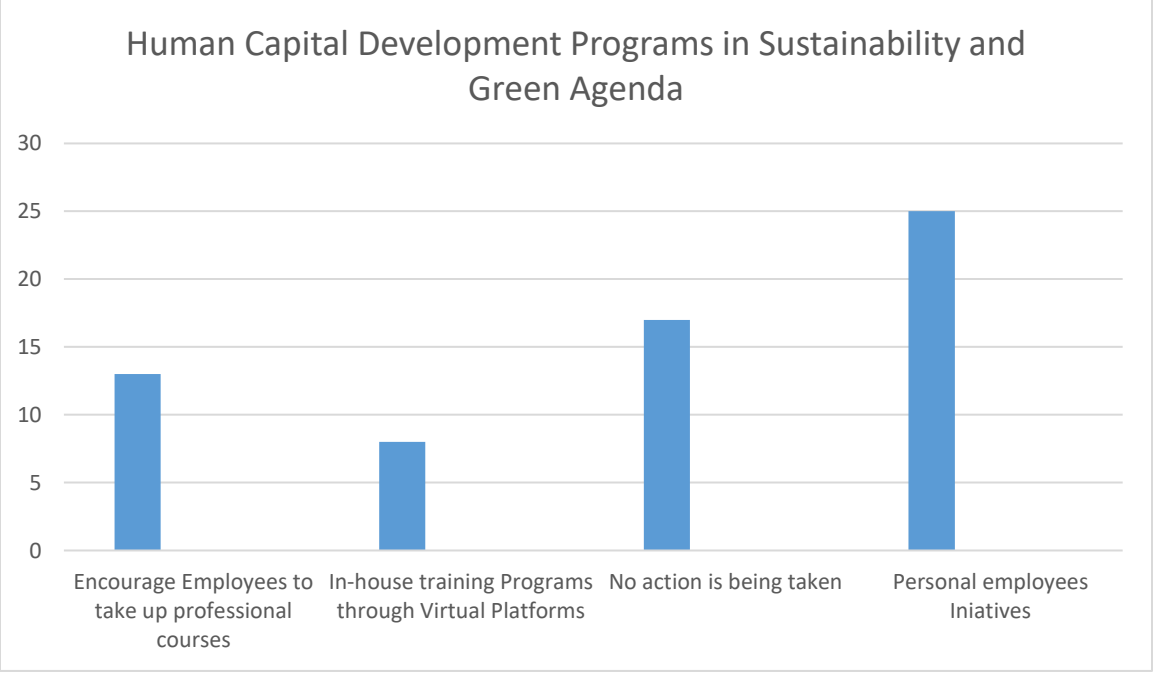

Figure 4.2 Human Capital Development

4.3 What strategies are in place to ensure minimization of logistics and transport externalities on the environment?

Table 4.1 below shows some of the strategies suggested by respondents to minimize the logistics and transport externalities on the environment in line with the call to work toward the attainments of SDGs as agreed by the international community.

Table 4.1

Strategies	**Number of Respondents**	**Percentage %**
Timely servicing of vehicles to curb high fuel consumption and save on energy	17	26.98
Balancing business growth financially against environmental pollution	6	9
Development of measurement instruments for sustainability and green agenda	9	14.02
Migrating to circular economy Philosophy- reduce, recycle, reuse and recover	11	17
Introducing paperless systems through computerization	21	33
Total	**63**	**100%**

The above Table 4.1 shows the various on how respondents think the externalities caused by logistics and transport could be combated. Seventeen respondents were of the view that having sound vehicle maintenance programs could assist in monitoring carbon dioxide emissions thereby saving on energy and minimizing environmental pollution. Twenty-one respondents indicated that migrating to paperless systems through computerization of organizational systems would also help to minimize the challenges caused by waste strewn all over the environment. The problem of designing performance indicators to measure the level of current implementation of sustainability and green technology practices in supply chains is a major challenge as noted by nine respondents. Even the idea to of migrating to circular economy philosophy suggested by eleven respondents may face the challenge of lack of suitable technology and resources to reuse or recycle waste materials and hence frustrating the green agenda policy.

5.0 Conclusion and Recommendations

This study could be viewed as a baseline research meant to establish some form of indicators on current prevailing practices toward establishing sustainability and green supply chain practices. This helps in designing some units of measurement for comparison after some intervention like conducting training programs on the same aspect or adoption of green technologies in the logistics and transport industry. The study concluded that the current level of sustainability and green agenda awareness requires concerted effort from all stakeholders if intended SDGs/ targets were to be met by 2030. The study also recommends that The Green Logistics Module offered by CILT International be introduced at Diploma and Advanced Diploma Levels for all professionals to develop some deeper understanding of sustainable practices. The module can be done as part of Continued Professional Development program for all professionals to enhance their knowledge on sustainable development practices. There is need for further research on better strategies to improve the application of sustainability and green agenda practices in the entire supply chains in Zimbabwe.

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