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# EFFECTIVE HUMANITARIAN RESPONSIVENESS BY COMMERCIAL THIRD PARTY LOGISTICS SERVICE PROVIDERS : LITERATURE REVIEW OF BEST PRACTICES

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## ABSTRACT

Logistics is a critical function to humanitarian and relief missions. The emergencies caused by the suddenness of such missions, results to high speed and highly vulnerable supply chains. This calls for logistics responses that are agile, flexible and adaptable yet resilient, a situation that greatly challenges the capacity and capabilities of logistics service providers. This study sought to contribute to the search for more effective engagement by Third-Party Logistics, a sector largely dominated by business logistics. The main objective was to establish best practices that can enhance effective disaster responsiveness of Commercial Logistics Service Providers. The study revealed a pattern of socially oriented practices that have enabled large logistics firms to respond better to humanitarian and emergency missions than the less developed firms. These practices were found to have the potential to increase the participation of more commercial third party logistics firms in humanitarian operations. Dynamic capability, social capital and coordination theory anchored the study. The relationship between the dependent and dependent variables was illustrated using a conceptual framework. The study was conducted through literature review of humanitarian logistics practices of private firms, and non-governmental agencies with long term experience in disaster and relief missions. Future research on the impact of a social logistics approach to humanitarian operations was recommended to complement the study. The contents were selected using key words for search.

*Key Words*
*Collaborative partnerships in humanitarian logistics, Commercial humanitarian Logistics Service Providers, Humanitarian Logistics Best Practices, Social logistics, Strategic Disaster Logistics Management*

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## 1.0 Background Information

The Centre for Research on the Epidemiology of Disasters (CRED), Emergency Event Database statistics, reported an increase in disaster events in 2021, with a recorded occurrence of 432 natural disasters compared to annual average of 357 catastrophes between 2001-2020 (CRED, 2022). With each disaster, a series of humanitarian and relief operations are triggered and which are highly dependent on logistics. The importance and challenges of logistics in disaster and humanitarian management can be summed in an observation by European union humanitarian logistics policy, that all humanitarian operations depend on logistics, and logistics should be treated as a key priority in all humanitarian projects (European Union, 2022). Several studies have also found that logistics consumes the highest resources of expenditure, approximately two-thirds in each disaster, with many challenges in humanitarian aid linked to logistics (European Union 2022, DFID 2020, HELP IFRC 2020). Among the key actors in disaster responsiveness, are Commercial Logistics Service Providers, (CLSPs hereafter ), largely placed in the Third Party Logistics (3PL) category, and who are part of humanitarian supply chain hierarchy, largely concentrated at the operational levels. The term commercial is used to lend distinction between profit seeking 3PL's and non-commercial Logistics Service Providers (LSPs hereafter), who include faith-based, government affiliated and non-governmental humanitarian service providers. During emergencies and relief missions, the hard and soft infrastructure of third party logistics especially at the first and last mile stages, is enlisted to support humanitarian operations, be it in form of warehousing, transportation or port and customs clearance. It is through this engagement, that they become part of first respondents to humanitarian missions. The review observed that it would thus be more beneficial to both humanitarian causes, and the logistics sector, if more CLSPs acquire capacity to respond and share their resources and expertise during disasters.

Commercial third party logistics sector is served by both large multinational companies, with several small and medium size firms concentrated at national levels. The responsiveness to global emergencies tends to be concentrated at this upper stratum of logistics service provision. While a section of large CLSPs have prominent presence in disaster management decision making forums, both by default and by strategy, the small and medium size firms have not largely demonstrated high and constant engagement with humanitarian organizations outside outsourcing. Logistics responsiveness challenges, thus seems to largely affect these small and medium size LSPs given the exceptional responsiveness capacities of large CLSPs like DHL, Kuehne and Nagel and Agility, who are able to build higher capacities through cross-sectoral partnerships with large humanitarian relief organizations as well as governments. This study sought to review the operations of these firms, and identify best practices that the small and medium size 3PLs can benchmark with, to increase their

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participation in humanitarian logistics through collaboration and cooperation over and above outsourcing. Critical to these CLSP's engagement, is the extent of their ability to build capacity and capabilities to handle the unique demands of disaster management that include mitigation, preparedness and recovery. The study identified a variety of strategies that allowed the larger firms to focus more on the societal needs before profits, strategies that facilitate their integration into humanitarian communities, allowing for a gradual social exchange of resources and capabilities between humanitarian organizations and LSPs. Apte, Gonçalves, and Yoho (2016), made findings that core capabilities and competencies exist in military and non-military organizations, and if identified their efficiency and effectiveness can be harnessed to enable greater response in humanitarian operations. Eventually, logistics social entrepreneurship emerges with a return on investment realized by the CLSPs.

The logistics that is prevalent in humanitarian operations requires conceptualization for more effective responsiveness due to varied definitions. The various terminologies depend on the nature of a disaster, for instance *pandemic logistics*, for COVID 19 challenges. Another term, is emergency logistics considered to be the first form of responsive operations and which thereafter morphs to humanitarian logistics for relief support. There is thus need to conceptualize these terms to aid the commercial CLSPs understand their roles succinctly. Nurmala, N.et al., (2017) conceptualize emergency logistics as those activities generated by supply activities in emergencies to meet logistics needs, and purposeful in maximizing time efficiency and minimizing disaster losses. Research on policy making including Kumar et al., (2018); European Union (2021), view humanitarian logistics as an evolving practice that has grown in research and practice with its definition capturing processes and systems involved in resource mobilization, application of knowledge and skills to meet the needs of vulnerable populations stricken by disasters and complex emergencies.

## 2.0 Research Problem

Humanitarian responsiveness is complex and costly causing multi-faceted problems to res-ponders and especially logistics service providers. A history of past disasters and pandemics has revealed that all logistics responsiveness systems are very costly, with 73% of disaster spend meeting supply chain costs. Researchers have also identified major shortcomings of humanitarian logistics in comparison to effective for-profit commercial logistics operations (HELP et al., 2019; Gober et al., 2018). Studies have revealed that low and delayed integration of CLSPs to humanitarian supply chains, and limited investment in disaster preparedness as partly contributing to these cost and service constraints. Cognizant of these challenges, the humanitarian community has continuously sought for practices and innovations to reduce the costs of humanitarian logistics through early preparedness, while increasing its responsiveness. This study sought to review best practices that

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commercial third party logistics sector can benchmark with to exploit their strengths, mitigate weaknesses and seek opportunities to serve humanity while meeting their shareholders obligations. Adoption of such practices would enhance the alignment of third party logistics sector with global responsive mechanisms of large resourceful humanitarian agencies and logistics clusters. Humanitarian operations are unpredictable and large in scale, demanding for high levels of alignment and flexibility, which many small and medium size CLSPs may not have the capabilities to react and respond speedily to. There are however CLSPs offering exceptional solutions, and equally receiving a return on investment to strategic humanitarian responsiveness.This study sought to review best practices that have made such CLSPs more effective in responding to disasters. The study, in addition, sought to identify strategic responsive planning practices and logistics frameworks that can help the CLSPs collaborate and partner with humanitarian organizations proactively.

## 3.0 Objectives and Research Questions

### 3.1 General Objective

The aim of this study was to contribute to improving humanitarian and relief missions through effective logistics responsiveness. To achieve this, a set of objectives were developed to guide the study. The main objective was to establish best practices that can enhance effective humanitarian responsiveness by Commercial Logistics Service Providers.



#### 3.1.1 Specific Objectives

The specific objectives were:-

i. To establish logistics social responsibility best practices that can enhance the humanitarian responsiveness of commercial logistics service providers

ii. To establish best practice collaborative partnerships that can improve humanitarian responsiveness of commercial third party logistics service providers

iii. To establish strategic response planning best practices that can optimize humanitarian responsiveness of commercial logistics service providers

#### 3.1.2 Research Questions

The following research questions guided the study:

i. Does logistics social responsibility enhance humanitarian responsiveness of commercial logistics service providers?

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ii. Do collaborative partnerships improve humanitarian responsiveness of commercial third party logistics service providers?

iii. Does strategic response planning optimize humanitarian responsiveness of commercial logistics service providers?

**4.0 Review of Literature**

Third party logistics contribution to disaster responsiveness has gained recognition in research and practice. Cozzolino, Wankowicz, and Massaroni (2017) observed in their research the increased interest in both academics and professional practices to understand the operations and the capacity of CLSPs in disaster relief operations for purposes of improving supply chain management in humanitarian aid.

Falagara and Wakolbinger (2019) explored the potential of engaging CLSPs in humanitarian operations through outsourcing, a practice which helps them enter into relationships with humanitarian organizations of commercial and non-commercial nature. In this study, and others by Vega and Roussat 2015; Gossler, Wakolbinger, and Burkart (2020) reveal knowledge gaps in establishing adequately the concept of outsourcing. This has led to a fragmented view of the logistics outsourcing practice in humanitarian operations. Fragmented approach to outsourcing makes the role of commercial service providers in disaster relief less visible. Better management of logistics outsourcing is critical as the logistics spend by relief agencies runs into billions of dollars. Gossle et al., (2020) note that the aims of both commercial logistics and humanitarian agencies contracting them are very different affecting their processes. The aim to save lives and mitigate disaster effects drives the humanitarian relief planning, while the profit maximization seems to drive commercial logistics. Evidently, while such perceptions present challenges to working relationships of both parties, new socially inclined models such as social-entrepreneurship and social supply chain approaches can harmonize the conflicting goals of the two. The role third party logistics played in the delivery of COVID-19 goods and essential supplies during the pandemic, re-calibrated its societal status, as it shifted focus from customers to people and humanity.

An area of concern has been low levels of service quality by CLSPs. Logistics responsiveness in disaster management as an emergent area of research, is thus gradually moving to focusing on quality management and standards management as a continuous improvement measure. Modgil, Singh, et al., 2020; Brown, Andrew, Jaskiewicz et al (2018), observed that logistics has an impact that is decisive on efficiency and effectiveness of humanitarian relief processes, not withstanding the fact that it accounts for upto 80% of relief operations costs. High quality management though standardization is likely to improve cooperation among different actors

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towards better service delivery, an observation also made by Paciarotti, Piotrowicz, and (2021). The role of logistics service providers has also been appraised as a critical link of the disaster management and especially due to fact that it bears the highest percentage of the logistics infrastructure required to respond (Adiguzel, S. 2019; Kim, Seongtae et al. 2019; Cozzolino A, et al., 2017). Kim, Ramkumar, Subramanian, N. (2019) observed that lots of advancements have been made beginning 1990s in humanitarian aid operations with sophisticated logistics witnessed. It is thus plausible for humanitarian relief organizations and logistics service providers to collaborate for greater improvement of relief operations. Studies have also linked the effectiveness of disaster management with emergency and humanitarian logistics models, which can be integrated with the third party logistics services who are predominantly commercially modeled, designed to meet business objectives to help them quickly adapt to the objectives of disaster responsiveness objects (Kucukaltan et al., 2020; Baharmand, H. et al., 2017). These objectives have the saving of human lives as paramount as well as sustaining the firms.

Studies have shown that disaster logistics has been affiliated to humanitarian relief organizations more than CLSPs. Vega and Roussat (2019) found disaster logistics focus more accredited to humanitarian relief organizations even where the involvement of CLSPs is evident. However, it is worthy to give credit to some of the humanitarian relief organizations that perform activities similar to commercial LSP through units specialized in logistics. They also observed that Humanitarian organizations (HOs) acting as LSPs can offer a wider range of value-added and dedicated services to clients (other HOs) CLSPs'. This study will endeavor to conceptualize the features of such unique CLSPs and how they can complement each other with the CLSPs especially in form of collaborations. A study by Bealt, Fernández, J.C, Mansouri, S.A. (2016) on collaborative relationships between humanitarian organizations looked at how collaborative partnerships between LSPs and HOs can improve effectiveness and efficiency of humanitarian operations. A study on challenges of such partnerships was also done by Leeuw, Dullaert (2017), Bealt, Fernández et al. (2016) noted the challenges in balancing the objectives in commercial logistics to minimize costs against those of relief agencies to reduce human suffering.

## 5.0 Theoretical Framework

### 5.1 Dynamic Capabilities Theory

The ability to consolidate external and internal competencies is important to mange the rapidly changing environment that unfold during humanitarian operations while remaining resilient. CLSPs thus require sets of dynamic capabilities that will allow them build capability to adapt to, align and offer the required agility necessary in emergencies. These competencies require multiple dynamic capabilities that provides the ability to react adequately and timely to external changes. A dynamic capabilities' approach proposed by Lee Hau posits

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that successful supply chains should endeavour to be Agile, Adaptable and Aligned (Triple 'A'), has been adopted by this study as constituting ideal attributes for humanitarian logistics responsiveness. Triple 'A' approach allows for adoption of emerging adaptive and anticipatory logistics practices critical to a firm's ability to offer agility in a resilient manner in unpredictable environments. Other forms of logistics dynamic capabilities such as flexibility and reliability would facilitate CLSPs adapting to sensitive disaster environments (Sandberg, E., 2021). Mishra et al (2020), extrapolate dynamic capabilities theory as developed by Teece, Pisano and Shuen in 1997 on humanitarian supply chains, due to its focus on the ability of firms to reconfigure competences lying within its internal and external reach to respond to rapidly changes in its operating environment.

**5.2 Social Capital Theory**

Due to the complex and worldwide nature of pandemics, the building of social capital across the world has been used as an approach to manage disasters. Disaster responsiveness require collective action and joint efforts to mobilize and coordinate all the resources necessary to act effectively and efficiently. Social capital theory posits of resources that exists in social structures such as communities and relationships. These social structures become points of references in linking the diverse interests of distinct members. For instance, within humanitarian relief operations, all the varied responders to relief missions belong to the humanitarian community as well as humanitarian supply chains as well clusters. Harnessing of social capital in disaster management creates a social exchange of non-monetary and monetary support (Jeble et al., 2020). The CLSPs would benefit greatly from the global social capital created by humanitarian relief organizations such as those coordinated by United Nations Office for Coordination of Humanitarian Affairs (OCHA) which has global clusters devolved into regional presence responsible for coordinating humanitarian response to emergencies. Findings by Namagembe, S. (2020) showed the influences of relational capital on both inter-cluster coordination and service delivery in humanitarian relief networks. Social capital would in the case of adoption and adaptation of best practices facilitate CLSPs to integrate into the social humanitarian chains through which capacity building is offered and capability enhancement. It can also bridge the coordination and relationship gaps between humanitarian organizations and CLSPs. Disaster supply chains require constant information exchange within the supply chains. Social capital improves levels of knowledge acquisition, exchange of information, effective collaboration and relationship management within humanitarian supply chains which are dependent on continuous dissemination of knowledge and information.

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### 5.3 Relational Coordination Theory

Humanitarian aid management entails collaboration and relationship building across the supply chain which necessitates continuous coordination among the various actors Coordination in humanitarian work is modeled in various ways including through clusters and inter-cluster coordination as well as cross-sectoral collaboration. In logistics and supply chain management coordination and relationship management is a critical to effective integration and breaking down of supply chain complex. It is applied to align the objectives and plans of the different entities to increase the performance of supply chains. Essuman, Dominic et al., (2021) regard coordination as a supply chain capability that can be a determinant to supply chain responsiveness.

### 6.0 Conceptual Framework

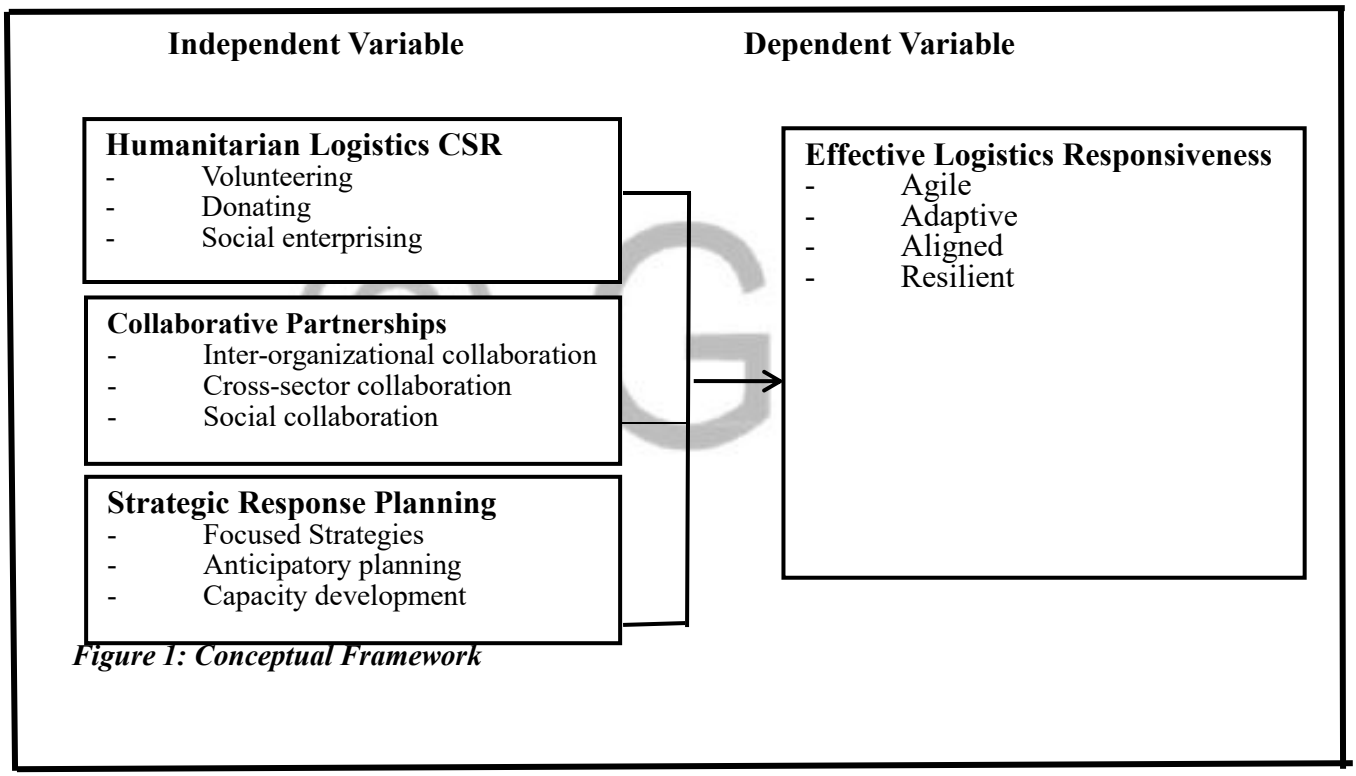


*Figure 1: Conceptual Framework*

### 6.1 *Socially-Oriented Humanitarian Logistics*

Business logistics emerged from military logistics and in between these two practices is the humanitarian logistics that focuses on people as the main priority before profits and other gains. In the review of how third party logistics has been serving the humanitarian community, this study observed a pattern in which successful commercial logistics service providers are gradually integrated into humanitarian supply chains through a socially oriented logistics approach. These 3PLS' have invested in three approaches namely corporate socially responsibility in humanitarian logistics which this study has labeled as Logistics Social Responsibility, a

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collaborative logistics approach hinged on varied social exchange approaches in form of inter-organizational and cross-sectoral partnerships, before investing in strategic responsive planning designed to meet the peculiar needs of humanitarian logistics. Zaczyk, Mateusz (2019) observe that social logistics is taking form in a similar manner to the business and military types of logistics during the past decade. Logistics association such as the American Logistics Aid Network-ALAN, the Logistics Emergency Teams as well as the global logistics cluster are modelled on social inclinations (ALAN 2020; LET 2021; GLC 2021). DHL, Agility and Kuehne ^ Nagel have approached humanitarian logistics from a social logistics approach investing in both logistics solutions and corporate social responsibility through humanitarian logistics emergency response programs.

As a consortium of third party service providers, the American Logistics Aid Network connects the humanitarian relief organizations to match them with pro bono services and coordinate logistics response during crisis. Hotho and Girschik (2019) notes that CSR has emerged as a key in South Indian humanitarian operations. A best practice approach to humanitarian logistics responsiveness by a 3PL is DHL's GoHelp disaster management program which coordinates its activities through two key programs the Get Airports Ready for Disaster (GARD) program and a Disaster Response Team (DRT). Through these programs, DHL is able to offer varied dimension of CSR that range from philanthropy, volunteering as fast logistics responders, and donating logistics expertise and resources. DHL, also uses a partnership approach with various stakeholder and especially those of UN OCHA global logistics clusters for deployment and training. This partnership model is a best in class practice that can be modeled to unify the sometimes conflicting objectives between CLSPs and humanitarian relief organizations (DHL 2020).

*6.1.1. Logistics Social Responsibility*

Humanitarian logistics is built on social responsibility conscience that may not be prevalent in commercial logistics. The large multinational CLSPs active in humanitarian relief missions embrace humanitarian logistics from a social responsibility perspective. CLSPs that are not conscious to social responsibilities as a cognitive factor in humanitarian logistics are less likely to create successful partnerships with human relief organizations. It is imperative to note that socially responsible logistics can be modeled to include philanthropy as well as social entrepreneurship to balance the objectives of a socially responsible commercial logistics service provider. CSLPs active in humanitarian missions have shared best practices in their reports individually and through clusters they identify with. CLSPs leading in the humanitarian sector include DHL, Kuehne & Nagel, Maersk, Agility, Bolloré Logistics among others.

**6.2 Collaborative Partnerships**

*6.2.1 Logistic Service Providers Cluster Model*

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Globally coordination mechanisms have been established to facilitate the delivery of plans to respond to humanitarian emergencies through logistics. One such mechanism is the clustering of logistics service providers. A logistics cluster is an agglomeration of firms offering similar services and who stand to benefit from each other through collaboration, cooperation as well as co-opetition. In their findings Rivera, Gligor, and Sheffi (2016) noted that logistics clustering has collaborative benefits and value added services. Jahre, M. and Jensen, L.-M. (2021) observe that logistics clustering bridges global response and local preparedness. During the Covid-19 lock downs, DHL reported to have collaborated with community-based organizations including the Red Cross and Salvation Army through DHL volunteer initiatives to help optimize the logistics and distribution process (DHL, 2021). Such partnerships are solidified through use of partnership instruments such as Memorandum of Understandings with government emergency teams and non-governmental organizations such as the Red Cross to ensure accessibility to local resources and management of policy barriers that may impede the defectiveness and efficiency of humanitarian operations.

*6.2.2 Focused Strategies*

Humanitarian operations are complex and dispersed and require strategies to manage large scale operations with high velocity in rapid responsiveness. For this purpose, most firms invest in logistics and distribution strategies. Some of the distribution strategies include establishing centers of competence, hubs or centralized consolidation points to support the humanitarian organizations as some of the best practice strategies. Logistics service providers active in the field of humanitarian logistics have distinct focused approaches to the sector. This is characterized by establishment of divisions specifically focused on managing humanitarian logistics. Through these approaches, they are able to manage the conflicts between commercial and humanitarian logistics and embrace a socially leaning logistics that balances between community needs and revenues without compromising the objectives of each. CLSPs would benefit from establishing sections to focus on humanitarian logistics for better preparation and capacity building in humanitarian logistics.

*6.2.2 Anticipatory Planning*

Disasters are naturally occurring phenomenons that call for anticipatory actions for better responsiveness. The humanitarian community at the stage of preparedness puts in place anticipatory efforts and programs. This approach has also been applied by large multinationals focused on humanitarian preparedness. This is through different mechanisms such as the establishment of response teams and signing of memorandum of understandings with the humanitarian community to continuously put in place anticipatory mechanisms for better disaster preparedness. A best practice approach to humanitarian logistics responsiveness by a 3PL is DHL's GoHelp disaster management program which coordinates its activities through two key programs the Get

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Airports Ready for Disaster (GARD) program and a Disaster Response Team (DRT).

*6.2.3 Capacity development*

The effectiveness of responsiveness by CLSPs is most dependent on their capabilities. During disasters logistics service providers are thus expected to reinforce the operations with skills, competencies and capabilities. As humanitarian relief operations are turbulent and complex they require the ability to adapt to the environment and continuous flexibility. Thus dynamic capabilities are most ideal for a CLSPs to build for effective repressiveness. Humanitarian organizations with in-house logistics units and LSPS focuses in offering humanitarian logistics are known to continuous seek to build capabilities. Kähkönen, Anni-Kaisa, et. al (2021) observed that during COVID 19 capabilities such as capacity to reconfigure resources and execute fast oppressiveness helped firms to remain resilient given the disruptive effects that emerged.

**6.3 Effective Logistics Responsiveness**

This study adopts the Agile-Adaptive-Aligned (AAA) supply chain model as representative of logistics responsiveness. The concept was proposed by Lee Hau in a Harvard Business Review article 2004 and revised in 2021, after his study of several firms showed that agility, adaptability and alignment were characteristic of supply chains that were successful. Lee observed that successful first class supply chains have three distinct critical elements of agility, adaptability, and alignment which have also been labeled as "Triple-A" supply chains ( Lee 2021). In defining the concepts, Lee looks at agility as a supply chains' ability to respond with flexibility and efficiency to variation and uncertainties. For a supply chain to counter dynamics, it needs adaptation strategies to manage the changing needs, while alignment enables the diverse demands of different supply chain interests to be integrated with encompassing benefits. The Triple A model has been broached in research as critical to the design of successful of sustainable humanitarian supply chains (Dubey, et al. 2015;, Jermsittiparsert et al.,2019). Successive researchers have also analyzed and validated Triple-A supply chain as characteristic of supply chain with very high responsiveness capabilities (Richey et al., 2022, Patrucco and Kähkönen, 2021) changes in environments and natural forces pose new challenges.As an emerging research domain AAA capabilities represent an interesting lens to investigate how LSCM strategies are evolving in the face of current global realities (Richey et al., 2022, Patrucco and Kähkönen, 2021).,

In a 2021 review, Lee proposed revamping the AAA capabilities especially due to challenges posed by natural forces and societal needs that calls for inclusion of socially oriented responsiveness and alignment to higher responsibilities other than revenue and cost. Agility, which he views as ability to sense supply chain demands quickly,and putting in place anticipatory strategies to prepare for prompt responsiveness, has been accelerated by digital technologies and social media to more throttled agility he conceptualizes to super-agility. The

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deployment of delivery drones for instance the DHL parcelcopter, and WFP unmanned aircraft systems points to increased need for super-agility in emergency preparedness and response. An Agile-Adaptive-Aligned approach to humanitarian logistics would increase the responsiveness of CLSPS to the dynamic relief supply chains that require high levels of agility by different actors with a common goal to disaster management.Adaptability is dependent on certain capabilities that according to Boston Consulting Group (BCG 2013) include quick responsiveness ability to sudden demand and changes, and strategies for resilient deployment in shifting and disruptive environments.

## 7.0 Research Methodology

### 7.1 Research Design

This is a best practices research. It is designed to systematically identify, describe as well as disseminate effective and efficient logistics management strategies developed and implemented in delivery of logistics services in response to disasters. A best practices research design by Mold, James, Mark. (2003) comprising of five step that include developing a conceptual model, best practice identification, value and standard based definition of 'best', and evaluation of methods deemed effective while combining and testing the methods identified as most effective. This process was described with case examples from diverse humanitarian logistics clusters. For the review, content analysis was used to identify best practices of different logistics clusters.



## 8.0 Research Findings

The key objective of the study was to establish logistics best practices that can enhance effective disaster responsiveness of commercial logistics service providers for improvement of sustainable disaster management outcomes.The specific goals were to enhance CLSPs logistics responsiveness through adopting a series of best practices in disaster preparedness, capabilities building and collaborative partnerships To establish best practice of logistics clusters that can enhance disaster responsiveness of commercial logistics service providers. Content analysis of disaster responsiveness for five logistics clusters revealed that lack of early preparedness and anticipatory practices, limited capabilities and proactive collaboration commercial LSP's inhibits their responsiveness making humanitarian logistics costly and less effective.

The research findings are presented as follows:

### 8.1 *Corporate Social Responsibility Approach to Humanitarian Logistics*

*8.1.1 Volunteer and Donation Initiatives*

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A best practice approach to humanitarian logistics responsiveness through volunteer and donations of expertise and resources programs, is the DHL's GoHelp disaster management program which coordinates its activities through two key programs the Get Airports Ready for Disaster (GARD) program and a Disaster Response Team (DRT). DHL staffs the purpose logistics units with volunteer who work with strategic partners such as the UN agencies under IASC and other NGOs to expedite relief supplies. The adhoc staff go through training that equips them with skills to handle the complexities of emergency logistics. The core functions of GoHelp program are disaster preparedness and response while GARD facilitate airport to handle logistical challenge in times of natural disasters ( DHL, 2021). DHL constant training for capacity building of their disaster response volunteers and staff to handle emergencies (DHL's Logistics of Things 2020), is a good practice that can help CLSPS become operationally ready during disasters trough cross-sectoral partnerships and collaboration.

### 8.1.2 Logistics CSR Contribution to Effective Responsiveness

***8.1.3*** *Capacity building through Help Programs*

In consolidating macro capabilities, initiated disaster response units such as GoHelp, and Get Airports Ready for Disaster (GARD) and Disaster Response Teams (DRT). The core functions of GoHelp program are disaster preparedness and response while GARD facilitates airport to handle logistical challenge in times of natural disasters ( DHL, 2021). GARD and DRT staff and volunteers with strategic partners such as the UN agencies under IASC and other NGOs to expedite relief supplies.

***8.1.4*** *Training of volunteer response staff*

DHL's help projects are manned by adhoc staff who go through training that equips them with skills to handle the complexities of emergency logistics. DHL constant training for capacity building of their disaster response volunteers and staff to handle emergencies (DHL's Logistics of Things 2020), is a good practice that can help CLSPS become operationally ready during disasters. This approach by DHL of increasing disaster response social capital is replicated by other large national and multinational CLSPs as a form of Social entrepreneurship and social supply chain management. The establishment of the DRT's as a best practice emerges as a form of anticipation logistics aligned to anticipation strategies in humanitarian communities in the disaster preparedness stage. This pre-disaster preparedness enables DHL to adapt quickly to the needs of emergency logistics. Further, it emerges as a form of Triple-A humanitarian supply chain management as DHL is able to adapt fast to the dynamic needs of a given disaster, alignment itself with the mission objectives while deploying agility required in quick response to the humanitarian demands. Adaptation, alignment and agility are critical factor in disaster responsiveness within humanitarian logistics.

*8.1.5 Social Enterprising*

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*8.1.6 Funding of Response Teams*

A best practice in humanitarian logistics preparedness is the combining of capabilities by large global logistics and transportation multinationals that include Maersk, Agility, DP World and UPS who reach out to global humanitarian community to help them on pro bono to effectively respond to disasters. With their global and local approach to logistics management they have the skills in matching the macro capabilities with their own micro capabilities.This is achieved through combining their resources and expertise with the expertise and experience of other humanitarian communities to optimize the responsiveness to disasters. Social enterprising emerges when these volunteer logistics response teams attract funding from economic partnerships such as the World Economic Forum that initiated the LET cluster. The establishment of the Disaster Response Team is also a best practice that emerges as a form of Anticipation Logistics. This pre-disaster preparedness enables DHL to adapt quickly to the needs of emergency logistics. This emerges as a form of Triple A humanitarian supply chain management with adaptation, alignment and agility most critical in disaster responsiveness. The approach by DHL of increasing disaster response social capital if replicated by other large national and multinational LSPs as a form of Social entrepreneurship and social supply chain management.

**8.2.0 Collaborative Partnerships**

**8.2.1** ***Inter-organizational Collaboration***

Humanitarian operations attract varied organizations contributing towards a common cause through inter-organizational collaboration. A best practice method that has been effective in pooling resources of such actors is the cluster method. A logistics cluster comprised of four global logistics and transportation companies that include Maersk, DP World, UPS and Agility known as the Logistics Emergency Teams (LET) is a model that other CLSPs can benchmark with to partner with other clusters such Global Logistics Cluster under IASC. The LET comprises of logistics experts and was facilitated by the World Economic Forum in 2005. LET members also share their resources,expertise, assets and services in emergency locations such as through Logistics Capacity Assessments (LCAs) to which LET provides information to facilitate humanitarian organizations in disaster preparedness and emergency responsiveness. LET for instance reported in 2019 to have cooperated with over 500 partners and stakeholders to respond to emergencies.

**8.2.3** ***Inter-Cluster Collaboration***

Clusters work best in collaboration with others through a best practice known as inter-cluster coordination. A best in practice inter-cluster collaboration is between Global Logistics Cluster and Cluster (GLC) and Logistics Emergency Teams (LET). In areas of Capacity building LET has left open its cluster to new members with whom they can collaborate with the Global Logistics Cluster for more global preparedness enhancement through resource deployment and sharing of technical expertise.https://logcluster.org/logistics-emergency-team.

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Among the capacity building support that can be transferred at the national level by global cluster programs include logistics operational guides, establishment of and local logistics clusters, logistics cluster support cell and development of global humanitarian logistics professionals.

**8.3.0 Cross-Sectoral Collaboration**

*8.3.1 Humanitarian - Business Partnerships*

A best practice Humanitarian-Business private partnership is that initiated by logistics emergency team cluster, LET which initiated by World Economic Forum (WEF), has been model-led to accommodate partnership building with either governments, non-governmental agencies and logistics service providers. This model uses a multi-stakeholder cooperation approach between the private and public sector creating a platform that pools together both logistics and non-logistics expertise required to achieve humanitarian operation objectives. With backing from global community through World Economic Forum it stands out as excellent mode in operationalizing public-private partnerships in humanitarian logistics.

*8.3.2 Public-Private Partnerships*

Disasters are known to entail complex operations which require cross-mobilization of resources between the private and public sector. In most instances CLSPs are integrated to reinforce national disaster capabilities. It is thus a best practice for CSLPs to position themselves along the humanitarian supply chain as suppliers of logistics capabilities. A case model is DHL Disaster Response Team (DRT) that works with governments to reinforce national emergency resources. During COVID 19 DHL DRT assisted Costa Rica National Emergency Commission to set up a center of distribution for management of supplies related to COVID-19 pandemic. Other deployments happened in Colombia and Brazil, to support the South American region respond to contain the spread of Covid-19.(dhl disaster response: The inside track of how Humanitarian logistics happens). DHL Disaster Response Teams (DRT) and other employee volunteers have provided COVID-19 humanitarian logistics support to eight countries throughout the Americas Besides the Red Cross, DHL also assisted the Coordinadora Nacional para la Reduccion de Desastres (CONRED) in Guatemala and the Costa Rica National Emergency Commission (CNE). For effective collaboration the Red Cross in Argentina, Colombia, and Ecuador signed Memorandums of Understanding with DHL In 2020 on preparedness and emergencies response efforts.

*8.3.3 Regional Clustering*

Disasters are normally disruptive of the socio-economic lives of large area which necessitates the pooling of resources on a geographical basis. A best practice regional preparedness is that of the European Union which coordinates humanitarian aid response through a European Civil Protection and Humanitarian Aid Operations (DG ECHO) outfit.In collaboration with field networks spread in over 40 countries ( DG ECHO, 2019*),* DG

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ECHO is able to fund preparedness and response operations through a network of around 200 collaborators that include the International Red Cross and Red Crescent Movement, UN agencies and other NGO's.

*8.3.4 Academic and Industry Collaboration*

Humanitarian Logistics research is important in disseminating best practices. Such research needs collaboration between the logistics industry and academia. A best practice in industry and academia research collaboration is a modelled established by the *Kuehne+Nagel* Group through Kühne Foundation. To advance the cause of humanitarian logistics, the foundation whose deed is to lender support support for research and training in transport and logistics has established logistics centers of excellence that support humanitarian logistics research. These include a Kuhne and Nagel Logistics University-KLU, HELP Logistics, Center for Humanitarian Logistics and Regional Development (CHORD) jointly operated by KLU and HELP Logistics. HELP logistics offers training globally to humanitarian practitioners in collaboration with partners in education sector. These partnerships are best in class reference models on how knowledge development and dissemination transfer can be transferred between the industry and academia back to the practitioners (Kuehne-nagel, 2020).

*8.3.5 Capacity Networking*

Fritz also participates in capacity building in developing countries through the African Capacity Networks Program. Its main focus is to build local capacity as well build partnership bridges between local organizations, private sector and governments. It also with academic and corporate sectors to develop tool-kits that can be used by humanitarian communities to improve the effectiveness of their programs. Through New Partnership for African Red Cross and Red Crescent Societies (NEPARC) a partnerships initiative by Fritz Institute's African Capacity Networks, Fritz seeks to create a an African peer network system that empower local humanitarian organization to meet the needs of the humanitarian challenges in the continent through resource mobilization, accreditation and capacity building in governance. Fritz compliments these initiatives with a research centre that feeds into the continuous improvement of the institute Relief Emergency Response Unit training.

**8.3.6 Professional Development**

Development of human resource in humanitarian relief logistic has variously been identified as key to ensuring presence of global standard expertise at local areas of intervention. CLSPS can gain more trust from large humanitarian agencies and actors by facilitating training in humanitarian work to their staff. The Humanitarian Logistics Certification Programs is rated highly in promoting and disseminating best practices from a large diverse pool of private and public players. Its programs are guided by a certification advisory group comprising

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of experts drawn from leading humanitarian organizations.

### *8.4.0 Social Collaboration*

*8.4.1 Knowledge Hubs*

Another distinct form of centralization and consolidation of resources are knowledge hubs established to gather and disseminate knowledge and best practices within the humanitarian supply chains and entities.

*8.4.2 Anticipation Hub*

The Anticipation Hub coordinated jointly by IFRC and the German Red Cross as the host as is a best practice a platform for online knowledge exchange between policymakers, scientists and humanitarian community actors. It seeks to enhance anticipation actions as a preparedness measure for effective disaster response through collaboration with other centers. The ICRC also has an online training centre that centralizes online training, e-learning modules and tool-kits on knowledge especially pertinent to humanitarian law.

*8.4.3 Anticipatory Action Toolkit*

According to OCHA, an anticipatory action is fundamentally different from humanitarian response and development programming. Anticipatory humanitarian actions are those actions taken in advance of a crisis, before either the shock or its peak impact. Therefore, anticipatory action makes acting the default when risks, not needs, increase.



*8.4.4 DEEP platform*

Another resource is the DEEP platform which is an open source service for data analysis freely accessible to humanitarian players. It disseminates best practices on preparedness and response through exchange of ideas and building of networks encouraging common approaches to global crises. During COVID-19 the platform initiated a global response to facilitate collaboration in humanitarian supply chains responding to the pandemic.

*8.4.5 Policy Development Collaboration*

The European Union has invested in supporting humanitarian logistics through development of policies and sponsoring standardization of practices initiatives. DG ECHO has developed a humanitarian logistics policy to enhance capacity building through developing of best practices and standards. The standards are contained in a Universal Logistics Standards (ULS) handbook containing best practice developed and adopted through consensus and collaboration by humanitarian logistics and supply chain actors. The standards are developed with the objective of helping these actors embrace new approaches to delivery of humanitarian logistics and align their processes to the standards by adapting to them. Another initiative by the EU is the establishment of a European Humanitarian Response Capacity (EHRC) to continuously improve response along the humanitarian

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supply chains and increase the humanitarian logistics sector with response capacities on an international basis.

*8.4.6 Standardization of humanitarian logistics practices*

Various initiatives have been sponsored and championed to standardize best practices in humanitarian supply chain and Logistics. These are handy tool-kits that enable humanitarian actors to improve on quality of logistics services and to also internationalize the practice of humanitarian logistics which may demand for universal approach due to diverse actor who jointly respond to an emergency. Such standards also help to create credibility in a CLSP seeking partnerships and collaborations with global humanitarian organizations. Operationally, standards are best practices in helping a CLSP adapt to humanitarian aid and relief demands and align with global community. Among such standards are the Universal Logistics Standards (ULS) which consolidate best practices in humanitarian logistics and supply chain management. Developed by the European Union Commission in conjunction with the INSPIRE Consortium, the standards were further developed jointly with a support handbook documenting standardized logistics practices for humanitarian response especially designed for any party involved in humanitarian work preparedness and response. A similar standardization initiative is that of the Partner Capacity Enhancement in Logistics known in short as The Parcel Project funded by ECHO to develop logistics standards, assessment tools, tool-kits and training resources including e-learning to bridge knowledge gaps in end to end humanitarian logistics management. The project draws its expertise and technical knowledge from a consortium that leads it comprising of international relief agencies that include World Vision International,MercyCorps US, Tearfund, Save the Children International, Oxfam, Action Contre la Faim and Concern Worldwide. The resources help the organizations to comply with the standards and manage capacity gaps for continuous improvement of humanitarian relief missions. Through such standards , CLSPS have a source of reference while engaging relief stakeholders. Humanitarian Charters are also another rich source of best practices designed to improve professionalism in humanitarian work. Several Humanitarian NGO's and IFRC initiated a charter championed by an organization of humanitarian professionals known as the the Sphere movement containing humanitarian standards that can be applied in humanitarian responses. The Sphere standards together with the Sphere Handbook is rated as the most recognized set of universal principles and minimum standards in the field of humanitarian response.

***8.5.0 STRATEGIC RESPONSIVE PLANNING***

*8.5.1 Focused Strategies*

All CLSPs active in humanitarian logistics have taken varied focused humanitarian logistics approaches to consolidate expertise and mobilize resources, while integrating into the humanitarian sector. A variety of these focused strategies include establishing specialized centers of competence in humanitarian logistics, investing a

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percentage of the profit to support CSR activities and strategic positioning in humanitarian supply chains. Examples are Kuehne+Nagel that set up Emergency & Relief Logistics Division in the 90's. Such divisions are used not only to offer contract humanitarian logistics services, but also to fathom corporate social responsibility, social entrepreneurship, as well as partnerships with UN agencies, governments and NGO's. DHL's GoHelp initiatives is also exceptional in serving humanity earnestly while integrating the firm horizontally and vertically.

*8.5.2 Distribution strategies*

*8.5.3 Modelling Distribution for Effective Humanitarian Logistics*

Humanitarian relief supplies have unique distribution needs. CLSPs who invest in distribution strategies for humanitarian aid supplies increase their participation in the disaster supply chains. A review of best practice distribution strategies included the establishment of logistics hubs, logistics centers as well as competence centers. Alternatively CLSPs can establish presence in such distribution centers as set up by humanitarian organization and national governments for effective positioning in such centers. Notable distribution centers include the worlds largest aid hub, the International Humanitarian City (IHC), based in Dubai and set up as global hub to facilitate preparedness and emergency response and international distribution of relief supplies. CLSPS domiciled in the hub have close contact with over ten UN agencies and 85 humanitarian organizations as well as commercial firms engaged in humanitarian aid distribution.The International Federation of Red Cross and Red Crescent Societies (IFRC) known as *IFRC* Hubs operate networks of logistics centers and humanitarian hubs in different global centers. Ten ASEAN member states have also invested in an intergovernmental centralized distribution centre known as the AHA centre that facilitates coordination and partnerships between humanitarian actors including UN agencies and IFRC. DHL also established a global competence centre for humanitarian logistics in 2022 to enhance global coordination of humanitarian supplies.

*8.5.4 Pre-emptive Logistics*

Technology has also become an enabler of humanitarian logistic effectiveness ad efficiency. This was especially critical during the COVID 19 pandemic. A logistics enabled and driven by technology emerged during the COVID 19 response due to the limitation of human mobility and contact caused by the virus. DHL observed that Covid-19 tested humanitarian aid management which necessitated increased digitization of logistics. The intention was to preempt as many logistics physical functions as possible precipitating an emerging logistics practice la-belled pre-emptive logistics that minimizes the human footprint in disaster zones. This included reaching out to stakeholders through webinars and conducting virtual meetings with staff. To manage physical delivery preemptive logistics relies on local teams and volunteers to manage the ensure order fulfillment.

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Technology proved critical during the COVID 19 pandemic due to the nature of the various that necessitated social distancing and working from homes. DHL has demonstrated leadership in emerging logistics practices that rely on technology and community engagement. Such virtual logistics is expected to push forward the progression of pre-emptive logistics with communities on the ground actualizing the physical delivery especially in the first and last miles. This form of logistics has been conceptualized as pre-emptive Logistics, a best practice logistic approach to humanitarian operations and especially viral pandemics.

*8.5.6 Capacity Building*

The effectiveness of responsiveness by CLSPs is most dependent on their capabilities. During disasters logistics, service providers are expected to reinforce the operations with skills, competencies and capabilities. As humanitarian relief operations are turbulent and complex, they require the ability to adapt to the environment and continuous flexibility. Thus dynamic capabilities are most ideal for a CLSPs to build for effective responsiveness. Humanitarian organizations with in-house logistics units and LSPS focused in offering humanitarian logistics are known to continuous seek to build capabilities. Kähkönen, Anni-Kaisa, et. Al (2021) observed that during COVID 19 capabilities such as capacity to reconfigure resources and execute fast oppressiveness helped firms to remain resilient given the disruptive effects that emerged.

*8.5.7 Micro Capacities*

CSLPs active in humanitarian missions have shared best practices in their reports individually and through clusters they identify with. CLSPs leading in the humanitarian sector include DHL, Kuehne & Nagel, Maersk, Agility, Bolloré Logistics among others. Unlike Macro capabilities which lie outside of an organization in other humanitarian community members, micro capabilities are internally harnessed and are dependent on a firms resources and competencies. DHL constant training for capacity building of their disaster response volunteers and staff to handle emergencies (DHL's Logistics of Things 2020), is a good practice that can help CLSPS become operationally ready during disasters. Establishment of humanitarian logistics units most notably the Get Airports Ready for Disaster (GARD) program and a Disaster Response Team (DRT) is also a best practice in harnessing of both micro and macro capabilities.

*8.5.8 Humanitarian Logistics Competence Centers*

Another best practice in harnessing micro capabilities is through establishment of competence centers in humanitarian logistics. DHL has established a global competence centre for humanitarian logistics in 2022 to enhance global coordination of humanitarian supplies.

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*8.5.7 Knowledge Acquisition Strategies*
*8.5.8 Knowledge Based Humanitarian Logistics*

Humanitarian logistics is distinct from commercial logistics and requires in-depth understanding of disaster management processes. The pertinent knowledge has been advancing to include its own taxonomies, objectives, principles and practices. It also requires the understanding of the global logistics ecosystems it operates within and especially the logistics cluster models pivotal in building capacities of other commercial and non commercial humanitarian actors. These clusters are also a repository of knowledge on disaster management phases that include mitigation, preparedness, response and recovery.Global clusters help logistics service providers gain knowledge that socializes by giving them access to best practices of humanitarian logistics leadership. The clusters also help them to adapt their logistics portfolios to humanitarian work and localization mechanisms. They also offer the CLSPs affiliation opportunities through partnerships.

*8.5.9 Humanitarian Logistics Research and Development*

Investing and participating in research and development is an area that has been used by humanitarian actors including CLSPs to raise their humanitarian profile. Successful CSPS in humanitarian logistics such as DHL and Kuehne and Nagel document their expertise and experiences that benefit the humanitarian logistics body of knowledge. This creates platforms for engagement with other clusters and actors who in return seek their expertise in delivery of humanitarian aid. CLSPS can partner with researchers or institutionalize research development by establishing centers of excellence to participate in this growing area of humanitarian logistics.

Best practice models are those of Kuehne Foundation, Fritz institute and DHL Discover among others. The Fritz institute affiliated to Fritz companies, a logistics corporation partners with non governmental organizations and governments to search for innovative logistics and supply chain solution to humanitarian aid operations. Focusing on disaster response and recovery, the institute promotes dissemination of best practices to enhance effectiveness of humanitarian logistics. Kuehne Foundation through HELP Logistics, a focused supply chain enterprise in humanitarian logistics, has established cross-sectoral partnerships with the UN, governments, NGO's and research institutions to increase capacities in humanitarian organizations.(HELP Logistics 2022 ).

**8.6.0 Capacity Development**
*8.6.1 Macro Capacities*
*8.6.2 Local Preparedness Networking*

Disaster management requires a concerted effort between the government, private sector and non-governmental organizations. Collectively they create a humanitarian community that pools together capabilities of each through various mechanisms of collaboration. A best practice is the consolidation of macro capabilities by DHL's through GARD and DRT staff through volunteer programs with strategic partners such as the UN

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agencies under IASC and other NGOs to expedite relief supplies. The adhoc staff go through training that equips them with skills to handle the complexities of emergency logistics. The core functions of GoHelp program are disaster preparedness and response while GARD facilitate airport to handle logistical challenge in times of natural disasters ( DHL, 2021). The approach by DHL of increasing disaster response social capital is replicated by other large national and multinational CLSPs as a form of Social entrepreneurship and social supply chain management. The establishment of the Disaster Response Team as a best practice emerges as a form of Anticipation Logistics aligned to anticipation strategies in humanitarian communities in the disaster preparedness stage. This pre-disaster preparedness enables DHL to adapt quickly to the needs of emergency logistics. Further it emerges as a form of Triple-A humanitarian supply chain management as DHL is able to adapt fast to the dynamic needs of a given disaster, alignment itself with the mission objectives while deploying agility required in quick response to the humanitarian demands. Adaptation, alignment and agility are critical factor in disaster responsiveness within humanitarian logistics.

8.6.3 *Continuous Improvement*

The humanitarian community especially as reported by the large clusters are always improving humanitarian operation contentiously especially with every major disaster. The improvement is diverse and cuts across sharing of best practices, developing tool-kits and enacting reforms and reviews. An example is the reform by IASC which is an umbrella organization of UN agencies



*8.6.4 Collaborative Reforms*

*8.6.5 IASC Reforms*

IASC was convened in 2009 to address humanitarian reform, cluster approach, funding mechanisms and logistics clustering that would implement logistics response teams (LRTs) at country levels came up with three pillars of humanitarian reform and which can serve as best practices.The first pillar was the establishment of logistics clusters by humanitarian relief organizations affiliated to the UN. This cluster approach has been beneficial to 3PL's where it has been utilized as an approach to integrate them with these strategic humanitarian organizations for higher synergy and capacity building. The second pillar is the building of a response force identified as humanitarian coordinators who would offer leadership and coordination in humanitarian emergencies. This would benefit the 3PL's who are inclined to more of building more capacity in business logistics over humanitarian logistics. The third pillar is humanitarian financing that is adequate, timely and flexible, an area that challenges 3PL's. One of the reasons for unresponsiveness by 3PL's is the lack of capital resources to mount a disaster response at short notice.

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## 9.0 Conclusions, recommendations and suggestions for further study

### 9.1 Conclusion

This research study has reviewed several humanitarian logistics practices both from practitioner papers and academic papers and drawn a main conclusion that the interaction and intersection of humanitarian logistics with business logistics has incubated a distinct form of socially oriented logistics. This phenomenon has been observed in other studies labeled social logistics (Banabakova, Vanya et. Al., 2019; Zaczyk, Mateusz, 2019), as an additional third pure form of logistics, with military and business logistics regarded as the first and second pure forms of logistics respectively. This study has added to the attempts to delineate humanitarian logistics from business logistics viewing it as a social entrepreneurship endeavor that requires heavy investment in both social responsibility and logistics solutions. A return on investment model has been proposed as a strategy to attract investments in disaster preparedness and humanitarian logistics by CLSPs. (Rahayu et al.,2020; HELP/IFRC, 2019; CARE, 2017;Boston Consulting Group,2015).

Humanitarian logistics are a big opportunity for Commercial CLSPs yet their complexity and scale are too daunting to pursue competitively. The sectors unique needs requires strategies that will allow the firms to embrace socially oriented logistics.This requires a logistics approach that is both co-opetitive and collaborative. CLSPs seeking to increase effectiveness in handling this distinct logistics will face a paradigm shift of firstly focusing on people and by extension societal needs before profits alongside a Triple P Bottom Model. The model demands for investing heavily in logistics CSR before the profits can accrue. Using a structure-strategy-conduct performance approach, a restructuring strategy that acknowledges the unique needs of the humanitarian community firms will require for separation of commercial logistics activities from the humanitarian logistics. This study identified specialized divisions in successful logistics service providers active in humanitarian operation as a best practice firm structuring strategy. The divisions are then used to help the firm integrate itself to humanitarian supply chains through a variety of socially enterprising best practices that include donating time, resources and expertise to humanitarian work, running volunteer programs as well as volunteering in disaster times among other philanthropic and non-philanthropic pursuits. These interactions gradually cause a social exchange between the logistics enterprises and that lays a foundation for partnerships, collaborations and eventually mutually beneficial social entrepreneurship.

Humanitarian Logistics are very dependent on collaborative partnerships due to scale of disasters that require governments,non governmental organizations and private sector to combine efforts at the point of response. For these partnerships to be effective, commercial logistics enterprises require internal mechanisms that will accommodate ad hoc and long term partnerships. Partnerships and collaborations are thus proposed in this study as best practice in increasing the responsiveness to disasters by commercial third party enterprises as well as to

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increase their participation in humanitarian supply chains that are mutually benefiting to society and the firm. This study concludes that responsiveness of CLSPs to disasters requires a socially oriented approach to logistics that will help the firms offer the agility-adaptation-alignment and resilient humanitarian logistics.

### 9.1.2 Recommendation

This review has established that commercial logistics needs to onboard to humanitarian logistics by embracing socially driven imperatives that focus on both human needs and profit needs. The role the sector played in the delivery of COVID-19 goods and essential supplies during the pandemic, re-calibrated its social value, as it shifted focus from customers to people and humanity. The author recommends a social logistics framework (see Figure 2) that balances these objectives.

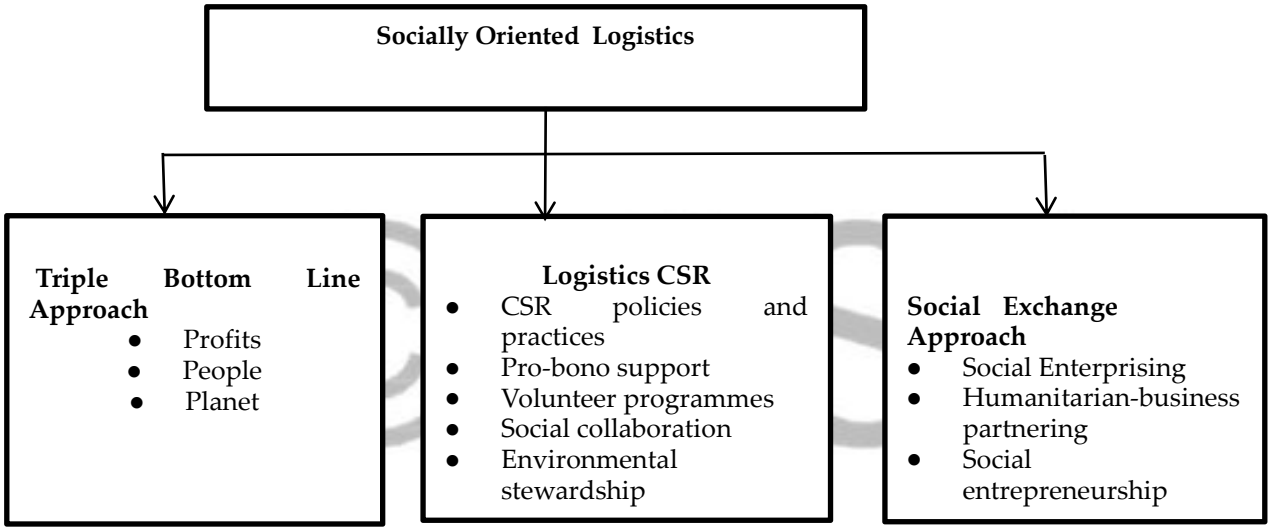


*Fig. 2: A social logistics approach to humanitarian Logistics*

### 9.1.3 Suggestions for further study

This study will best be complemented by further research on the impact of a social logistics approach to humanitarian logistics by commercial logistics service providers. The findings would be beneficial in informing the feasibility and sustainability to both large and smaller third party logistics service providers.

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