

# **DEVELOPING HUMANITARIAN LOGISTIC STRATEGY: AN INTERSECTIONIST VIEW**

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## **INTRODUCTION**

This paper aims to give an introductory discussion on the various aspects of humanitarian logistics initiatives. We apply an intersectionist view to specify the scope of the initiative and propose five important strategies for humanitarian logistics development. We provide an overview of the implementation of each strategy in the context of disaster management phases to highlight the critical areas for capacity building programs in humanitarian logistics.

## **LOGISTICS IN DISASTER EVENT**

Logistics is a process from procurement, storage and to distribution of goods and equipment through effective organizational networks. Logistics systems can be categorized into three types, namely, commercial /industrial logistics, military logistics, and humanitarian logistics whose ultimate goals are different (Tabbara, 2008).

Commercial logistics aims for economic profit. Humanitarian logistics aims to relieve the burden of suffering people (non-profit oriented) due to disasters such as earthquakes, volcano eruptions, or tsunamis. Military logistics also consists of a procurement process, storage and distribution of materials and equipments in a short time and to the right target. The difference is that the controlling facility and organisation units involving

military operation procedures are under a command system. Their robust commanding with experiences in chaotic conditions, anomaly environments, and a limited time of unpredictable and uncertain situations are among successful factors for humanitarian logistics missions. During a disaster, military logistics often involves cooperation with volunteers, non-governmental organizations (NGOs), local agencies, etc.

International experiences show that the level of success in humanitarian logistics varies with organizations. Humanitarian logistics missions often fulfil the required objectives, but some are poorly performed. Hence, the role and significance of logistics is not well understood or appreciated by humanitarian relief organizations and the donors (Thomas, 2003).

To understand the reasons for the variation in humanitarian logistics and the possible strategies to solve these problems, we present an overview of humanitarian logistics operations in the context of humanitarian supply chain management to specify the factors that potentially affect the performance of logistics.

### HUMANITARIAN LOGISTICS AND SUPPLY CHAIN MANAGEMENT (SCM)

In general, SCM facilitates three kinds of flows. First, the material flow, which is the flow of physical products from suppliers to consumers, and the reverse flow of returned products, recycling, and disposals. Second is the information flow, including demand forecasts, order transmissions, and order status reports. Third is the financial flow such as information on the required credit or payments, and the payment schedules. All these flows run simultaneously and require a complex business SCM.

Specific to humanitarian SCM, the goal is not on the consumers who build business relations with producers, but the disaster victims associated with the donors. This type of relation affects various factors in each flow. To examine the factors relevant to the action, we need to define the boundary of humanitarian logistics.

Halldorsson and Larson (2004) describe the linkage between SCM and logistics from four points of view, traditionalist, unionist, relabeling, and intersectionist. The traditionalist views SCM as a part of logistics, along the lines of external or inter-organizational logistics, while the relabeling views SCM as logistics, but renamed it as a form of “integrated” logistics. The unionist views logistics as a part of SCM, reducing logistics to one of many business processes or areas. Meanwhile the intersectionist views SCM as a broad strategy that cuts across many if not all business areas, where logistics becomes operational decisions, SCM becomes strategic decision, and tactical decisions fall to the intersection. We suggest that humanitarian logistics which has various dimensions, involving many stakeholders and requiring inter-disciplinary approaches, should be defined with an intersectionist view.

Under the intersectionist view, we adopt Howden (2009) to define the boundary of humanitarian logistics (Fig. 1). We then examine the relevant factors in humanitarian logistics operations.

Fig 1 shows that humanitarian logistics intersects with humanitarian SCM which controls the process of material, information and financial flows and link donors with the beneficiaries. Here, humanitarian logistics takes part in the procurement, storage and distribution process with support from organizations in the network.

Second, humanitarian logistics is not directly related to the interaction process with the donors. Humanitarian logistics does not have contact with authorities who plan and implement policies related to the flow of materials, information, and funds from donors to beneficiaries. Humanitarian logistics only focuses on operational and tactical decisions. Nevertheless organizational units in humanitarian logistics have to understand the position of the donors and authorities which have authority to plan and implement policies. Later they are parties who concern about humanitarian logistics performances.

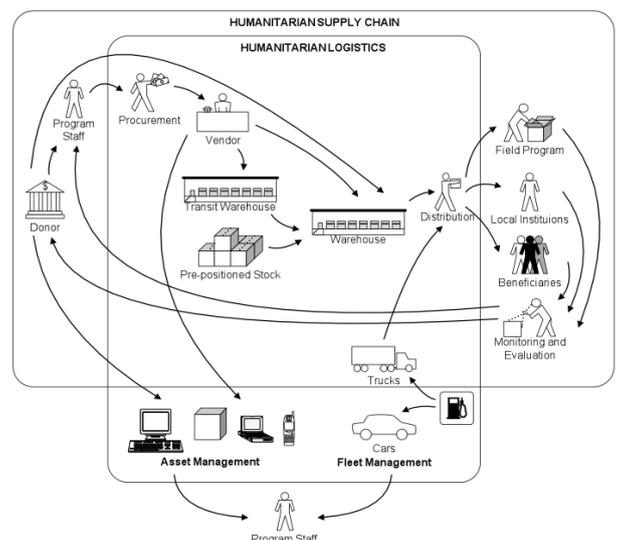


Fig 1: Humanitarian Logistics and Humanitarian Supply Chain Flows (Howden, 2009)

Third, humanitarian logistics plays an important role in the distribution process among field officers, local institutions, and disaster victims. However, it does not include the capacity management process of field officers and local institutions as well as the identification process on situation and location of disaster victims (beneficiaries). Also, the monitoring and evaluating reports for donors are done by other parties outside the process of humanitarian logistics.

Fourth, humanitarian logistics includes asset management to support the procurement process, storage, and the distribution. Asset management involves information systems and all tools, hardware, software, transportation, stationary, electronic equipment, computers, etc.

## **DEVELOPMENT STRATEGY**

Based on the above specification of humanitarian logistics, we describe possible strategies. There are at least five important efforts to develop humanitarian logistics.

First is the procurement management to ensure the supplies are provided timely in the right amount, good quality, at reasonable prices. Here, the unit that is responsible for procurement should be able to find suppliers, and monitor their performances. The capacity building of the procurement unit to work under disaster circumstance is one of critical aspect in the development strategy.

Second, warehousing plays a significant role to maintain the quantity and quality of supplies. The facility should include detailed, accurate, and reliable information of supplies to control, monitor, and secure the demand for beneficiaries. Physically, the warehouse should be large, sturdy, and equipped with proper rules and regulations that govern the receiving, storage, and distribution of supplies. Even though it is a critical aspect, in many disaster events, the warehousing activities are often temporary and managed with voluntary basis. These characteristics in combination with the complexity of warehousing require more attention in the development strategy.

Third is the organization relationship involved in the humanitarian logistics. It includes government institutions, both at the central and regional levels, donor institutions and countries, volunteer groups, military, NGOs, the private sector, academics, etc. They shall be mobilised with proper communication, cooperation, and coordination as the structure of the organisation units varies but they shall be united in the same objective, i.e. providing helps and aids to reduce the victims' sufferings.

Fourth, transportation systems are needed to accelerate the distribution process. It includes road networks, number and type of vehicles available to deliver the aids. The operation of the vehicles shall be sufficiently supported by fuel supply, skilled drivers and engineers. The failure of the transport system will result in a bottleneck of humanitarian logistics and therefore should be strategically maintained.

Fifth, the information system is critical for organisation units involved in collecting /provisioning, warehousing, and distributing the aids. At the strategic level, it is useful to establish policy and implement the plan. The information system helps the organisation units to implement collaborative activities. Hence, the preparedness of information systems under an uncertain disaster event is a strategic factor for developing humanitarian logistics.

## **HUMANITARIAN LOGISTICS CONTEXT**

This section elaborates the above strategic aspects contained in the humanitarian logistics into all phases of disaster management, starting from preparedness, response, transition, rehabilitation, and reconstruction (recovery) and mitigation.

Preparedness requires capacity building of the community and the organisation units to operate humanitarian logistics in disaster events. There are three steps to be involved. First, identify donors for potential aid. Second, identification of capacity building programs for potential staff to manage humanitarian logistics in the aforementioned subject on humanitarian logistics, i.e. (1) procurement, (2) warehousing and distribution, (3) relation among organisation units, (4) transportation, and (5) information system. Third is to ensure the availability of standard working procedures accessible to the stakeholders.

The response phase focuses on the quick action to rescue and protect the victims from the subsequent effects of the disaster. This phase can run for quite a long time (one month, for example) and the humanitarian logistics become absolutely significant. Hence, the linkage between humanitarian logistics and SCM shall be maintained to secure the whole process in a longer period.

The transition phase would be reached after the victims in a stable condition. When their living conditions become more stable, basic needs such as clothing, food, water, and sanitation are more controllable. In this phase, the activities aim to reduce the severity of the victims which are usually followed by active participation of the volunteers, NGOs, higher education institutions, and the mass media. They work together in conducting charity activities which are aimed to restore the conditions of victims. Humanitarian logistics should be in line with the charity activities.

The rehabilitation and reconstruction phase aims to restore the social, economical and environmental conditions into more or less the same condition as before the disaster. It may include job training for the victims to enable them to make income and become economically independent. The victims usually receive some money for living costs; however, the amount is very limited that are only enough to meet their basic needs. Humanitarian logistics shall support recovery activities such as logistics support to rebuild housings, places of worship, and various public facilities such as education, health, water and sanitation, security, and market facilities.

## SUMMARY

The terms logistics and SCM are often used interchangeably, however for the purpose of improving the capacity of stakeholders in humanitarian logistics initiatives we propose to first clearly distinguish between logistics and SCM. With the intersectionist view to specify humanitarian logistics, we identify strategic processes and relevant elements to improve the performance of humanitarian logistic missions. This approach enables us to indicate a possible focus for capacity building program in each phase of disaster management.

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