IDENTIFYING CHALLENGES AND COLLABORATION AREAS IN HUMANITARIAN LOGISTICS: A SOUTHERN AFRICAN PERSPECTIVE.

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ABSTRACT

This paper discusses the challenges, difficulties and problems faced by humanitarian organisations in running logistics systems Worldwide in Africa and particularly in Southern Africa, with a focus on some systems in Zimbabwe. Mini-case studies of the operations of the World Food Programme, the International Red Cross Society and the Zimbabwe Red Cross Society, the World Health Organisation, the United Nations Children's Fund and the Zimbabwean Civil Protection Organisation in Zimbabwe are discussed. These clarify the challenges faced as the lack of trained logistics personnel, lack of access to specialised humanitarian logistics courses and research information, the difficulty in using and adapting existing logistics systems in attending to humanitarian logistics and the lack of collaborative efforts that address the area specifically. Though the focus is on operations in Zimbabwe and operations that include Zimbabwe and neighbouring countries, the work can benefit other regions in Africa and beyond. The findings aim to inform decision making and activities on collaborative networks that are beneficial to humanitarian logistics.

1. INTRODUCTION

When disasters strike, relief organizations respond by delivering aid to those in need. Their supply chains must be both fast and agile, responding to sudden-onset of disasters, which may occur in cities such as New Orleans, or on the other side of the globe in places like rural Pakistan. Since 2004, many large-scale natural disasters have captured the attention of the international media: the 2004 tsunami, Hurricane Katrina in 2005 that devastated New Orleans and the 2005 earthquake in South Asia. Disasters of this magnitude cause donors, beneficiaries, and the media to closely monitor how quickly and efficiently relief organizations are able to respond. A disaster response operation involves trade-offs of speed, cost, and accuracy with regard to the type of goods that are delivered and their quantities and an often under-estimated variable in large humanitarian crises is the movement of staff in large numbers to the field, ensure their safety and shelter. Operations can be in many challenging places, which the corporate sector and businesses shun. Creating and implementing complicated logistics solutions and dealing with the final leg between the final distribution centre and the beneficiary or client is a challenge. Humanitarian logistics involves organizational components such as procurement, transportation, warehousing, inventory management, trace and tracking, bidding and reverse bidding, reporting and accountability to address emergency needs..

The humanitarian environment is becoming increasingly complex, requiring a deeper understanding of conflict, security and local and international politics. Humanitarian organisations tend to be highly dependent upon grants, which are generally geared towards paying for direct project and programme inputs in the field. Projects and programmes are time-bound, often under-funded. They live from grant to grant and project to project and this does not allow for a healthy strategic process to develop, as both planning cycles and funding cycles are generally unpredictable. This does not encourage investment in improved information systems. These issues justify a need to consider humanitarian logistics as a special field on its own that requires attention. This paper addresses some of the challenges faced and suggests collaborations and systems that can be used to improve humanitarian logistics based on a number of mini-case studies.

2. LITERATURE REVIEW

Logistics is the process of strategically managing the acquisition, movement and storage of materials, parts and related information flow through the organization and its marketing channels to fulfil its tasks most

cost effectively. Emergency logistics requires: Delivery of the appropriate supplies in good condition, when and where they are needed; A wide range of transport, often improvised at the local level; Limited, rapid, and specific deliveries from outside the area; A system of prioritising various relief inputs; Storing, staging, and moving bulk commodities; Moving people; Coordination and prioritization of the use of limited and shared transport assets; and Possible military involvement in logistics support (especially in cases of civil conflict). The main factors in the operating environment which shape the response are: Capacity of the infrastructure; Availability and quantity of transport assets in the country; Politics of the situation; and Civil conflict in the area of operations. The structure and organization of emergency logistics is based on the supply chain. Components of this chain are the following: Port of entry; Primary warehouse; Forward warehouse; and Terminal storage point. A typical relief logistics structure starts at the points of origin, e.g., producing or donor countries, to one or more ports of entry, i.e., land, sea or airports, and one or more primary warehouses (near the port of entry), through to forward warehouses (for holding), and lastly to terminal storage points from which the relief goods are transferred to places of distribution to the beneficiaries. (UNDAC, 2006)

2.1 Logistics Performance Measurement

Supply chain professionals in the commercial sector face many of the same issues of trade-offs in performance as a professional working in a disaster relief operation. In business and in disaster relief supply chains, speed is of the essence. Even more striking in parallel are military supply chains, which often face similarly short deployment periods and challenging working environments. Because of these similarities, it is important to understand the underlying principles of commercial and military performance measurement systems when developing a system for disaster relief operations. The following three principles are critical:

- **Align metrics to the organization's core strategy** (Lambert, 2001). If a metric is not critical to fulfilling an organization's core strategy, it should not be included on the scorecard. There is a need to avoid a "more is better," syndrome to avoid cluttered indices that cannot be used.
- **Understand the dynamics of how performance is driven** (Caplice & Sheffi, 1994) Fast delivery of goods to beneficiaries after a disaster has to accurately meet the needs and is always costly. The humanitarian relief organization has to align itself to ensure speed, accuracy, and optimised cost.
- **Review the metrics periodically as performance improves** (Meyer, 2005). The goal of implementing metrics is to improve performance and when goals are achieved, targets must be re-evaluated and revised to ensure continuous improvement in the organization's supply chain.

In addition, humanitarian logisticians use more indicators that may not necessarily apply to commercial and military logistics operations. Examples are given as follows:

Appeal Coverage: This indicator is comprised of two specific metrics: 1) *percent of appeal coverage* and 2) *percent of items delivered*. The first metric is the quantity of items that have been pledged by donors out of the total number of items requested for the operation. This indicates how well and how quickly the organization is finding pledges for the requested items. The second metric is the percentage of items that have actually been delivered on-site out of the total number of items requested for the operation. Together, these two metrics indicate how well the organization is meeting its appeal for an operation in terms of both finding donors and delivering items.

Donation-to-Delivery Time: This indicator is a measure of how long it takes for an item to be delivered to the destination country after a donor has pledged to donate it. (Dumond, 2000).

Financial Efficiency: Three metrics comprise the indicator of financial efficiency. The first two metrics use two methods (one relative and one absolute) to compare the budgeted prices to the actual prices paid for items delivered in the operation. The third financial efficiency metric incorporates the transportation cost of delivering the goods to the beneficiaries. This metric is expressed as a ratio of the total transportation costs incurred to the total costs for delivered items at a point in time. The value of this ratio should decrease over time, as less expensive transport methods are used after the initial delivery phase and as more items are delivered on-site.

Assessment Accuracy: This measures how quickly donations are pledged and delivered to beneficiaries and relies on how accurately the field personnel assessed the needs of the population affected after a disaster.

3. LOGISTICS AT THE WORLD FOOD PROGRAMME

Logistics is very important for the World Food Program because lives depend on it. It is one of the world's largest humanitarian aid organization and the United Nations' largest frontline relief agency. The aim is to deliver the right amount of food to the right people in the right place, at the right time and at the right price. WFP logistics has over 2000 employees worldwide and its supply chain begins by procuring and receiving aids from government and donors. The cargo is shipped using trucks, helicopters and even animals such as elephants among many other modes. At times it carries out special operations when necessary to improve local transport infrastructure, including rebuilding roads, bridges and railways, de-mining and rehabilitating ports.

Over the last eight years, WFP has developed a specialised unit to augment its field operations with a variety of support services. The Augmented Logistics Intervention Team for Emergencies (ALITE) is specifically tasked with addressing logistical preparedness as well as providing key operational support during emergencies. This includes developing logistics capacity assessments, rapid response equipment, stand-by arrangements, civil-military cooperation guidance and inter-agency work on the UN Joint Logistics Centre concept. ALITE strengthens WFP logistics activities by working closely with field logisticians, and programme, resource, telecommunications and procurement officers to apply standby capacities, develop operational plans and, where necessary, design special intervention projects. ALITE's goal is to provide a range of rapid and effective emergency services to support WFP field operations, primarily through increased resource availability. It is also responsible for the operational management of the UN Humanitarian Response Depot (UNHRD). This facility is used by both UN agencies and NGOs to store programme supplies available for immediate distribution to beneficiaries and operational support equipment for responding agencies and NGOs. WFP often needs to establish its own infrastructure for field operations including offices, warehouses and all the equipment for a supply chain system. In such circumstances, the Country Office can augment its own operation by drawing on reserves stored in UNHRD and can build up the infrastructure to establish both operations at the country office and sub-office levels.

Even though Africa has food deficit it has several characteristics which constrain the delivery of food relief. Distances are long, roads and railways are of poor quality and of insufficient length to reach the desired areas. In such instances the WFP has made special provisions to pay for up to half the cost of internal transport, storage and handling of food aid in the least developed countries. (WFP in Africa, 1984) Despite such commitments governments of some recipient countries still find it difficult to meet the remainder of the costs, bringing the financial burden back to WFP. Food deficient areas are also normally unstable environments and pose great risks to the WFP logistics staff. For example WFP transport and logistics operations in Afghanistan continued to be plagued by highly security risk and eight serious incidents involving their staff occurred over a five months period in 1994. (WFP, 1994)

One of the biggest challenge that WFP has continued to face is overcoming the time lag between disasters occurring and donation coming in. (WFP, 2005) In some cases resources arrive very late. WFP operations have continued to face hindrances from some governments in the developing world relating to the use of their country's road network as a passage of relief food aid into other fellow countries. At one time, WFP food relief trucks bound for Somalia were stranded for months at the Kenyan boarders after the Kenyan government decided to close its boarders for security, political and infrastructure damage reasons. (ZBC, 2007)

3.1 WFP Uses Different Transportation Modes

In 1985 alone more than 1,700 ships commercial lines and charter ships were used. (WFP, 1986) Besides transportation and distribution the WFP provides some of the logistical support to facilitate the smooth running of their operations. In 1995 WFP spearheaded the rehabilitation of port infrastructure, equipment and chartering barges on Lake Tanganyika as logistical support. (WFP, 1996) Thus there is need for diverse skilled personnel in the logistics team. Food that comes in late, particularly in emergencies may be of little benefit, accelerated delivery may involve high transport costs. (WFP, 1993) In essence the more the costs

spent on delivery the less the funds spent on sourcing the food. The Oceanic Transport Services (OTS) is the back borne of the WFP logistics operations. In 2002 it carried a total of 3.3 million tones of food relief across the world. (WFP, 2008) The OTS service crew are responsible for arranging; Supply vessels, Landing craft and Passenger ships to accommodate the team members. WFP logistics team arranges and pays for shipping and insurance of food relief. Given the high volume of relief food the WFP handles from donor to recipient countries, they devised a system of combining parcels into a single chartered ship. (WFP, 1986) This type of shipping has enabled the WFP to reduce shipment costs and increased convenience as compared to the use of commercial liners. The logistic department also negotiates with owners of ships and vessels for better prices and increased convenience. In order to keep expensive liner shipment to the minimum, consolidation of consignments into large quantities suitable for vessel carriage is done. (WFP, 1992) The challenge is to find ship owners prepared to carry a number of small individual shipments for multiple destinations as part of a single charter.

In some cases the WFP uses air transport mode as the last resort. During 1991 nearly 54 000 tonnes of maize were delivered by the air to the most inaccessible regions of Ethiopia, Sudan and Angola. (WFP, 1992) Air drops can pose operational risks especially in the war zones. It is also time consuming, costly in cargo preparation and often entails high losses of commodities. The mode requires a complex support communication structure and specialized air craft. WFP in conjunction with the United Nation Humanitarian Air Service operated some 103 planes and helicopters on missions ranging from food air drops and helicopter sling deliveries in 2006. In fact light operations have now been established for the WFP alongside large cargo aircraft operations to allow the movement of relief workers to the field of affected areas. (WFP, 2008)

Trucks are the workhorses of the WFP logistics and carry most of the loads. For example in 2005 a convoy of around 69 trucks crossed the Sahara desert from Libya to Chad carrying up to 15000 metric tones of food. (WFP, 2006) WPF relies mostly on contracted road transport for most of its delivery. However in some cases they used owned fleets. Trucks are also important during distribution from one locality to the other. Poor roads are a major challenge such that the WFP takes part in repairing damaged roads. In some instances the WFP has gone to the extent of reopening roads previously closed due to physical deterioration in an effort to reduce transportation cost. In Angola a large share of air transport was replaced by cheaper road haulage, which was facilitated by reopening of roads previously closed due to mining and physical degradation. (WFP, 1995)

3.2 Inventory Management, Warehousing, Monitoring and Evaluation

The WFP storage deports are distributed all over the world and are mainly located at ports. In the Southern African WFP have four deports located in Mozambique. The logistics personnel are responsible for port deports inventory and storage management. Storage management entails activities such as store and insect pest management. When need arises fumigation activities are carried out in order to reduce grain deterioration. The logistic team is also responsible for monitoring stock levels and replenishing of stocks.

WPF through its logistical team establishes the need areas and the level of food requirements through relevant government agencies of the recipient country. (WFP, 1986) Once all stakeholders agree on the validity of the needy area and specific requirements for the area, the WFP logistic team takes over the responsibility of distribution and monitoring. In some instances the WPF logistics team gets assistance from the relevant governments department. This can however result in clashes between the two parties as differences might arise in perceptions of problem identification, monitoring and distribution methods. During monitoring the logistics personnel conduct registration verification done through visits to households. There is also monitoring at distribution sites and this encompasses post distribution monitoring. This enables evaluation and assessment of the extent to which relief distribution objectives are met, ensures smooth flow of distribution process and equitable distribution of relief. The WPF logistics team also employs specific monitoring check for each specific program. They also monitor and report monthly, any political incidents surrounding the program activities. (WFP, 2005) For improvements of its targeting assistance to the needy groups, WFP carries out Vulnerability Analysis and Mapping for pin pointing food needs. (WFP, 1996)

3.3 WFP Operations in Zimbabwe

The WFP operations in Zimbabwe are part of a global and regional network that has to be capable of delivering critical emergency supplies, materials, vehicles and technical assistance to any place in the world within a short timeframe. The operations address natural disasters due to poor harvests, drought and cyclones and manmade disasters caused by political and economic upheaval since year 2000 (WFP Zimbabwe, 2006; Irish Aid, 2006). The logistics operations begin by identifying the emergency areas. Case loads are determined, that is the level of demand for the food aid. Visits are made to the affected areas to find out about the existing infrastructure and its accessibility. The following aspects usually provide the guidelines for the decisions that are made: Commercial setup, i.e. Do the areas in need of aid accessible by road and how far are they from these commercial centres?; Are there any warehouses and if so what is the storage capacity? If large enough the WFP leases them; Do we require any temporary storage facilities or should we build new warehouses, if there is need the WFP erects temporary warehouses; Are there any Non Governmental Organizations (NGO's) currently in place and to what extent are they meeting the demand.

The UN logistics service usually has a fleet of a specified number of trucks to transport relief commodities to designated delivery points. (Gustavsson, 2006) WPF usually subcontracts some trucks from the private sector whilst some are purchased by UN funds and deployed to the regions. The fleet is managed by WFP head of logistics on behalf of the UN agencies. Distribution of aid is affected by a number of factors that include: The nature of existing roads, whether there are dust roads or gravel roads and how good they are; The strength or lack of bridges; and the Local and Central Government setup. Before the donations are distributed, the government department first tests the food to find out if it is not genetically modified and a GMO certificate is issued before the donations are shipped. The location of the central hubs where the bulk of the food aid is to be stored depends on: Where buy the food is procured from and the regions where food aid is urgently needed; If the food aid coming through South Africa the central hub/storage centre used is in Beitbridge, from where it is easily be transported to neighbouring areas. Food aid coming through Mozambique is centrally stored in Mutare. Removal of stored food is scheduled on a First In First Out (FIFO) or First to Expire First Out (FEFO) basis. At the final destination zones, WFP normally leases sub-warehouses and /or erect mobile storage for distribution various places like schools, hospitals and other points of need.

A number of problems and challenges are faced by the WFP logistics programme in Zimbabwe. These are as follows:

- The free fall of the economy has resulted in a shrinking supply base due to the weaker currency. The exchange rate fell from Zimbabwean $9 in 1997 to $100 billion for every United States of America dollar.
- Infrastructure in the country has deteriorated due to the economic and political problems. The roads have not been adequately maintained and adequate supplies of fuel are not available. Storage and distribution facilities are at times looted and the whole exercise politicized.
- In some cases, the donations that are received in kind are not in synch with what is required at a given moment. For example there may be donations in the form of rice instead of maize grains, which will be in demand.
- At times the distribution of food aid is affected by politics. Directives from the government directing the release of a particular commodity to a particular location can affect the planned delivery schedules and interference with the type of food distributed can result in poor implementation of delivery and expiry of certain foods. The delays in issuing GMO certificates can delay delivery to those urgently in need of food. This is a case where bureaucracy in-efficiency impacts negatively on WFP operations.
- In some cases donations do not match the exact needs resulting in food rationing. The timing of the donations to match the demand is always a big challenge.
- At times operations in certain locations are hampered by lack of information and communication technology. Documentation relating to transportation is often produced electronically at point of origin and is often only available on-line. Unfortunately, the majority of partner NGOs and operations in less connected countries typically do not have the electronic infrastructure

investments or operations in place. Therefore, access to this information is not necessarily possible along the whole supply chain and often moves quite early on in the handling process from electronic systems to paper. This typically increases the time required to handle information and leads to reduced efficiencies, duplication of functions, increased inaccuracies in reporting and increased costs.

- The existing logistics structure is loose and in some parts multi-organizational based on historical responses to different emergency situations. The looseness may result in the loss of commodities and may react slowly to new and developing needs. Creation of adaptable structures that can mutate and respond to constant changes is one challenge that humanitarian logistics practitioners need to attend to.
- In the distribution of aid to individuals, problems of diversions of relief aid are normally experienced especially at the delivery points where informal systems are necessary due to lack of infrastructure and systems.
- The people in charge of humanitarian logistics have no formal training in logistics. Many employees began their careers with a background in the social sciences, development studies or law. Most of them are value-led and few have corporate experience of logistics management.
- Some of the key support mechanisms are lacking in the WFP in Zimbabwe even though they are available in the private sector and the military. Examples are expert staffing, know-how, IT systems, MIS systems, framework agreements, corporate relationships, infrastructure, standardization and collaborative initiatives.

3.3 Suggested Solutions

Some of these challenges can be attended to by developing systems and manpower development programmes. It was found out the most of the people employed as logisticians were not formally trained in humanitarian logistics. They have developed their skills on the job. Competency-based capacity-building initiatives and mechanisms need to be developed and supported so that humanitarian logisticians' skills and know-how are raised to professional levels, and supported by appropriate training discipline, accreditation and continuous professional development to meet the evolving systems and challenges. Local staff has to be trained in most of the relevant aspects of supply chain management. They need to locate and mobilize the vehicles needed, and to ensure sufficient amounts of fuel. There is also a need to broaden the scope of funding. The humanitarian organisations can learn new developments and systems from copying and improving and collaborating with the corporate world and the military. Donors need to realise that unless they adopt an actively hands-on approach to changing organisational logistics management, funds will often not be used as efficiently as they could be. They should also be sensitized to evolving needs on the ground. When in charge of formulating a relief operation, it is advisable not to build a loose structure from the onset. Steps to organize existing loose and informal operations so that they are tighter and accountable, have to be taken in order to minimize loss of commodities and other inefficiencies.

Most humanitarian organisation are only beginning to implement what the corporate sector did 10 to 15 years ago. One way to rapidly catch-up could involve collaboration with business corporations sharing their know-how, systems and resources. Collaboration could ultimately result in more efficient and more cost-effective logistics operations. New employees could be sourced from humanitarian logistics schools and corporate environments where they might have core professional skills. In addition, there needs to be a greater emphasis on mentoring, continuous professional development and coaching within organizations. A higher degree of collaboration across humanitarian agencies in the form of workshops and shared specialist pools is suggested. A consortium of NGOs could form coalitions to work with the private sector, drawing on their resources, expertise and knowledge in radio, satellite, licensing, and hardware. One outcome could be a communication unit to serve the wider humanitarian community during a large-scale disaster.

The WFP can work closed with World Vision, which has established pre-positioning units in three places: Denver, US (primary focus serving the Americas); Brindisi, Italy (primary focus Middle East, Central Asia and Africa); Hanover, Germany (a smaller unit serving diverse logistical needs). World Vision's unit is designed to deliver supplies worldwide within 72 hours. Other developments include the establishment of a Humanitarian Logistics Council (HLC, 2002) to heighten the visibility of the sector and stimulate improved

logistics management. It brings together key logistics managers in the humanitarian sector with the aim of encouraging collaboration, integration, standardization, synergy and joint product development.

4. THE ZIMBABWE RED CROSS SOCIETY

The Zimbabwe Red Cross Society (ZRCS) is one of the several members of the International Federation of Red Cross and Red Crescent Societies located in various parts of the world. It was established in 1932 as a branch of the British Red Cross until 1981 when it began to be recognized in Zimbabwe through an Act of Parliament. In 1983 it was recognized by the International Community of the Red Crescent Society (ICRC) (Mazvimavi, 2000). The Society is supported by a Regional International Federation delegation whose aim is to coordinate and deliver programmes and initiatives, most of which are funded by Red Cross Donors either bilaterally or through Federation Appeal. The Federation delegation is also instrumental in accessing and coordinating technical support as well as develops processes the Society would have identified. The Federation delegation also assist the Society to develop and expand links with all stakeholders including local and international media, diplomatic missions, civil society representative, local authorities, NGO and the corporate sector to secure coverage and funds for some of its humanitarian activities and as such the Society does not fully fund itself. (IFRC,2002)

The Zimbabwe Red Cross Society operates countrywide under a similar administrative structure to local government. Beneath the National Executive Council (NEC) are eight provincial committees, then 57 district committees. At present, there are 282 branches. The provincial offices are located in the main cities within the provinces. The district offices usually deal with issues of food distribution and communities support whilst the provincial offices are there to provide support to their respective districts and as such they deal with issues of procurement of goods and resource mobilization from the NEC. The provincial offices also arrange temporary warehousing of goods before they are distributed. They are also responsible for organizing the transportation same goods. The NEC is involved in issues of a strategic nature involving planning, advocacy and the sourcing and movement of goods and services from local and international donors. (IFRS, 2004) Trained Volunteers, usually members of the same community in which the support is offered, provide services and support on behalf of the Society. They are given small allowances for food and transport. The Society has approximately 20 000 adult members/volunteers and 19 000 youth members/volunteers. (IFRC, 2007)

ZRCS has been implementing projects in the health sector since 1988 and key programme elements within this sector include: The integrated HIV/AIDS programmes involving information desermination on HIVAIDS prevention and home-based care for People Living with HIV/AIDS through training and counselling as well as provision of clothes, nutritional support and drugs such as anti-retrovirals (ARVs). A lot of support is provided by the Danish and Japanese Red Cross Societies; Support for the orphans and vulnerable children through provision of clothes, food and school fees. UNICEF also provides complementary effort on this programme and there is a need for collaborative systems; community-based first aid training to action teams and other members of the community; Water and sanitation programmes which involve rehabilitation of boreholes/wells, building of new latrines in affected areas as well as providing water purification tablets to improve water quality. ZRCS also provides funding for disaster management programmes placing much emphasis on preparedness measures both in communities and within the Society itself to enable a quick and better response in time for such disasters like drought and floods through capacity development at community level and supporting branch and youth development. Other activities include complementary food-for-work programmes, provision of shelter (tents) and clothes wherever there is need. ZRCS also supports the integrated food security programme by reinforcing self-reliance and coping mechanisms with a vision of enabling self-sustenance of communities particularly households through provision of agricultural inputs like seed and fertilizers and sometimes, draught power to enable tilling of the land for farming purposes. (IFRC, 2007)

The exercise of carrying out a needs assessment is normally carried out by the Vulnerable Assessment Committees consisting of government authorities, UN agencies and the International Federation of the Red Cross. They look at the provision of safe and adequate household water. They have come to realise that the food security programmes are most effective when built around or with the on-going HIV and AIDS mitigation activities since there are already existing beneficiary systems in place.

The Society faces several challenges in both its Operational programmes and Logistical operations: There has always been the swelling of numbers of beneficiaries in the communities. This has put a huge challenge to the Society, as it must source extra funds to cater for the growth, which sometimes is unavailable; Swelling numbers of HIV/AIDS infection; Lack of safe drinking water in many rural areas; Reaching out to beneficiaries located in remote locations particularly where roads are non-existent has been extremely difficult; The Society also faces limitations in retaining skilled staff due to low wages they offer and this has had a major impact on activities, as there is a high personnel turnover; The Society is also not spared from political harassment by some local members of the society particularly since its corporate colours are similar to those of the main opposition political party. (Mazvimavi. 2000)

5. WORLD HEALTH ORGANISATION LOGISTICS

The idea to set up the World Health Organisation (WHO) was discussed the diplomats who met to form the United Nations in 1945. Its constitution came into force on 7 April 19948. It directs and co-ordinates health issues and activities within the United Nations system, proving leadership on global health matters, shaping health research agenda, articulating evidence-based policy options, providing technical support for member countries and monitoring and assessing health trends. This enables collective defence against trans-national health threats. (WHO, 2008) Humanitarian logistics operations play a vital role within this mandate. There are a number of logistic challenges that are being faced by the WHO in its endeavour to provide health services especially in most African countries and Asian communities. In most African countries unplanned disease outbreaks such as malaria, cholera, dysentery, measles and pneumonia pose a high challenge to the general preparedness. The outbreaks of war and the rain season have posed greater challenges especially in African countries. The serious logistical challenges facing WHO are: Hospital service quality in some of the African countries is poor and inadequately equipped to cater for epidemics; Accessibility in some of the African countries especially in war regions is still poor; UN common logistics and air services have not expanded to cater for food, nutrition, water, sanitation and health activities to threatened people; Lack of coordination among agencies due to poor communication network in certain regions; Limited access to primary health care and lack of an organized public health system .also hospitals are ill equipped; Consultation, staying in hospitals, medication and consumables are expensive to the ordinary people especially in African countries; Reports of high-jacking, looting and revenge killing are common problems. An example is the rail link between Nyala and Khartoum which was broken by warring parties; Prompt provision of basic food, water, and health services to thousands of villagers spread across thousands of miles is a formidable task; Government support in certain counties is weak due to overwhelming humanitarian needs and low GDP in some African countries such as Sudan; The number of NGOs participating is low due to delays on travel permits, clearance of goods or vehicles; Recruitment of skilled staff is still a problem whenever there is an outbreak of epidemics; Pledged cash and borrowing is also a difficult problem for the funding of operations.

The following are suggested to reduce WHO logistics challenges: Ensure hospital service quality improves in many affected areas; Rehabilitation of critical hospitals; Encourage partnerships with governments, NGOs and the private sector in health assurance and delivery; Maintain health experts and surveillance on epidemics; Provide adequate back-bone of medical supplies and logistics; Agreement on priorities between parties and establishing coordination and joint action

6. HUMANITARIAN LOGISTICS OPERATIONS AND CHALLENGES AT UNICEF

The United Nations Children's Fund (UNICEF) is an integral member organization of the United Nations (UN). It is mandated by the United Nations General Assembly to advocate for the protection of children's rights, to help meet their basic needs and expand their opportunities to reach their full potential. To achieve this mandate, among other goals UNICEF seeks to: Mobilise political will and material resources to help countries, particularly developing countries to ensure a "first call for children" and build the capacity of the countries to form appropriate policies and deliver services for children and their families; Respond in emergencies to protect the rights of children in coordination with United Nations partners and humanitarian agencies, UNICEF makes unique facilities for rapid response available to its partners to relieve the suffering of children and for those who provide their care. (UNICEF, 2008)

To perform its mandate; to deliver the right amount of food, clothing and health care to the children and their families in the emergence areas timely and at an optimal cost, UNICEF has a logistics system. The challenges faced range from the geographical barriers between donor countries and crisis area, political and legislative practices, dilapidated infrastructure, war and different cultural norms. (UNICEF, 2003) It is a partner in the United Nation Joint Logistics Center (UNJLC) and this allows it to coordinate its services and requirements with other humanitarian and non-humanitarian agencies (UNJLC, 2008). Thus it can use the resources of other partner organizations in the crisis regions (WFP, 2008). It is also in partnership with other organizations involved in logistics for example corporate partners such as DHL (DHL, 2006). It also works closely with governments, local authorities, military, civil and commercial organizations in the countries it will be operating in. In Zimbabwe for example, UNICEF works with the Ministry of Health and Child Welfare, using their personnel and facilities such as clinics and hospitals during immunization programmes and with the Ministry of Education, Sports and Culture during children feeding schemes. It also rents storage space (warehouses), hires local transport contractors to transport aid to the different regions of the country and during Cyclone Eline, UNICEF worked with the Civil Protection Unit and the Air Force of Zimbabwe to bring aid to those affected (UNICEF Zimbabwe, 2003).

UNICEF relies on air, sea and road modes of transport to deliver aid. An overview of the logistics operation undertaken by UNICEF is as follows; aid from donor countries is transported normally by ship to the ports closest to the recipients of the aid. “Closeness” is determined not only by geographical considerations but also in terms of infrastructure such as roads, security, legislative issues and speed of customs clearance. This information is provided by UNJLC and routes and mode of transportations are decided on. UNJLC also provides for real time tracking of all UNICEF containers. In serious emergences and/or where infrastructure is very poor/non-existent aid and relief works are air lifted to region of crisis. Where infrastructure is good or terrain allows UNICEF relies most on trucks to get relief from the ports and warehouses to the affected region (WFP, 2008). At all levels of its supply chain UNICEF relies on both it own, those on sister UN agencies, NGOs and/or contracted resources. The challenges faced with UNICEF are in coordinating and synchronizing the activities all these different organizations in a cost effective manner into fulfilling its mandate, especially given the fact that emergencies do not have a timetable. It has tried to reduce these challenges by forming effective partners through UNJLC, through the presence of its employees on the ground and through nurturing good relations with governments, local authourities, NGOs and other civil organizations in its areas of operation.

7. HUMANITARIAN LOGISTICS AT THE ZIMBABWE CIVIL PROTECTION ORGANISATION

Relief logistics also encompass the relocation of disaster-affected people, transfer of casualties, and the movement of relief workers. When disasters strike, relief organizations respond by delivering aid to those in need. Their supply chains must be both fast and agile, responding to sudden-onset disasters which may occur. (Caplice et al, 1994) A disaster response operation involves trade-offs of speed, cost, and accuracy with regard to the type of goods that are delivered and their quantities. Balancing these trade-offs requires a means of measuring supply chain performance. However, the inability to centrally capture time and cost data related to the procurement and distribution of goods has prevented a systematic process of performance measurement from being implemented. (Dumond, 200)

The Zimbabwe Civil Protection Organisation is a disaster response entity, coordinated by the Minister of Local Government Public Works and Urban Development empowered by the Civil Protection Act Chapter 10.06 (1989). It is national policy for Civil Protection that every citizen of Zimbabwe should assist where possible to avert or limit the effect of disaster. Central government initiates hazard reduction measures through relevant sector ministries with the local administration taking responsibility for implementing and maintaining effectiveness. (Civil Protection Act, 1989) The system uses the existing government, private and NGO structures, whose regular activities contain elements of prevention and community development. These organisations are adopted structurally, materially and technically so that they can speedily shift from their regular activities to undertake protective, relief and rehabilitation measures in times of disasters in terms of intensity only without drifting from their operational principles. This is a very challenging exercise.

The Civil Protection Organization (CPO) reacts according to the nature of the emergency. As an initial step, an assessment of the needs of the people caught up in a disaster is made. For instance, if there are floods in a rural area, the immediate needs of the people will be shelter and sanitation. It is difficult to cater for their needs since they are scattered all over the affected area. To make things easier in flood-prone areas, as a part of emergency preparedness response training, people are advised to gather at a designated central point, like a school or clinic. There can be challenges on how to reach affected people in the event of floods. This can be due to the fact that roads and bridges may be washed away. In such instances, the CPO liaises with the Zimbabwe National Army for helicopters to extract marooned people. In instances when the extraction of people may not be necessary but they would need food and water and the Air Force of Zimbabwe use small planes and helicopters to drop food packs, water and any other necessities like plastic sheeting or tents for temporary shelter. They can also hire trucks from the Government of Zimbabwe owned Central Mechanical Equipment Department. For instance, during Cyclone Eline, a flooding disaster occurred in February 2000 and many areas were ravaged. There were many fatalities and there was need for body bags, shelter, food and water and the CPO had to react quickly to reduce stress and deaths. In such extreme cases the CPO has the legislative power to commandeer private transport. However, the most benefits when such disasters occur depend on pre-arrangements for the disaster through emergency preparedness. In every rural community a record is kept of every one who has potentially useful equipment, like a tractor, a lorry or buildings. By prior arrangements with the owner, such equipment is mobilised in the event of disasters. Local companies mainly mines also come in handy when disaster strikes by providing their vehicles for use and by providing other material things.

The CPO faces many challenges. In cases when disaster strikes remote areas, there are serious communication problems. In some cases the affected areas do not have any communications infrastructure in place, any telephone lines or radios. Other areas like Chicualacuala in the southern parts of Zimbabwe cannot receive early warnings because they only receive foreign radio transmissions. In other areas like Muzarabani they use VHF radios which will be at the local police stations. The efficiency of these will be limited by the shortage of personnel as well as lack of power. The CPO is also not well funding and heavily relies on donor funding for their programmes. In cases of disasters the CPO initially appeals locally for aid and individuals and the business community responds to a central point. If it is not enough, an appeal is then launched internationally. One main challenge is a lack of accountability and misuse of donations and that has tended to dampen local response to appeals for assistance. The management systems of the CPO need to be improved in this regard.

The CPO falls short in many respects based on performance indicators discussed in literature. The CPO faces many challenges financially, materially and structurally. Although resources can never be enough, the current situation at the CPO makes the situation worse. In terms of the structures in place it is the Director and Deputy Director who can authorise the release of funds to secure materials needed. This is too bureaucratic because there is need for decentralisation of authority and to put in place effective humanitarian logistics management systems to avoid corruption, in-effectiveness and in-efficiency. Although both the director and D/Director are on standby 24 hours a day, it still does not address the issue of expediency. The other aspect relates to the fact that the CPO does not own their fleet. Problems might arise between the different government ministries, departments and arms when there are clashes of interests. For example the CPO might need to use some vehicles urgently, but the army might feel they are not obliged to act with the necessary speed without authorisation by the commanders. It might be necessary for the CPO to have their own small fleet and then get extra help later when the most critical decisions and implementation steps have been taken. There is also need for the CPO to establish branches in the major towns of the country to raise awareness on disaster preparedness to more people.

8. RECOMMENDATIONS AND CONCLUSION

Based on the discussion in this paper, the following collaboration a areas and issues are proposed:

- An international education, teaching and research network is proposed that can initiate and/or consolidate: educational programmes in Humanitarian logistics at diploma, degree and post-graduate degree level; professional development courses for logistics personnel in humanitarian organisations; and doctoral research and consultancy in the area.

- Development of a Humanitarian Logistics Network for Africa that brings together participants from industries, governments and academics to develop specialised systems for humanitarian logistics. The focus can be on technology and system adaptation from business and military logistics systems; development of systems that respond flexibly to changing needs, identification of opportunities for exploiting synergies in the different sectors, development of practical metrics and score cards and on the use of third parties in humanitarian operations.
- Typical topic areas that can be considered for system development and research collaboration are: Defining the role of humanitarian organisations in infrastructure development and maintenance; Trans-boundary operations issues and views; Minimising the impacts of politics, security and war on operations; Location decisions for main, sub-, and small warehouses and storage areas for cost optimisation and higher impact factor; Quick methods to develop distribution networks for identified operations; Own and lease decisions for logistics equipment and infrastructure given the limited term of operations; Managing the mismatch between donations and demands/needs; Formalising the delivery end-points; Information and communication technologies for humanitarian logistics; Rapid catch-up models for systems to match corporate, global and military logistics systems; Developing peer networks for different humanitarian organisations; The role of volunteers in humanitarian logistics (HL); Development, impact and effectiveness of HL emergency preparedness and response systems in disaster-prone areas; Response systems to rapidly increasing relief demand or high demand emergency situations; Routing problems for HL; Managing the military-civil interface in HR for effective co-ordination during disasters; and legal issues in HL.

This paper has presented mini-case studies for HL operations in a number of organisation that also operate in Zimbabwe. The above recommendation contribute to further discussion and dialogue on the development of collaborative networks that can assist in attending to the challenges that are faced by humanitarian organisations' logistics operations. It is hoped that some of them will prove to be effective in the effort towards improving the systems and operation.

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