Issue - 03 | April 2018 | Sri Lanka's First Ever Logistics Magazine

LOGISTICS TIMES

Department of Management and Finance
General Sir John Kotelawala Defence University



IMPROVING THE EFFECTIVENESS OF HUMANITARIAN LOGISTICS THROUGH PROPER NETWORKING
SUDATH MADUGALLE

QUEST AGAINST HUNGER
DJORDGE VDOVIC

HUMANITARIAN LOGISTICS: THE ROLE OF MILITARY
MAJOR GENERAL H. JAGATH S. GUNAWARDANE

HUMANITARIAN AID: EVOLUTION THROUGH TECHNOLOGY
REAR ADMIRAL (S) HAUD HETTIARACHCHI

THERE IS NOTHING MORE SALIENT THAN THE IMMEDIATE RESPONSE
AIR VICE MARSHAL SAGARA KOTAKADENIYA

LEARNING IS THE ONLY WAY TO BECOME AN EFFECTIVE HUMANITARIAN LOGISTICIAN
DR. JANAKA JAYAWICKRAMA

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EDITOR'S NOTE...

Welcome to the third edition of Logistics Times!

It is with great pleasure that I am making the editor's note of the third issue of Logistics Times 2018 which comprises of articles exploring the theme of Humanitarian Logistics: The Societal Responsibility to advance the thought and practice on improving coordination, in the context of humanitarian logistics. This is a reflection of the great combination of effort, courage, dedication, commitment and another triumphant commute of intake 33 undergraduates who are looking for an opportunity to meet the experienced and prominent personalities in the corporate sector.

In this issue as always, we have included, interviews conducted by our own undergraduates with prominent professionals in the industry and articles written by our own lecturers, undergraduates of Intake 33, intake 34, intake 35 and corporate sector on different topics related to Humanitarian Logistics. In addition to that we have also included the winning essay of the essay competition. We hope that the package of ideas, words and images that our group of expertise prepared for this magazine will be able to make a difference by creating value for the readers' future. I would like to take this opportunity to dedicate my deepest unrestrained gratitude to all those who their generosities gave us the ability and possibility of taking this significant over. Specially, to everyone from the corporate sector for giving us time in the thick of their busy schedules, to the Vice Chancellor of General Sir John Kotelawala Defence University, Deputy Vice Chancellors, Dean FMSH, Dean FDSS, Head of the Department of Management and Finance, Mr. Wasantha Premaratne and all other lecturers. I also extend my sincere gratitude to the chief designer who helped in adding artistic creativity to the magazine, the editorial board, all the writers, everyone from the Department of Management and Finance of Intake 33 and finally all those whose names are not mentioned. Your valuable contribution and thoughts have immensely helped to make this a reality.

Farah Jayman
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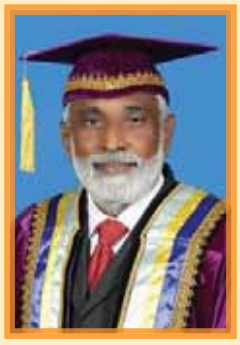
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Dr. Janaka Jayawickrama

Associate Professor in Community wellbeing
Department of Health Sciences
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Dr. Janaka Jayawickrama is an Associate Professor at the Department of Health Sciences of the University of York in United Kingdom. He is a social anthropologist with a background in conducting research in multi-disciplinary and culturally diverse contexts. His work has a particular focus on understanding wellbeing of communities within uncertainty and dangers of life presented by disasters, conflicts and uneven development. Janaka has played key roles in various humanitarian responses including tsunami responses in Sri Lanka (2004), internally displaced people in Western Darfur, Sudan (2005), Afghan refugees in Pakistan (2006), refugees in Malawi (2006) and Iraqi refugees in Jordan (2007). Currently he is collaborating with affected populations in South Sudan, Sudan, Syria, Iraq, Yemen and Afghanistan.

As per your experience in this field how can you briefly clarify the concept of humanitarian response in a logistical aspect?

Humanitarian response is not just responding to disasters but it is also about conflicts. It is important how you define humanitarianism. The current humanitarian system has a huge relevance to the 3rd Article of the Universal Declaration of Human Rights – "everyone has the right to life, liberty and security of person". According to this, any humanitarian response to a disaster or conflict should be based on protecting life, liberty and security of affected populations.

According to International Committee of Red Cross, the logistics in humanitarian responses can be defined as obtaining and delivering requested supplies and services, at the places and times they are needed, whilst ensuring best value for money. In the immediate aftermath of any disaster, these supplies include items that are vital for survival, such as food, water, temporary shelter and medicine, among others. In this, it is important to understand that the humanitarian system is a part of the global market place. That is the reason why instead of building mud-huts with straw roofs, the affected populations always receive plastic tents. The International humanitarian system easily forgets that the affected populations are the first responders to any disaster or conflict. They help themselves until the outside help arrives.

When we do not help ourselves first, nobody is going to help us either.

In my opinion, most of the logistical needs can be sorted locally and should be the centre of any humanitarian response. Over the years, my experience is that in any crisis, we can find most materials locally. Of course, these may not be the most suitable, however, engaging with affected communities and finding local materials, always empower people. Any humanitarian response should be focusing on strengthening the affected populations, therefore they will be able to respond to future uncertainties and dangers without outside help. This is an ideological expectation, however, without this ideological foundation we would be continuing the business as usual. If planned and executed effectively, logistics can bring people together and empower them.

Well, you said that if we are doing an effective humanitarian response we do not need to bring most things from outside rather we could use what is available locally. How far this statement is applicable for a developing country like Sri Lanka?

The contemporary humanitarian system began in 1945 after the World War II. The formation of the International Committee of the Red Cross goes back to 1863. Therefore, how did we respond to disasters and conflicts before these institutions? The humans survived all the disasters and conflicts in those days without international humanitarian assistance. I'm not necessarily saying that you do not need the help from outside. You do need help, collaboration and learn from each other, but at the end of the day the people who are affected have to deal with their lives.

For example, let's look at the Sri Lankan history. We had many conflicts, invasions and disasters. We did not have the international humanitarian system delivering assistance during the Great Famine (Beminitiya Seya: 103-89 BC) or we did not receive international peace keeping missions during the Kalinga Magha (1215 – 1236) invasion of Sri Lanka. However, without the international humanitarian system, people survived. This is true for the communities in Asia, Africa, Americas and the Middle East.

My interest is how did we survive at that time and why do we need the help now. The point is when we do not help ourselves first, nobody is going to help us either. That is one thing that we should understand, and the second thing is over the years like I said earlier, affected communities are the first respondents. If you look at the disasters such as Tsunami, floods, landslide, or even the war in Sri Lanka, it is the people who helped themselves before anybody else comes. What we need is to develop a humanitarian system in Sri Lanka, which is relevant to the social, political, economic, cultural and environmental context. Within that, we should be able to manage and coordinate the logistical responses to crises. Then we can engage with the International humanitarian system according to our needs and wants.

As per your view, what is the current situation of disaster management procedure in Sri Lanka and your suggestions on how we should improve?

As per my perspective, we have very strong laws, procedures and frameworks for disaster risk reduction and response. We have a Ministry of Disaster Management and what is needed to be promoted is the





relevant, effective and efficient implementation of disaster risk reduction and response. Responding to a crisis is not the sole responsibility of the Ministry of Disaster Management, but everyone's business. This has to be promoted through primary, secondary and higher education. For example, we have a very strong tradition of public health in Sri Lanka.

Comparatively our system is one of the best in the world – relevant to our people. Therefore, when the Tsunami took place, about one million got displaced, we did not have cases of infectious diseases. That is because people knew to wash their hands after going to the toilet, wear flip-flops, boil their drinking water and so on. That is a huge positive impact. Similarly, if you are going to do Disaster Risk Reduction, it is your responsibility to protect your family and community without expecting the government to come and do it for you. Therefore, it is important that to facilitate the community preparedness to face disasters and will lead to looking after themselves which will ultimately help the government too. The idea to wait until the government to come and save people is somewhat not practical and it is also problematic.

Q When compared to other developed countries as a developing country what are the strategies that we can adopt to our Humanitarian System?

First of all, our learning should come from our neighbouring countries like Bangladesh, Nepal, India and any other Asian countries which are similar to our social, political, cultural, economic and environmental context because they have same geographies, cultures, hazards, experiences and challenges similar us. For example, Bangladesh is a flood prone country and through the experience over the years, they have developed the idea of floating gardens for food and agriculture. That is a very effective thing that we could learn and adapt according to our context.

Initially, we should learn from each other in the region, because the outsider who comes to a region or country is not an expert. I visit to disaster prone countries, but I do not go as an expert, but as a learner. We have to become a good friend and a collaborator to affected populations in order to learn from each other. If we progress in that way, we might come up with responses that are relevant, effective and efficient.

Q What are the challenges that we face in disaster response and your suggestions on improving the operational effectiveness and efficiency of the activities related to humanitarian logistics in disaster response?

Let's think about the key components of the humanitarian aspect. You have food and nutrition, shelter, health, water sanitation and hygiene (WASH) and protection. According to my view, we face a big issue of communication in a disastrous situation and that has a huge impact on humanitarian logistics. Therefore, this is the key aspect that the logisticians need to think about. However, all about logistics is planning, you need to have the creativity, innovation and imagination to engage with a crisis.

Again, the way you define logistics is important because in different types of disasters you get different types of logistical needs coming up. If we think about the camps, they need a huge amount of logistical intervention. Hence the biggest problem is when there are lots of people together, we produce a lot of waste. The second issue we face is the transportation of food, because after a disaster we will not be able to reach the affected areas easily. We can take actions to do air drops and other similar measures, but they are not sustainable. Another big issue we face is the health, because the medical supplies are heavy as most medicines need refrigerators and cooling systems to keep them in proper conditions and we need generators to maintain those conditions continuously in the affected areas.

> *a logistician need to respond to the needs of people with innovation, creativity and imagination in a humanitarian crisis.*

A disaster is a human involvement, so the responses should be tackled in the same way. Logistically, it is very effective to collaborate with the affected populations themselves, especially the young people. Therefore, they will have more responsibility and will not become passive recipients of outside help. As a logistician, you are not focusing on supplies and services, but also coordinate with all the other sectors.

When considering on coordinate between shelter, food and nutrition, water, sanitation and hygiene, health and protection which are very important part of your planning, execution and evaluation of logistics operation. In this process, your primary focus is to find materials, supplies and services that are locally available and if not locally relevant.

What suggestions would you like to recommend as a professional to enhance the better standards and modularity towards improvement of disaster preparedness in Sri Lanka?

Life is not a simple straight line. We include modules in studies to make it easier but that does not mean we can live our lives as such. The idea that we have to have a model for everything, and for living is wrong. What we need to look at is we have quality standards and procedures but in responding to a disaster, we need to deal with people. As I mentioned before, a logistician need to respond to the needs of people with innovation, creativity and imagination in a humanitarian crisis. And you have to go with the flow, work with the flow and that is the difficult part if you are thinking from a modular perspective. Because working with the flow is unknown. You do not know the result. And that causes problems in modular systems since you need to know the outcomes.

There is a Chinese proverb, "a good traveller is always trying to enjoy the journey and sometimes never intend to arrive at the destination". It is not about the destination, it is the journey that matters. It is all about how you collaborate with the affected population, how do you make sure that you go with that flow. If we can incorporate the flexibility when working with people into any disaster risk reduction or response plan and it will be much more relevant and effective ultimately.

As an expert in this field, would u like to share some words of motivation to our future logisticians who are interested in the humanitarian field?

The moment you think that you are an expert that defines you know. That is limited. When you realise that you do not know, that establishes unlimited potential for learning. However, your learning should not be just a qualification for a job. You should not stop learning after your degree. Learning is a lifelong process. You have to develop and find your own ways to engage with situations. Every single situation is a learning opportunity.

When you identify with your ignorance, you become a humble learner. When you identify with your knowledge, you become a tyrant.

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SRI LANKA HUMANITARIAN LOGISTICS BACKGROUND IN DISASTERS



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Disaster situations require various types of humanitarian assistances to address both physical and emotional needs of affected people. According to United Nations, a disaster can be defined as a serious disruption of the functioning of a community or a society. Disasters can be either man-made or natural that involves widespread material, human, economic or environmental impacts which exceed the ability of the affected community or society to cope using its own resources. Any disaster can interrupt services such as electricity, water, transportation, commination and heath care.

Mitigation, preparedness, response and recovery are the four main principles in the disaster management circle. Mitigation and Preparedness are pre disaster phases while response phase comes to action during or directly after a disaster. Recover is a post disaster phase. Humanitarian logistics plays a critical role in the aftermath of disasters. That is during the Response and Recovery phases. Humanitarian logistics can be defined as the process of planning, implementing and controlling the efficient, cost effective flow and storage of goods and materials, as well as related information, from the point of origin to the point of consumption for the purpose of alleviating the suffering of vulnerable people. Humanitarian logistics deals with natural and manmade disasters and it is a sub field in the supply chain management context. A country requires an emergency preparedness and contingency plan with emergency needs assessment and operational planning to respond towards the disaster.

The Main objective of commercial supply chain management is profit maximization, but the objective of humanitarian logistics is to balance speed and cost. Most of the authorities believe that the efficiency of humanitarian relief operations depend to a large extent on humanitarian logistics. Humanitarian logistics accounts for approximately 80% of all disaster relief activities. Three main characteristics of a humanitarian logistics are;

- Humanity prescribes that a person will be assisted, regardless of the physical or mental state in which they are found
- Neutrality requires that those who are involved in relief operations will not influence the outcome of a conflict or interfere with political tension through their actions.
- Impartially implies that no group of people will be favored above another.

Nowadays, disasters are becoming an unavoidable part of everyday life throughout the world, including Sri

Lanka. Sri Lanka being a small Island in the Indian Ocean is mainly affected by two monsoons and due to these two monsoons we mostly experience hazards such as Floods, droughts dues to failure of monsoonal rain and low pressure systems. We also face other hazards such as landslides, cyclones, winds storms, coastal erosion, sea surge and sea level rise.

The main manmade disasters which we can see in Sri Lanka are sand and gem mining, indiscriminate coral and deforestation. In addition to those, some health issues such as Chronic Kidney Disease with uncertain/ unknown etiology (CKDu) and other on-communicable diseases (NCDs) are emerging as a disaster in contemporary Sri Lanka. Both man-made and natural disasters have caused destruction of property, damages and loss of life. Even though Sri Lanka is not a country affected by large scale disasters such as earthquakes, tornadoes, the impact of disasters in Sri Lanka is aggravated significantly by the vulnerability of people living in informal settlements. As Sri Lankans we not only face disasters but we face social issues such as poverty, lack of education and crime, therefore any forms of logistics that aims to relieve such suffering also falls under the heading of humanitarian logistics.

The process of humanitarian relief-operation management involves number of key players who shares common interest with similar mandates. The key players can be categorized as the government, the military, aid agencies, donors, non-governmental organizations (NGOs), and private sector companies among which logistics service providers are preeminent. The cordial relationship among the different key players is very important in this regard to provide efficient service without overlapping same interventions by different key players.

In Sri Lanka humanitarian assistances are provided mainly by international organizations and NGO's together with the ministry of disaster management. NGO consortium partners are supporting local authorities in providing water, food, shelter, sanitation and hygiene services and unconditional cash grants.

Effectiveness in humanitarian supply chain is very important to ensure both saving the time and the cost that means saving more lives and helped more people to alleviate their sufferings.

However, there are number of specific challenges in humanitarian operations. As Ergun and his/her group have identified basically ten such challenges are listed below.

- High uncertainty in demand,
- High uncertainty in timing,
- High uncertainty in location
- High uncertainty and challenges in supply
- Challenges in collaboration among the multiple players and decision-makers in a humanitarian supply chain
- The impact of the political, cultural and socioeconomic conditions of the region
- The strong dependency of last mile operations on the location and disaster severity
- Limited telecommunications and information infrastructure
- Long-term impact of the many activities carried out during humanitarian operations
- The success of humanitarian operations is hard to measure

The logistics service planners should pay attention on the above challenges in advance. The tsunami disaster took place in Sri Lanka is an occasion where the country didn't have any experience of handling such events to address both short-term and long-term issues. However voluntarism with informal care and supportive systems prevailing in Sri Lankan culture played a crucial role in minimizing the level of suffering by the affected communities by helping each other.





ROLE OF ACADEMICS ON STANDARDISING THE ACTIVITIES OF HUMANITARIAN LOGISTICS



DR. UG RAJAPAKSHA

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Effective delivery of humanitarian aid is an issue that is becoming increasingly important as part of the overall response to disasters, not least as there is strong evidence that both natural and man-made disasters around the world are increasing in terms of their magnitude, frequency and impact. As the demand for assistance increases, it is important that not only is more aid made available, but that the logistics systems and supply chains for delivering the required commodities from source-of-origin to recipients are both effective and efficient.Unfortunately, there is clear evidence that many humanitarian supply chains are less efficient than they could be.

It is also clear that organizing efficient and effective humanitarian supply chains is no easy task. The environment into which aid is delivered is almost always challenging in the extreme for a wide variety of reasons including social and political upheaval or military conflict. At the same time there are often, potentially, very significant operational difficulties in managing logistics and supply chain activity ranging from degradation or destruction of information and communications systems, difficulties in coordinating physical supply lines and associated damage to the physical infrastructure (roads, bridges, etc.), to a lack of logistics management expertise. In practice many aspects of the environment into which aid must be delivered are frequently beyond the control of the logistics professional and must, therefore, be taken as a given –at least in the short run. Nevertheless, improving the operational performance of aid supply chains is an area that can be and, indeed, must be addressed by aid organisations in their continuing quest to both improve the service to the beneficiaries and to provide increasing confidence to donors by demonstrating efficient use of resources. This focus is particularly true given that, according to some sources, as much as 80 percent of the activity of a non-governmental organisation (NGO) is logistics related.

Fortunately, an increasing number of humanitarian aid agencies have become aware of the need for improved performance of logistics and supply chain management, not least through the efforts of organisations. At the same time there has been a growing appreciation in the academic community of the need for, and potential of, research and education in the area of humanitarian logistics and supply chain management. As a result, a number of initiatives have been instigated at universities in different parts of the world needs to develop coordinated research in the area of humanitarian logistics in disaster preparedness, response and recovery with the intention of influencing future activities in a way that will provide measurable

benefits to persons requiring assistance.

Manufacturers as a result of their lean policies, whilst in food retailing the move to centralised and contracted out distribution (first adopted by companies such as Sainsbury in the UK, Walmart in the US and Carrefour in France) led, as a necessary competitive response, to dramatic improvements in supply chains across the sector. In these and other areas, the increased focus on logistics and supply chain management has been driven by commercial competitive pressures and has resulted in its eventual elevation to become a key part of company operations and strategy. In the humanitarian sector such competitive pressures are absent or at least much less direct although, perversely, the results of failure are much more significant as they can be counted in terms of unnecessary deaths rather than reduced profits. The question that must be asked, therefore, is what will trigger the development ofa more concerted, professional and effective approach to supply chain management in this sector. On the one hand, it may be that increasing demand for aid combined with increased fuel and resource costs that will put an even greater focus on the need for efficient supply chains. Alternatively, it is possible that by focusing on improved supply chain management, one or two major aid agencies will be able to demonstrate the benefits to both service levels and costs, and that other agencies will then achieve similar improvements not least through donor pressure to emulate the "market leaders".The academic community has a clear role to play in such developments by providing objective evidence of the need for improved supply chain management, by developing methodologies and concepts demonstrating how supply chain performance can be improved, by helping to transfer knowledge and best practice in supply chain management from the commercial sector, and by provision of education and training programmes to increase the professional standards for humanitarian logistics practitioners. A further, and potentially crucial, role for the academic community could be to highlight the importance of improved supply chain management to the most senior management and decision makers in humanitarian organisations and within the donor community.

In summarizing, the academics would need to suggest that raising the status of logistics and supply chain management requires a significant change in corporate mind sets, and note that this almost always proves to be a difficult and slow process. In the commercial sector, such a change in perspective has been driven by market forces including, for example, increasing demands from customers for better service, continual pressure to reduce costs, competition from low cost economies and the continual search for competitive advantage. In the humanitarian sector many of these forces are absent or less apparent. The "voice of the real customer" (i.e. the actual beneficiaries) is weak or unheard; there is no competitive pressure between aid agencies to improve logistics performance; there is a lack of clear measures with which to evaluate performance even against previous aid missions and there is, perhaps, a feeling in some agencies that "we are doing our best, in difficult conditions", even though that might not be the best possible. In these circumstances elevating the status of logistics and supply chain management in the humanitarian sector is going to be particularly challenging but arguably it is in this role that the academic community can make a useful contribution by objective analysis of current humanitarian operations, by introduction and adaptation of theories and best practices from the commercial world, and by provision of training and education for humanitarian logistics and supply chain professionals.

It is also clear that there is a need for robust empirical studies which will aid the development of arguments for a change in approach and emphasis. Development of sound data is essential to underpin the arguments both within a given NGO/Agency and with donor bodies no one doubts the need to improve the logistic performance in support of disasters, but arguments to achieve this should be supported by clear, robust analysis of accurate and verifiable data.





QUEST AGAINST HUNGER

"EVEN A BAD EXAMPLE IS A GOOD EXAMPLE





Djordge Vdovic

Logistics Officer
Regional Bureau Bangkok

Djordge Vdovic is a national of Siberia. He is an engineer by occupation who holds a master's in mechanical engineering. He first started to work in WFP as a logistician. He was working in many different fields of and he has travelled to many countries in the world like Africa, Latin America, Europe and Asia. He has acquired a number of skills in Logistics, public procurement and project development management.

Even a bad example is a good example, because you see the things do not work and you need to find out why and improve that.

Give us a brief introduction about world Food Programme.

World Food Programme (WFP) is an international organization which provides food assistance to the people and the governments. WFP is responsible in mastering the supply chain from source to final beneficiaries which means the people who need any assistance. There are a number of countries where WFP operates. Some of those countries do not have the WFP presence. But anyway, we are always working with partners and host governments in delivery of assistance. In addition to that WFP is a funding organization do not have a budget but deals with preparing projects. These projects should be funded either by governments or by private sector. The funding procedure of WFP basically follows the code sharing system where WFP brings one portion and the host government will provide another one. Sri Lanka is a bright example of this code sharing where WFP has a very limited presence in operations from a supply chain point of view and the movement is operating most of the parts with its capacity and the costs. As WFP is a food assistance organization it is mostly focused on working towards a food security and safety and nutritional aspects. In here Sustainable Development Goals (SDG) of United Nations are really important. This is the commitment that governments and people made to the population of earth on how to improve the lives of everyone of us. Therefore, governments are basically committing to do the improvements around this SDGs. SDG number two is related to food which is "zero hunger" where WFP is focused on. Furthermore, we are working on supporting others education, nutrition and so on. The number two SDG goal is highly related to partnerships because you cannot do anything completely alone. As WFP this is how we work and collaborate to find the way most effective way in assisting the vulnerabilities in improving their lives focusing on zero hunger. How WFP works in Sri Lanka is an interesting case because this is a quite developed country where government is a great partner in aiding. Well there is no theory on capacity strengthening and knowledge and the government is actually providing resources to receive these food in the point of entry which is the port. In addition, government takes all the actions to the importation, custom clearance, quality control and transportation. Therefore, for these processes government need some cost so as you can see WFP contributes in these projects by providing a financial assistance.

In recent past what are the humanitarian activities World Food Programme has engaged in?

WFP has a big role to play in humanitarian activities. One thing is delivery of assistance and emergency preparedness. Which means we help the governments and partners to see the possible scenarios that can happen in a certain place in a certain country and the possible responses to those potential emergencies. In addition, in a theoretical and practical way how the government is responsible. We also have emergency response which means the delivery of food and cash, in case if something happens like a natural or man-made disaster. The capacity strengthening element which works as a vehicle of working with the government as partners and individuals on improving the knowledge of supply chains based on the theory and the formal knowledge and practical experience. We are covering more than 80 countries in the world and we are having a huge protocol of special supply chain operations as well as other operations like planning, controlling, monitoring etc. Therefore, there are many specialties in WFP and supply chain is just one thing it covers which is delivery of specific set of skills in order to support the projects to deliver what we promised to the people and the governments as a service provider. Thus, what practically we have done in this region is we have number of emergency operations. Currently we are



operating in Papua New Guinea where WFP is organizing to support the victims of the earthquake struck on February 26th, 2018. We already started to do the first thing we have asked to do which is logistics coordination. Because there are many different donors and transporters and parties who are interested to help. WFP sent specialists who are capable of putting these things together and checking what needs to be delivered. At present we are delivering projects based on so called cash-based transportation. In this we prove either cash or a voucher to the affected people, so they can buy their own food in the local market but still it is under discussion.

Q What are the challenges faced in handling logistics activities locally and globally, and the support from other parties involved in these operations?

I have to say that our work is not one persons' work. There are so many people involved in this system who requires special knowledge in fields such as supply chain and also resource mobilization. We have experts in many different fields who are doing that part so when the project is prepared we can present it to the donors for funding. Thus, when an emergency situation arise we try to find out what happens in the field, who is affected and how many people required with what type of assistance. This is usually done by our specialist group of people whose expertise in assessing us. They use different types of special methods like satellite images and other electronic means and inclusive of visiting the places taking interviews and using different techniques and finally they come out with a list of requirements. Based on that list of requirements we decide what are the operational requirements. For instance, in order to feed those people how much food need to be there, which type of food we need, where the food is going to come from, how much it will cost, how many distribution centers available and how much the transportation systems cost. Therefore, different specialties are looking into different aspects and contributing to some coherent presentation of what this operation would be like. Hence, that we come with a budget, explanation, map and who are the partners in this, how this distribution will work and what is the contribution of the government.

Formal knowledge, continuous education and practice work of many different fields gives the capability to be a good humanitarian logistician.

As you can see many people are involved in managing one project once this project is done or during the preparation of the project there are people who are specialized in donor communication who are continuously coordinating with the donors and that's their only job to look into the resources. These donors can be either a government, private citizen and private entity doing commercial activities. People can donate as in general fund or as for specific projects. Usually the large amount of money comes to WFP is from governments of different countries inclusive of all the host governments because the host government contributes to the project not necessarily by giving WFP the money. Since the money is given for the projects the rest expenses are covered by code sharing. Based on the requirements we give the verification on how much each donor will contribute to that project. This is a balance between the availability of funding and the



needs in the country. Once this is prepared the final document is produced and then the donors can contribute with the budget to operate.

What are your recommendations on developing the procedures in humanitarian logistics operations in Sri Lanka?

There is no one model, or approach fits for all. This is a large world which is diversified in economies, political systems, and cultures by all means and we all belong to humanity there are so many people have their own attitudes, languages and eating habits etc. It is very difficult to make a general approach which fits all the countries. It is obvious that the support or the contribution of the population is important. If the population is well organized and willing to help themselves, then that's one huge step of making things better which makes the government much easier to operate. No one can resolve problems for someone else solely it must be a joint effort and that's the good part of working in Sri Lanka. Because it's a joint effort with WFP and other UN partners because there are many of other organizations like WFP who are specialized in different aspects like UNICEF is specialized in working with children and WHO in health aspect. We have many different organizations who are expertise in different parts of these SDGs. Therefore, we all work together for the big picture of making life better within our own expertise and the government is the one who basically combines and coordinates in making an environment for the people to prosper. But again, government cannot make something for people if they do not contribute. As a result, we all have an individual responsibility as humans and also, we have collective responsibility towards our family and other people to deliver something and that's what WFP is looking for working with communities, government and with the partners to make something much bigger effective input. As per my opinion the best system to follow is the one which is agreed by everyone and then implement it.

As per your view what are the knowledge skills that future humanitarian logicians should adopt if they are entering to this field?

Humanitarian logistics is a niche of logistics. In humanitarian logistics usually, we use something which is called downstream logistics. Which means once the food arrives at the WFP of a country they will be taken and transport to distribute to the final destination under very difficult conditions. That's what the humanitarian logistics is all about. Because usually the most intensive work is on this downstream logistics. Being good in



one's work requires a knowledge and experience. Therefore, the knowledge by sound doesn't really solve the practical problems in working in the field. Because you need to know what the commercial and legal requirements of the field are. One has to continuously learn because many new things are coming out. If you are not continuously learning, then you are going to find yourself obsolete. That applies not only for logistics but also for everything else so, you need to have the knowledge of commercial and legal potentials and logistics, warehousing and insurance and many other stuff. And then you need to work under someone because that gives you knowledge on how the things are practically done. Even a bad example is a good example, because you see the things do not work and you need to find out why and improve that. A combination of formal knowledge, continuous education and practice work of many different fields gives the capability to be a good humanitarian logistician.


WFP
7Q-STB
UNITED NATIONS HUMANITARIAN AIR SERVICE
World Food Programme


WFP
UNITED NATIONS HUMANITA




WFP
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THE UNITED NATIONS WORLD FOOD PROGRAMME ON HUMANITARIAN LOGISTICS



PASINDU SILVA
Intake 33
Undergraduate
BSc in Logistics Management



World Food Program(WFP) was initiated to carry out the noblest mission of assisting the mankind eradicating global hunger and poverty. It is the food aid arm of the United Nations. WFP uses its food to meet emergency needs, support economic and social development. It also provides the logistics support necessary to get food aid to the right people at the right time and in the right place. WFP works to put hunger at the center of the international agenda, promoting policies, strategies and operations that directly benefit the poor and hungry.

HISTORICAL BACKGROUND

- 1961 - WFP was established
- 1963 - The first development program was launched in Sudan
- 1984 - 2 million tons of food were delivered during Ethiopia's famine
- 1992 - Europe's first large-scale emergency relief operation was carried out in Yugoslavia

HUMANITARIAN LOGISTICS OF WFP

WFP is the pioneering organization that assists 80 million people around 80 countries every year. Their main aim is to fight hunger worldwide, delivering food assistance in emergency situations with communities to improve nutrition and increase the capacity of endurance. It is significant to note the international community has dedicated itself to put an end tohunger andacquire food security by 2030.

The following staggering data prove the massive strength of WFP to address the needs of any disaster at any given moment. There are 5,000 trucks, 20 ships and 70 planes on the move at their command to deliverfood and other humanitariansupport to the needy. They have the capacity to distribute approximately 12.6 billion rations at an estimated average cost per ration of US$ 0.31. The above speaks volumes for WFP's unparalleled reputation as an emergency responder.Even in the most difficult environment, they are able to get the job done in double quick time.

The main areas of major concern of WFP include emergency assistance, relief and rehabilitation, development aid and special operations. The two-thirds of their work is carried out in conflict-affected countries where people are three times more likely to be undernourished than those living in countries without conflict.

WFP is always first on the scenein emergencies

providing food assistance to the victims of war, civil conflict, drought, floods, earthquakes, hurricanes, crop failures and natural disasters. They also help communities to rebuild their lives and generate income as before after the disasters. It is also noteworthy to mention how they rebuild people's attitudes and strengthen them to bravely face the situations.

The nutrition projects of WFP mainly concentrate on mothers and children, addressing malnutrition from the earliest stages through programsfocusing on the first 1,000 days from conception to a child's second birthday, and later through school meals. It is the largest humanitarian organization thatcarries out school feeding programs worldwide and has been doing it for over 50 years. WFP facilitates school meals to between 20 and 25 million children across 63 countries, often in the hardest-to-reach areas each year.

STRATEGIES OF WFP THAT ENSURE HUMANITARIAN LOGISTICS

The Emergency Preparedness and Contingency Planning team of WFP ensures that United Nations World Food Program (WFP) is ready to act at any time because the time saved amounts to lives saved. WFP assessment teams draw up a detailed plan of action and budget, which is termed Emergency Needs Assessment and Operational Planning. This plan is equipped with answers to its questions, the WFP draws up an Emergency Operation (EMOP), which includes a plan of action and a budget. EMOPs usually last for between three and 12 months.

The WFP also prepares a Protracted Relief and Recovery Operation (PRRO), which helps to sustain disaster-hit communities as they re-establish their livelihoods and stabilize food security in more efficient way such that costs saved amount to more lives being saved. The Agile Principle/Concept is applied according to the objective of urgent effectiveness in the EMOP stage depending on the restoring stage in the response. The Lean Principle is utilized according to the objective of efficiency in the Protracted Relief and Recovery Operation stage, corresponding to the reconstruction stage.

Literature/ Principle	Stage in WFP
Preparedness	Emergency preparedness & contingency planning
Response	Emergency needs assessment and operational planning Emergency Operation- EMOP
Reconstruction	Protracted Relief and Recovery Operation- PRRO
Agility	EMOP
Leanness	PRRO

Table 1: Phases of the Humanitarian Supply Chain process

The following table shows the theoretical phrases of the humanitarian supply chain process and the empirical stages of the emergency relief process of WFP.

SOCIAL PROTECTION AND SAFETY NETS OF WFP

At present, there are 815 million people who do not have enough to eat worldwide. It is only through working with national systems such as social protection systems governments can reduce the number of hungry people in the world to zero by 2030. Social protection systems protect the most vulnerable from shocks and stresses throughout their lives addressing multiple, inter-related issues including poverty, inequality and food security which will lead to the achievement of several Sustainable Development Goals (SDGs).

Every living being on earth aspires that one-day poverty would end and there would be abundance of food for them to live happily. To achieve this noblest of aims, safety nets play a crucial and critical role. The safety nets or social protection systems ensure reliable transfer of food, cash, vouchers or goods to vulnerable groups.

Developing platforms to register and manage information on safety net beneficiaries and building government's capacity and ability to respond to emergencies will pave the way for every country in the world to have at least one safety net in place to alleviate poverty and suffering of people and eventually hand them over to the respective governments.



THE DEFINITE ROLE OF DISASTER RELIEF OPERATIONS: HUMANITARIAN LOGISTICS



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Department of Management and Finance,
General Sir John Kotelawala
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The activation of humanitarian aid after a disaster depends on "the ability of logistics to acquire resources, transport and receive supplies instead of a humanitarian relief effort." But disaster relief operations are fighting under very special circumstances. Often, they must be carried out in an environment with destabilized infrastructures ranging from the lack of electricity to the limited transport infrastructure. Also, since most natural disasters are unpredictable, the demand for commodities in these disasters is also unpredictable. Therefore, a set of features that establish humanitarian logistics in addition to commercial logistics can be identified.

Humanitarian logistics covers very different operations at different times and in response to various disasters. All of these operations have the common goal of helping people survive. However, aid for the development of a region, famine relief and refugee camp execution is significantly different from the help needed after a natural disaster. In this way, two main flows can be distinguished from humanitarian logistics, continuous relief work and disaster relief. While disaster relief sometimes also covers relief, the term disaster relief is usually reserved for sudden disasters as natural disasters (earthquakes, cyclones, floods, fires, etc.) and very few human-made disasters, such as terrorist attacks or nuclear accidents. Aid can be defined as "foreign intervention in a society with the intention of helping local citizens." The purpose of disaster relief operations is to design the transportation of first aid equipment, food, material and personnel rescue. It signals a large number of geographically dispersed destination nodes in the disaster area and the evacuation and transfer of disaster-affected people to health centers in a safe and timely manner.

Disaster management is often described as a four-step process from the preparedness, mitigation, response and recovery phases of disaster management. By adopting these four steps for information technology discuss the three phases of disaster relief operations, during operations and post operations. In this way, different operations can be notable in the times before a disaster strikes (the preparedness phase), immediately after a disaster (the immediate response phase) and after a natural disaster (the recovery phase). The first two phases correspond to strategic planning to prepare an emergency response and actual disaster preparedness planning. The involvement of government, non-government and private institutions are represented in the recovery stage where more financial aid is required. It is not surprising that different resources and capacities are needed for the three different stages of emergency assistance.

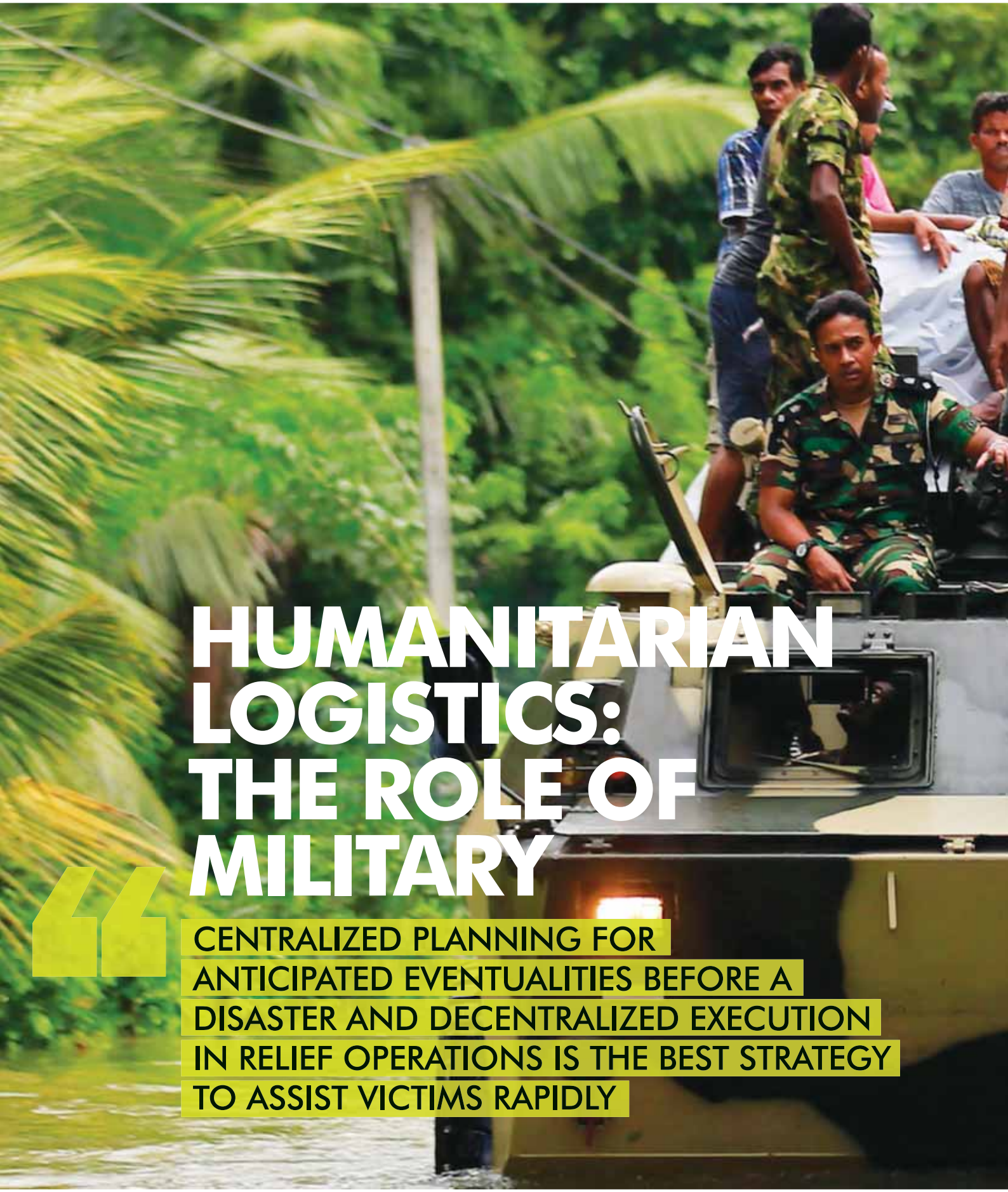
It is difficult to prevent a disaster especially if it is a sudden on-set disaster. Due to some continuing risk of certain disasters, countries like Japan, USA has taken some measures to prevent disasters. In the modern world, with many measures and inventions, natural disasters can be prevented to minimize the damage by offering community awareness, training, evacuation maps and routes.

These methods can prepare people well in advance before a disaster strikes. However, as donors insist that their money goes directly to help victims and not to fund back-office operations, preparation and training are often overlooked. For obvious reasons, regional actors, such as regional governments, private and non-governmental organizations, should prepare these plans. Also, to prevent from disasters, strategic plans can also be developed for the preparedness before a disaster occurs. Logistics serves as a bridge between disaster preparedness and response. Some items are so often needed during natural disasters. Therefore, agencies can develop strong relationships with their suppliers and have long-term purchase agreements. The most commonly used products for disaster relief are water, medicines, chlorine tablets, provisions, batteries, mosquito nets, blankets and protein-rich food for undernourished children. Many relief agencies must have pre-purchase agreements with drug suppliers, stores, flyers or blankets. Information technology is also crucial for humanitarian efforts. Information systems are the most important factor in determining the success or failure of a disaster relief operation. Also, hospitals in disaster-prone regions can develop emergency procurement procedures with their suppliers.

After a disaster, the emergency plans of the regional actors come into play. But prepared for these actors, they will have to operate in an environment with a destabilized infrastructure. On the other hand, some disasters such as famine occur more often in less developed regions, which from the start are struggling with inadequate infrastructure and a lack of transport connectivity. Less developed regions are also more likely to destroy their infrastructure further once a disaster strikes. For example, floods and tsunamis are dramatically increased due to poor housing conditions and inadequate construction requirements. The nature of most disasters requires an immediate response. Therefore, supply networks must be designed and deployed at the same time, although situational awareness is very limited. Business logistics typically manages a set of predetermined suppliers, manufacturing sites and stable or at least predictable demand; This is not the nature of aid agencies face during the operation of humanitarian activities. There can be many relief agencies focused on helping after natural disasters. As a result, it is often required to know what resources are available, even the participation and contribution of suppliers is unpredictable. This creates many layoffs and duplicates efforts and materials. While military relief operations are usually coordinated from a particular coordination center, the involvement of many humanitarian organizations in relief operations renders many planning techniques for distribution centers obsolete. The use of centralized distribution facilities, since victims, are often weakened and cannot travel long distances to receive help. Given the challenges of coordinating a network of multiple facilities and multi-projects, real-time communication in disaster relief operations is particularly important. In the response phase, the remote support agencies must take care of the needs of the victims by very limited information. It is a need to make assumptions about the type and quality of supplies needed, the schedules and locations of the application, as well as the nature of the potential distribution of those supplies at any point in time. In fact, the main problems of the response phase are the coordination of supply, the unpredictability of demand and the problem of the last kilometer of transport of the necessary elements to the victims of the disaster.

Reviewing different perspectives on relief operations provides a basis for examining what differentiates business logistics from the humanitarian logistics. The first question is the definition of the concept. If we define business logistics as the process of managing the flow of goods, information and finances from the source to the end customer, humanitarian logistics can be defined quite easily, because humanitarian logistics also require logistics management process. The flow of goods, information and finances from donors to those affected. Humanitarian logistics, as well as business logistics, encompasses a range of activities, including preparation, planning, procurement, transportation, storage, monitoring and implementation. Therefore, it can be concluded that the basic principles of management, information and financial flows also hold for humanitarian logistics.





HUMANITARIAN LOGISTICS: THE ROLE OF MILITARY

> CENTRALIZED PLANNING FOR ANTICIPATED EVENTUALITIES BEFORE A DISASTER AND DECENTRALIZED EXECUTION IN RELIEF OPERATIONS IS THE BEST STRATEGY TO ASSIST VICTIMS RAPIDLY





Major General
H. Jagath S. Gunawardane RSP USP ndc psc

BSc, MSc, MA, MNSA, PG Dip in CR & PP,
Dip in HR, Dip in Def Mgt
Master General Ordnance, Sri Lanka Army

Major General Jagath Gunawardene RSP, USP, ndc, psc, was enlisted to the Sri Lanka Army Regular Force in 1985 and was commissioned to the Corps of Engineers in 1986. He had the privilege of successfully completing many Professional and Academic courses in overseas and local. He has held many command appointments, including Officer Commanding Explosive Ordnance Disposal (EOD) Unit of the Sri Lanka Army, Commanding Officer of the 8 Field Engineer Regiment (Infantry Role), 6 Field Engineer Regiment (Combat Engineer Role), Commander 524 Infantry Brigade (Point Pedro) and Commander Engineer Brigade and General Officer Commanding of 57 Infantry Division before he took over the appointment Master General Ordnance at Army Headquarters on 05th February 2018.

Master General Ordnance is responsible for ensuring the stores and equipment required by the Army are available in the right quantity, in right quality, in right place and in right time. He holds the degree in BSc in War Studies, University of Baluchistan, MSc in Defence Studies from University of Kelaniya, Post Graduate Diploma in Conflict Resolution and Peace Preparedness, MA in Conflict Resolution from University of Bradford UK, and Master in National Security Administration from University of Philippines.

Q As a Sri Lankan Military officer, how can you elaborate the concept of Humanitarian logistics as a societal responsibility in terms of military logistics?

At the outset I like to explain that in military terminology, logistics comes under administration. We learn from British military publication called "Administration in the field". We know that no operational plan can be successful without an adequate administrative plan. Sometimes administration and logistics are frequently used loosely. In military terminology administration is defined as, "the management and execution of all military matters not included in tactics and strategy; primarily in the field of logistics, personnel management and internal management of units. "Logistics is defined as" the science of planning and carrying out the movement and maintenance of forces. In its most comprehensive sense, those aspects of military operations deal with: Design and development, acquisition, storage, movement, distribution, maintenance, evacuation and disposition of material; Movement evacuation, and hospitalization of personnel; Acquisition or construction, maintenance, operations, and dispositions of facilities; Acquisition or furnishing of services." Therefore, my assessing in logistic services will be based on those aspects. When it comes to humanitarian logistics, humanity, impartiality and neutrality principles come into action.

"Challenges of humanitarian logistics not only come from the effects of the disaster.

As the theme of your magazine is Humanitarian Logistics; Societal Responsibility, when we take the 'Societal Responsibility' term it is bounded by an ethical framework. Therefore, whatever we do should minimize the adverse effects on those immediately around and do it with a sense in such manner the next generations will not suffer. Humanitarian logistics is not just planning, storing or moving things from A to B or from warehouse to victims. Hence, it is all about what exactly the people on the ground needs and timely delivery of essential items.

Q What is your experience in assisting major disasters in the view of providing logistics services and the challenges you have faced when responding to disasters?

I would like to say that my experience comes from what I have heard, seen and been actively taking part in Disaster Relief Operations in Sri Lanka and Overseas. Specially, performing duties as Second in Command of the Sri Lankan Quick Reaction and Disaster Relief Contingent for Earthquake in Nepal 2015 where I was responsible for planning and execution of all operational and administrative requirements. If you really ask about challenges and problems, there will be many things to talk about. However, when you usually go for a task, if you are well anticipated, planned and prepared you could execute it easily. From your mindset if you are ready to face challenges and you have planned on where you have your warehouses and equipment in a logistical aspect it will not be so problematic to carry on the tasks needed. Mainly you need to understand the situations that you have to face and level of preparedness and act rapidly to the circumstances. Communication is the biggest challenge that we have to face soon after a disaster.

Q What is the impact of military involvement in the initial crucial life sustaining days immediately after a disaster?

Military covers the first few days after the onset of the disaster. Getting access to the field and setting up lifesaving operations as fast as possible is the highest main objective. Search and rescue, medical assistance, delivery of water and emergency shelter, emergency engineering and communication support are the main tasks that need to be performed with proper coordination with all agencies. Depending on the type of disaster and effects the time taking to reach all affected people depends on the destruction level to the surface communication system. To overcome mobility difficulties joint operational capabilities, play a vital role. Few areas that need to focus are, concentration of specialized equipment and accessories required for quick reaction of the troops and their mobility. These difficulties were amply witnessed during the 2015





earthquake in Nepal where emergency engineering was in high demand to clear all blocked roads in hill country, installation, repairing of water lines, supplying of water, repairing of power supply, repairing and maintenance of bridges, constructions of shelters and clearing of debris and wreckages. Further, endurance of medical teams was tested when they had to cover over 30 km daily to treat patients in hill country. Sometimes delivery of essential items were restricted to shoulders of soldiers until roads were reopened. It was witnessed that it is only trained versatile soldiers or well-trained relief workers could undertake these hardships risking their life to assist needy people.

Q As you said military is adequately trained for the safety of people in disaster response, do you think there is a possibility that the civil parties also can be trained in such a way to carry out these activities?

Definitely we can. However, it is also important to think how much of risk civilians can undertake and for how long. There are certain types of disasters where risk is very high and unpredictable, like flood and earthquakes. The risks depend on the type of disasters and number of people who like to work under a tremendous situation voluntarily. When it comes to military such problems will not arise as they have trained to face challengers. That's the basic difference between civilians and military in humanitarian activities.

Q What are the Challenges faced in improving civil military coordination in humanitarian l ogistic activities?

Military in humanitarian relief operations need to respect the principles of humanitarian. Therefore, any military civil coordination must first serve the prime humanitarian principles of humanity, neutrality and impartiality. Challenges of humanitarian logistics not only come from the effects of the disaster. The most highlighted and common challenges are the coordination of logistical activities, inability to meet the items and appeal coverage of people effected from disaster and relief staff, and continuation of supply chain. This coordination requires between all kind of actors involved in relief operations, horizontal and vertical coordination inside a cluster, among clusters and important issues of the supply chain. Frequency of contacts for coordination differ from the stages of the disaster relief operations basically which depends on type of disaster and risks involved. The issues of appeal coverage of affected people could be overcome by establishing proper communication network using available technology and reducing the donation to delivery time. Humanitarian supply chain is very significant over business supply chain due to the level of risks and uncertainties that need to overcome. Humanitarian supply chains have a short and unstable existence with an inadequate coordination link between emergency relief aid and longer term sustainable developmental aid. Highlighted challenges can be minimized, managed and addressed well by proper planning and anticipating likely events that could unfold after a disaster and coordinating with likely key actors get involved for relief operations. Most importantly assigning tasks to different stakeholder by considering their experience, commitment and capacity to handle logistics in high risk.

Q What are the issues in deploying military forces in humanitarian logistics activities?

Military deployment phases of; warning, preparation,

deployment, employment and redeployment actual timings can be varied and depend on the mission type. The disaster response cycle is usually composed of a set of activities that are performed before during and after a disaster. Activities can be divided into different phases; lifesaving phase, stabilization phase recovery phase, each demanding different types of assistance, different requirements and capabilities. Humanitarian logistics deal with organizing the delivery and warehousing of supplies during the natural disasters or complex emergencies to the affected area and people. Important issues that are connected directly to humanitarian logistics are to select the type and quantity of resources, way of procurement and storage of supplies, tools of tracking and means of transportation to the stricken area, specialization of teams participating in the operation and plan of cooperation between these teams. Humanitarian relief operations engage in multiple decision-making process and a variety of actors each with different missions, goals, capacity and logistic capabilities that need to be coordinated well in order to manage interdependencies.

What are the strategies followed by military for the success of effective disaster relief operations?

Information on effect of the disaster, logistics intelligence and economic intelligence play a key role to formulate plans and appropriate strategies for disaster relief operations. No plan can be formulated without an accurate appreciation of logistic intelligence available and of all other relevant factors and coordination with all actors involved in relief operations. Logistics appreciation is likely to be a purely a mental process since time will not permit a written evaluation of all factors involved in the support of a relief operations.

Logistics intelligence deals with the assessment of the affected terrain and climate on relief operations and the logistics infrastructure of areas or countries. Economic intelligence is concerned with analysis of the area and countries economic strength and weaknesses, including its ability to support and sustain relief operations. Which directly indicate the donations, foreign assistance involvement capacity necessity and level of coordination required.

Success story to any relief operations is a direct result of early gathering of intelligence of; geography, climate, entry points, transportation, airfields, source of supply of all grades of refined oils and lubricants, water resources availability and source of supply, electric power distribution system, equipment production sites, storage facilities, availability of manpower for assistance. It is highly important to get an accurate assessment of effects to town and villages with their size, population, public services and key points. To select a strategy and a plan, few courses of actions always derived from proper analysis of; threat and risk, initial intervention, protection, reserves, resources and warehouses, surface communication system, terrain and climate, joint service administration, local manpower, availability of sea and air lift, and state of readiness.

For the success in disaster relief operations it is paramount important to reduce the reaction time and to ensure that the greatest value is obtained from the available resources and materials. The strategy that military adopting is foresee, forecast and stock essentials equipment and resources required and plan the probable course of an operation for each type of disasters and foresee the corresponding requirements, materials and anticipate likely difficulties and reactions required to overcome. Centralized planning for anticipated eventualities before a disaster and decentralized execution in relief operations is the best strategy to assist victims rapidly. Application is largely a matter of common sense and a logical approach to problems.

As per your opinion, what are the lessons we have learned so far and future developments in the field of humanitarian logistics?

The basic task of humanitarian logistics comprises acquiring and delivering requested supplies and services, at the places and time they are needed, whilst ensuring best value for money. Immediate aftermath of any disaster most demanding supplies include that are vital for survival such as food, water, temporary shelter and medicine among others. Timely delivery of items to mostly needy people is the key for successful humanitarian logistic activities. Therefore, future development in humanitarian logistic activities will reinforce with more use of technology, automatic data processing, using e-platforms, such as e-tendering, e-bidding, e-actions, e-payments and emerging best practices, use of modern management techniques, automated warehouse management systems, and employment of mechanical handling devices to deliver right items with quantities to right people at right time. Best lesson for services are to develop logistic supply chain from inter services and form joint humanitarian relief operational teams and train quick reaction teams with skills for effective performances and competencies required for humanitarian logisticians.



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MILITARY INVOLVEMENT IN HUMANITARIAN RELIEF OPERATIONS



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A disaster is a situation which causes, a serious disruption to a community triggering extensive damages, destructions and losses to humans, buildings, materials and the environment in the form of a natural or a manmade hazard which affected community cannot cope up with its own resources. Meanwhile, the term; Humanitarian logistics is the process of planning, implementing and controlling the efficient, cost effective flow and storage of goods and materials as well as associated information from the point of origin to the point of consumption with the objective of providing redress to the victims in vulnerable areas as quickly as possible. Sudden and unexpected disaster may need military involvement at any moment. The threatened environment and the magnitude of a disaster may also call for a massive assistance and intervention of military very quickly. Military involvement in humanitarian affairs has a very long history since first century BC. For an instance, the Roman Legions while on campaign in Gaul in the first century BC launched humanitarian relief programmes, where Napoleon did in the late 19th century. The allied armies supplied a huge quantity of food and other assistance to the affected people in liberated areas throughout and after the event of World War II.

The military and humanitarian establishments should clearly identify their respective duties and responsibilities for the purpose of maintaining more effective process of post disaster activities. Finding the efficient ways of delivering assistance to victims mostly relies on humanitarian organizations. Usually the humanitarian organizations seek military assistance as the final resort when the humanitarian capacities are not adequate and cannot be obtained in time and or other approaches are unavailable or inappropriate.But the military capabilities can only be deployed in accordance with the Guideline on "The Use of Military and Civil Defence Assets to Support United Nations Humanitarian Activities in Complex Emergencies". The key criteria included in guidelines are;

- **Unique capability:** Lack of appropriate civilian resources as alternatives.
- **Timeliness:** Immediate action based on the gravity of the disaster.
- **Clear humanitarian direction:** Military assets should be kept under the control of military authorities.
- **Time-limited:** Use of military assets to support humanitarian activities should be confined only for the specific period.

Military forces could fulfil humanitarian missions by

themselves or with the assistance of other humanitarian agencies. The humanitarian missions cover a massive range of duties and responsibilities. The military support in a disaster mainly comprises of three spectrums such as;

Direct support	Indirect support	Infrastructure support
Includes peer-to-peer distribution of supplies and services. This is a usual practice of humanitarian organizations, where Military Forces are highly involved, and imply direct delivery of goods to affected people.	Assistance is provided to the agencies who are directly involved in the process of distribution of goods to victims. The assistance includes several activities such as transporting relief goods, security, and protection towards humanitarian activities. Usually this can be seen in hostile areas where military support is necessary to ensure safety of human beings and protect convoys.	Basically, facilitating assistance in both direct and indirect ways. This comprises of road and bridge repair, airspace management, water, and power generation are provided to both affected population and relief organizations.

Table 1: Three spectrums of military support

Direct support	Indirect support
Field Engineering	Includes basic military engineering capabilities, e.g., bridge construction for vehicles and/or pedestrian
Latrine Construction	To prevent the spread of disease and ensure the hygienic disposal of human decay in hygienic manner.
Road or airfield Construction	Prepare and conduct road/airstrip repair/construction to improve existing transportation systems.
Water Treatment and Purification	Maintain water purification system to provide water bottles to the nearby persons.
Radio and Satellite Communication	Establish a radio communication system to facilitate information exchange process within the area of operations, and satellite communication to exchange information both within and out of the area of relief operations.
Fixed Wing Strategic Airlift	Provide strategic airlift of humanitarian consignments (goods/cargo) and the transportation of emergency victims to safer areas and necessary equipment to the calamitous area.
Fixed Wing/ Helicopter Theatre Airlift	Provide regional air lift (short-haul) capability for delivery of personnel, equipment, and/or humanitarian cargo within the crisis region in coordination with the local authorities and humanitarian organizations involved in the process.

Table 2: Military operations

Table 2 represents some of the traditional and non-traditional military operations which are conducted directly, indirectly, and as infrastructure support.

In addition to these traditional tasks, the military forces usually have to organize non-traditional military tasks like;

PROVIDING PROTECTION FOR HUMANITARIAN ASSISTANCE:

Humanitarian aid may not reach the victims due to the uncertainty and hostility of the affected area. In this issue the military protection is necessary to ensure an effective flow of delivering goods in terms of the entire relief distribution procedure. Some critical points (airports and seaports) of the post disaster relief distribution chain need more security than the other processes in order to ensure the transparency in distribution and to prevent thefts and misappropriations.

HUMANITARIAN INTERVENTIONS:

When the host nation fails to take necessary steps to protect the victims or alleviate human suffering, the military forces have to launch humanitarian missions to provide protection to the victims and personnel engaged in humanitarian activities as per the request made by the particular government.

PROTECTION OF REFUGEES AND DISPLACED PEOPLE:

Procedure involved in constructing and maintaining camp to accommodate victims to ensure their safety in the camping sites until the evacuees return to their homes. When a disaster occurs, it is extremely important to implement a logistics plan with basic links. Usually the success of post disaster relief process depends on the extent of the military intervention.

Meanwhile there must be a proper communication technology and information flow such as real-time tracking systems – GPS and GIS to facilitate the post disaster aid activities and to ensure that aids are distributed properly, correctly and fairly to victims within the shortest possible time.

THE ROLE OF THE KEY PLAYERS IN HUMANITARIAN LOGISTICS



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Humanitarian logistics is the process of planning, implementing and controlling in an efficient and a cost-effective manner from the flow to the storage of goods, as well as information related from the point of origin to the point of consumption to meet the needs of the vulnerable people. The humanitarian supply chain has a very unpredictable demand where the time, location and the size cannot be predicted. The inventory control can also be very challenging because the lead times are unknown and there can be a high variation in the demand as well. The conditions and the barriers that have to be faced can be stressful because the roads can be damaged and sometimes building up communication with the affected people can be a great challenge. However the main goal of the humanitarian supply chain is to minimize loss of life and alleviate suffering. The humanitarian sector consists of some unique characteristics because the outcome of each mission conducted by the service providers are hard to quantify and the outcomes are unknown. When it is specially referred to disasters the humanitarian supply chain will mainly focus on the speed and the cost because during a disaster the faster you reach the victims the more you can help them save their lives.

The increasing need of help for the vulnerable people will increase in the future because the disasters to occur in the future are greater when compared to the current situation therefore, these service providers will play a major role. The key players can be categorized as the government, the military, aid agencies, donors, non-governmental organizations (NGO) and private sector companies.

Government: The host government, neighboring governments and other governments that are willing, can also be involved in helping and providing with the resources that are needed for the vulnerable society. Unless the host government requests for help or for aid from other governments they have no authorization to take any action before requested. Some benefit's that can be gained from other governments can be blocked because of the quality of the relationship the host government may have with the other governments. Specially the relationship between the neighboring countries. However at the end the host government is the responsible party that has to take action to mitigate the problems that can occur or try to minimize them as possible so that damage can be reduced in the future.

Military: They have a significant role to play because the military will be the primary assistance for telecommunications, route repairing and camp installation. Their planning of logistics capabilities provide a huge benefit for humanitarian logistics activities to be carried out smoothly.

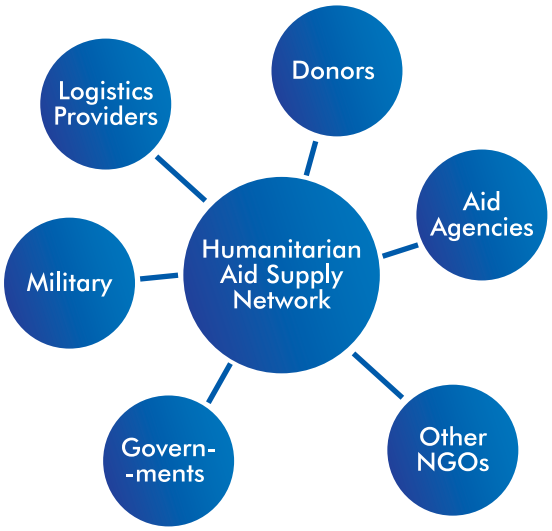


Figure 1: The humanitarian relationship model

Aid agencies: They are the actors through the government that help the affected parties due to the disasters. WFP is another important player that contributes highly to the logistics role. WFP stands for World Food Programme, they are under the United Nations and one of the main agencies for emergency relief that highly support for vulnerable communities that are affected by the disaster. During the recovery phase they aim to ensure that the affected people have enough access to food. However, they act according to the governments request.

Donors: They provide the funding for most of the relief activities carried out. When the funding is providing the agencies like WPF will involve and carry out the procurement, and the logistics services to make arrangements for the essential goods to be transported the victims. In the humanitarian relationships model the donor is the person that provides the financial funds. Thus, individual funds, government funding, funds from donors and companies have become the main funding NGOs: There actors that are influential to international organizations such as CARE (one of the leading humanitarian organizations that is fighting against global poverty) to small organizations that get together with the local communities who have the capability to help globally. Some of these organizations are temporarily created as a relief for that particular disaster.

The private sector companies mainly play three roles. They are as the donor, collector and the provider. As a donor the companies can provide financial support needed for the humanitarian logistics to be carried out. As a collector the companies can collect financial funds form the know people, such as the customers, employees, and other interested parties to fund the operations. As a provider the companies can provide the available goods and services freely for the victims that are suffering. However according to the relationships model if the company acts as a donor or a collector it comes under the category of the donor and if it is the company category then the company has to become the provider. Companies have the ability to provide the technology available and also the logistics staff that is required for the operations to carry out smoothly. Within the company category the logistics service providers become very important at every stage of disaster relief activities. The main leading international logistics service providers are DHL, FedEx, Maersk, TNT and UPS and they have been a great help to speed up the activity of transporting the goods and services required to the victims and also carrying out the activities efficiently have made the operations a very successful one.



HUMANITARIAN LOGISTICS ASPECT OF OPERATION THUNDERBOLT: A RESCUE MISSION OF 105 HOSTAGES ACROSS 2500 MILES



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Humanitarian Logistics is defined 'as the process of planning, implementing and controlling the efficient, cost-effective flow and storage of goods and materials, as well as related information, from the point of origin to the point of consumption for the purpose of alleviating the suffering of vulnerable people.' The military involvement in humanitarian logistics is a mush discussed area as the support rendered by the military in humanitarian crisis is very high. It could take the form of responding in natural/man-made disasters as well as military rescues.

Operation Thunderbolt was a military operation focused on rescuing 105 hostages held in Uganda, after hijacking of Flight 139 of Air France by terrorists in 1976. There were many unusual logistical challenges involved in this mission of rescue which were beyond the normal circumstances of humanitarian logistics. The major challenge was that the destination where the hijacked plane was: Entebbe, which was 2500 miles away from their origin of Israel was on hostile grounds. Therefore no collaboration was to be expected at the destination. In fact it was only resistance which was to be expected.

Collaboration with external parties was also at a minimal as it became as issue of rescuing hostages belonging to one nation: Israel where the other nations were reluctant to participate or extend their support. Therefore support from other countries was at a minimal level. The other crucial factor was that the need of the element of surprise at the receiving point/destination which is quite unnecessary at any other humanitarian operation. In fact it was on the element of surprise that the success of the operation would depend on and the minimum number of casualties would occur. The element of surprise was so crucial that the mission was a secret to even the people of that nation and was only known by a very few who were directly involved in the mission. As a strategy to avoid suspicion on the surface, negotiations were done to find a solution.

Another major challenge was that details of the location layout at the destination was not known and this information was not freely available which made precise planning difficult. Therefore information of the layout had to be obtained from several hostages who had been freed earlier and by air observation.

The operation was carried out on the night of 3rd July 1976 with a special commando team who took off in an aircraft armada of four C130 Hercules planes from Israel. In order to maintain the element of surprise, during the transport process the aircraft had to avoid the radar of hostile countries along the route of 2500

miles. Usually in other humanitarian logistics mission there would be support for the logistics movement from the point of origin to the destination.

As a part of the logistics that needed to be displaced from origin to destination, several black Mercedes Benz cars and land rovers had to be taken in the aircrafts. These were to be used for the commando team to move from the aircraft to the main terminal building once they were at the runway. This way they could avoid suspicion from the Ugandan soldiers as the cars and land rovers were similar to what the Ugandan government officials used. The next issue was landing discreetly at the runway.

A British Airways flight was supposed to refuel at Entebbe that night, therefore the timing was done so that these aircrafts would land as soon as the British Airways flight had landed, thus able to avoid suspicion about the radar signal. Another advantage of this was that the runway lights would be on to guide the aircrafts, where else they would have had to land in darkness which was risky. On the other hand although the aircrafts had taken off, the permission to execute the operation was still under discussion between the higher level officials and it was only when they were midair that the message came in to execute Operation Thunderbolt.

Once the aircrafts landed the team was transported from the aircraft to the main terminal building using the Benz cars and Land Rovers. Unexpectedly, during the short ride from the aircraft to the main terminal, the element of surprise was lost due to shooting of a Ugandan soldier, using a gun without a silencer. With that unexpected situation the team had to rush towards the main terminal where the hostages were held and gun fire filled the night air. After several minutes, 7 of the hijackers were killed and some hijackers ran away, while the building was taken under control by the team.

The next logistics challenge was refueling as the Hercules could not complete the return trip without refueling. The preferred option of refueling at Nairobi in Kenya, had not been approved by Kenya at this time. Therefore the next option was to refuel at Entebbe itself, which would delay the start off of the armada on its return trip. This would mean the waste of precious time during which re-enforcements of Ugandan troops may come.

As the first Hercules began the time consuming process of refueling at Entebbe, the word came in that Kenya had finally agreed to allow for refueling. Therefore just 53 minutes after the first Hercules had landed, the armada began its return journey, refueling at Nairobi.

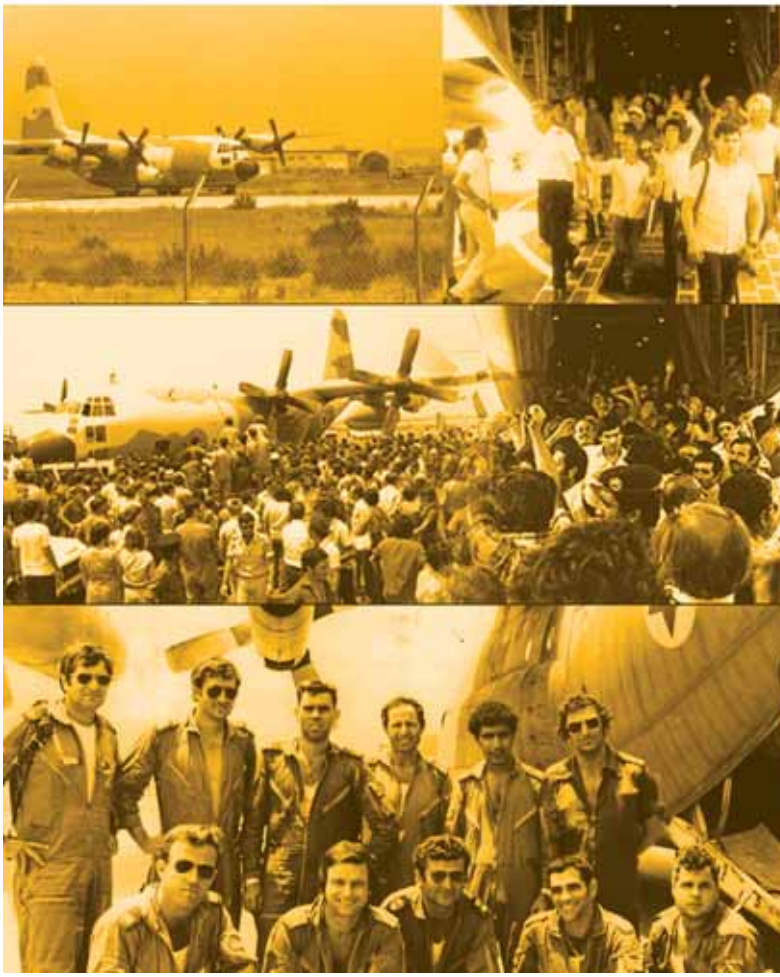
The armada returned home to Israel, bringing with it, 101 rescued hostages, 4 casualties: one commando and 3 deceased hostages. By the dawn of 4th July 1976 the armada touched down on Israeli soil, demarcating the success of a humanitarian military operation executed hundreds of miles away on hostile land within a very short time period. The rest of the whole stood stunned as the news was broadcasted to the world of how one small nation stood for its people.



Figure 1: Routes to/from Entebbe



Figure 2: Use of Mercedes Benz to avert suspicion





IMPROVING THE EFFECTIVENESS OF HUMANITARIAN LOGISTICS THROUGH PROPER NETWORKING

> OUR STRATEGY IS TO POSITION ON GROUND AND EXTEND THE NETWORK TO THE GRASSROOT LEVEL





Mr. Sudath Madugalle

Deputy Director General
Head of Operations
Sri Lanka Red Cross

Mr. Sudath Madugalla is the deputy director general and the head of the operations of the Sri Lanka Red Cross Society. He served as a colonel in the Sri Lanka Army and is now retired. Sri Lanka Red Cross and Red Crescent Societies are widely recognized as a major humanitarian network which mobilize volunteers to support the vulnerable communities at any emergency situation.

Q As a professional in this field, what is your view on Humanitarian Logistics?

Humanitarian logistics is one of the critical components of the success of humanitarian assistance. If you intend to provide humanitarian assistance, you must deal with humanitarian logistics. To elaborate on that a little further, humanitarian logistics is primarily about planning, implementing and controlling the flow and storage of goods and materials, and also related information from the source to the point of consumption with the aim of alleviating the suffering of those vulnerable people, in an efficient and cost-effective manner. In brief, Humanitarian Logistics is about getting the right items to the right beneficiary at the right time.

Q As per your view, how does humanitarian logistics sector differ from commercial logistics?

We cannot say it is different, it is a branch of logistics. The main difference comes under its objective. The normal commercial logistics go for the maximization of profit. Therefore, it is profit oriented. When it comes to the humanitarian logistics, we are not profit oriented, but beneficiary oriented. Furthermore, we want to save the lives and assist the most vulnerable people in the field. In addition to that, it can be explained that the commercial logistics is normally owned by either individual, the partners or the board of directors who invest in the organization. But humanitarian logistics is not like that; humanitarian logistics are mostly dependent on the donors. Some countries have the government support, some countries have donors; either international or individual. We need to consider the demand pattern in a given context. During commercial logistics, everybody knows what the demand is. That is coming from market intelligence and experience. But in humanitarian logistics, demand is much more complex. We often need to provide humanitarian logistics during disasters and emergencies. In such circumstances, we are not certain whether a demand exists, and if it exists the demand pattern. During emergencies, we cannot predict the exact demand, which is highly variable. As humanitarian logistics deal with emergencies, you need the supply to be available as soon as possible. In humanitarian logistics, the lead time is virtually zero! There is an emergency and you are working to provide logistics during an emergency. Your experience really matters in such demanding situations.

Q As a leading humanitarian organization of the country, how does the Sri Lanka Red Cross Society operate in the field of humanitarian logistics?

Humanitarian logistics is a service for humanity. The people who are handing it should have humanity with them.

We are a member of the world's largest humanitarian organization. We have more than 190member countries. That is a strength for us. Sri Lanka Red Cross Society (SLRCS) has rich experience in serving the country for more than 70 years. SLRCS network is our most important asset. In contrast to other humanitarian organizations, we have our branches in all twenty-five administrative districts in Sri Lanka. If there is a disaster, we can reach the affected areas very fast. Going below to the district level, we have divisions and units. These divisions and units are running parallel with the government administrative system. In the government administrative system, there are district secretary areas at district level, parallel to our branches. Then there are the divisional secretariat areas which are in line with our divisions. Lastly the Grama Niladhari Divisions work with our units.

Therefore, we can reach the grassroot level within a very short time. Further, in each of the twenty-five branches, we have our own staff, communication systems and other operational mechanisms. Not only that, we are having a large volunteer base also. Our success is due to the volunteers. When you are doing the humanitarian activities, it is essential that you make use of these volunteers. The other important point is that we are coordinating with the respective government sector. For you to be successful in humanitarian assistance, you must operate in line with the country's law and order and the government system. Therefore, at national level, we collaborate with the relevant ministries, while at district level, we work with the district secretaries.

Q Can you elaborate the supply chain management system of the Sri Lanka Red Cross Society?

The supply chain management system of the SLRCS is also based on provision, procurement and receiving of stocks for timely issues. As we are an international



organization, we are linked with our international partners.

Our international counterpart, the International Federation of Red Cross and Red Crescent Societies (IRFC) maintains the regional warehouses. Especially for us, the closest warehouse is in Kuala Lumpur. If there is any urgent requirement, they provide necessary assistance by air, or at times by shipping. Then, we do our local procurements. We have done a market survey. Thereby we have identified our suppliers and they have been registered. We maintain our emergency catalog. In this emergency catalog, we have identified the required items with our experience, for example, water, tents, hygiene kits, baby kits, and mosquito nets etc. We have specifications for each item in the catalog. This is critical especially when we order any goods from overseas, for which we are well prepared. All Red Cross members use the same catalog which facilitates the supplies between them. As a national society, we also have our own specifications. When you are doing humanitarian logistics, the important thing is preparedness. Every member must prepare themselves. We must make use of the experience. We depend heavily on the experience of our organization. One good example is the 2004 Tsunami. We have the experience of managing large supply chains to receive and distribute assistance from our federation headquarters and other sister national societies. Our past experiences make us strong.

Q How does the Sri Lanka Red Cross Society ensure best assistance to the beneficiaries?

Providing the best assistance to the beneficiaries is very important. As we said before, we must provide the right items at the right time to the right beneficiaries. For that we must have a good knowledge. We should have good human resources and a powerful work force. Our human resource includes both our management staff as well as the volunteers. They must have good knowledge and a proper training in critical areas of the operational process. We are not an organization who just wait for a disaster to come. As much as we believe in disaster

preparedness, we believe in disaster risk reduction. These days, we focus on disaster preparedness. If we are prepared, we can minimize the effects of the disaster. That is important. We build the capacity of our people by enhancing their knowledge as well as through training the trainers. At branch level, we have Branch Disaster Response Teams (BDRT), while at the divisional level we have Divisional Disaster Response Teams. At the national level, we have National Disaster Response Teams (NDRT), whereas at international level, we have Regional Disaster Response Teams (RDRT). If something happens in another country, our representatives go there. If we have a major disaster in our country, teams from other countries come and assist us. We have that coordination mechanism through which we exchange our experience and the knowledge. We get updated all the time. Considering the performance of the volunteers and team members, they are well trained in first aid. When we do the search and rescue operations, the immediate requirement is first aid. This is our specialty! Whoever who goes to the field are equipped with first aid. We have our own warehouses, with the main one in Katunayake. In Anuradhapura we have the regional warehouse. In addition, we have mini warehouses at each branch, where we maintain buffer stocks. The minimum requirement is maintained at that level. When there is an emergency warning, we can make use of that initially. This is part of preparedness. When we are well prepared, it is easy to provide timely support for the beneficiaries.

Q What are the difficulties that you see in the field of humanitarian logistics locally and globally?

Today, the main challenge that the world is facing is the increase in the frequency of disasters. Unlike in the past, we are prone to frequent disasters. This change is visible even in Sri Lanka. In 2016 we had heavy floods, in 2017 too we had them, and we don't know what is going to happen this year. Sometimes, we get floods and soon after that we get droughts. Recently many districts of the country were affected by droughts. Therefore, the increase of frequency of disaster is a challenge, not only for us, but for everyone. If we are well prepared, we can minimize casualties and damage to livelihoods and property, while we also cut down on lots of expenditure during emergencies. That is why we talk about disaster preparedness always. If the number of disasters increase, you need more resources. This means a need for more funding. Unlike in the past, the requirements are increasing. So, we cannot say that there are less donors, but we can say that we don't have enough donors. When it comes to disasters and emergencies, there is a need for better coordination with the government sector and coordination among the humanitarian sector. If our efforts are not coordinated properly, we will not able to support the beneficiaries. Sometimes there can be duplication: we end up doing the same thing. Therefore, we must have a very good coordination mechanism. The other point is the communication.

When a disaster takes place the best communication at present is the use of mobile phones. Sometimes everybody is using the same. It can get stuck. So, we must have a reliable system of communication as we must get first-hand information from the disaster location. Now we are trying to introduce an application. It is in in the process of development. Then another challenge is latest equipment. We don't have latest equipment, but we need them more and more. So, for a country like ours, it takes time for latest equipment to come. But we must plan for it, especially for early warning systems targeting preparedness. We must go for technology. Other challenge is lack of knowledge of the people those who are in disaster prone areas. People whose houses are prone to disasters are not willing to evacuate even in disasters. If these vulnerable people have a proper knowledge about disasters, it makes things easy for the humanitarian logisticians to do there rescue operations.

When we are well prepared, it is easy to provide timely support for the beneficiaries.

Q Media is a critical factor of ensuring the information flow in humanitarian logistics. How do you make use of media to support the beneficiaries?

Media should support us from the beginning, starting from the early warnings. They can support in pre-disaster period. During emergencies too, they have a role. The best way they can extend their support during the emergency is through attracting the donors. They should not do the humanitarian services by themselves. They can attract donors and direct them to the humanitarian organizations. That is very important. Otherwise when they start to collect things and

distribute, lots of unwanted things can get collected and wasted, because they lack special skills in the field.

What are your recommendations to bridge the knowledge gaps in the field of humanitarian logistics?

We must share our experiences among humanitarian organizations. It should be led by the government Disaster Management Center. In addition, we can conduct research on humanitarian logistics. You all can organize a symposium on humanitarian logistics. It is the right time. You can be humanitarian leaders. It is important that we create an interest on this matter. Media should start a discussion on this subject. This is the beginning of upgrading of our knowledge locally. Our humanitarian logisticians should attend international conferences. We must get international professionals to come and share their experience and expertise with us. But everything should happen before a disaster happens. We must monitor the focus on preparedness. If we are well prepared, we can cut down lots of expenditures in during the emergencies.

Are there any special strategies you follow when there is a disaster or an emergency ?

Most of the other organizations have only the headquarters. But our strategy is to position on ground and extend the network to the grassroot level. That is our strategy. Thereby we can identify the requirements of the people. Having people with us is the reason for our success. We get first time information from the people. Unlike other humanitarian organizations, we have our branches in all twenty-five administrative districts. If there is a disaster, we will be able to reach these disaster-prone areas very quickly. This is what we do.

What is your message to the future logisticians who are interested in humanitarian logistics field?

If you are going ahead with the humanitarian logistics, we must invest on forecast-based assistance. We are not going to wait for the disaster to happen. Instead, you start to act when you get the early warning. Now you know that when the flood level is going up, with in another couple of minutes or sometimes after one or two days you will get flooded. At that time, we are getting ready with our stocks and all. Sometimes with our experience, we know this place will get flooded. So, people will move to the safer places. Then we will provide whatever is necessary. That is called forecast-based disaster response. Finally, what we have to say is, everything moves with performance of humanitarian supply chain. It can be evaluated in terms of maximizing human safety while minimizing the logistics cost.

So, we work together to assist our most vulnerable people. Humanitarian logistics is a service for humanity. The people who are handing it should have humanity with them. However good you are in logistics knowledge, you will not make a good humanitarian logistician unless you have a touch of humanity in you! My food for thought for you, as young humanitarian logisticians, is that you should go towards a forecast-based humanitarian assistance so that we can minimize human suffering. All logisticians in the humanitarian field should join hands to make a difference in the lives of the most vulnerable during emergencies.





HUMANITARIAN LOGISTICS IN BLOOD SUPPLY AND TRANSFUSION IN SRI LANKA



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Logistics plays a central role at all stages of managing disasters and supporting humanitarian operations. The fundamental task of the logistics system is to supply the relevant materials, in good quality, in the right quantities, in places at a time when they are needed. Human lives are inherent in natural disasters, man-made disasters, accidents, unexpected wars and military challenges, where we need to have humanitarian logistics that faces unique challenges, critical infrastructure, including transport and communication systems, may have serious negative consequences and their functionality has been compromised. There is a short window of time in which one must meet the needs of critical needs that must be delivered in order to avoid deaths and human suffering, and there may be great uncertainty due to disruptions, among other complications. This article covers the unique challenges and prospective solutions associated with humanitarian logistics in emergency mitigation and preparedness, disaster response, and recovery related to blood supply and transfusion for remote areas in Sri Lanka in the view of humanitarian logistics with respect to societal responsibilities.

COURSES OF BLOOD SUPPLY IN HUMANITARIAN LOGISTICS

Type and quantity of the blood, way of procurement and storage of the supplies, inventory handling, tools of tracking and transportation to the stricken as well as remote areas, specialization of teams participating in the operation and plan of cooperation between these teams, are some important issues that are connected directly to blood supply and transfusion relating to humanitarian logistics. It is important to consider whether the marginalized people in remote areas can get these humanitarian services when needed with the occurrence of a disaster or any other accidents they face since human life is more important than any other. Some Rural areas of Southern, Northern, Eastern, North Central Provinces are critically affected by this issue. There is a big challenge in overcoming them.

ERRORS AND ISSUES IN THE BLOOD SUPPLY & TRANSFUSION PROCESS

- Incorrect labeling, either at bedside or during label printing, due to:
  - Patients with similar or sequential names.
  - Inadequate identification of injured patients or newborn infants.
  - Rush situations or availability and the accessibility.

  - Detachment of labels during transportation between hospital and blood bank.
- Mix-up of samples due to simultaneous handling of specimens from multiple patients.
- Mix-up of blood product due to storage in same container of blood destined for multiple infants.
- Inadequate cross-matching at the blood bank due to human errors.
- Malfunctioning of the inventory handling procedures in blood banks and regional hospitals.
- Lack of high levels of professionalism and skills in the whole humanitarian logistics and supply chain management area.
- Less adaptations and use of new technology and new trends with the non-affordable cost.
- Limited telecommunications and information infrastructure.

PRACTICAL SOLUTIONS

- Eliminate labeling and other bedside errors.
- Eliminate paper forms and the associated cross-checking they require.
- Provide the ability to trace the blood packet throughout the entire cycle.
- Offer portability and mobility for tracking and verification.
- Adopt with new technological trends which are cost effective and affordability.
- Train high levels of professionalism and skills in the whole humanitarian logistics and supply chain management area in blood supply and transfusion.

The success of humanitarian operations is difficult to measure. Economic success is the standard measure of efficiency in the world with pro-profit. For non-profit organizations, this assessment is more complex, governmental and non-governmental organizations specialize in organizing the delivery and storage of blood supplies during disasters or complex emergencies in the affected area and people. The National Blood Bank of Sri Lanka, the Red Cross and the UN rendered humanitarian blood supply to the affected people in remote areas.

The role of the Red Cross of the Red Crescent is to support and promote links between communities and health services by facilitating contacts, when and where necessary, providing basic health messages in remote and rural areas, conducting health promotion and promotion activities and empowering people for making informed decisions about their own health. It is the promotion of a healthy lifestyle and the promotion of healthy practice.

There are three parts to the system delivering medical goods- landing stations where packages can be dropped off and transferred, and the software that ensures vehicles get securely from point to point. Because of their short battery life, networks of drones are needed to work together, shuttling between ground stations. Drones with advanced technological facilities can be used to implement such projects inside the country. The people of Sri Lanka enjoy an extensive network of public health clinics and hospitals across the country (25 Districts), with most of the population (except in the North East) living within 5 Km of a facility. However, there is room for improvements related to organization and management of the health system, where there is less health personal per population and easy access to health facilities are hampered. It does occur that tertiary and secondary level hospitals (Teaching, general, and Base Hospitals) have occupancy rates of over 100% while the primary care hospitals (District and Rural Hospitals, and Peripheral Units) often barely have 30% occupancy.

In the non-government (NGO) sector, planning and implementing of most health programs have to date been carried out on a piecemeal basis. The community health problems are identified according to criteria set by outside donors or in accordance with the mandate of a given NGO. However, the NGOs in Sri Lanka, as well as the Red Cross movement, who target poor and vulnerable communities for health promotion and disease prevention. In some instances, health care provision has great potential to contribute towards improving health.

I feel like it sounds there is some very good practice around, some agencies would benefit from greater depth of experience in logistics management and humanitarian aspects of it. But further improvements and more consideration should be focused relating to this issue to overcome the challenges and dangers faced by the rural people in Sri Lanka.



IS HUMANITARIAN INTERVENTION AN EXCEPTION TO THE PROHIBITION ON USE OF FORCE?



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According to article 2(4) of the United Nations Charter the use of force or the threat of using force is both prohibited. The sub article declares that 'All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any State, or in any other manner inconsistent with the Purposes of the United Nations'. However, Article 51 of the same charter declares that 'Nothing in the present Charter shall impair the inherent right of individual or collective self-defense if an armed attack occurs against a Member of the United Nations'. From a literal reading of the text it becomes clear that the only exemption given for the use of force by country over another is only regard to self-defense and hence it could be argued that per se, humanitarian intervention should not be made a ground for the use of force.

Though humanitarian intervention is not recognized by the United Nations Charter as a ground for using force against another country, there have been many instances where force was used under the blanket of humanitarian intervention. In 1998-99 NATO intervened in the matter concerning Kosovo claiming that it was a humanitarian intervention. The need to halt horrendous crimes against humanity, massive expulsions and war crimes, was widely recognized. NATO intervention by military force was widely welcomed, but it was also sharply criticized. And it inspired much searching of soul by students of international law. An eminent scholar, Louis Henkin states that unilateral intervention, even for what the intervening state deems to be important humanitarian ends, is and should remain unlawful'.

At the heart of the debate surrounding the humanitarian intervention is the alleged tension between the principle of state sovereignty, a defining pillar of the United Nations (UN) system and international law, and the evolving international norms related to human rights and the use of force. After the end of the world war two, the UN was established for the main reason of stopping another world war from happening. It was built with the central pillar of the sovereign equality. The prohibition of use of force or the threat of use of force against another sovereign State epitomizes this norm. Therefore, it can be argued that if we are going to depart from the black letter of the Article 2(4) of the UN charter it may be received with strong opposition. But the history has shown that by using its powers, powerful sovereign States have tried to justify the use of force which is not warranted by the UN charter, by citing humanitarian reasons for making interventions where they have in most of the times resorted to the use of force let alone threatening to use force.

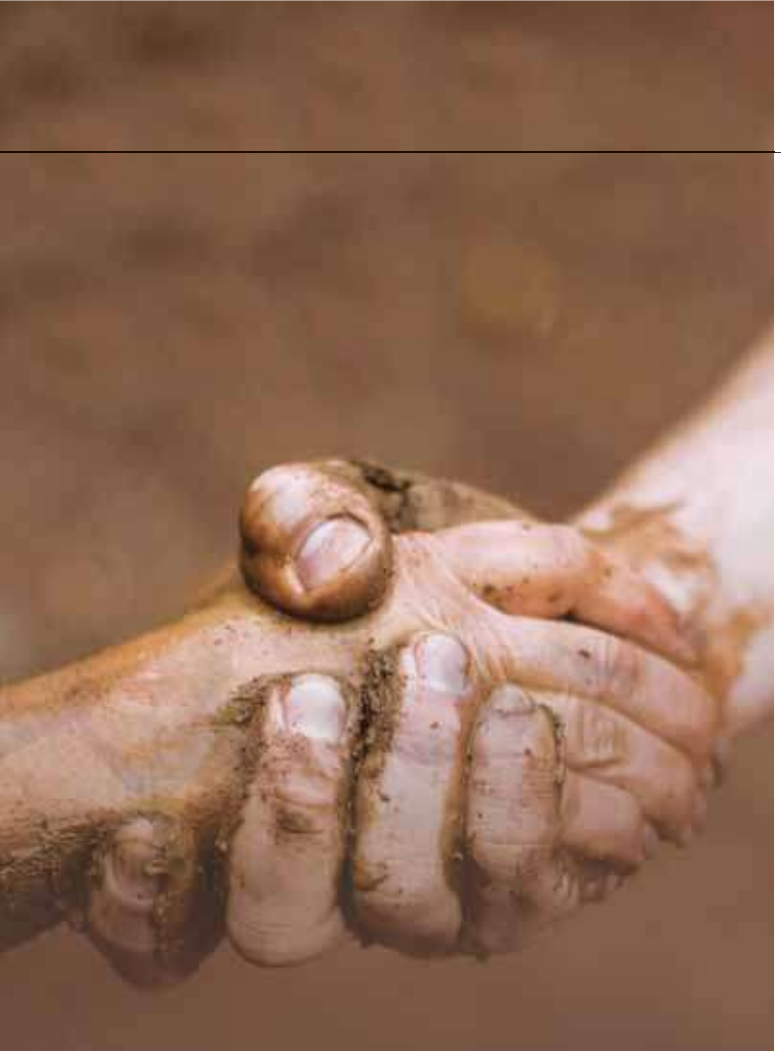


Article 51 of the UN charter which allows for the Use of force emphasizes the fact of getting the prior authorization of the security council. When the US and UK forces invaded Iraq in 2003 alleging the presence of weapons of mass destruction it did not get the authorization of the security council. They justified their actions by reference to Iraq's material breach of UN security council resolutions. However, one can or should not be allowed to use a breach to commit another breach. In this regard, it could be argued that if State can intervene or use force against another state citing humanitarian reasons, this would in turn be a situation where one would be using a breach of a countries responsibility of protecting and furthering humanitarian obligations for making an unwarranted intervention by use of force for the same reason.

The reason for advocating against allowing a State for intervening in the affairs of another State citing humanitarian reasons lies in the vagueness and the ambiguous reasons that may be cited as humanitarian. Henkin states that 'the law that prohibits unilateral humanitarian intervention rather reflects the judgment of the community that the justification for humanitarian intervention is often ambiguous, involving uncertainties of fact and motive, and difficult questions of degree and "balancing" of need and costs'. Hence, it would be dangerous to allow for humanitarian interventions without first giving a proper interpretation to the term 'humanitarian interventions' and then listing out circumstances where such may be allowed. But this is rather easier said than done. In the field of international law, the politics that hides behind the veil cannot be ignored when making laws and policies and these political realities often take precedents when trying to make reconciliations between powerful States.

In the recent case of Crimea, where in a referendum held on 16 March 2014, the inhabitants of Crimea (an autonomous region of Ukraine) voted overwhelmingly in favor of breaking away from Ukraine to join the Russian Federation it is important to bear in mind that the referendum and the declaration of independence took place because of Russian military intervention in Crimea and against a background of the threat of further military action if the Ukrainian government chose to take steps to protect its territorial sovereignty. Under above circumstances, if humanitarian intervention was recognized as a ground for use of force, then the actions taken by the Russian federation could not be questioned. As anything to do with human may be interpreted as humanitarian.

In concluding the question whether humanitarian intervention could be a ground for the use of force, it may be safe to say that it should not be made as such. Because to do so will open a plethora of uncertainties which will for sure be manipulated and abused by the powerful States. The existing regime that allows for the use of force in situations of self-defense is as far as I believe is sufficient for the furthering and protecting world peace which is the pinnacle ambition of the United Nations.



DEVELOPING LOGISTICS CAN SAVE THE MANKIND



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Nowadays logistics have turned in to an unprecedented direction in the humanitarian section. Humanitarian logistics (HL) has now become one of the significant factors in assisting any disaster. The successfulness of humanitarian operations is directly depending on the effectiveness and efficiency of logistics.

When a disaster occurs, time is crucial. The level of the damage, the population affected what type of help they need and what materials are needed should be determined extremely fast. In this phase, government and other humanitarian organizations also need a team to handle the logistics involved in water and sanitation, construction, energy and supply other materials (from pre-positioned stocks, international suppliers and donators). Most of the time donated material does not fit with the real needs of the area affected. It's difficult to select, store and distribute. Likewise, transportation is difficult and can be conclusive due to the high flow of materials in areas that often lack good infrastructures such as ports, air ports. Or where existing infrastructures might have been damaged or destroyed by the disaster.

Basically, the purpose of the humanitarian logistics is trying to overcome the unexpected demands with fast and efficient responses, so that as many people as possible receive the help they need.

Sri-Lanka is not considered as one of the most disaster-prone countries. After the Tsunami (2004) which devastated thousands of livelihoods across the country, was also a warning that Sri-Lanka also vulnerable to low frequently high impact events which cause extensive damage. In 2005, the Sri-Lanka disaster management Act No 13 of 2005 was enacted in parliament with a view to provide solid legislative and institutional arrangements for disaster risk management, establishing a national council for disaster management as the lead organization for disaster management. The ministry of disaster management established under a strong leadership with the number of disaster management initiating including, policies, institution mandates and developments, hazard vulnerability and risk management training and education etc.

Between last decade, more than 3 million people have been affected in Sri-Lanka by various natural disasters such as Tsunami, epidemics, floods and storms. This shows the significance importance of having a proper disaster management system. As I have mentioned earlier for the successfulness of these operations, a proper logistics system is an essential requirement. For example, in 2017 Sri-Lanka floods resulted from a heavy south west monsoon beginning around 18 to 19

May 2017. In that case Sri- Lanka Tri forces and Media did a huge role to overcome the disaster.

- The Sri Lanka Army deployed more than 1700 Army personnel of 17 Battalions, including Commando, Special Forces, Mechanized Infantry and Army medical personnel. BTRs, WMZs troop carriers and 30 Army boats and other machinery were deployed by the Army for the rescue operations.
- The Sri Lanka Navy deployed over 110 search-and-rescue teams comprising 776 naval personnel along with 116 relief boats. The Navy began rescue work along the Kelani River by 19 May.
- The Sri Lanka Air Force deployed Mil Mi-17s, Bell 212s, and Bell 412 helicopters to rescue the affected in all areas. Flights involving B200 Beachcraft were deployed for continuous reconnaissance/observations over affected areas.
- As well as all media partners were able to provide subsidies with the support of the donators.

Governments should play a main role in determining what critical resources the country needs and achieving coordinating among the NGOs and all related organizations. Because of the lack of resources, most of the time NGOs are willing to invest an inordinate amount of time to make all the things work. Agencies have established regional pre-positioning units capable of delivering critical emergency supplies, materials and technical assistance to connect any place in the world within a short time period. For example, during the war time of Sri-Lanka NGOs did a huge role to overcome the misunderstanding of the nationalism and humanitarianism. But these partnerships should be built before a disaster. And also, government should improve the quality of the infrastructures of the country.

To recognize humanitarian logistics (HL) as a profession, conducting proper educational programs are needed because of the lack of recognition of the importance of Humanitarian Logistics. Training and informing the entire community is crucial and all humanitarian logistics organizations should take the responsibility for raising the public awareness. Finally, as undergraduates we have the ability to act as neutral parties and create a broad network that goes beyond borders among researchers and educators to develop new ways to improve humanitarian operations.





NOT ALL THE PRINCIPLES IN COMMERCIAL LOGISTICS CAN BE TRANSFERRED TO HUMANITARIAN LOGISTICS

"I REALIZED THE IMPORTANCE OF TEACHING HL AT UNIVERSITY LEVEL AND INCLUDE HUMANITARIAN LOGISTICS INTO THE MBA AND BSc IN LOGISTICS MANAGEMENT DEGREE PROGRAMMES AT KDU IN 2012





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Why Humanitarian Logistics is central to disaster relief?

Humanitarian Logistics(HL) can be identified as the process of planning, implementing and controlling the efficient, cost-effective flow and storage of goods and materials, as well as related information, from the point of origin to the point of consumption for the purpose of alleviating the suffering of vulnerable people. Therefore, HL is central to disaster relief for several reasons:

- HL is crucial to the effectiveness and speed of response for major humanitarian programs, such as health, food, shelter, water, and sanitation.
- With procurement and transportation included in the function, HL can be one of the most expensive parts of a relief

effort.

- Since the Logistics department handles tracking of goods through the supply chain, it is often the repository of data that can be analyzed to provide post-event learning.

What is the role of Emergency Response Unit (ERU) during Humanitarian Logistics operations?

Following a major disaster, an Emergency Response Unit (ERU) should be deployed immediately. ERU consist of a team of trained people with sufficient equipment to establish the necessary IT and telecommunications infrastructure for the operation. This may include a PC network, VHF radios, HF radios and satellite connectivity. Without this infrastructure, the safety of staff and volunteers cannot be assured, the financial and logistics systems cannot run and ERU cannot supply details of the disaster to the rest of the world.

What are the Humanitarian Logistics Software Currently in Use?

SUMA, FACTS, CTS, PALMAS and FRITZ are some of the softwares used in HL. SUMA (Humanitarian Supply Management) Systems was developed in 1993 as technical cooperation project in Latin America and Caribbean by WHO and PAHO. Microsoft FACTS (Food and Commodity Tracking System) was developed through Microsoft and Mercy Corps partnership. FACTS is designed to cover the "last mile" of the logistics process. FRITZ software was designed by the Fritz Institute in response to lack of adequate humanitarian software. This software is designed to interface with other systems and includes Framework Design, Mobilization Module, Logistics and Tracking Module, Procurement Module, and Reporting Module.

What are the common challenges faced in the field of humanitarian logistics?

When we look at the current research trends in HL and talk to the people in the field of HL, it is obvious that there are several alarming issues in the field of HL.

- Lack of recognition of the importance of HL: Most humanitarian organizations pay much attention to front-line activities in relief and development, the provision of services such as food, water, shelter, sanitation, etc. but less attention to support services. Support services refer to the activities of the "back room", which support the front line: logistics, technology, finance, communication, human-resources, etc. Thus, the focus is on short term direct relief rather than investment in systems and processes that will reduce expenses or make relief more effective over the long-term.
- Lack of professional staff: The vast majority of people with logistics responsibilities do not have training in logistics. While this is changing in large multilateral organizations, the trend toward the "professionalization" of logistics has been slow to take hold as field experience is considered much more valuable than formal training in logistics.
- Inadequate use of technology: In the private sector, supply chain technology has enabled the transformation of the logistics function from a peripheral to a strategic one. By accumulating data about the supply chain, decision makers have new ways to create efficiencies. Historical data also allows greater effectiveness through the tracking of supplier performance, cycle times, inventory levels and turns, etc. In the humanitarian sector however, logistics management is still largely manual.
- Lack of institutional learning: The intensity of relief efforts, high turnover and the crisis-oriented nature of disaster response creates an environment in which there is a lack of institutional learning. Thus, while logisticians have a remarkable track record for getting the job done under the most adverse and extreme circumstances, the lessons learned from one disaster to the next are often lost.
- Limited collaboration: Although many of them face the same challenges, they have only little collaboration except during an actual disaster response operation.

What kind of strategies can we use for moving forward to improve humanitarian logistics?

The Fritz Institute is one of the premier organizations in the field of HL. According to the research findings of the institute, the following strategies can be implemented to overcome the challenges faced by the field of HL.

- Creating a professional logistics community will enable humanitarian logisticians to share knowledge and experience on common issues and to create a consistent, powerful voice with all the stakeholders in the sector.
- Investing in standardized training and certification will help build a pool of logistics professionals that share common processes and vocabulary, promoting professionalism and collaboration.
- Focusing on metrics and performance measurement will empower logisticians to demonstrate and

> *Decentralized supply chain is more efficient than centralized supply chain in HL.*

improve the effectiveness of the humanitarian supply chains.

- Communicating the strategic importance of logistics will enable logisticians to create awareness of the contribution that logistics makes and to obtain needed funding and resources.
- Developing flexible technology solutions will improve responsiveness by creating visibility of the materials pipeline and increasing the effectiveness of people and processes.
- Furthermore, advanced information systems will create the infrastructure for knowledge management, performance measurement and learning.

Q What is your overall idea about Humanitarian Logistics?

Humanitarian Logistics is critical in emergency management and takes place in complex environment due to high uncertainty. Therefore, preparedness and pre-planning is critical. Decentralized supply chain is more efficient than centralized supply chain in HL. Not all the principles in commercial logistics can be transferred to HL.











REVIEW ON HUMANITARIAN LOGISTICS: TRENDS AND CHALLENGES



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As per the customary economic term "Scarcity", highly intensified and limited resources which has been scattered within the distinct boundaries of the globe has incorporated an essentiality towards dynamic supply chains and logistics operations. In today's universal economies, logistics plays a commanding role in expediting trade operations, and hence plays an important factor in rising prosperity and welfare. Prevalence of negative externalities which has been initiated through individuals or mostly by trade operations, has increased the exposure of countries and regions towards key natural and man-made hazards. Coincidingly, this initiates a social vulnerability in the form of population's susceptibility and their finite capacity in coping and adapting towards the hazardous situations. Increased vulnerability and the essentiality of instantaneous resources which are capable of uplifting the living standards of local communities under contrasting disasters has led the humanitarian logistics operations to play a prominent role in re-settling and re-development of the exposed communities and shattered economies. Technically, humanitarian logistics can be defined as a "process of planning, implementing and controlling the efficient, cost-effective flow and storage of goods and materials, as well as related information, from the point of origin to the point of consumption for the purpose of alleviating the suffering of vulnerable people". Humanitarian logistics tend to steer key functions of disaster response and disaster recovery. Followingly, preliminary humanitarian logistics activities can be illustrated within a time continuum which rangers from short-run activities to longer-run activities. Instant Disaster relief operations, reconstruction and rehabilitation, and socio-economic development can be denoted as pivotal short, middle and long run operations. Structure of a humanitarian supply chain tend to share comparable characteristics when equated with business supply chain, yet its underlaying objectives, revenue sources, and performance metrics tend to repudiate notably. Humanitarian supply chains are expected to be highly capricious and require notable coordination and management in occupying success on humanitarian operations. Furthermore, humanitarian supply chains will be operated with finite revenue sourcing options which includes volunteer donations being made by individuals and corporations. In addition, decisive goal of the humanitarian supply chains is to be highly responsive towards multiple interventions within a swift time period. Non-existent nature of predefined performance measures within the humanitarian supply chains has become a significant barrier in measuring its service quality, as performance measures will implicate intangibility of the services offered, immeasurability of the operations, unknowable outcomes and conflicting interests of stakeholders. Clear segregations being made among humanitarian logistics and commercial logistics has been able to determine distinct characteristics of both the logistics functions. Humanitarian logistics tend to share

Attributes	Business Supply Chains	Humanitarian Supply Chains
Objective	Maximize profits and increase the stakeholder wealth	Provide immediate assistance and save lives
Demand pattern	Relatively stable and predictable	Fluctuating and un-predictable demand
Supply pattern	Proportionately predictable	Unsolicited donations and in-kind donations
Flow type	Commercial products	Vital resources including shelters, food and water, drugs, vehicles and professionals etc.
Lead time	Mostly predetermined	Approximately zero lead time
Inventory control	Expected level of safety stocks	Challengers in inventory control
Technology	Highly developed technology usage	Limited technology adaptations
Performance measurement methods	Based on the predetermined standard of the supply chain metric	Time to respond towards a hazard, meeting contributor expectations, percentage of demand being supplied

Table 1: Comparison of Business and Humanitarian Supply Chains

significant number of dynamic characteristics and this has been able to provoke specific challengers and complexities in conducting smooth logistics and supply chain operations. Limited predicting capabilities of disasters, timely operations, limited trained logisticians, lack of equipment's and information systems, stakeholder interferences, limited information and lack of integration among intermediaries can be identified as typical challenges being faced under logistics operations.

UNPREDICTABLE NATURE OF DISASTERS

Time, place and severity of a disaster in terms of people and property are less like to be predicated prior to a disastrous situation. Accordingly, this will limit the in-advanced capabilities in predicting the demand and supply of a humanitarian need. In order to accommodate immediate responsive operations which require supplies within a minimal time period, early preparedness, effective and efficient collaboration among supply chain mediators and unobstructed flow of upstream and downstream information plays a demanding role.

TIMELINESS OF OPERATIONS

The importance of timely response, is highly significant in humanitarian operations than the commercial operations. A potential delay within the commercial supply chains will result in a compensation being accounted towards the affected party and ultimately it will initiate costs in terms of productivity and customer dissatisfaction. Hence, a delay in a humanitarian supply chain could literally be the difference of life and death for communities who are being severely impacted by a disaster. Limited predictability of the disasters and availability of a limited time frame between the occurrence of a disaster and the essentiality of the humanitarian service has pledged significant barriers towards an effective humanitarian relief operation.

LIMITED TRAINED LOGISTICIANS

In the global arena there is a significant shortfall of logisticians who can plan, assess, and coordinate effective human and material resources towards relief operations. Further, limited recognition being given towards the professions of humanitarian logistics, lack of a clearly defined career path, professional association, or community of practice has incorporated significant barriers in retaining qualified personals. Followingly, this will generate negative impacts on smooth humanitarian operations, as experience has been found to be more important than the paper qualifications.

LIMITED EQUIPMENT AND INFORMATION TECHNOLOGY ADAPTATIONS

Sustainability of humanitarian operations will largely rely on volunteer donations. However, in most instances the need in attracting necessary equipment's and information technology adaptations will not be recognized by the donors. Effective logistics information systems which contains repository of data regarding the effectiveness of suppliers and transportation providers, cost and timeliness of response, appropriateness of donated goods, and the management of information lacks within the field of humanitarian logistics.

STAKEHOLDER INTERFERENCES

Corruption and lack of transparency has plagued almost every disaster relief effort. Further, human intervention in the distribution of aid which comes in the form of political grand standing and dishonesty among distributers has become a highlighting factor in humanitarian operations.

Besides the following complexities being faced under pivotal logistics operations, limited data bases being maintained on the lessons learned among the supply operations, independent decisions being made by distinct supply chain nodes, lack of reckoning being given on the importance of humanitarian logistics and limited professional bodies who accommodate humanitarian logistics learning and instruct professionals has become relatively problematic within this subject area. Therefore, a system which surge the public awareness and the importance of humanitarian logistics should be implemented within the communities. Accordingly, professional logistics bodies should find newer forms of enhancing the scope of funding and to be interdependent bodies of the supply chains which can be positively used in accommodating efficient and effective humanitarian operations.

ETHICAL & LEGAL ASPECTS OF HUMANITARIAN SUPPLY CHAINS: A CROSS-CASE STUDY OF SOCIETAL BENEFICIARIES



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Humanitarian logistics renders benefits to three identified areas of particular difficulty: Post-disasters, post-conflicts and remote locations. These logistically challenging environments demand valuable, innovative and agile capabilities to fulfil the needs of humanitarian logistics from originator to the beneficiaries. The logical transition from emergency phase to response phase is underpinned by different capabilities of the supply chain systems.

Emergency aid supply chain coordination, warehousing and stock consolidation, load planning and distribution, procurement from pre-qualified suppliers, medical staff sourcing, government agency liaison, post-disaster logistics support and reconstruction among other things explains the said transition. The immediate deployment of highly organized, lifesaving humanitarian relief is the successful outcomes of Humanitarian logistics.

The level of tremendous uncertainty during time of emergency is based on dynamic situations and environmental contexts. Thus, societally responsive humanitarian logistics are premised on: a) Maintained warehouses with emergency response supplies; b) Roster of logistics staff for rapid deployment; and c) Accountable systems to track aid through supply chains to the beneficiaries.

In glocalized contexts humanitarian logistics can be analysed across real- time cases. Post-disasters illustrates that Israel dispatched first response aid in the wake of 2004 Tsunami with 82 tons of relief to Sri Lanka. Further, deployed rescue teams and field-hospitals effectively. This signifies the responsiveness of warehouses with urgent supplies. Post-conflicts illustrate that in 1999, Albanian refugees benefited by a one hundred bed field-hospital which performed some fifty surgeries and child births as well. This mission comprised of sixty physicians, nurses and paramedic experts with tools and hospital equipment deployed. This signifies the roster of staff for rapid deployment. Humanitarian logistics to remote locations illustrates that an agricultural project was implemented in Nairobi, in 2004 for two hundred and fifty rural, marginalized farmers. It combined traditional methods of ethical planting and sourcing of seeds, with modernized technology processes of production and harvesting. This signifies the accountability of supply chains to track assistance for the defined project.

The humanitarian logistics systems have a direct impact on national economy and technological advancement. However, holistic national progress depends on societal, ethical and legal aspects as well. Hence,

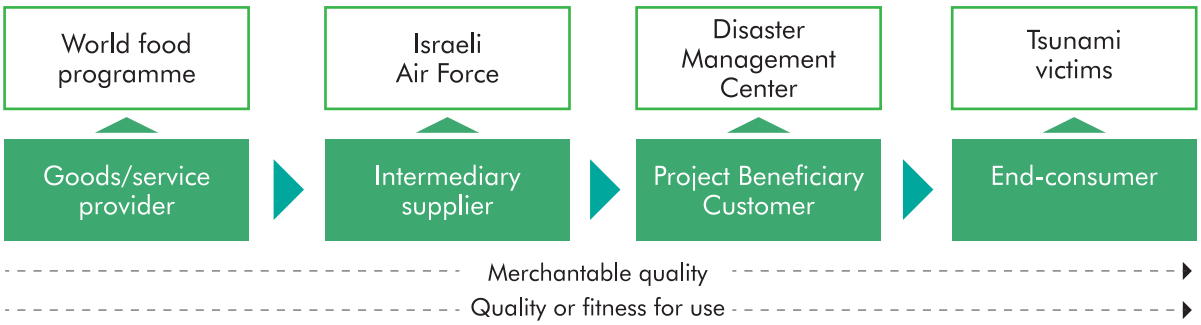


Figure 1: The Societal Perspectives of Humanitarian Logistics

societal responsibility of humanitarian supply chains is driven by stakeholders, impact and positive outcomes. Stakeholders in the [context of logistics] are the people or organizations that can impact or be impacted by the [logistics systems]

Every link along the supply chain is ideally constructed upon a written agreement- Memorandum of Understanding or domestic contract. According to law of contract the agreements have conditions and warranties. Merchantable quality of supplies is an implied condition in the law governing Sales of Goods.

In Sale of Goods by description each link of the supply chain shall ensure quality of and in the supplies. Goods supplied in emergency to response phases do not permit the reasonable examination of quality by the beneficiary. Hence the supplier is bound to ensure minimum defects in the supplies. It would warrant the suitability for consumption. The violation of condition of merchantability shall result in the repudiation of the contract, as merchantable supplies goes to the root of the contract.

Fitness for use of supplies is an implied warranty in a contract according to law of Sale of Goods. The fitness of supplies for a given purpose may be annexed by the usage of trade. Hence, the supplies of beds and equipment for a field-hospital should be manufactured for ease of mobility and agility. This would facilitate the logistics of mobile hospital clinics-mobile patient care, despatch of essential medicines, emergency treatment and proper, safe casualty evacuations. The practical implications of violating warranties are noteworthy. Procuring supplies after disasters and conflicts are based on expedited government tenders. Hence, the fitness for usage may be compromised in certain purchases. In this context, the affected parties could seek for damages and compensations both financial and sentimental in nature.

Humanitarian logistics dwells on two significant footings. These are people and progress ('2 P') of nations overall. The people are the stakeholders of the supply chain including future investors. Progress means the impact and positive outcomes upon a country including economic development. Collectively, people and progress will enable the improvement of socially beneficial supply chain(s) "He who saves one life is as if he saved an entire world" - Humanitarian logistics indeed has an ethical & legal impact on society; the societal responsibility.





HUMANITARIAN AID: EVOLUTION THROUGH TECHNOLOGY

> THE FUTURE DEVELOPMENT OF MILITARY DEPENDS ON THE CAPABILITY OF MANPOWER AND ADOPTION OF MODERN TECHNOLOGY





Rear Admiral (S)
HAUD Hettiarachchi

USP, MSc (DS) Mgt, BA (DS), LLMC, MISMM, MIM (SL), JP (Whole Island)
Director General of Logistics
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Rear Admiral (S) HAUD Hettiarachchi is presently holding the appointment of Director General Logistics at Naval Headquarters. He joined General Sir John Kotelawala Defence Academy in 1986 as a cadet officer and on completion of his basic naval training at the Naval and Maritime Academy, Trincomalee. Subsequently, he followed a Sub Lieutenant Technical Course in Sri Lanka, Sub Lieutenant Supply Course in Pakistan and completed his Long Logistics and Management Course in India. During his naval career spanning nearly 32 years, acquired wide and varied experiences. He is a distinguished, decorative and unblemished naval career has been rewarded on several occasions. In the academic arena, Rear Admiral (S) Hettiarachchi has secured many outstanding landmarks. He possessed

Master of Sciences (Defence Studies) in management from the General Sir John Kotelawala Defence University and at present he is reading for his PhD.

Q What is the role of the Sri Lanka Navy towards Humanitarian Logistics assistance?

The primary role of the Sri Lanka Navy is defending the sea and defending the motherland. The secondary role of the logisticians in the Sri Lanka Navy is to respond quickly. Without a proper logistics system we cannot perform any activity in land, air or sea. The responsibility of the logisticians in the Sri Lanka Navy is to quickly respond to our fleet units. Currently we are in the process of acquiring ships because our troops are mostly deploying in the land base. Therefore, we are moving from the Dvora concept and increasing the number of ships.

Q What are your experiences in disaster relief operations during major disasters in Sri Lanka in relation of providing Logistics assistance?

This is my thirty third year in Sri Lanka Navy. I am the head of the Navy Logistics team and I have served in the Sri Lanka Navy in different capacity levels starting from a supplier to the head of logistics. Therefore, in my experience as a navy officer our duty is to make sure we respond quickly to the ships and the naval bases. I have served in tactical and operational levels and during the past five to six years I have been able to take part in the strategic decision making as well. Currently I am making strategic level decisions and I am obliged to report to the Navy commander. Since the entire world faces several types of man-made and natural disasters in the world these are being commonly seen in many countries including Sri Lanka. Therefore, we are having separate units called disaster relief operation units with all the necessary equipment. During the last Nepal landslide, we sent our troops including logisticians, medical groups and engineers to assist them. The requirement is to educate and train people on how to act during the disasters. We have our disaster operation unit at the Gemunu Regiment. Our logistics officers rush to the locations that are affected and provide immediate assistance required. We have a disaster operation center where we deploy the troops with the coordination of the logistics officers. The best thing is to educate and train the people to do this because we are capable to go outside from this country and assist disaster relief programs. We have around 55000 men in the navy. My branch is the second largest branch of the Navy which has an executive branch of 6000 sea going men and 320 officers. We have a large contingent as we have to go out from this country for the UN missions.

Q How do the advanced technology and specialized vessels are used to provide effective services at humanitarian relief operations?

The advanced technology can be used to any disaster. For example, we built a hoover craft, capable to operate even in inland water. That is an important activity that we have implemented. We can use the hovercraft to distribute food and other needs to the vulnerabilities during floods. In addition, we can even use it for rescue operations. During the floods in last year we used digital media like skype to communicate with the people on ground and boats from head quarters to be informed about the severity of the disaster and take necessary recovery measures. Likewise using advanced technology is beneficial to both military and other humanitarian organizations who are involved in logistical activities. Since logistics basically focused on minimizing the inventory cost we should have more

The corporation among stakeholders is important as it facilitates the information flow effectively.



technology so that can reduce the cost of carrying a huge inventory.

Q What are the challenges faced by Sri Lanka Navy upon conducting humanitarian operations?

Cooperation among stakeholders is a main challenge we face since there is lack of coordination among all the parties involved in humanitarian operations. The corporation among stakeholders is important as it facilitates the information flow effectively. In order to operate effectively in humanitarian logistics activities, it is important to adopt modern technological aspects of disaster management and avoid. The rules and regulations related to disaster management should be updated and prone to amendments to avoid outdated methods of operation. Since, humanitarian logistics activities are not profit oriented, as a state entity we need to think of the budget that has been allocated towards disaster relief operations. Therefore, we should adhere to the financial restrictions. Community support is also a major challenge because it is important to enhance the awareness of the disaster management operations among the public. Mainly we need to focus on disaster preparedness and mitigation. Educating the community about these will help the forces to conduct their operations in a more effective manner. This should be initiated from the village level and be extended up to national level. Restrictions in operational activities such as time and space matters in disaster preparedness. In order to deploy the forces on time we need to be well prepared in advance with all the equipment needed for rescue missions and other relief activities. The timely readiness results in saving more lives and success of the rescue operations. Lack of modern technology is also a concern in a situation of disaster when it comes to maintaining the channel of communication among all the parties involved. Therefore, we need to update our systems with modern technology to meet the necessary requirements in relief operations. During flood situation small boats of navy with path finders can play a major role in rescue missions.

> *The requirement is to educate and train people on how to act during the disasters.*

Q What are the recommendations on the future development of Humanitarian Logistics effort of the military in Sri Lanka?

As per my opinion, the future development of military depends on the capability of manpower and adoption of modern technology. Thus, we have to train people well to support in relief and rescue operations. Even though we have sophisticated equipment if we are lacking with competent manpower we face a huge problem. Therefore, continuously training the people who are engaged in disaster relief as well as logistics activities and introducing with modern technological equipment is important in to develop this field of humanitarian aid. However, we have constraints in training budget which limits the capacity that we can achieve locally and internationally. Proper training helps everyone to react to any disaster situation wisely. This is more valuable as we need trained people to achieve whatever the task given to them in any emergency.



USE OF MATHEMATICAL MODELS IN HUMANITARIAN LOGISTICS SYSTEMS



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World War II was the major motivation of logistics to increase recognition and emphasis, following the clear importance of their contribution toward the Allied victory. Starting from the early '60s, many factors, such as deregulation, competitive pressures, information technology, globalization, profit leverage, etc., contributed to the increase of logistics science in the form we have it today. The operating responsibility of logistics is geographical positioning of raw materials, work in progress, and finished inventories where required at the lowest cost possible. It is through the logistical process that materials flow into the vast manufacturing capacity of an industrial nation and products are distributed through marketing channels to consumers. Physical flows involve the entire process and activities of logistics systems. Major components of logistics system are: network design, information, transportation, inventory, and warehousing, material handling and packaging. Humanitarian logistics is a branch of logistics which specializes in organizing the delivery and warehousing of supplies during natural disasters or complex emergencies to the affected area and people. The objective of this article is to describe the uses of mathematical models in designing humanitarian logistics systems.

Facilities such as central warehouses and distribution centers and relief goods form the logistics network design. Decisions have to be taken at strategic, tactical and operational level to determine the location of central warehouses and local distribution centers at pre-and post-disaster phases taking into account the inherent uncertainties in demand and supply data and the availability level of the transportation network's routes after a disaster like earthquake. Next is the development of relief distribution plan based on various disaster scenarios aiming to minimize: total distribution time, the maximum weighted distribution time for the critical items, total cost of unused inventories and weighted shortage cost of unmet demands. In this junction, the algorithms and optimization would be needed to carry out the above activities in an efficient and effective manner.

Humanitarian logistics operation is required to procure, store and distribute supplies for the assistance of beneficiaries. In order to function effectively humanitarian logistics must coordinate with other actors and be considered throughout the lifespan of humanitarian operations. Flow of information among this actors is a key to the successful supply chain. Humanitarian logistics information systems can enhance needs assessments by ensuring that field staff knows what supplies are available for beneficiaries, either in local warehouses, pre-positioned emergency

stocks or from local and international markets. It Shares lists of supplies available in both local and international markets, including prices and lead times, logisticians to empower program staff to better plan their procurement activities. It keeps program staff informed of procurement activities which will help to develop an understanding of the constraints within logistics and create trust. It provides budget holder more accurate financial information regarding funds which are committed within the procurement process, to avoid the over or under spending of budgets. It also provides warehouse inventory reports to program staff to allow them to take more responsibility for their supplies, and ensure that they are utilized effectively. It also shares information on the distribution of supplies to allow program staff to better monitor and evaluate activities and avoid the need for duplicate record keeping between logistics and programs. In addition, it divides logistics overhead costs such as warehouse rental, transportation and logistics staff wages into program budgets according to the activities logistics is supporting.

When a region is hit by a severe disaster, humanitarian supplies must be provided to victims/evacuees efficiently throughout the entire disaster and post-disaster periods. The emergency packages include but not limited to food, water, sanitation supplies, medicine, medical equipment, etc. Delivery of the humanitarian aids from suppliers to shelters must be done within certain time limits. Though helicopters are used for transporting a fraction of the daily requirements, the capacity of small aircrafts limits the throughput of this mode. Ground transportation modes are still playing a major role in the humanitarian logistics. Because of the severe weather during and after disaster, e.g. storm after hurricane or after-shock after an earthquake, it is common to have failures on the road and infrastructure, such as flooding, surface cave-in and sedimentation, which may delay the traffic or even make part of the network unusable. The expected reliability of a route is one of the main variables when planning a trip.

The route choice coheres with the choice of the departure time to reach a destination in time with an acceptable probability. To increase the possibility of providing supply to evacuees under uncertainty without disruptions is a challenging problem. An efficient and reliable routing and scheduling model needs to be developed for both disaster and post–disaster conditions. Development of a humanitarian response planning for a fleet of vehicles with reliability considerations is vital. Routing and scheduling of humanitarian supply transportation can be formulated as a mathematical model. To apply this routing and scheduling method in real operations with on-line information, efficient algorithms are necessary. A genetic heuristic algorithm can be used to solve the problem in reasonable computational time. These mathematical models can help provide prompt delivery while reducing the risk of undesirable delay caused by uncertainty.

An efficient humanitarian inventory control model plays a crucial role in maintaining reliable flow of vital supplies to the victims located in the shelters and minimizing the impacts of the unforeseen disruptions that can occur. Mathematical models help to determine the minimum safety stock levels of the emergency inventories so that the consumption of these stocked commodities at the major shelters can occur with minimum disruption. These inventory control models should easily be incorporated into disaster relief plans so that planners can become aware of potential serious inventory related problems that can occur at the shelters along with their occurrence probabilities.

Increase in the severity of the disaster causes an increase in the consumption levels of vital supplies in the shelters since the demand of evacuees for a given commodity increases. Frequent number of deliveries during the emergency relief period minimizes the need for higher level of safety stock. Thus, if the transportation/supply systems are robust enough to support frequent deliveries, authorities can afford to maintain lower levels of safety stocks reducing the cost of emergency preparedness without compromising the wellness of evacuees. Vital/ perishable commodities, emergency orders from different suppliers and cross-shipping possibilities also require extra attention when deciding on the safety stock levels. Mathematical models are useful to optimize the maximum use of space, labor and the material handling equipment during the disaster relief activities. They pave the way towards better achievement of set targets in the three phases of the humanitarian activities such as preparedness, response and recovery processes.





LOCATING TEMPORARY LOGISTICS HUBS DURING DISASTER RESPONSE



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Consistently natural disasters, such as floods, landslides, earthquakes kill or destroy a substantial number of individuals and cause economical harms around the world. Opportune conveyance of essential living needs like shelter, food, water and medicine to the affected challenge is a standout amongst the most critical difficulties at post-disaster. The way toward planning, arranging, managing, and controlling the productive, cost effective and storage of goods and materials to give help to victims is called emergency logistics.

Humanitarian logistics is a standout amongst the most difficult issues in the field of logistics, and such tasks are renowned for their complexity. The special challenges are because of some extraordinary and entangled qualities, the delivery of numerous products, through potential multi-model systems, under extremely strict time limitations, requiring the coordination of various different actors. The stakeholders in humanitarian logistics incorporate casualties, donors, logistics organizations, NGOs, and government institutions.

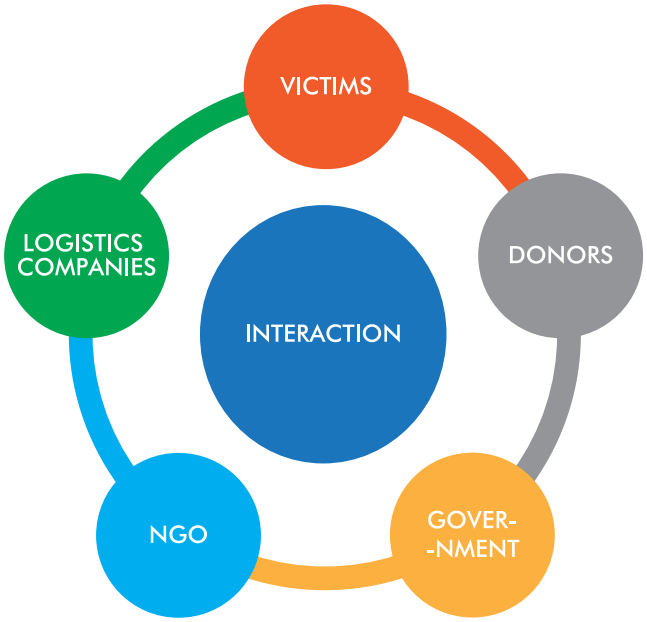


Figure 1: Stakeholders in Humanitarian logistics

The location of facilities, especially distribution centers, warehouses, medical centers, and shelters, assumes a critical role in ensuring the success of emergency humanitarian relief activities. From a logistics perspective, an effective reaction to an emergency demands setting up logistics hubs or distribution hubs in suitable locations. In the pre-disaster stage, facility location planning includes finding tentative locations for warehouses, distribution hubs, and evacuation centers in view of accepted situations, while in the post disaster organize, such arranging incorporates finding crisis shelters, medical centers, relief distribution centers, and

logistics hubs for a specific disaster-affected zone.

The absence of advance preparedness in developing nations recommends the requirement for a proper, efficient, and effective response. In addition, the unpredictability of disasters prevents authorities from deciding a correct location for emergencies facilities beforehand and given that perpetual facilities alone might be inadequate, emergency temporary facilities turn out to be particularly important in emergency nations where disaster preparedness misses the mark. Selecting where to locate temporary facilities for emergency activities is an important operation.

Temporary Logistics Hub (TLH) is characterized as a place assigned for storing, arranging, consolidating, consolidating, and distribution emergency relief materials to disaster-impacted regions for the short term. It subsequently goes about as an intermediate between the central warehouse or relief supply points and territories in require. Subsequently, TLHs are regularly settled after the disaster has occurred in the response stage of disaster management. In any case, TLHs play a key role in ensuring an efficient and effective disaster response. The provisions from permanent warehouses or entry points commonly come in bigger vehicles, which may be not able access influenced zones in view of halfway or finish harm to streets and extensions. Without logistics hubs, the blockage made by bigger vehicles utilizing helpless street systems may cause conveyance times to increment fundamentally. Specifically, the temporary idea of hubs is critical in creating nations where infrastructure facilities are poor and disaster preparedness for the most part misses the mark. The two noteworthy decisions with respect to temporary hubs are to determine their ideal number and location while thinking about the length of their operational horizon. Factors that complicate humanitarian logistics operations include:

- Various disparate stakeholders,
- Distinct stages of relief efforts, and
- Specific resource requirements (including materials, products, and people).

All this complication should be considered in the overall planning and operation of humanitarian logistics, to make these faster, reliable, smarter and also no more expensive than necessary.

In Sri Lankan aspect, in every year we are facing for severer destruction because of disasters like, flood, landslides and cyclones. The legislature of Sri Lanka takes the need in building up temporary hubs with the assistance of Sri Lankan Tri forces, to give temporary shelter, food, garments, sanitary items and medical aid and so forth. Indeed, even NGO's, Logistics organizations and additionally private donors are joining with this procedure.

For an example, The Sri Lanka Red Cross Society (SLRCS) is a willful humanitarian association who is cable in providing relief in the time of disasters/crises. More than 500 staff and volunteers are prepared in disaster response. As per the disaster on 19 May 2016, Colombo, Gampaha, Kegalle, Puttalam and Kurunegala districts are among the highly affected districts. Sri Lanka Red Cross Society also gave an immense support. With SLRCS, The International Federation of Red Cross and Red Crescent Societies (IFRC) and The International Committee of Red Cross (ICRC) was composed.

But in some situations, in Sri Lanka, we cannot accept that they are conducting effective operations with regarding locating temporary logistics hubs during disaster relief. Because they are lacking strategic planning. In generally, during the disaster, NGO's, people and logistics companies get together to support each other while the local authorities were bidding for more time. They could have provided necessary essential goods immediately, but the mechanism was too slow. So, it is better to develop a framework (mechanism) which is smart, fast, accurate and not that much expensive, to carry out these operation in an effective manner. Also, locating temporary logistics hubs must be systemized further.



Temporary logistics hubs during aranayaka landslide



First aid administrations by Sri Lanka Red Cross Society

A PROPER LOGISTICS PLAN FOR DISTRIBUTING FRUITS AND VEGETABLES FROM DAMBULLA ECONOMIC CENTRE TO MINOR HUBS



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The government of Sri Lanka had established economic centres in provinces according to the budget proposals in the year 1998. The Dambulla economic centre was the first that was established on the 01st of April 1999. Thereafter, a number of economic centres were established throughout the island. But Dambulla main hub remained the central warehouse of vegetables in the island. In exploring the topic further and in depth, it is worthwhile to examine the historical benchmarks of agriculture in Ceylon. From the early dawn of civilization in Sri Lanka, agriculture has been the major occupation of Sri Lankans except for a few cottage industries since the natural resources of the country favoured agricultural production over industries. Therefore Sri Lanka became to an agricultural economy.

Even though there were no specific and recorded data about vegetable production in early society, a considerable number of people engaged in vegetable cultivation in Sri Lanka. Even in the Dry Zone, especially during the "Yala" season, farmers concentrated on vegetable cultivation.

The vegetable industry in Sri Lanka is characterized by high dependency on small scale production, perchasing ability of the product, high use of family labour and is concentrated in remote areas where transport, electricity, communication and water facilties are lacking. This results in severe price fluctuation, high post – harvest losses and a high cost of business activities. Although vegetables are grown throughout the country, a few districts are well known for up country vegetables.

In Sri Lanka, the fruit market depends mainly on fruits in the Dry Zone and the other verieties are imported fruits. Fruit farms are not as abundant as vegetable cultivation farms in Sri Lanka and fruit cultivation is done on a small scale. Therefore the prices are generally higher than vegetables per unit weight. The types of Sri Lankan fruits available in the market at a given time, vary according to their harvesting season. The prices soar if it is not the harvesting season and when the harvest is scarce in a particular year. Even if some fruits are produced mainly in certain areas of the country, they are distributed throughout the country in the season of their availability.

The main aim of this article is to find a way of minimizing the cost in distribution of vegetables and fruits in the Dambulla economic centre in Sri Lanka while maintaining a better service level. As mentioned before, this article is based on the Dambulla economic centre which distributes vegetables and fruits to different provinces. Its main hub is situated near Dambulla

vegetable and fruit market, and its minor hubs are situated in each province in Sri Lanka.

Sri Lanka's vegetable prices fluctuate during different seasons in the year. The prices depend on the supply of vegitables to major markets and economic centres in the island. And also on the amount of the total production of vegetables during that period. Most low country vegetables are cultivated in the Dry zone while the rest are cultivated upcountry. Supplying goods from these remote areas to consumers islandwide is carried out through a supply chain. It starts from the farmer and goes via middlemen, economic centres, more middlemen, the retailer and at last to the consumer. In that supply chain, the middlemen's charges are very high on account of high transportation expenses and post harvest losses. That results in higher final retail prices while farmers get a low price for their products.

MDL reduces the transport expenses through an organized system for the distribution of goods from the economic centres to the venders according to their demand in a cost effective way. This will result in a reasonable price for both farmer and consumer with low transportation cost and minimum wastage.

Currently there is a company assigned to oversee the logistics at the Dambulla economic centre but it does not function effectly. However, the Dambulla main economic centre distributes all vegetables and fruits to the eleven main sub economic centres in Sri Lanka. Currently there are particular buyers who operate in the Dambulla economic centre and they distribute goods to the sub economic centres in Sri Lanka. The main buyers of each city distribute goods from the sub economic centres to small shops in the district.

The consumption and production of market food is spatially separated. Production is primarily in rural areas while consumption is higher in urban areas. Agricultural marketing is the process that overcomes this separation, and allows the product to be moved from an area of surplus to one of need. Food reaches the consumer by a complex network involving the production, assembly, sorting, packing, arranging reassembly, distribution and retail stages.

There is a need for a proper transportation procedure to deliver the goods through this system. Great deals of vegetables are wasted by the existing model, so it seems necessary to introduce and allocate a proper strategy for distributing vegetables and fruits. A system should be developed to maintain a supply that does not result in deficits or surpluses in the market. This will reduce unnecessary fuel consumption in addition to creating an efficient distribution of food. The following factors are considered as major issues.

SURPLUS AND DEFICIT OF VEGETABLES AND FRUITS

In Sri Lanka, there is a wide variation in the area, population density and life styles of regions. Therefore, the consumption of vegetables and fruits varies considerably in different areas in the country. In some areas, production as well as consumption exists, but in others there is no production while consumption is very high, for example in urbanized areas like the western province. Therefore, there is a deficit in areas where the population and consumption is high and whole production is less. In the areas where fruit and vegetable farms are situated, there is a surplus, as these are mostly rural areas where the population density is relatively less. Therefore, it is necessary to distribute food from areas of surplus to deficit areas utilizing a successful method.

UNLIMITED FUEL CONSUMPTION

According to the current method of distribution of fruits and vegetables, different kinds of lorry and trucks are used and different amounts of good are transported without using their optimum capacity for transport. Moreover, there is no proper schedule for the travelling time and no planning regarding the transportation. Therefore, an unnecessary number of vehicles are used for the purpose of distribution. This results in excessive fuel consumption.

If there is a proper schedule and plan with a proper assessment for the requirement for each area at a given time, it is possible to use only the necessary number of suitable vehicles for transportation. This will save unnecessary fuel consumption and wastage of funds.

PRICE DISCREPANCY BETWEEN FARMER AND CUSTOMER

The farmer is the primary level of the supply chain and the chain ends at the consumer. In between there are middlemen and economic centres. Products are bought from the farmer by middlemen at a low price and sold to economic centres whilst retaining a considerable profit. Thereafter the economic centre sells to the next middlemen and finally the product is sold to the consumer. At every step, there is a price increment as the middlemen and venders reap profits and the price increase and transportation costs are passed into the consumer. Ultimately, the consumer has to buy the product at a price which is very much higher than the amount paid to the farmer. Reduction of the number of

middlemen, reduction of transportation costs and wastage can minimize this gap in price between the farmer and the consumer.

To achieve this objectives of this article is building a cost minimize model which creates a suitable method for delivering vegetables and fruits from the Dambulla major hub through its minor hubs to the outlets in the provinces.In this article the final goal is to encourage the young logisticians to build an Internet Based System to solve this mathematical problem. Researchers can use Mathematical LINGO Software in two ways for two major parts of this system.

I encourage and wish to guide some of researches to develop the said mathematical model in following way

1) Use the Hamiltonian Cycle to find the major paths to delivering vegetables and fruits from the Dambulla major hub to each warehouse in every district in Sri Lanka.

Lingo Code to Solve Warehouse Vendors Problem.

```
MODEL:
! A 50 Warehouse 75 Vendor Transportation Problem;

SETS:
! Import warehouses and vendors from Excel;
   WAREHOUSES: CAPACITY;
   VENDORS   : DEMAND;
LINKS( WAREHOUSES, VENDORS): COST, VOLUME;
ENDSETS

! The objective;
   MIN = @SUM( LINKS( I, J):
COST( I, J) * VOLUME( I, J));

! The demand constraints;
@FOR( VENDORS( J):
@SUM( WAREHOUSES( I): VOLUME( I, J)) = DEMAND( J));

! The capacity constraints;
@FOR( WAREHOUSES( I):
@SUM( VENDORS( J): VOLUME( I, J)) <= CAPACITY( I));
DATA:

! Import the data from Excel;
   WAREHOUSES, VENDORS, CAPACITY, DEMAND, COST =
@OLE( 'F:\Program Files\Databases\TRANSPOTATION.XLS',
     'WAREHOUSES', ' VENDORS', 'CAPACITY',
      'DEMAND', 'COST');

! Export the solution back to Excel;
@OLE( 'F:\Program Files Databases\TRANSPOTATION.XLS',
    'VOLUME') = VOLUME;
ENDDATA
END
```

2) Using Excel, Access and Java software to build a computer based system which delineates the manner of delivering all vegetables and fruits to all vendors from all warehouses in Sri Lanka.

Further I recommended to develop a mathematical linear programming algorithm and computer base system for Marketing Department Logistics (MDL) Ltd, which is tailor-made for the distribution in the Dambulla economic centre Sri Lanka, in order to provide are efficient and streamlined customer service in a cost effective way.



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THE TRUTH BEHIND 3PL IN SRI LANKA: A GLIMPSE IN TO THE HUMANITARIAN ASPECT OF 3PL

> NO MATTER WHAT YOU DO, DO IT WITH PASSION AND COMMITMENT AND EVERYTHING ELSE WILL FALL INTO PLACE.





Mr. Ruwan Waidyaratne

Managing Director
Hayleys Advantis

Mr. Ruwan Waidyaratne is the Managing Director of Hayleys Advantis Limited, the transportation and Logistics arm of Hayleys PLC. As a pre-eminent figure in the logistics industry in Sri Lanka, Mr. Waidyaratne has made significant contributions to the industry for over three decades. He is also a Board Director of Hayleys PLC, a diversified blue-chip conglomerate operating in multiple countries. He is also the current Chairman of the Ceylon Association of Shipping Agents, a former Chairman and Member of the Advisory Council of the Sri Lanka Freight Forwarders' Association and a Member of the Steering Committee on Ports, Shipping, Aviation and Logistics affiliated to the Ceylon Chamber of Commerce.

Q Third Party Logistics (3PL) firms either provide a single service or a wide bundle of services which are capable of managing the entire supply chain. How do you see the level of 3PL industry in Sri Lanka?

3PL is a very dynamic industry with many inherent complexities. Only a handful of 3PL providers in Sri Lanka provide a complete logistics solution for customers. In our case, we handle logistics for many multinational companies operating in the country here and in overseas locations like Myanmar, India, Indonesia and many others. By working with this diverse client base and by operating in multiple countries, we have gathered a lot of experience and developed our expertise in providing innovative solutions for complex requirements.

We provide complete end-to-end logistics solutions for our clients thereby creating a lot of value to the client's businesses. That is part and parcel of third party logistics. In reality, there are only a handful of people who offer actual 3PL services in Sri Lanka.

Q What is the uniqueness of your company when compared to other 3PL service providers in the field of Logistics in Sri Lanka?

I believe the end-to-end portfolio of services that we offer is what really sets us apart from our competition. Advantis is the largest logistics service provider in Sri Lanka by far and we are not JUST a 3PL service provider. We cover a gamut of logistics services covering air, land and sea including 3PL, Project Logistics, Oil & Gas Logistics, Free Zone Logistics, International Freight Management, Inland Container Depot Operations, Logistics Engineering, Marine Services and many more. Due to the availability of all these services under one Group, we have always been agile in our response to our client's growing wants and needs.

Our people and culture are also factors that add to our strength and agility. Our people are one of the strongest assets of Advantis and they have always built close relationships with our partners and clients enabling us to understand their operations giving purpose to what we do as a logistics service provider. This enables us to be agile and customize solutions in order to not just satisfy customers but to offer them complete peace of mind whilst we take care of their Logistics.

Q Nowadays, delighting customers rather than satisfying is the key trend of any business. What are your recommendations to enhance the value-added services provided by 3PL firms?



3PL is all about the right partnerships. You cannot work individually and try to delight a client. You need to work in very close collaboration with the clients, if your intention is to create value for them. Because at the end of the day, it is about integrating your services into their complete supply chain.

First of all, you need to understand your customers' expectations as well as the expectations of their customers', before designing a solution. This is a process that we continuously work on at Advantis, as we are always looking to make it more cost effective and more productive. Creating value single handedly is quite impossible. Thus, working in collaboration is absolutely necessary when it comes to 3PL businesses.

It's not about just movement of goods, it's about analyzing data and to do that you need the right technology on your side.





In delivering optimal solutions not only do you need to collaborate with the customers, but you also need to work very closely with the suppliers or service providers and drive overall value rather than focusing on cutting corners. When you collaborate your strengths, you can achieve synergies that will bring more value to your customers and ultimately generate more value to your company as well.

Q Heading towards e-logistics is the current trend in Sri Lanka as well as other countries in the world. How has this trend influenced the 3PL industry of our country?

E-commerce in Sri Lanka is still at a very primitive stage, but of course there's a lot of opportunities in the sector. Consumers are looking more and more towards convenience as opposed to cost, and with online payment gateways becoming more secure, Sri Lankans are also moving more towards online purchases as opposed to walking into shops.

But one area that e-commerce solution providers have not mastered yet, is the logistics aspect of the solution concerning both fulfillment and last mile delivery. I believe there's room for improvement in this area and 3PL players have a huge opportunity to bridge the gap. With our expertise we can work on improving fulfillment services and last mile delivery which can make a significant change in e-commerce in Sri Lanka.

Q What do you think about the role of logistics service providers in humanitarian relief operations and the company's contribution towards assessing disaster relief activities in Sri Lanka?

At the moment the Logistics service providers in Sri Lanka including Advantis are completely disengaged from humanitarian relief operations. I feel this is mostly due to the lack of structure in the humanitarian relief efforts in the country. As a responsible company in the field of logistics, we have always tried to do our part by assisting relief efforts through the provision of lorries etc. for transportation of aid when the need arises. However this has not been done in a structured manner in the past and we can certainly do more.

Advantis recently unveiled a purpose statement, which is to Inspire, Connect and Enrich… i.e. to provide inspired solutions to our clients and partners, connect with one another & build stronger relationships and always work towards enriching those around us. With this at heart we want to be more engaged with our communities in future and assisting in such relief efforts will also be part of this journey. We will be looking at how we can engage in humanitarian logistics in a more structured manner in future, however this will be more as a CSR initiative as opposed to a new line of business.

Q If you are to operate in the field of humanitarian Logistics as a logistics service provider in Sri Lanka, according to your opinion what challenges and issues will you face?

The lack of structure in disaster relief and response in Sri Lanka has created an environment where responsible organizations carry out their social responsibility initiatives in an ad hoc basis. Sri Lanka as a nation is blessed to have people who step up and do things to help each other. We are always truly united as a nation when a disaster hits and this comes quite naturally to us. But this is not the ideal scenario.

I believe we as the private sector can do a lot more and as logistics companies we can definitely be more involved. However without a proper structured mechanism to address relief efforts it won't be easy for the private sector to dedicate a lot of time and effort. So the challenge we have to overcome is in getting the structure right, and from there onwards we can work on a collaborative public private partnership for disaster relief which will give us a better platform to be more

involved in humanitarian logistics.

Q As per your view what kind of strategic approach is needed to address these issues?

In addressing these issues we need authorities from the Government to establish a proper regulatory framework that enables the private sector to work together with them as well as other support groups. This will help us plan ahead and be more proactive than being reactive to disasters as we are now. The Government has to take a leadership role in making this a reality.

I can say with authority that the logistics potential in our country is truly underutilized in situations like these and we certainly can do a lot more with proper planning. So in order for us to take advantage of the full potential of our service capability, I believe the disaster relief efforts need to be more thought through.

At Advantis we have been looking at the probability of setting up a task force to address such disasters purely as a CSR initiative. Here we can take advantage of our widespread warehousing network to store relief items and deploy them to the affected areas using our extensive transportation network. However this is still in the planning stage.

Q What are your suggestions on further development of contribution of 3PL towards humanitarian logistics in Sri Lanka?

As a logistics service provider with a conscience we are truly concerned about being socially responsible in everything we do. Knowing that we have the capability to take on humanitarian logistics to serve our country, we would like to advocate the importance of a structured system to incorporate all support groups in disaster relief and response operations. It is also important to consolidate all service providers into a registry enabling the parties who are willing and able to support such relief efforts to be contacted immediately when a disaster strikes, which can positively influence the relief efforts.

I believe the Disaster Management Center and others who work on projects of this nature can truly take advantage of the logistics networks we have in the country to support their efforts and dispatch aid in a more structured manner. For exampleour company's expertise in fulfillment and last mile delivery can be exploited in the humanitarian logistics framework in making space for the relevant storage and other auxiliary activities.

Q In day to day logistics operations, transportation and distribution of cargo needs to be carried out efficiently and effectively to provide a better service to the customers. How do you manage your fleet and transport networks to facilitate this service?

Right now, we work with state of the art transport management systems with GPS tracking that allows us to know exactly where each vehicle is at all times. Those days when you send a truck out of your premises, you have no clue about its location until it reaches the destination. But now with the tracking systems in place we know exactly where they are.

We have gone the extra mile to give that visibility to our clients as well, so that they know exactly where their goods are. Giving that visibility enables us to earn their trust faster and create a win-win situation. It also ensures that the distribution is carried out more efficiently.

Another thing is using the Uber model for trucking operations. There are plenty of occasions where our trucks are sent out with goods but come back empty. If you can create visibility through a network on trucks that are available and which routes they will be traveling on, there may be others who could utilize these empty trucks to transport goods. This once again



adds a revenue stream for the company. This also reduces fuel consumption on a national scale, as a separate vehicle will not have to be sent to collect those goods. If this can be practiced, it will pave the way for a more sustainable delivery system which also has a reduced carbon footprint.

Q The geographical locations of distribution centers are critical to speed up the delivery process of cargo to their destination. As per your view how should we determine the best location to fulfill this requirement?

Well this will change from client to client. We generally conduct a study to identify the center of gravity for each client based on their movements, prior to deciding the distribution base. So, you need to get data to understand the movements and to understand the delivery dates, timelines etc. For example, if the center of gravity is Kurunegala, you need to identify the most efficient routes by setting up a hub close to that location. It's not about just movement of goods, it's about analyzing data and to do that you need the right technology on your side.

One thing we've learned by working with multinationals, is to find better ways of doing what we have been doing for years. Innovation is key to being on top of the logistics game and multinationals always push us to do better and add more value at lower cost. They have challenged us to do much more than what we thought was possible, but they have also been by our side to guide us with their knowledge of global practices. One thing you need to always remember is that you cannot clap with one hand in logistics. As I mentioned earlier, to create a successful supply chain we need the support of the customer as well as the service provider. So even in identifying the best distribution hub for a particular client, you need to consult them and get their input prior to designing the route plan.

Q As a professional of a leading company in this industry, what are the bottlenecks that you have faced when dealing with 3PL activities?

Manpower is one of the biggest issues we have had in the past and continue to have even today. I see that a lot of youngsters don't see logistics as an interesting field to work in. They don't seem to appreciate the value of it, though it's a very important area of business. If you actually look at it, the whole country runs with logistics. If all logistics networks were to stop operating, the entire country will come to a standstill. But the importance of this job role has not received enough prominence in the past. Now we see the situation improving a bit, with more students registering for logistics related courses, which is a good sign for our industry. People showing interest is a good thing, but the issue is in finding people with the right set of skills. Even at the lowest level, finding labor is quite challenging. Because there are more interesting jobs in hotels, tourism, construction etc. and we see that more people are moving into those.

Skilled a logistician is a huge bottleneck at the moment. But I do see this improving in the future.

However many who get into the industry develop their skills to become experts in this field. For example when it comes to warehouse construction etc. we have not hired people from other countries, simply because we have enough expertise within Advantis itself.

The entry into a logistics career can be seen as a huge bottleneck at the moment, but I do see this improving in the future.

Q Young people always follow role models in the industry. So, as an experienced professional role model, what is your advice to those who seek opportunities in this field?

In my opinion, logistics is a growing industry which is going to play a big role in Sri Lanka. As you would know the government is also making significant investments towards establishing Sri Lanka as a logistics hub. So, I would encourage anybody to do logistics and supply chain studies. We need specialists who are qualified in the field, but it is always good to have the practical side as well, to give you a good balance when entering the corporate world.

Apart from following related courses I would also advice any student to follow an internship programme. At Advantis, we offer some structured internship programmes which would really allow you to get a better understanding of the industry before you enter it as an employee. This can help propel your career as a logistician to greater heights. There is so much of potential to grow in this industry, if you give it the right focus and commitment.

VITALITY OF WAREHOUSING CONSIDERATIONS FOR ORGANIZATIONS IN HUMANITARIAN LOGISTICS



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Post-war context of Sri Lanka is frequently battered by the natural disasters born in the forms of drought, flood, landslide and cyclone. One such example raised from the recent past of the country, in 2017 United Nations reported more than 500,000 people affected from floods in 7 districts and out of them 150,000 were women and girls at reproductive age, 189,000 were children and over 3,400 were temporarily displaced in 73 locations. This elevated hazard profile of Sri Lanka urge speedy and effective humanitarian programmes to distribute necessities such as food, healthcare items, sheltering equipment, water and sanitary items to relief the victims of the disaster. Logistics service providing institutions will become key players in the humanitarian field as they will liaise with the government and donor agencies when they respond to major disasters. The type and intensity of the disaster, variability of the needs of the affected parties impose multiple challenge of those institutions to decide upon the items included and reachability of humanitarian aids. This article pays attention about how three critical warehousing concerns play a pivotal role in fulfilling humanitarian needs by the firms in the humanitarian logistics field.

Location identification: Unpredictability of the nature and type of the disaster cause multiple complications in the need assessments of people who are reeling from the tragedy. As a result, humanitarian logistics greatly differ from business logistics in terms of its specialization in organizing the delivery and warehousing of supplies during natural disasters or complex emergencies to the affected area and people. In humanitarian logistics, procurement procedures are often difficult to enforce by the firms as their intention is to provide quicker service delivery. Consequently, integrity of transactions might be lacking, tracking and tracing deliveries is still fragmented with frequent interruptions in technology, difficulty in tracking and tracing prices paid, transit times, or quantities received / purchased. These multiple practical issues might exist as it deals with instant response to emergencies. Further, Warehousing aspects including location identification, stock management, picking and assembling the supplies, coordinating and dispatch deliveries would become significantly volatile due to these procurement issues as well as the firms' core performance objective of swift response in disaster recovery activities. Setting up and operationalizing a warehouse in a centralized place but in a safe and non-affected area by the disaster prior to its occurrence often recognize as a "pre-positioned" warehouse. A pre-positioned warehouse would be ideal to maximize the effectiveness of humanitarian aid supply chain. The warehouses of a firm in humanitarian logistics often are temporary facilities than regular facilities under business logistics. In business logistics warehouse location would be in closest proximity to factories,

distribution centres and customers but a warehouse in relief distribution system is a centralized location which would be easily accessible for the collection points of commodities, transfer depots for commodities and demand points or beneficiaries of commodities. Ground transport network of the warehouse location also revealed to play a major role to achieve a high-performance disaster response after an event.

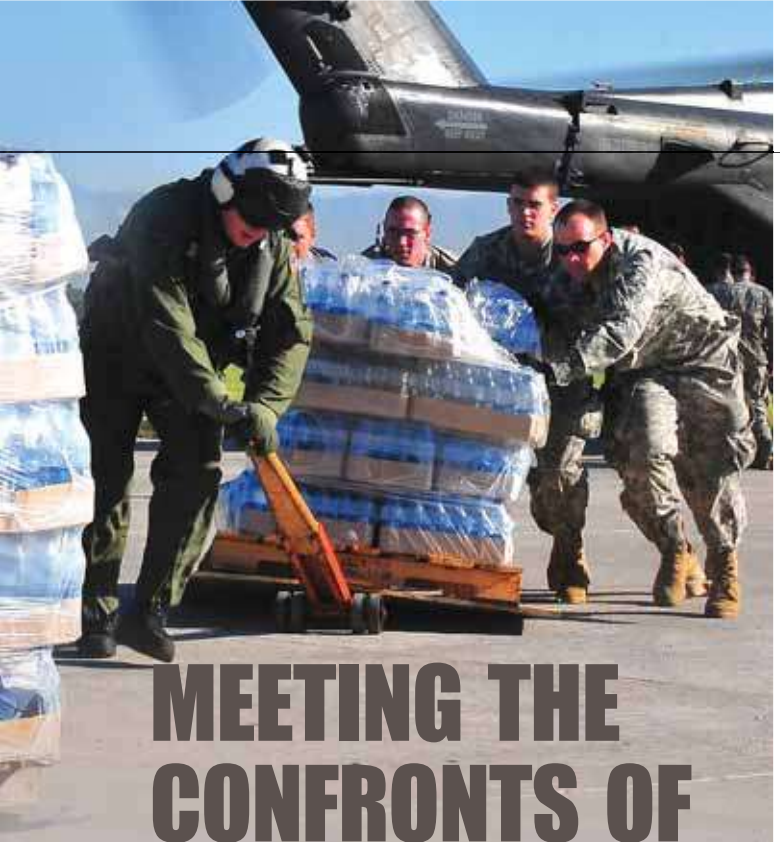
Functional aspects of a warehouse: in humanitarian logistics often focus on sorting, staging, moving commodities from donor agencies to affected community. As a partial fulfillment to achieve warehouse operational excellence it is highly essential to establish a system of prioritizing various relief inputs ordered from different disaster affected locations. Considerable amount of inventory items in humanitarian aid such as pharmaceutical drugs, basic food items and water are highly perishable in nature. One of the most common complaints pledged by victims is the relief items have already expired by the time they reached to them. Humanitarian organizations are concern on keeping maximum stock of relief items and cautious to avoid stock out situations to support the victims soon after the disaster. In such condition, firms have to strike a balance between the controls over the dead stock and replenishment lead-times of those perishable items in order to provide a quality aid delivery.

Communication and coordination of the warehouses: with other advanced technology like Virtual Warehouse Management System now entertain real time decision making, would be useful in improving operational efficiency of warehouses in humanitarian logistics. A typical example of one such initiative in Sri Lanka Sahana project launched in 2012 by the Disaster Management Center IT crew could is an effort of real-time visibility of disaster relief items to improve monitoring and tracking. New technology aided warehouse management system implementation would enhance the pre-positioning capacity of relief stock. As the technology would uplift the capability of stock management within the warehouse which enable to eliminate ad-hoc disaster response to more systematic emergency preparedness.

Reflections of firm's warehousing aspect in humanitarian logistics : Warehouse location selection and stock management effort involves the tradeoff among speed, cost, and accuracy with respect to the types of goods that are delivered for a firm in a disaster-response operation. Temporary distribution centers, floating stock locations, mobile storage facilities would enhance the speed of response to disaster relief activities but will greatly deteriorate the accuracy and increase the operational cost of deliveries than permanent storage locations as in traditional business logistics practices.

Many global humanitarian logistics service providers such as Red Cross, UNICEF have now explored the need to invest in emergency infrastructure by identifying alternative warehouse locations to improve the efficiency of their service delivery which will be compensated with the cost of developing such facilities. An uninterrupted humanitarian interventions during the disaster recovery is greatly essential to satisfy and to maintain sustainable relationship with their donor agencies. However this warehouse facility building and maintenance has become a long term venture harness its operational capacity in a disaster prone environment with the limited availability of capital funds. The firms found alternative mechanisms of warehousing ownership like joint warehousing relationship building and utilizing common services under the state's sponsorship. In the Sri Lankan setting non state firms have the potential of thinking the ways of integrating their mobile storage warehouse facility requirement with available public locations in disaster prone areas typically schools, religious places, provincial councils etc. At present they station on those public places as temporary distribution centers during the post disaster time period. Preplanning and recognition of alternative warehouse locations is a vital aspect to provide a better service during emergencies since it permeates prior discussion and negotiations with gate keeping institutions in the process of obtaining authority to access those premises.

Pre-positioning a warehouse with prepositioned inventory is the most desirable but least implemented strategy due to the uncertainties of disaster occurrences, uncertain demand for humanitarian aids, limited capital budgets, and operational cost and potential IT breakdowns during a disaster. At the time of humanitarian interventions prepositioned stock of humanitarian aid would consider as the best inventory management practice for a more efficient and effective intervention. Yet, anticipated stock of perishable items develop the risk of delivering expired items to the affected parties. In order to avoid the drop in trust and faith over the humanitarian aid support and assistance, most of the global firms implement communication technology driven warehouse management system. These systems are useful to forecast, monitor and sort the stock according to their replenishment lead-time and expiry dates. With the sophistication in those systems facilitates enable to integrate the donor agencies with the warehouse locations while coordinating with other floating locations. This system increases the operational efficiency of the warehouse by helping to overcome the challenges imposed to implement a pre-positioned warehouse strategy. In conclusion it improves the confidence of the donor agencies on the quicker and high quality service during large scale on-set disasters.



MEETING THE CONFRONTS OF PREPARING AND RESPONDING TO DISASTERS THROUGH PROPER HUMANITARIAN LOGISTICS OPERATIONS



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Sri Lanka has faced few severe disasters during the past few years, where we experienced floods during monsoon rains and severe droughts in certain areas. The flood in 2017 was able to grab the attention of the world due to the severity. This flood affected many districts, killed around two hundred people and around one hundred people were documented as missing. One hundred thousand people were affected by the flood and many have lost their houses and belongings. Landslides also occurred due to the floods in many areas of Sri Lanka.

Sri Lanka have faced a similar flood situation in the year 2016, as a result of the monsoon rains. Therefore, when the floods occurred in 2017, Sri Lanka had a better disaster response system. After adopting from the shortcomings and challenges during the previous disaster, the disaster relief activities were conducted smoothly by the relevant parties.

The Sri Lankan military forces play a significant role in disaster relief activities during disaster situations. They can access to most of the places than the general-public, as they are the tri-forces that cover land, water and air in Sri Lanka. The tri-forces were able to distribute the food, water and necessary items to the people who were affected by the floods. The forces have a well-developed logistics system which allows them to have access to every place within the country. In military, logistics is defined as the science of planning and carrying out the movement and maintenance of armed forces.

One of the main reasons behind the floods is not having a properly maintained drainage systems in Sri Lanka. As Sri Lanka has faced floods during the past years the authorities can take necessary measures to maintain the drainage systems in a standard manner. Maintaining the drainage systems island wide will have a significant impact on the floods, therefore, the responsible authorities can initiate shramadana campaigns to clean the drainage systems as a preliminary step to mitigate the flood situations. Inappropriate methods of garbage dumping is the main reason to the floods to occur. As the dumped garbage blocks the drainage systems it does not allow the water to flow smoothly which ultimately results in floods during monsoons.

Not only floods, Sri Lanka also faced droughts that affected many districts in Sri Lanka. Suggestions can be provided as a solution to these drought situations, to start minor projects to educate them to collect the rain water during the rainy seasons and use them during the drought seasons. Gathering rain water and

encouraging the people to use the saved water for cultivation purposes, will allow them to maintain their life styles without breakdowns. These projects can be initiated from the schools in drought prone areas. Major projects such as constructing wells can be introduced to assure the well-being of the people living in the drought prone areas.

Fire situations can also be defined as a disaster as it disrupts the functioning of the society and it exceeds the ability of the affected society to cope using its own resources. Therefore, proper installation of fire extinguishers and conducting fire drills can be done in an organizational level to mitigate the possible risks. The organizations can also enforce separate first aid and firefighting teams after providing them with proper education and training.

The government along with media and other organizations can arrange a proper disaster communication channel that gives access to the real time information of the disasters, to the public. This will help to reduce the possible risks associated with people getting killed and being documented as missing during disasters.





THERE IS NOTHING MORE SALIENT THAN THE IMMEDIATE RESPONSE

> REAL LOGISTICS COME TO ACTION SOON AFTER THE RESCUE OPERATION AS TO PROVIDE AFFECTED PEOPLE WITH BASIC REQUIREMENTS





Air Vice Marshal
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WWV, RWP, RSP, USP
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Director Logistics
Sri Lanka Air Force

Air Vice Marshal Sagara Kotakadeniya is presently serving as the Director Logistics at the Sri Lanka Air Force Head Quarters. He has served in various staff appointments including Staff Officer Air Operation 1, Staff Officer (Air) Joint Operations Command and the Chief Instructor of the Air Wing at Defence Services Command and Staff College. He has commanded No. 07 Squadron and is a well recognized VVIP rated pilot with over 4500 flying hours. Further he has commanded Sri Lanka Air Force Academy China Bay, Sri Lanka Air Force Base Katunayake, Rathmalana, Anuradhapura, Vauniya and Hingurakgoda. Moreover, he has contributed in past humanitarian operations actively as an Operational Pilot and as well as a Logistician.

Q Can you briefly explain the background of Sri Lanka Air Force and the Directorate of Logistics?

The vision of the Sri Lanka Air Force is "Ensuring National Security through effective employment of air power". The main core competencies of the Air Force are air defensive and air offensive, which is mainly to detect, identify and destroy any hostile aircraft getting airborne within Sri Lanka or any hostile aircraft that attempts to penetrate Sri Lanka air space. Other core competencies includes conducting of surveillance and reconnaissance operations over Sri Lanka territory, electronic warfare, air strikes during day or night in all weather conditions, air transportation and force protection.

Apart from that we also engage in rescue operations and transport VIP's and VVIP's within the region and also involve in cyber space warfare. When it comes to the command structure it includes Commander of Air Force, Chief of Staff, Deputy Chief of Staff, and respective Directors who are responsible for the smooth functioning in every department. The Directorate of Logistics has been established in the Sri Lanka Air force with the mission to meet logistics necessities of SLAF in all military and non-military operations of the nation, effectively and efficiently whilst preserving the core values of integrity, loyalty, knowledge, transparency and rapid response. In this regard, the Directorate of Logistics is managing the flow of resources, between the point of origin and the point of destination within the range of "Pin to Aircraft".

Q What is the role of Sri Lanka Air Force in airborne Logistics activities?

The main role of airborne logistics activities is the discipline of planning and carrying out the movement and maintenance of military forces which deals with design, development, acquisition, storage, distribution, maintenance, evacuation and disposition of materiel. Apart from that transport of personnel and disposition of facilities, acquisition or furnishing of services, medical and health service support are being playing a pivotal role in operational logistics activities. Whatever operation is being conducted in the Air Force, there will be a strong logistics contribution. From point of purchasing of an aircraft and acquiring of spares to aircraft to get airborne, certain procedures are to be adhered. Admiration of public money involves to purchasing of an aircraft to purchasing of trivial stuff of the right quality, in the right quantity, at the right price, from the right source and at the right time. Procurement of goods and services required by SLAF are to be carried out efficiently and economically for the sustenance of optimum operational efficiency in accordance with the Government procurement guidelines. Purchasing and procurement should go hand in hand with the help of proper accounting and manifesting. Everything is accountable and we can not execute the operations as our own wish. We have to follow up with documents. For an example, an aircraft to get airborne you might only see an aircraft getting airborne from one place to another. Pilot get into an aircraft, start up the machine and fly. Besides, behind this machine there are number of tasks taking place. Technical aspect is on another arm and logistical aspect is on another very strong arm. Loading, unloading, refuelling and how the aircraft get equipped to get airborne with lubricants, spares, fuel in all these areas logistics is involved. Loading of an aircraft is based on identifying the Centre of gravity of the aircraft and the load distribution. Load masters should calculate and load the aircraft without compromising safety. In addition, we need to feed our people when they are airborne. It is a very salient point in logistics where many people do not address under logistical operations. To reach the food to the destination logistical process is essential. If the men are with empty belly at the time of aircraft is airborne the performance of the Airmen will be deteriorated, and we will not fulfil in our mission.



Q What is the role of Air Force in disaster management and special Humanitarian Logistics activities in Sri Lanka?

As we all aware, Air Force is one of the first respondents to any type of relief operation within a single call. Air Force has the capability of delivering the disaster relief items to any part of the island and capable of approaching the destination within very short time. It does not matter time, space, whatever and where ever, we are geared to reach any destination even at night. There are certain stages of relief operations in any kind of a disaster. First of all, rescue of victim personnel is to be done as the immediate relief and rescue operation. Secondly, we fulfil their basic requirements such as shelters, food and other essentials. At the post disaster management stage, rehabilitation of the victims is considered. In all these three phases logistics is involved in very much handy. It is a continuous process where we start with rescuing them and accommodating them to a better place.

Execution of our air doctrine through the Air Power is under a very strong segment called air supply operations. It is focused on how to supply from theatre to theatre during any type of disaster. In this case there are two components being addressed called as inter and intra. As an example if we air lift the cargo from Rathmalana to Palaly this entire movement is called as





"inter'' which is conducted between two theatres. At the same time using helicopters to fly within the same theatre to distribute relief items is known as "intra" theatre.

Q What are the best practices that Sri Lankan Air Force has to encounter related to relief and rescue missions in terms of humanitarian logistics?

There is a comprehensive logistics business under these operations where we need to start with procurement. In a disaster situation many institutions support us by giving the urgent needs required by the vulnerabilities. Real logistics come to action soon after the rescue operation as to provide affected people with basic requirements. You might feel that we just take the stuff and distribute to the affected people. Besides, there is a huge logistical process running behind. We take over those food parcels and subject them into manifest, weigh, load, pack and repack and make them waterproof to prevent from spillage. Those are real situations where operational logistics that come to action. The biggest advantage what Air force has in these disaster relief operations is the reach and range capability. We can reach to any disaster location within a less time period and that is the main successful behind our operations.

Entire rescue mission can be divided into three categories such as immediate response, evacuation place and post disaster. As I mentioned earlier we are the first respondents of any kind of disaster, we study the situation and do the execution part using air power. We rescue the people and bring them to the second stage for immediate relief with air supply with our different types of lifting capabilities and provide shelter in tenets as soon as possible. When conducting all these operations certain steps should be adhered with documents as these are accountable.

Sri Lanka Air Force Air Ambulance Medical Evacuation (Medevac) with an experienced medical team is ready to airlift and provide with medical care for injured personnel during a disaster who require urgent transportation to a hospital at any given moment. When it comes to the post disaster activities Air Force is not expected to do that because the air operations are very expensive. We are there to do an immediate response and we will immediately react to the situation and handover the post management to the local authorities to carry on the task as we have concluded most difficult part of the operation.

Q What are the challenges faced in aerial delivery related to Humanitarian Logistics activities?

There are many challenges to be faced in any type of disaster. Basically, limitation of Airpower such as geographical setting, weather, limited payload, and sensitivity to technology and cost can be highlighted as major challenges. I am talking as an operation pilot as well as a logistician with experience. During the rescue stage, rescuing certain number of people is not enough. We need to understand the real requirement of the victims and act accordingly. Therefore, communication is a challenge. For instance, to know the exact number of the people who are affected and deliver what they actually want. For an example as soon as the disaster happens there is no requirement to distribute raw dhal to victims. Instead of that we should provide them with cooked meals. There is limited access in every disaster relief. Therefore, we need to forecast beforehand the types of things that the affected people require. Water is a very mandatory requirement in any disaster specially in

> *Awareness on the contemporary situation is important for a Logistician to exactly know what they want and adhere to the needs of them to do the air supply*

floods. In addition to that cloths and milk powder for kids is essential.

The immediate medical attention is also required. If you send antibiotic injections to the location it is unproductive and useless. Subsequent services should be provided after the proper medical attention. We airlift people and distribute goods in areas where others cannot reach by ground. We airlift medical team of doctors as well as medicine. Medicine should be purchased and kept in advance and what need to be bought should be totally evaluated. Awareness on the contemporary situation is important for a logistician to exactly know what they want and adhere to the needs of them to do the air supply.

What are strategies followed by Air Force to improve air capabilities in supporting Humanitarian Logistics?

To face any disaster, we have our standard operating procedures. We do not wait until a disaster comes till the last moment. When it is raining heavily we forecast floods and be prepared for any eventuality. We always monitor the raining patterns it maybe in two of any monsoons, south western and north eastern. We have analysed minors and depressions which will affect in raining to any type of disaster. Because of the nature of airpower and its dependency on the weather and other external factors, there is always an element of uncertainty of its availability at the time it is required so our constant readiness is conspicuous. Therefore, we keep surplus of stock in different places in order to cater the expected demand. We keep our aircrafts ready at any moment that needs our action which sometimes we maintain a stock in air base also. All kind of rescue equipment are available in the aircraft including dinghies, ropes and essentially eight-man team trained under special force to do any kind of rescue at any given moment.

When there are cyclones, earth slips and floods we have the ability to gather information through our aerial reconnaissance platforms. We launch missions in a very systematic way that we distribute stuff in correct location otherwise it is a waste in every aspect. We always have our medical teams ready with special ambulance team which can accommodate for two critical patients with all required medical equipment. We don't hesitate to rescue a person in any location. We have to say that whatever we do is for the betterment of the displaced people and the society as a whole. Our only desire is to rescue victims from the disutility and provide them concession and comfort in order to abstain from the prevailing condition.

Do you think that Humanitarian Logistics in Sri Lanka is improving with the global trends?

When it comes to global trends if we compare with other Air Forces how they deliver stuff, they mostly deliver them through parachutes in a hostile terrain when there is a conflict. In peaceful environment there are different tactics being used to accomplish the said mission. When considering how the global trends apply to Sri Lankan context, we too carry out aircraft modifications and technical advancements to improve our capabilities of delivering goods in humanitarian relief operations. In the world, to increase the range and endurance of certain aircrafts a special function called air to air refuelling is being used to enhance the range of helicopters. These helicopters can be refuelled in the air from air to air refuelling tankers. As refuelling is a logistical activity it enhances the operational efficiency as well.







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ENHANCEMENT OF DISASTER PREPAREDNESS AND RESPONSE CAPABILITIES THROUGH PROPER HUMANITARIAN LOGISTICS OPERATIONS



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Our globe has faced thousands of disasters from the past and the same condition will be continued to the future. Disasters cannot be stooped but their worse effects can be minimized and can face disasters successfully by preparing and responding to disasters through proper humanitarian logistics operations. Humanitarian logistics go hand by hand with the corporate logistics.

Humanitarian Logistics operations refer to a combination of both processes and systems involved in mobilizing people, resources skills and knowledge to help vulnerable people affected by disasters and complex emergencies. Humanitarian logistics operations perform a range of activities including procurement, transportation, distribution, information management and communication which serves as the key components of a successful humanitarian operation. The significance of a proper humanitarian relief operation in the process of meeting the challenges of preparing and responding to disasters is identified with several important aspects. These aspects strengthen the humanitarian relief supply chain in order to meet the challenges in preparing and responding to disasters.

The scale and the scope of a disaster highly influence humanitarian operation in disaster response and preparedness. In a humanitarian operation specific needs and the range of after effect vary from disaster to disaster. At that point disaster response process faces a challenge to implement the most suitable strategy which suits the situation.

Another important challenging area in the disaster respond and preparedness process is poor management of information and communication. Information management and communication management go hand in hand because, in order to make success a humanitarian operation a strong link should maintained between information and the communication. First accurate information should be collected and then the collected information should be communicated to the people in charge on functioning the humanitarian operation. The stronger the above link is maintained the more success is gained in the disaster response and preparedness process.

Lack of institutional learning over time is another main challenge identified in the disaster response and preparedness process. Simply this means the lack of proper humanitarian logistics knowledge. In order to work out a proper logistics operation a good theoretical and practical knowledge on humanitarian logistics should be there. For an instance, the parties who are willing to engage in the disaster response and



Figure 1: Supply chain for humanitarian relief

preparedness process should have knowledge and capabilities to handle and work with the automated processes like software rather than working with the manual processes.

Ability to identify, develop and exploit the core capabilities cause for the efficiency and effectiveness of humanitarian operations in order to meet the challenges successfully in the process of disaster respond and preparedness. While meeting the challenges of disaster respond and preparedness proper humanitarian logistics operations serve as a bridge between disaster preparedness and response, between procurement and distribution and between the point of distribution and the point of consumption. Proper humanitarian logistics operations encompass the effectiveness and the speed of response for basic requirements of the victims such as health, food, water, shelter and sanitation which are considered as the most expensive components of the relief mission. Another crucial aspect is information management and proper communication. For the success of a proper humanitarian logistics operation it is important to manage the flow of information with the corrective measures. Strong information technology systems and speed communication systems are crucial in this aspect.

Core capabilities in humanitarian operations also lead for the success of meeting the challenges in preparing and responding to disasters. In order to achieve the core capabilities in humanitarian operations it is important to discount the capabilities which might be specific to the main service of the humanitarian operation. Generally, the phases of the humanitarian operations are categorized in terms of preparedness, relief response, recovery and development. In the process of preparedness, it is highly focused on the mitigating or completely avoiding the negative consequences of the disasters. Therefore, in the sense of disaster preparedness sharing the information and the capabilities among humanitarian logistics organizations and collaboration plays a major role.

The following conclusion has been developed by analyzing the above information in order to summarize and judge the point: Meeting the challenges of preparing and responding to disasters through proper humanitarian logistics operations. Humanitarian logistics operations have the opportunity to increase its contribution to meet the challenges of the disaster response and preparedness process. Turing and corrective actions which can be taken to uplift the disaster relief process can be recognized by addressing the pain point, the challenges described above.

This cannot be done individually. This is a process and it is combination of knowledge management, technology, education, information management, communication management and the corrective measures. Proper humanitarian logistics operations can be uplifted by improving the insight to the operations, learning internally and with a clear strategic focus. Therefore, a proper humanitarian logistics operation which include the above components will be able to meet the successfully in disaster response and preparedness.



CIVILIAN PROTECTION IN SRI LANKA 2009 UNDER THE THREAT OF WAR



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Between January and May 2009, Sri Lanka was heavily discussed in internationally and it was a debated case of civilian protection. As many as 200,000 civilians thought to have been trapped by the Rebel Liberation Tigers of Tamil Eelam (LTTE). Other than the natural disasters such as Tsunami and the flood, this ethnic conflict can be considered as one of the most dangerous man-made tragedy, where humanitarian logistics played a vital role.

The activities of ''planning, implementing and controlling the efficient, cost-effective flow of and storage of goods and materials as well as related information, from point of origin to point of consumption for the purpose of alleviating the suffering of vulnerable people'' are known as ''humanitarian logistics''. Briefly, ''for humanitarians, logistics is the processes and systems involved in mobilizing people, resources, skills and knowledge to help vulnerable people affected by disaster''.

The armed forces, International Committee of Red Cross (ICRC), and also the World Food Programme (WFP) engaged on supplying their resources, skills and the knowledge on winning this mission of rescuing civilians.

For three decades, the LTTE unleashed a brutal campaign of terror and violence in Sri Lanka that resulted in the deaths of thousands of Sri Lankans in all ethnicities. During these ruthless activities of LTTE, Sri Lankan government tried to engage peace talks with LTTE in several times. But all the attempts were failed. The LTTE collapsed all the ceasefire agreements and between 2002 to 2006, the LTTE has violated the ceasefire agreement by 5461 times.

Humanitarian Operations were started at the time that the LTTE closed a vital Sluice gate at Mavil Aru in July 2006, posing a dire threat to civilians of all ethnicities in the Trincomalee District. Between January and May 2009 during Wanni operations (climax and the End) time the LTTE enforced an eastward movement of the trapped populace of some 200,000 to use them as a strategic resource and a bargaining tool to extract international intervention.

This was the point where security forces engaged towards a mission on humanitarian logistics widely In logistics point of view, it is very important to ensure the required resources (Human and physical) are efficiently delivered to gain the victim. Thus, disaster management is a key factor and disaster management is often described as a process composed of several stages,

- Mitigation
- Preparation
- Response
- Reconstruction

The four phases constitute the Humanitarian Logistics

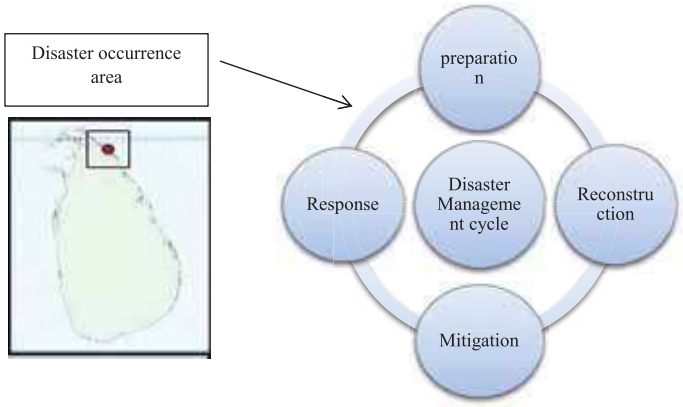


Figure 1: The four phases of the Humanitarian Logistics Stream

Stream. During the climax of war, these four stages were used by the armed forces in their mission of rescuing civilians.

The armed forces have gone through the above stages to make their mission successful. Mitigation implies the actions taken to reduce the negative impacts on civilians. For that, government declared No Fire Zones (NFZ) in January 2009 to safeguard the people. While mitigation tactics are carried out, the armed forces prepared and trained well, because it was water-based operation. Civilians were held forcefully by the LTTE between Nathi Kadal lagoon and the sea (The geographical location was Putumattalan, Karayamullivaikkal and Vellamullivaikkal).

The response phase refers to the operations implemented.

The security forces got in to small groups and adopted stealth moves. Ropes, barrels, tubes, logs, sticks and inflated tubes were placed in the water along with divers and skilled swimmers as water scouts for evacuation of civilians. Small groups on surprise landings under cover of night crawled in land and were met by earth bunds. Maximum surprise was utilized in negotiating the earth bunds while reserves stood in the background. The task was to open mobility corridors for civilians to find a way to safety. And also, they have sent the boats with the divers to rescue injured, sick and aged. Security Forces that ferried civilians to safety had to encounter water filled ditches heavily mined with anti-personnel mines and booby traps. Due to oncoming attacks from LTTE Security Forces had to dig positions in the ground. The trenches had to be dug at night to avoid visibility, a hazardous operation since the LTTE kept on firing during construction. In one week alone, Security Forces lost 47 personnel digging such trenches.

The Sri Lanka Navy established secure sea corridors for civilians escaping from the LTTE held areas and these areas were continuously kept under close surveillance Boats with excess civilians and civilians with urgent medical needs were assisted by naval craft taking people on board to avoid any possible accident. On 17th May 2009, military established a foothold across the Vadduvakkal Lagoon that the civilians started moving fast the lagoon towards Security Forces in large numbers.

Reconstruction phase refers different operations aftermath of a disaster.

On 20th April 2009 42,000 civilians were rescued. On 21st and 22nd 60,000 civilians were saved. On 17th May around 80,000 civilians were rescued. The forces had lack of resources, but their receptions of civilians were well managed. Immediate attention and care has been given to all the civilians rescued. Medical treatments have been given immediately.

A large number of medical officers and trained medics were deployed. Eight Advanced Dressing Stations were established within 500 meters to 1 kilometer of the front lines for minor surgical procedures. More complex procedures were carried out at the five Main Dressing Stations established in the divisional headquarters area. Those with severe injuries were evacuated to hospitals at Vavuniya and Anuradhapura using helicopters. The Colombo Friend in Need Society (Colombo FINs) with well-run mobile camp units provided artificial limbs to many of amputees.

Civilians not requiring medical treatment were sent to the relief villages established by the Government of Sri Lanka in the Vavuniya. LTTE cadres who surrendered were taken to centers for rehabilitation. Former child combatants were looked after separately. Sri Lanka engaged a military strategy against LTTE as the last resort. There, both military logistics as well as Humanitarian Logistics tactics were highly utilized. While military logistics gave the Sri Lanka to win the war and Humanitarian logistics process was used to rescue Tamil civilians. Though there are many international arguments, the duty of the armed forces on mobilizing skills, their knowledge and the limited resources they had, during that time was amazing. Though 47 soldiers were killed by the LTTE while rescuing people, they did not give up their mission and by creating safety corridors for civilians to come, by providing boats to send injured, by sending the doctors and medical equipment, by providing transportation to send injured to hospitals and non-injured for villages, the duty they have engaged with was amazing.

WINNING ESSAY

HUMANITARIAN LOGISTICS; THE SOCIETAL RESPONSIBILITY

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THE VEINS ARE TO CARRY WHAT THE HEART PUMPS. LOGISTICS PLAY A WIDER ROLE IN SUPPLY CHAINS...

Every life holds a unique Logistics system inside the body. Not only lives, the entire nature depends on an unspoken Logistics system which maintains the balance in between supply and demand. The Oxygen cycle, water cycle, carbon cycle and many more ecological systems are driven by a naturally designed logistics management system. In the modern era, Logistic has become one of the most valuable services around the world. A productive logistic manager or system decides, what, when, where, and in what quantity should the goods be moved, in order to maximize the efficiency and effectiveness of movements and, delivers or receives goods on time. Simply it is all about maintaining perfectness in inbound and outbound logistics. If defined, Logistic is, a part of the supply chain process which plans, implements and controls the efficient and effective flow, and facilitates storage and value-added services for finished goods, work-in-progress and raw materials from point of origin to point of consumption.

In Sri Lanka, most of the businesses depend on Logistics. Hence, Logistics has become a special service to private and public companies in our country. Also, it creates value addition to the economy by serving to a huge market locally as well as internationally. When considering logistics in a broader view, it controls the whole market by its' services. For example, the Sri Lanka Ports Authority generates a decent revenue and lifts up the economy, by carrying out port services such as loading, unloading, transhipping and other services in the Port of Colombo.

In an economy, each and every consumer is benefitted by a logistic system. Also, logistics is the connection or the link of a supplier and a customer. In a world filled with logistics, it is very important to look wider about this system. As every human being is served by logistics, it should have a standard in carrying out services. Not only to the market or general public, also to the environment including trees and animals. A logistic system generates jobs, creates value to the economy but, what if it destroys the nature or the end customer? In order to minimize the damages or threats, the regulatory bodies should implement and maintain standards, rules and regulations to enhance the quality of logistic services. In Sri Lanka, companies serving logistic services are mostly controlled by the demand

and supply, but not mostly on social responsibility. This situation is not in a hiccup because some companies are maintaining good quality standards in storing, loading, unloading, etc. But in most organizations, the standards they maintain are mostly concerned and focused on customer attraction. Here, the customer of the logistic service would be a Supplier to the general public. In this scenario the service carries a threat to the end customer if the quality is not assured by the logistician. Moreover, logistic service providers should concentrate on the goods' nature when handling, in order to reduce damages and to optimize safety levels. In this case, the machineries used are required to be maintained up to standards.

Most companies carry outdated technology and it has become a drawback to the company as well as to the economy. To reduce wastage and to maximize efficiency, a competitive logistic service provider should focus on using updated technology in information systems, storage systems and transportation to increase the capacity as well as the safety levels in providing logistic services. Usage of 4Ps, 5s, JIT, FIFO and other standards will be useful for the companies who do not have a proper system. Application of standards help to prevent unnecessary damages, delays and other issues in logistics management. It also enhances the speed, and quantity of the product flow of a supply chain.

When considering the Societal Responsibility of logistics, the aim should be to improve sustainability in the logistic system. By having a well maintained logistic system, every business would increase the ability of catering to a wider market. Also, it might increase employees' satisfaction and customersupplier relationship. Moreover, adding value to corporate social responsibilities such as good governance, maintaining ethics, managing externalities, etc., would be an attraction as well as a strength to the company/ industry. Usage of eco-friendly products or equipments would reduce energy consumption and enhance the service value. As logistics deal from the origin, to the destination of a product flow, this service would serve as a connector of several markets. This can be taken as an advantage to increase the bond between the supplier and the customer as well as an improvement in trade.

When considering the organizational view of logistics responsibilities, freight handlers should be fully equipped with safety equipments and accessories. Enhancing satisfaction and safety levels of employees would be a competitive advantage and also an investment to the company. Furthermore, the application of 4Rs (reliability, relationships, responsiveness and resilience) can be more effective and productive in the logistic system. In conclusion, the logistic social responsibility (LSR, Carter & Jennings 2009) is not only about the duty towards the society, it is a duty and a responsibility to the industry itself. Therefore, every logistic system should practice ethics as well as updated standards in order to improve sustainability and to optimize Logistic Social Responsibility.



FINDING FEET IN A STRONG SUPPLY CHAIN: A NEWER PERSPECTIVE OF ELASTO GROUP WITH TEXTRIP [PVT] LTD AS ITS MAIN SUBSIDIARY



Mangala Gunasekera
Chairman
Elasto Group



It seems that the modernity presents a mismatch when attempting to explain the old world in modern terms. This is increasingly so for the business houses which are finding themselves in difficulties in searching a fit; a fit built upon strategic construction. The phases of history of business world again is a topic to dwell upon for a while before venturing further into the unknown world. The management aura and culture has changed the world dancing with the diversified customer needs and wants. This is the context which subtly opens the pages for Elasto Group; a band of companies initiated for the present and future human needs of the countrymen and the world body to be in line with the changing times. Firstly as the first Sri Lankan footwear company attracting Sri Lankans to have footwear (in form of shoes, sandals, and slippers). So it was a forethought mission for protecting human feet in the mundane activities of life more than a fashion tool for his body. What modernity has invented in to the field is beauty and elegance for the feet with footwear finding a slot in the customer quadrangle.

It is the creative thinking, ingenuity, firm commitment and managing resources which are most needed inputs in such development of items for a nation just gained independence but still in the fierce shackles of imperial rulers. Bentota in the southern costal belt of Sri Lanka had only fishing craft for life dependency plus meagre involvement in agriculture, seven decades ago.

Poverty or even malnutrition would be an apt epithet for describing the village then so much basked in – scarcity in almost in all conceivable aspects of life – village in the jungle - was the focal aspect in all most in all folklore in the Country then. It was the setting for the great minds or great men to find their footing to commit them for the benefit of their fellow- beings. Late Eng. Donald Gunsekera of Mc Gill University- Canada fame saw the world and saw the perils of his own people and defied the call for the greener pasture to put his innovative mind and ingenuity to work to come up with brilliant idea unparalleled to date to make his foot wear kingdom a reality seven decades ago and to follow the gist of other industries to father his innovative products benefitting the villagers in and around Bentota and the rest of the Country to make name for him and his company in his home bastion and in international environ.

Company product portfolio began with shoes, baby products particularly baby cot sheet, and mackintosh, Syntha cane, PVC bags, for the local market. Donald was not alone in his work but his younger sibling Late Wilson Gunasekera was his right hand and his MD in turning his industry in to a business empire. Sri Lanka

business holds the premise that Elasto was the first industry to set up between Bentota and Gintota.

For a discerning traveler on the Colombo- Galle road then, Elasto was the trendsetter firstly with Bambalapitiya Road side hoarding with glittering plated silver coins - Sea Quinn- a reflective material – clean tech began then as pioneering job and along with floating mermaids held stationery on Bentota River until they went to rest with ferocious Tsunami devils. Elasto generated many firsts under late Eng Donald Gunasekera, the charismatic pioneer chairman and the philanthropist;

- Company hoarding to guide the travelers in Sri Lanka with Bambalapitiya Elasto Hoarding
- Company float on Bentota River, a first of its kind in Sri Lanka
- Stakeholder agreement with Ro-Search Company – USA to exploits their patents here, again a first – in such activities in Sri Lanka
- Musical Mela again a pioneering activity seven decades ago
- Presenting a CSR components in to local area of Elasto Ltd , by way of building and donating Gunasekera Memorial Hospital to the Government of Democratic Republic of Sri Lanka, an activity supporting the 'Public Health' of the people in and around Bentota and maintaining it to date
- Developing associated companies under the same group to pursue different product portfolios
- Becoming an elite band of few companies to achieve ISO 9001;2015 an ISO 14001;2015 in the name of Textrip [Pvt] Ltd [main subsidiary of Elasto group]
- Receiving a merit award from the productivity secretariat in 2015

Besides the item 5 above the other CSR activities of Elasto Group have taken a focal point in company agenda whereby training of youths, and industrial training for young graduates, training and imparting knowledge to its own employees, supporting religious and education activities in and around Bentota, donation of required items for Government hospitals and institutions, imparting training facilities for all leading colleges and forces are our current focus.

Creating awareness in private health in association with Government and private agencies including schools and universities in inducting youths and adults to take on physical exercises as part of life style change has also come under our CSR activities having born the cost thereof.

It was with such readiness Elasto group has come forward in national disasters such as floods to contribute to the needy in terms of logistic support. As a social responsible corporate citizen, it takes solace upon its own activities by being and identified with such.

Progressing steadily in cross functional activities more prudently under business processes and also going beyond the internal boundaries to be in supply chain to support the customer is in current focus. Backed- up fully with the R & D dept the creation of new products is taking the Group to the club of sustainable elites in business. Elasto Group is continually on to the development of its cross functional skills with the intake from logistics. It integrates its internal dept to have one cohesive process enabling us to understand our role model in logistics. In management we follow the 'essential Drucker' so as in logistics what he [Peter Drucker] referred to as the 'economy's dark continent'.

Leaders are all that matter; present leadership of Elasto Group is in the able grip of Mr Mangala Gunasekera, Chairman of Elasto Group, a technocrat with high repute with great experience and resilience who can also see the world order as any expert in the field of business would do. Sustainability of the Group is thus assured!



HUMANITARIAN LOGISTICS: PAVING A BETTER AVENUE FOR WOMEN



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Humanitarian Logistics is the process of procurement, delivery, warehousing and distribution of supplies during a disaster or complex emergency situation to an affected area with victims. Organizations that are involved in humanitarian logistics are mainly United Nations (UN) agencies or non-governmental organizations (NGO). The significant difference between humanitarian logistics and commercial logistics is that the end beneficiary is entirely deprived of the purchasing power and they are unable to access any other alternative sources of supply and may not even able to communicate their requirements. However, the objective of humanitarian logistics is meeting the needs and wants of the end beneficiaries irrespective of the gravity of the disaster or emergency.

When focusing light on women's involvement in this arena, only few female humanitarian logisticians are found in the industry as it is a vulnerable occupation for women. For example, the proportion of females in Médecins Sans Frontières, an international humanitarian NGO reputed for projects in war-torn regions and developing countries affected by endemic diseases is 80-90%. But only less than 1% of those females are in logistics. Further, the report, Women in Supply Chain (WISC) Australia, highlights that the long periods of extended absences from home, family and personal security and safety as the underpinning reasons for the hindrance to women joining the humanitarian logistics professions.

Also, Tatham & Kovacs (2010), has identified that lack of means of transportation to travel the distances required to access humanitarian supplies and women's commitments towards their families such as inability to leave home and children and to articulate their needs to meet the requirements of beneficiaries as some main reasons which has paved way for humanitarian logistics to be a challenging occupation for women.

The report, 'How can Humanitarian Organizations Encourage More Women in Surge?' has identified that personal safety and security, confidence and skills, personal hygiene, well-being and support, family, child care and personal relationships, perception and stereotypes, hostile environments and living arrangements are some key barriers that women in this field have faced by interviewing women who have been deployed with variety of different humanitarian logistics organizations such as ActionAid, CARE, DFID, Islamic Relief, Save the Children and Tearfund. Personal safety and security is a key concern for women as they are at a greater risk of violence compared to male counterparts. They have the possibility to face gender-based violence as well as issues of nervousness

of entering into insecure environments. To overcome this barrier, strong health and safety measures should be implemented for women and more effective briefings should be conducted which includes sexual and gender-based violence, protection from sexual exploitation and Abuse. Also, it is ideal to conduct these briefings by women as it enables deployed women a comfort level to discuss issues and concerns specific to women. In addition, humanitarian agencies should periodically review the accommodation of deployed staff and should mitigate the safety concerns effectively if there are any. Personal hygiene is another obstacle that women face as they have to travel long field trips through insecure areas. During an emergency or a disaster, most of the time the affected areas do not have proper infrastructure.

As a result, women share toilets between the genders or utilize toilets without proper facilities. This has a possible risk of women facing issues of spreading of infections and facing cultural challenges of sharing facilities or security risks. Menstruation is another specific challenge that women face with regard to personal hygiene. Lack of regular toilets, access to water and sanitary products are some key problems they face. Therefore, all humanitarian organizations should be encouraged to take initiatives to create safe environments for women in terms of menstrual hygiene.

Further, in terms of living arrangements, women deployments are often requested to live with the men in housing arrangements. The issues they face in such situation are that they feel uncomfortable and get stigmatized at the host community due to the culture of those countries. Further they get burdened with household activities such as cleaning, cooking etc. Hence, safe and separate accommodation should be arranged for men and women who are involved in humanitarian logistics programs. If this is not possible agreements should be made on sharing domestic responsibilities and ensuring the comfort of women.

On the other hand, lack of confidence and skills is another barrier they face when getting involved in humanitarian logistics. To overcome this challenge, humanitarian agencies should invest in training programs and gender balanced teams should be deployed during an emergency or a disaster. In addition, women should be given leadership in the sector as they can break the stereotypes as well as encourage and create space for others to step in to this field. The organizational culture and the management support plays a significant role in breaking the stereotypes. The management should recognize the confidence and dedication of women and sometimes women should be reminded with feedbacks and performance management to motivate them. Further, it is important for humanitarian organizations to provide women with safe spaces where they can voice and discuss their experiences related to gender-based discriminations in the work places. Furthermore, actively promoting women into leadership roles by humanitarian organizations will enable them to challenge in implementing policies against these issues.

As women are primary care providers, commitments towards the family and personal relationships and lack of support from them are significant barriers that women in this field face as they have to strike a balance between work life and family life. Women should always make sure that they maintain their commitment in work life while not missing the responsibilities towards their families. Hence, humanitarian agencies should invest in policies and procedures that enable female staff to have a good work-life balance. Peer support is extremely helpful in women in this field during challenging situations that have been mentioned above. Therefore, humanitarian organizations should be reasonable enough to deploy more than one woman from a similar cultural background so that they can support each other during tough time on deployment. In addition, these organizations should ensure that all surge staff are trained on well-being as it is critical not only to manage their own stress levels but also to play an important role in others (affected communities) while they are on deployment.

In a nutshell, humanitarian logistics is an emerging area as there is an increasing trend in the emergency situations and disasters worldwide. It has received a lot of attention as the logistics costs related with humanitarian operations has been estimated to lie between 80-90% of the total expenditure of a humanitarian organization. However, it is clear that there is a low participation of women in this field of work in local as well as in the global context. This field has become a challenging arena for women as they were not given proper recognition in terms of their performance as well as fulfilling of their basic requirements. Therefore, the insights presented in this article is not about contrasting the role of women against men in the field of humanitarian logistics. Rather, it is to highlight the underpinning reasons for lack of participation of women in this sector and the initiatives that humanitarian logistics organizations should implement to enable women an effective work/life balance which inspire future generation to join this field as well as to enhance more women participation in the foreseeable future.

RESOURCE MOBILIZATION TOWARDS DISASTER MITIGATION

> HUMANITARIAN LOGISTICS IS ABOUT MOBILIZATION AND MOVEMENT OF RESOURCES FOR DISASTER PREPAREDNESS, RESPONSE AND RECOVERY





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Mr Tyronne Gunawardena is the Manager of Cargo Administration and Logistics of Sri Lankan Airlines Limited, Airline Center at Bandaranaiyake International Airport, Katunayaka. He joined Air Lanka and then Sri Lankan Airlines in 1986. He has completed his MBA, and has followed many trainings related to cargo, logistics and human development. His learning has particularly focused on airfreight, areas on handling and safety measures etc. Within his thirty-three years of service period he has developed his career from the position of officer, supervisor and then to the post of sectional manager.

What are the main concerns in handling Air freight?

The main focus of Air freight industry is to carry Cargo from point A to B by using an Aircraft under an Air Way bill with paying the utmost care to Safety and security of its Passengers, Properties and supporting services. The total process is monitored and controlled by various local and international rules and regulations. In here, one should abide by both international and the local rules and regulations implemented by International Air Transport Association (IATA) and International Civil Aviation Organization (ICAO). The Civil Aviation Authority in Sri Lanka is responsible in implementing local rules and regulations that is required to be followed by the airline industry which are operating out of CMB.

Currently, what types of cargo is being transported through air by Sri Lankan Airlines?

As the sole handling agent in Sri Lanka, we are capable of handling any type of Cargo, from a box of matches to even an Elephant. Cargo could be categorized under general cargo, perishable cargo, Fragile and Dangerous Goods Regulation (DGR) etc. so each category has their own rules and regulations that needs to be followed during transportation, handling or in storage. For example, when handling of a pharmaceutical product, the required measures should be taken throughout the Logistics chain from the point of Uplift till deliver to the customer.

How can you differentiate the operations of Sri Lankan Airlines with the other Airlines operating in Sri Lanka?

We as the sole ground handling Agent should provide the safest, on time and reliable service to all Airlines operating to CMB and out of CMB. We are the handling Agent for Sri Lanka as well and there is no differentiate to any carrier and we ensure best service to any carrier including UL. The audits which are being carried out by all Airlines Operating to CMB and they are pleased with our standards and Terminal handling process. Our standards are focused on staff training, security and Safety aspects. Being in the airline industry is not that easy as a whole. The staff should be competitive, multi-talented, skillful and well experienced to conduct operations in a more effective and efficient manner. Sri Lankan Airlines provide the staff and the members with various facilities, such as trainings and courses free-of-charge for the betterment and to increase the technological know-how and work-related experiences. Then, they are deployed once after they are being proved they are well suitable for the position.

In a situation of disaster what type of a role do you play as the national career?

Sri Lankan Airlines' Emergency system is pre-planned or prepared to face any kind of a situation. Under the regulations we have an emergency team, separate emergency procedures in place and also an emergency and safety section. The process is being often tested and rehearsals are being carried out and during a situation of disaster you only have to activate it. In order to obtain the approval or license for an airline to operate in an industry all those factors are to be considered. In addition, regular audits are being conducted to check the performance, safety and evacuation methods on the air crafts and airlines. The main concern is safety and security. Whatever the cargo is being handled the basic procedures should be adhered. In case of an emergency, the cargo emergency team connecting the company's emergency team are being handled separately. There is an alarm system area is being allocated for emergency evacuation or passenger evacuation. Areas are marked in airport itself. Casualties should be brought down such as doctors, ground handlers, air force, medical personnel etc. the training and programs given to the staff are ongoing every two years or either one year. The best example for maintaining proper safety measures and evacuation methods were during the situation of Tsunami in the year of 2004. The teams of the social department, customs and Ministry of Health were able to deliver the cargo to the customers as soon as possible also by making the customers aware of the situation and handling common cargo and passenger clearance activities easily and quickly. The members or the staff are well trained to act during a disaster situation as they are being provided with training and development courses and programs. At times when foreign aids are being received, the goods are stored in demarcated areas as planned in warehouses in case of an emergency by removing away the retaining cargo and allocating the space for emergency operations. Apart from the two existing terminals in the airport, we can also go in for outside warehouses as in Social department if there is any issue arrives with not enough space.

Sri Lankan Airlines' Emergency system is pre-planned or prepared to face any kind of a situation

As the national carrier, what kind of cooperation and collaboration is being developed with the parties involved in disaster response activities to operate effectively?

In a situation of disaster, first we act collaboratively with the Sri

Lankan Airlines emergency section. There is a panel from the CEO level and another panel at the ground handling level, also known as the action team. The process is written down and the test is done time to time. The process should be pre-planned and pre-activated. The activation would be started from the Civil Aviation level, airport and aviation and then the ground handler. In here the Civil aviation is the regulator, Airport and the aviation is the operator and the ground handler. All the parties such as Customer airlines, Ministry of Health, Police and Airforce work together to enhance the effectiveness of operations.

Q What are the challenges faced when conducting cargo operations in such activities?

Sri Lankan Airlines as the sole government agent handles both cargo and passenger. The volume handled is more than the capacity in the two terminals. The main challenge the airline is facing is the space constraint due to the availability of limited space. 250,000 metric tons could be handled per calendar year, but we handle 270,000 metric tons. We are planning to address the problem of space constraint so that we could overcome the main challenge successfully. Availability of space solely would not address the problem but also availability of skillful labor, manpower and the advancement of technological know-how matters. In addition, automated systems on cargo handling, retrieving, storing and locating are some factors where we should pay much attention. Currently, 65% to 75% the activities are being conducted mostly through manually in our hub while other international hubs are more towards automation.

Q What are the suggestions on developing the airlines when comparing with the other airports and airlines?

Moving away from manual system to the automated system and usage of more technology would create an efficient and effective airport terminal and airline. Also, all stake holders namely Airport and Aviation, Sri Lanka Customs and Export Development Board also has a major role to play to make Sri Lanka as one of major Cargo handling point and the process is commenced. Sri Lanka must use its geographical location to attract more business and be a part of major logistics HUB in the region.



APPLICATION OF AGILE AND LEAN PRINCIPLES IN HUMANITARIAN SUPPLY CHAIN MANAGEMENT



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The contemporary world is enriched with well-coordinated supply chains which undoubtedly creates value at every node of the chain. Although the nature of a business supply chain is quite similar to a humanitarian supply chain, humanitarian supply chain cannot be described under one form. It comprises of a complex array of functions and interrelated aspects beyond a typical business supply chain. There are multilateral chains which conduct operations, during and after any emergency situations, some of which are military, INGO, NGO and even Media based. Unlike business supply chains humanitarian supply chains are unstable due to the involvement in major economic parties. Such a chain can breakdown easily at any given point in time, thus proper planning and initiative must be present for the successful operation of a true humanitarian supply chain.

Humanitarian supply chain management have room to incorporate specific principles which may allow the smooth flow of resources from one point to another, this can be carried out with the incorporation of either lean or agile concepts. Lean principle generally focuses on reducing waste and cost along with omitting value addition. Lean supply chain requires for the sourcing organization to be conservative of resources and costs at every level. However, agile supply chain focuses on flexibility and agility of the chain and provision of an end to end solution. In an emergency situation help is extended from many platforms of the society.

International, government, media, reputed organizations, logistics companies and small grassroot level groups and family units are common sources of aid.

Humanitarian aid extended from such parties are ever changing and turbulent. This requires flexibility in all levels of the supply chain. Further, unlimited flooding in of donations may create a wastage and may create room to incur large costs. Therefore, neither lean principles nor agile principles must be carried out independently, for an effective and efficient humanitarian supply chain both lean and agile principles must be combined and consolidated as one. Application of lean principles can create an efficient upstream supply chain which reach out to donors whereas application of agile principles can create an effective downstream supply chain aiding the affected.

Creating a base of donors with substantial funding capabilities, although unstable is one of the most important aspects of humanitarian aid. Subsequently, creating an information platform with greatest amount of flexibility in order to reach out to the affected. However, the common ideology is to enhance

humanitarian supply chain through agile principles.

Not all emergencies can be predicted, in an event of heavy monsoon rain floods and landslides can be predicted, in an event of an earthquake many physical damages can be predicted yet an earthquake. Spread of infectious diseases such as Ebola can also be considered an emergency yet it cannot be predicted in its first phase itself. Thus, quick responses are required in order to aid the needy. Further, the requirement of each and every disaster and emergency situation is not similar, especially during disaster.

In the Sri Lankan context rescue and relief as the first response is carried out by the military in which necessary equipment and man power is supplied based on requirement and intensity, this is the very basic attribute of agility. Therefore agile principles of flexibility and ever changing demand can be utilized as a foundation in conducting first and immediate response activities. However, post disaster activities can be divided into two criteria as immediate need provision and rehabilitation. In immediate need provision level many social groups, INGOs, NGOs, Governmental parties seek for logistics service providers and military to deliver first hand requirements such as portable shelter, cooked food, clothing, water, sanitary items and small teams of medical groups along with medicine and equipment. These are generally not forecasted yet the aid flowing in is gladly collected and consolidated and sent via various modes of transport. This creates sourcing agility whereas the transportation and distribution agility is focused in collaboration with the military and logistics providers.

Route planning is an essential element, this generates awareness on the fastest delivery systems this again falls under agility as no planned route can be traveled on in an emergency situation. Therefore it is well understood that more flexible and speedy methods of sourcing. Managing, consolidating, transporting and distributing must be carried out thus embracing the principle of agility. Response and relief does not conclude there, rehabilitation is the final part, this is where the affected are more settled in different ground and the emergency situation is mitigated. However, at this level lean principles are all the more applicable. In fact, the wastage must be accounted for, demand can be forecasted prior to sourcing and costs can be reduced by utilizing land and boat transport and omitting air transport. Distribution costs may come to a minimal with the active participation of socially responsible companies both commodity selling and logistics service providers. Volunteer groups may extend man power to aid the affected. INGOs and NGOs may carry out visits to assess the rehabilitation programs and understand further needs which should be procured and sourced for the needy. At this level general warehouses and storage facilities can be utilized in order to carry out an effective supply chain.

Emergencies may occur any time any day it is important for us to be agile and flexible on our evacuation plans individually or as a household unit, we can also follow lean principles our self by having an ever ready disaster or emergency pack that carry all the needful for you to survive until help arrives. Therefore, lean and agile principles can be applied in almost all contexts of a humanitarian supply chain both individually and in collaboration.





LEGAL ASPECTS OF HUMANITARIAN LOGISTICS



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Humanitarian Logistics is the fundamental aspect which facilitate humanity of nations beyond boundaries because Humanitarian logistics is the contributing factor of achieving Humanitarian goals. Increasing disaster situations and their humanitarian impacts has created the need for a legal framework that addresses the responsibilities of States and humanitarian agencies in disaster settings. This has led to the emergence of International Disaster Response Laws, Rules and Principles. (IDRL). IDRL is a model Act which can be adopted by many States which lack regulations and necessary functions in Humanitarian aid programs currently. International Federation of Red Cross and Red Crescent(IFRC), the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) and the Inter-Parliamentary Union (IPU) developed the IDRL guidelines which can be used by States. After piloting in 2012, the final version of the model Act was launched at the General Assembly of the Inter-Parliamentary Union in Geneva, Switzerland on March 2013 as 'International Disaster Response Laws, Rules and Principles of 2013'.(IDRL)

Another law which is used globally in disasters is 'International Humanitarian Law(IHL)' which it mainly considers armed conflicts as disasters. IHL is currently adopted by many States with their own necessary provisions to regulate and facilitate humanitarian activities in respect to armed conflicts. Subsection (d) of Article 2 of IDRL distinguishes between International Humanitarian Law(IHL) and IDRL. It says that, the provisions of this Act do not apply to situations of armed conflict or to Disasters that occur in an area also affected by an armed conflict. International assistance provided in armed conflict is governed by International Humanitarian Law. For example, the 2004 tsunami in Sri Lanka – IHL is the governing law. Even if the need for relief is prompted by a natural disaster rather than by ongoing fighting, the obligations of the parties to the conflict in an armed conflict setting remain the same. Logistics arise in the very first moment Humanitarian Aid programs initiate, caused by the occurrence of disasters. Articles 8,9 and 10 of IDRL guidelines summarizes that,

With the knowledge of disaster situation, the affected country shall announce an International Disaster Recovery period considering the severity of the disaster.

Chapter 3 of the Model Act is about Coordination and Preparedness for International Disaster Assistance. The appointed authorities under the supervision of central government will carry the dignified inspection and coordination of Humanitarian Aid activities. To provide aid many organizations, individuals and governments might arise. But according to Chapter 5 of IDRL guidelines eligible actors, eligibility for legal actors, deemed eligibility, eligible parties, eligibility certification and termination of eligibility should be considered thoroughly because the risk should be minimized by ensuring fitness of eligible actors in the cause. These eligible actors are

none other than logisticians and authorities who are subjected to different countries and organizations. Eligible Actors shall be entitled to a Disaster Visa according to Article 25, unless national security or public health and safety concerns related to the particular individual preclude it. Disaster Visas shall be issued without a fee for an initial period of three months, and renewable without a fee for periods of up to six months from within the country.

Customs activities play a major role in commercial logistics. So as in Humanitarian Logistics. If aid shipments delays at customs or if it swifts beyond inspection it will create problems. So it's really important to bound all these activities under a proper Act of law. IDRL guidelines provides provisions on customs procedures which are summarized below,

Article 29 states that Customs shall facilitate the rapid importation of consignments of Goods and Equipment by Eligible Actors.

According to Article 31 Eligible Actors may make representations directly to the customs authority with respect to their International Disaster Assistance consignments or through a designated third party acting on their behalf.

Article 32 of IDRL guidelines depicts following, Exemption from Import Duties, Taxes and Restrictions, clearance without regard to the country of origin or the country from which the Goods have arrived, subject to monitoring for reasons of public health and security.

Article 33 and Article 35 speaks on the Simplification of Documentation Requirements and Inspections and Customs Security respectively.

According to Article 35, During the International Disaster Relief Period, the customs authority shall;

- On the basis of risk analysis, take only such action as it deems essential to ensure compliance with customs and related laws for the purpose of checking the goods declaration of a consignment sent by or on behalf of Eligible Actors.
- Use risk analysis, preferably on the basis of advance information, to determine which consignments of Goods and Equipment imported by or on behalf of Eligible Actors shall be inspected and the extent of that inspection.

Part 3 of Chapter 6 of the IDRL guideline states about the laws on, Expedited Entry and Use Restrictions for Specific International Disaster Goods and Equipment. Under that Articles 37, 38, 39 and 40 respectively speaks about provisions for adopting Telecommunication equipment, use of medications, useof food and use of temporary vehicles which are important factors in arranging Humanitarian logistics. Part 4 of chapter 6 of IDRL sets out the permitted Disposition of Goods or Equipment for which remain in their possession as of the end of their Disaster Relief and Initial Recovery Assistance operations.

Such Goods and Equipment should be,

- Retained by Eligible Actors that are not-for-profit entities and used or distributed by them for humanitarian, development or charitable purposes in that country.
- Permitted to re-export any Equipment or unused Goods and to do so without the imposition of any taxes, export duties, or similar charges
- Permitted to donate any imported or locally purchased Goods and Equipment without the imposition of any taxes, fees, duties, or similar charges on either the donor or the beneficiary, when they are no longer needed for their Disaster Relief or Initial Recovery Assistance.

Additionally, such Goods and Equipment may be sold, but only under the provisions of subsection (c) of article 42.

Transport of aid stocks to victims is a crucial part prior to distribution of goods to victims. IDRL guidelines provide following provisions on transport. Article 45 speaks about the Facilitation of Means of Transport. According to that all transport modes should be,

- Accorded priority treatment for passage, including, as appropriate, priority in air traffic routing and landing permissions
- Exempted from any applicable taxes, levies, duties, fees or charges normally imposed by governmental entities.

Transport Modes will exempt from any prohibitions, limitations or restrictions in respect of their arrival, overflight, landing, stay and departure, other than those necessary to guarantee national security, public safety or public health. Article 47 depicts that eligible actors or their carriers shall inform the relevant aviation authority in advance of the intended route of flights, type and call signs of the aircraft, number of crew members, the character of the cargo, time-table of flights, and the list of all passengers, and shall comply with any directions from the aviation authority. Covering almost all aspects of Humanitarian logistics the IDRL guidelines can be recognized as a comprehensive framework which should be adopted by States. But many countries haven't yet adopted any type of International Disaster Response Laws in order to mitigate inefficiencies which are possible to occur because of weak/nil legal conditions on Humanitarian Aid programs. As we don't have a legal framework in Sri Lanka to regulate and facilitate humanitarian activities, this IDRL guidelines is the best framework which can be used to sketch our Legal Aspects on Humanitarian Logistics.



"SIYALLATAMA PRATHAMA MINISKAMA"





Mr. Mahesh Jayawardene

Assistant General Manager- Sales
TV Derana

"Manusath Derana is a part of TV Derana which is more focused on conducting societal welfare activities other than the media activities. The need to conduct the societal welfare activities as a popular TV channel aroused when we started obtaining profits as a media channel. When we achieve profits by conducting organizational activities as a media channel, it becomes our responsibility to conduct societal welfare activities to enhance the well-being of the general public.

As an organization we obtain profits from various kinds of contributions from the public. For instance, when we take road systems, for us to conduct day to day activities we need roads that are in good conditions. Those roads are built with the tax funds collected by the Sri Lankan citizens. The stakeholders of TV Derana have invested on this business, but as an organization it is not ethical for us to

distribute it among ourselves. Because the infrastructural facilities provided for us is a collaboration of all the citizens in this country. Therefore, it is a common thing for all of us to conduct welfare activities. As per this concept we established Manusath Derana officially in 2013, when we started to get profits as an organization. While conducting welfare activities we still cater to the needs of the society where we first find the needs and then act accordingly.

When conducting these welfare activities, the transportation system is very important. The road networking system in Sri Lanka is quite perilous, which makes the Island wide welfare coverage a difficult task. The employees of TV Derana are working in Manusath Derana willingly. During the initial days of Manusath Derana we had to face many difficulties with funds and accommodations but now we get free transportation and an immense support is given by the forces.

When performing these welfare activities, our organization must take advantage of logistics in two ways. As a leading media channel in Sri Lanka, we must send our reporters to report the incident to the public and the aiding groups to assist the people who are affected by the negative effects of the incidents. Therefore, the need of logistics activities is very crucial for us, as a media channel to conduct the welfare activities.

As a leading media channel, we believe that we should not just provide the general-public with the news of the incidents. But we should also provide them with the insights of the seriousness of the incidents, so that the public will feel it themselves. We focus TV Derana, FM Derana, 24/7 on all the campaigns we conduct to reach to the public. After the establishment of "Manusath Derana" we looked into the problems in Sri Lanka which needs to be attended to. We found out that thousands of people die due to kidney diseases in the Northern and North Central provinces. This kidney disease was a unique disease which occurred only in those areas. Accordingly, we conducted the program "Anagathayata Hetak" and we interviewed people and we provided the news to the people. Then we understood that this is not a solution to the problem, because there was no visible action taken for this problem. Therefore, we thought of doing something from our side and we spoke to doctor Asanka who was in charge of the Nephrology Unit in Anuradhapura. He informed us even the World Health Organization has not identified the reason for this kidney disease. He asked us if we can conduct a program to identify this kidney disease at the initial stages. At that time the health ministry was conducting medical camps in many villages to identify the disease at the initial stage which was successful. And it was said that, if we can identify it at the initial stage this kidney disease can be treated. With the guidance of Doctor Asanka, we conducted our first medical camp in 2013 in Mahavilachchiya Hospital. We found 175 people who was newly diagnosed with this kidney disease. Initiating from 2013 we have conducted 32 medical camps. With the channel reputation and media coverage we were able to perform the initial kidney disease detecting tests for around 35000 people. When they realize that they are diagnosed with the kidney disease they face many financial difficulties to treat this disease. They have to sell their belongings to find money for their treatments. We initiated "Derana Daruwo" scholarship program to assist the kids of these families because we figured the financial struggle they were facing. We found financial assistance to 2800 children. We allocated 9 hours solely to find families to provide these kids with financial assistance. And we were able to find assistance for all the kids. The communication strategies used by the channel assisted majorly to make the "Derana Daruwo" program a success.

Another project which we got involved with is the fund raising programme for the PET scan machine for the Cancer Hospital. The target was to raise 200 million rupees while only 6 million rupees was in the account when we undertook this project. We conducted a program called "Ape Ekamuthukame Haiya" to raise funds for this project. We wanted to enhance the fact that our unity is greater than 200 million rupees. After conducting these programs, we were able to raise 240 million for this PET scan project.

"Little Hearts" is another major project we are involved in which needs 2000 million rupees. This project is currently in process. DSL company sponsored us for the "Little Hearts" project.

"Sobadam Balakaya" is the latest project which we started to enhance the fact that not only the humans but also the environment which gives us life should also be taken care of. In this project 1 million trees are planned to be planted by 2020. We have already planted around 200,000 plants. We plant these trees in different schools to emphasize on the need of a nature friendly future generation. The reason for us to initiate this program is because, environmental pollution has increased in countries. And it becomes our responsibility to preserve the quality of air to survive the life on earth. We are also conducting another program called "Sisu Savi Pubuduwa" to provide educational equipment's and infrastructural facilities to the low benefitted schools in Sri Lanka. Seylan Bank has joined

As a leading media channel, we believe that we should not just provide the general-public with the news of the incidents.

hands with us in this project to provide us with financial assistance to make this program a success.

We cannot perform all the welfare activities, projects and health camps alone. We need help from authorized government bodies as well as corporate partners to assist us with these tasks. The main government body that immensely helped us in the Kidney disease program is the Health Ministry. The medical health offices, medical professionals, hospitals, government, private institutions, civil societies, security forces, police, schools and religious places provided immense corporation for our medical camps. Leeson's hospital also provided us with the technical and clinical assistance to conduct the kidney disease tests. The Ceydem laboratory sponsored our "Anagathayata Hetak" program.

KIU University assists us in our "Sobadam Balakaya" program. City Garden organization provided us with the plants and the knowledge we need to conduct this program.

During the flood incident which happened in the recent past Red Cross and the Plan Organization assisted us with the distribution process. Red Cross has a vast distribution channel which has allowed them to reach everyone in need. We partnered with Red Cross because of their access to the distribution channels. The tri-forces helped us immensely during the flood period. They provided us with helicopters and all the assistance needed at that time.

At the beginning of "Manusath Derana" we faced the challenge of raising enough funds. The channel had to provide the monetary funds to conduct these welfare activities. But now we have an account where the public deposits funds so that we do not face the financial challenges anymore. We also find sponsors for the events separately.

When we are performing these activities, almost all the time we have to go to outstations. Therefore, we take the support from our reporters to contact any officials from those areas. Because we must overcome the transportation challenges. There are destinations where we cannot reach easily, even though we have the vehicles. In cases like that we must reach a feasible person to access to these places. We wanted to go to Baththalangunduwa to distribute school equipment's to children. Usually it takes three and half hours to reach that destination. We spoke to Navy spokesmen and we were able to get a boat, and it took only 30 minutes for us and we made that program a success. There is a saying called "Every dark cloud has a silver lining". According to that saying we believe every problem has a solution. We should find the solution and get the job done. Therefore, we do not take anything as a challenge. We find the solution and develop it.

We have thought of expanding internationally and to get the international support to make these welfare activities a success. We can develop the life styles of people living in rural areas while retaining their contribution to the gross domestic production in Sri Lanka. We can develop these areas for tourism with a good transportation system. So, we thought to take our vision to the international level and we hope we can get more support to these activities.

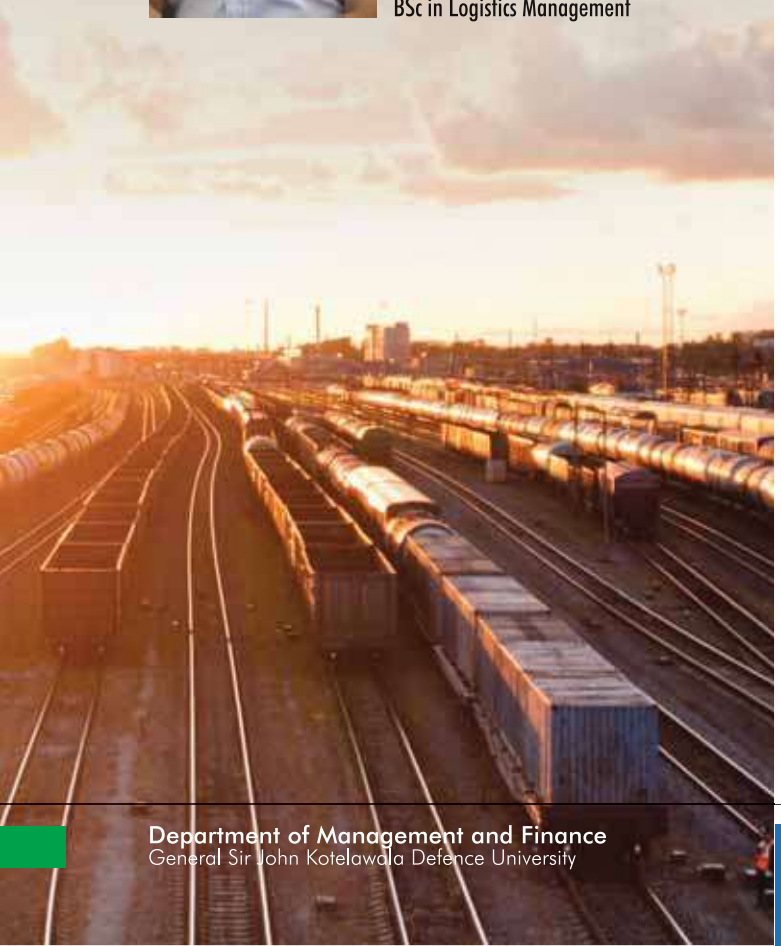
We initiated the first campaign of this concept during the International Kidney Day. We joined our hands together with an international organization during this project. We should conduct more projects with internationally reputed companies to obtain a good reputation internationally. As a developing country we can get donations from developed countries. We should also apply more for international award ceremonies so that our reputation will be enhanced."



STRATEGIES TO FACILITATE LOGISTICS COORDINATION IN HUMANITARIAN RELIEF



DF JAYMAN
Intake 33
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In the recent years natural and man-made disasters are wreaking havoc on human lives and nations' economies at an alarming and rising rate. According to the World Economic Forum, more than 180,000 deaths and more than $200 billion in economic losses occurred in 2005 alone followed by the 2004 earthquake and resulting tsunami in South Asia. The scale of 335 natural disasters which were reported worldwide in 2009 shows the requirement for the better preparedness in respond and recovery from disasters, offering timely and necessary aid to those in need through efficient humanitarian supply chains. Recognizing this, the importance of logistical coordination in humanitarian relief emerged to bring together players with various expertise, experiences and capabilities within an affected region to share and mutually benefit from collaborative work. As it is prudent that coordination is a commonly accepted concept in the commercial field, in humanitarian relief domain it has taken a limited favorable result in coordination among NGOs and Military. Thus, new web-based systems and strategies have been developing to enable effective logistical coordination in humanitarian relief. These strategies address many challenges and obstacles related to implementing coordination platforms in other humanitarian domains, distributing food, medical supplies and disaster relief.

MECHANISMS TO MITIGATE RISK AND ALLOCATE COSTS AND BENEFITS

In contrast to commercial logistics, humanitarian logistics activities do not focus on cost reduction rather its main objectives are to improve the effectiveness of saving lives and providing better services. In fact, the objective of increasing NGO service level through coordination can often incur higher, rather than lower, cost. Another attractive incentive for NGOs to join the logistical coordination is reducing the operational risk of the individual relief agencies. Given that, the urgent nature of relief operations, collaborative contracts and templates must be established in advance in such a way that they can be quickly activated and easily used in the chaotic environment following a disaster, particularly with NGOs with no prior history of collaboration.

WEB BASED SYSTEMS FOR EASY ACCESS

Today finding sufficient personal commitment to aid humanitarian activities is becoming an upcoming problem in this field. So, developing web-based systems which are easily accessible by users such as SUMA, UNJLC and various aid matrix platforms, have been relatively successful in facilitating logistical coordination

in humanitarian relief between agencies, donors, transporting partners and NGOs. These systems can allow NGOs to place requests, offer services and share information and experiences with other NGOs from anywhere in the field.

MEMBERSHIP SUBSCRIPTION TO REDUCE RISK

This helps in reducing the issues of inter-agency trust and risks associated with logistical coordination. The subscription of members is also tending to enhance the responsibility and have the capability necessary for an organization to join the logistical coordination. This can lead to more reliable and capable participants, which would reduce the risk and encourage more inter-agency coordination. However, as a pitfall to this condition it has been identified that it limits who can participate and benefit from logistical coordination.

USE OF INFORMATION SHARING AND COMMUNICATION TOOLS

As in any disaster situation the participating organizations often has only a partial knowledge of the affected region. Hence, there is an urgent need for providing detailed information from the field and to facilitate communication between relief organizations in a collaborative system. The effectiveness of sharing information from all organizations in all around the world while reducing duplication and overinvestment in detection and assessment technology shows a significant importance in the field. For instance, the OCHA established platform, Relief Web, actively searches the Internet for information relevant to humanitarian relief operations, such as NGOs' and governmental reports, news in the media and press releases. This information is then posted on its website, as well as delivers important information directly to its members through e-mails, mobile phone and other channels. Nevertheless, the relief organizations should be able to use a platform to easily report information from the field, needs for logistical assistance and logistical capabilities that they are willing to share, and it should be able to actively recommend coordination partners based on gathered information to ensure successful coordination.

FEEDBACK MECHANISMS TO FACILITATE LEARNING FROM PRIOR EXPERIENCES

Last but not the least most importantly there should be a feedback mechanism to learn from the successes and failures of ongoing and past humanitarian relief practices which is critical in improving logistical coordination. A coordination facilitating system which maintains a detailed record of the collaboration participants, their actions, problems incurred during the coordination, and the outcomes helps in addressing issues faced in successful coordination due to the diversity of the disaster relief environment and circumstances. Tracking different transactions and building an extensive database platform containing information such as prices paid for various supplies, transit times and quantities of distributed commodities would be much helpful to effectively conduct the future operations.







Management Champions League '17

The freshers welcome was organized as a cricket encounter by the students of intake 33 of the Department of Management & Finance as management champions league '17. The event was held on 26th of March 2017 at the Irrigation Grounds in Ratmalana. Many students from different intakes of the Department took part in this event while the intake 33 students were able to win the championship.

2016

22nd of August 2016

26th of March 2017

28th of April 2017

Disaster Management Exhibition

The undergraduates from intake 33, Department of Management and Finance organized a disaster management exhibition as a partial requirement of the degree program on the 22nd of August 2016 under the supervision of Ms. Kalpana Ambepitiya. Different disaster calamities were provided for different teams, each team did a poster presentation and displayed their skills and talents immensely.

Logistics Day 2017

The 3rd consecutive Logistics Day of General Sir John Kotelawela Defence University, organized by the Department of Management and Finance of the Faculty of Management, Social Sciences and Humanities, was held on 28 April 2017 at the university premises. The theme of the Logistics Day for that year was "Sri Lanka towards E- Logistics: Way Forward". Major General RV Udawatte graced the occasion as the chief guest. Parallel to the event there was a Quiz competition and essay competition and undergraduates from the University of Moratuwa, CINEC Maritime Campus, and University of Colombo attended these events. The highlighted event was the launching of the 2nd edition of Logistics Times Magazine.









KDU Young Entrepreneurs

The students from intake 33 of the Department of Management & Finance organized an Entrepreneurship Exhibition which was held on the 20th of November 2017 in a grand scale, where twelve teams competed for the title of "Best Entrepreneur of KDU".

The event was graced by the Deputy Vice Chancellor of General Sir John Kotelawala Defence University where the event was conducted for the entire day at the university premises with the participation of many corporate representatives. When the whole country is looking for an era of entrepreneurship, the event gave an opportunity for the students to improve their skills and abilities leading towards outstanding entrepreneurs.

20th of November 2017

7th of December 2017

2018

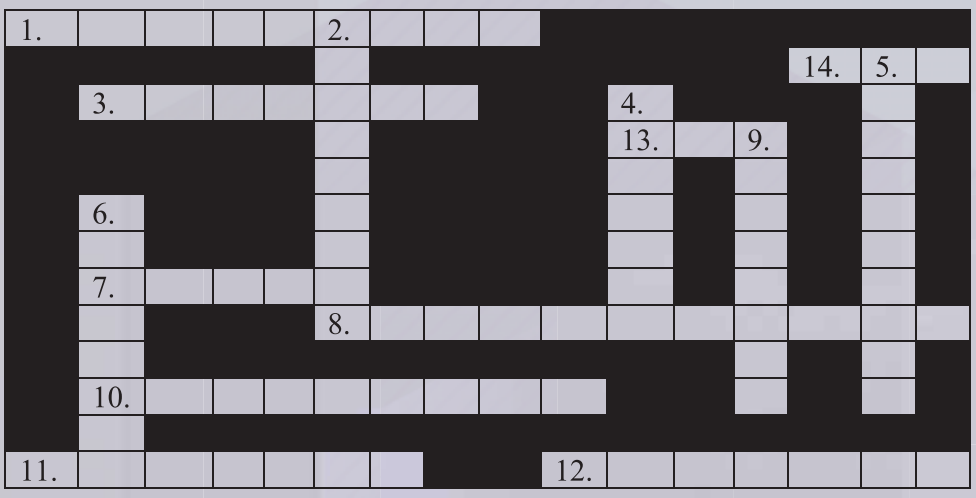
SIHINA Shaping their dreams

Intake 33, Faculty of Management Social Sciences and Humanities organized a donation campaign to fulfil the material educational needs of 190 students studying at Senapathi Vidyalaya, Bibile, Monaragala. This campaign was conducted as a partial requirement of the degree program under the supervision of Dr. Upali Rajapakse. Donations were collected in forms of stationery and required items only.

The project was carried out at the respective school on the 7th of December 2017 bringing joy to the hearts of the students and their parents. The specialty of the project was that the selected 190 students were financially underprivileged and stricken by poverty. Excess stationery collected was donated for administration activities. This project was an enlightenment for the students in shaping their dreams and to our prestigious institution for being the hub of their innocent joy.



Puzzle



Across

(1) Easy integration and management of the product value chain from supplies to the customer

(3) Is any source of potential damage, harm or adverse health effects on something or someone

(7) A sum of money set apart for a specific objective

(8) Reducing risk of loss from the occurrence of any undesirable event

(10) A situation that poses an immediate risk to health, life, property or environment

(11) In Sri Lankan context, humanitarian logistics emerged with this disaster which occurred in 2004

(12) Ability to move materials and equipment quickly and easily

(13) Help or support

(14) It's a component of 5Ms in logistics

Down

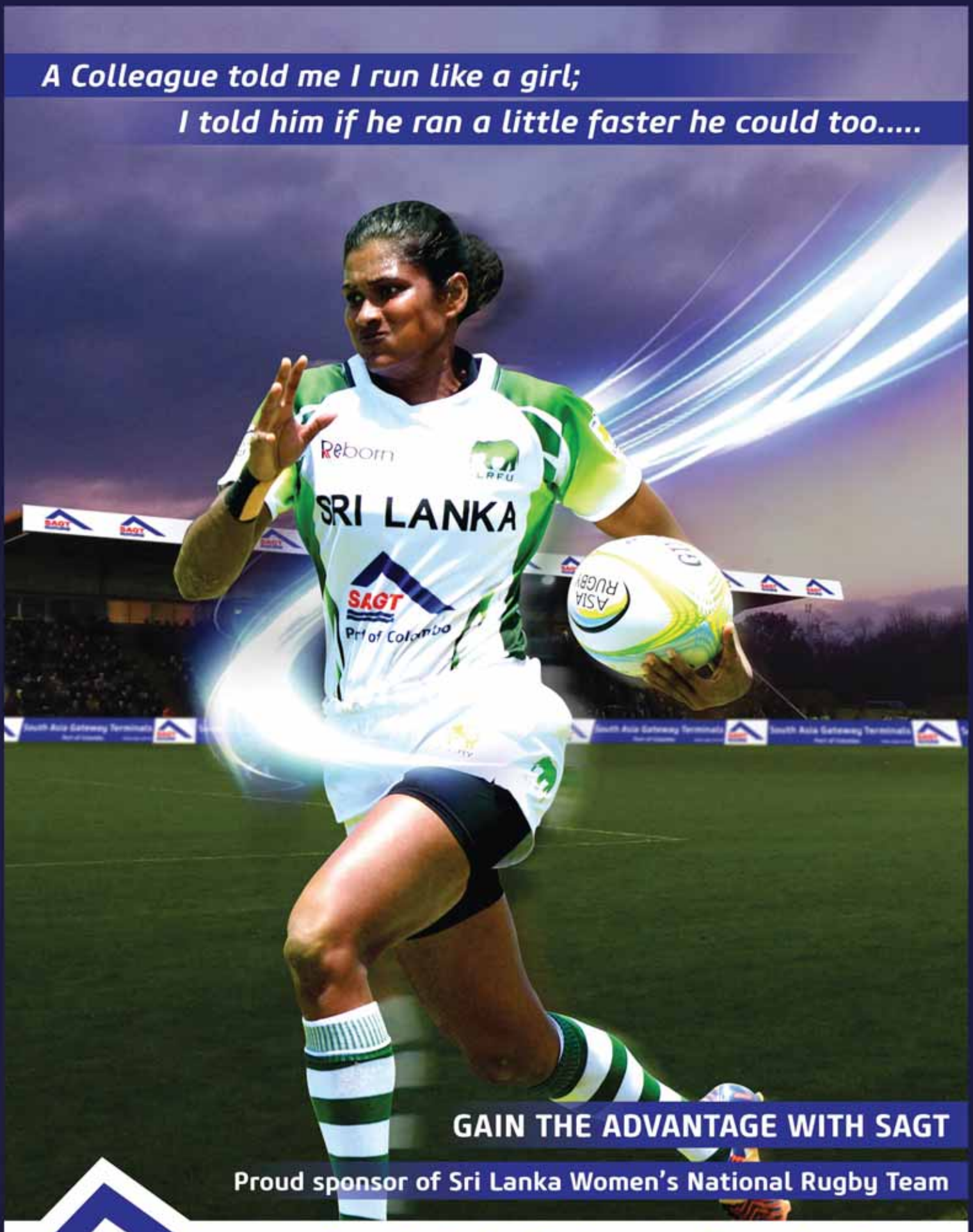
(2)The unlawful use of violence and intimidation which should be maintained at zero level in a country

(4) Advance notice of a possible danger

(5) An after effect caused due to a distressing or traumatic event

(6) Is someone who has been forced to flee his/her country/region due to a disaster

(9) Is a serious disruption caused over a short time



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ISSN 2550-3332

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