FEEDBACK TUTORIAL LETTER

2nd SEMESER 2019

ASSIGNMENT 2

ENVIRONMENTAL AND HUMANITARIAN LOGISTICS

EHL612S
ENVIROMENTAL AND HUMANITARIAN LOGISTICS (EHL 621S)

Dear Student,

I trust that, by the time you are reading this Second Tutorial Letter of 2019 for Environmental and humanitarian Logistics, you have received and perused your marked Assignment number 2.

To those of you that did well- CONGRATULATIONS! It is a pleasure to mark assignments that have obviously been completed with care. To those of you that fared poorly- remember that your marks are often a reflection of your attitude; if you try to complete an assignment in the shortest time possible you cannot expect to do well.

It is apparent that many students still do not know how to study on distance mode. The study guide contains a detailed introduction with recommendations about how to use the guide. You do not learn anything by simply scratching around to find the page in the study guide that appears to have the answer to a question in the assignment. You need to work systematically from the beginning of the semester; otherwise you will be unable to master the subject.

Please feel free to contact me for assistance while you are studying. I prefer e-mail as method of communication and will try my best to respond as soon as possible. Very few students approached me for assistance while they were completing their assignment.

The purpose of this letter is to make certain observation regarding your answers to the questions as contained in the aforesaid assignment in an attempt to guide you to find the most appropriate answers and/or solutions.

Environmental and Humanitarian Logistics is an extensive course, it requires you do a lot of on time reading.
REMEMBER THAT TUTORIAL LETTERS FORM PART OF YOUR STUDY MATERIAL FOR EXAMINATION PURPOSES

General comments:

1. Some students tend not to read a question to establish exactly what is asked and, as a result, you have lost marks. Also observe the mark allocation in order to decide how many facts to include in your answer.

2. Read your answer! Carelessness costs marks!

3. Make sure that you have answered all the questions. In an assignment there is no excuse to omit questions.

4. Keep your answers concise and to the point and always give examples when expected to.

5. Please do not copy the questions into your assignment book; the tutors have a copy of the assignment and it wastes time to have to figure out where the question ends, and the answer starts.

6. Always read the instructions in each question carefully.

Regards

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ASSIGNMENT 1 (50 MARKS)

QUESTION 1 (25 MARKS)

(a) Students, were expected provide their understanding by briefly explaining and the key considerations in humanitarian logistics planning

(b) also make use of possible examples when answering questions.

As much as creating and enhancing infrastructures can mitigate the effects of disasters, we are still required to have better proactive plans and improve the implementation of relief operations. One main aspect of such planning and implementation is the logistics of relief operations. Humanitarian logistics can be simply defined as a branch of logistics dealing with logistical aspects of a disaster management system, including various activities such as procuring, storing, and transporting food, water, medicine, and other supplies as well as human resources, necessary machinery and equipment, and the injured before and after disasters have struck.

The 5 key considerations in humanitarian logistics planning should include but not limited:

- **Local transport infrastructure capacity**
  It is important to know what transport infrastructures are available, its condition, its capacity, its availability, its entry point locations and customs procedures, and safety, security and other statutory procedures, freight forwarders, fees and rates as well as working hours. Modes of transport could include road, rail, air and waterways individually or a combination of two or more. Fuel and maintenance support for transport units are also crucial for the successful operation of the plan.

- **Warehouse and storage capacity and equipment**
  It is also important to know whether there are any warehouses available, its location and accessibility. Storage facilities and capacity is similarly important to determine whether additional storage and warehousing needs exist. In addition to capacity and location, the type of facility and storage equipment, overall condition, security and cost should also be considered during the planning stage. For example, if a warehouse is dilapidated and not fit-for-purpose to store a specific type of item, there is a good chance that those items will get damaged or destroyed. If a warehouse is not properly secured, it is exposed for theft. If too far away from manufacturing plants, it puts more stress on transport activities which is costly and can be minimized if built closer to manufacturing plants. If the volume of the warehouse is huge enough to store stacked
items and there is no proper racking or lifting equipment to move those items, then space will not be used optimally which means costs are spent on a wasted opportunity.

- **Availability of local supplies and financial resources**
  Before considering importing supplies from foreign vendors, determine the availability, reliability, quality, capacity, delivery and cost of local sources of supplies and services.

- **Factors that may restrict or assist relief efforts**
  The first circle of responders such as the national authorities (police, fire, emergency management and medical teams) may restrict, ban or help any aspect of the logistics operations. For example, they first need to determine whether it is safe for the logistics and other teams to move into the area to assist in relief. They would consider the geography and remoteness of the disaster area, the climatic conditions, the safety and security aspects, the state of the infrastructure and determine availability of logistics resources at the site before deciding on whether to restrict or proceed with relief assistance. The conditions should be reasonably safe for them to proceed with relief efforts.

- **Social, environmental and cultural features of the affected population and region:** It is important to procure and provide the specific type of supplies required by the affected people and that it is distributed timely to be used or consumed as required. If the population’s dietary habits, religious or traditional beliefs in terms of food is considered, then the right goods will be procured and provide relief aid to the affected people.

- **Plan alternative routes for transportation in case of local destruction**
  Road infrastructures are essential for effective and efficient logistics system as they connect the points of supply to the points of demand. Given that in most cases emergencies do not occurs in places where good and services are produced, urgent transportation will be required. There is therefore, a need for access roads in case of local destruction such as traffic congestion or collapse of roads and bridges. Absence of alternative routes may cause ripple effect and escalate problems; thus, transport infrastructures need a better understanding.

- **Simplified Logistics Systems**
  Logistics system does no need to be complicated; it should be simple and clear in order to reduce transit time, to minimize the number of stops and transfers, and to consolidate facilities. Road signs must be easy to understand, or streets must be named to avoid confusing and distance between places must clearly indicated.
- **Locate warehouse centrally in areas they intend to serve**
  Warehouse refers to the space needed for the storage of goods. Pienaar and Vogt (2012) says, efficiency and effectiveness in delivery of goods relays on the location of the warehouses. This literally mean, we need to carefully select the location of the warehouse so that delivery takes place without compromising efficiency and effectiveness. In humanitarian logistics perspective, compromising efficiency and effectiveness may result in more suffering of the people, or loss of lives. It is important that a warehouse is in the vicinity of the disaster.

- **Maintain Buffer of Stock**
  Buffer stock refers enough or reasonable stock that is kept on top of the cycle stock to make provision for the uncertainties in supply and demand. In humanitarian logistics perspective, it refers to stock that is kept in warehouses to protect against natural disasters. For instance, the national warehouses would keep items such as blankets and tents, sealed food items with long shelf life such as energy biscuits, and non-perishable medical and hygiene supplies to replenish regional warehouses to ensure the ready access to the essential stock items without having to resort to costly and risky last-minute procurement and transport into the country.

- **Humanitarian Technology and Communication**
  Pettit and Beresford (2009) recommended that agencies must come to terms with the important role that logistics and supply chain management can play. Senior managers need to recognize that there are great savings to be made by consolidating and standardizing a host of often scattered logistics functions. Middle management must invest time and energy in order to persuade senior leadership. Kunz and Reiner (2012) also recommended that a key area of concern that needs a collaborative contribution by both private sector and NGOs is that of global communications. One idea would be for a consortium of NGOs to work with the private sector, drawing on their resources, expertise and knowledge in radio, satellite, licensing and hardware. One outcome could be a communications unit to serve the wider humanitarian community during a large- scale disaster. Logistics plans, logistics software and logistics staff should be in place. Communications issues should be addressed for the logistics chain to be complete and efficient.

  Technology is a key factor to achieve better results in disaster logistics. Implementing up-to-date information or tracking systems and using humanitarian logistics software which can provide real-time supply chain information, organizations can enhance decision making,
increase the quickness of the relief operations and achieve better coordination of the relief effort. Biometrics for identifying persons or unauthorized substances, wireless telecommunications, media technology for promoting donations, and medical technologies are some more aspects of technology applied in humanitarian operations.

- **Humanitarian relief personnel**
  Teams deployed in emergencies are required to initiate rapid assessments and implement appropriate interventions within days of a disaster. Coupled with the need for a rapid response in conditions of extreme physical and mental stress, aid workers must adapt to and deal with unfamiliar demographics, cultures, political environments and climates. This further complicates the task of implementing relief activities that are relevant, timely and well-targeted. Training and skills development is needed. This must be matched with a complementary level of institutional commitment and financial investment, aimed at improving the efficiency of humanitarian operations.

- **Supply chain collaboration**
  In humanitarian logistics, supply chain collaboration is defined as two or more autonomous responders working jointly to plan and execute operations. This can deliver substantial benefits and advantages to the victims of a disaster. Effective collaboration with all humanitarian supply chain partners requires sharing of valuable information in real time, create, through near-transparent communication, a network of collaborators to act as an extension efforts to get the right supplies and assistance to the right people in the right locations at the exact time they needed.

Many humanitarian organisations are not performing effectively today due to their fragmented functional structure. With a fragmented approach to aids distribution, they have to manage functions rather than processes. It is also difficult for organisations like these to reflect external integration when they lack internal integration. Organisations that have got over this problem only have to design close linkages with their supply chain partners so as to make logistics managers view their specific functions as part of a process and not just stand-alone activities.

One of the most important keys to successful supply chain integration is the transparent flow of information from one end of the chain to the other (Lin Moe & Pathranarakul, 2006). With this, supply chain partners are able to respond more rapidly to emergency demands with lesser inventory and hence lower cost by sharing information. An effective supply chain has to be highly integrated internally across functions and externally with suppliers and aids beneficiaries.
A higher degree of collaboration across agencies is required in the form of workshops and shared specialist pools. It is also important that the sector draw on the brain trust of the commercial sector, particularly in its proven areas of competence, systems and software, technical and engineering expertise. Corporations could provide their own staff with opportunities to work alongside NGOs. The corporate community could also create a pool of logistics experts available to the humanitarian sector for deployment on an on-call/as-needed basis. Humanitarian demand is often seasonal with need often dictated by the specific requirements of an emergency. Corporate experts could work alongside NGOs in the field in both pre emergency and during emergency phases. In the area of partnership there are different ways that can be looked at to consider a community’s contribution to emergency response operations. What is required is a much higher degree of collaboration across agencies in the form of workshops and shared specialist pools.

- **Competencies**: For long-term survival, a wide variety of competencies are required. An aids organisation will perform effectively if it possesses some of the core competencies.
- **Performance cycle**: A structure integrating all aspects of supply chain operations linking procurement, manufacturing, support and physical distribution.
- **Functions**: These are traditional areas of logistics specialization, which are essential for operational excellence. They need to be viewed as integral parts of the overall logistical competency and not as unique areas of performance (Stadtler, 2015).
- **Sub functions**: These are specific jobs within functions which need to be performed within functions for satisfying logistical requirements.
- The humanitarian organisation is at the centre of an inter-dependent network that competes as an integrated supply chain against the other supply chains. Managing such an integrated structure requires various skills and priorities. A focus on the network management as well as upon internal processes is necessary to achieve effectiveness of the supply chain.
- The following are the most significant issues in such an environment:
  - **Collective strategy development**: In the traditional view, members of a supply chain thought of themselves as separate entities that did not see themselves as part of a network and consequently never shared their strategic thinking with each other. A higher level of joint strategy development is required for a network to be truly effective. Network members must collectively agree to strategic goals for the network and the means of attaining them.
- **Open communication**: The advent of information technology is making the exchange of information between supply chain partners very easy and this has been one of the most powerful drivers of change in the networks.
- **Benefits for partners**: There is a growing realization between network partners for cooperation that usually leads to improved performance. Another issue is how the results of that improved performance can be shared amongst the various players. All partners must benefit and be better off due to co-operation.

- **Have a contingency plan in place**
  Contingency plan refers a well calculated plan of action that is drawn in advance for various situations that might impact humanitarian logistics process. The plan should include any incident that might disrupt operations, how the information will be communicated to those who are concerned, what routes will be used to reach the people affected, etc. For example, in case of fire at UNAM main camps, it will not be appropriate to use Independence Avenue as it might be congested, but alternative roads such as Western bypass would be appropriate.

- **Training for community members and aids agencies personnel**
  The training of personnel of aid agencies should be seen as a very important factor for the effectiveness of the supply chain in handling relief distribution. This is to enhance knowledge that can greatly assist humanitarian agencies in their duties. Competency-based capacity-building initiatives and mechanisms need to be developed and supported so that humanitarian logisticians’ skills and know-how are raised to more professional levels and supported by appropriate training discipline and accreditation. New employees could be sourced from feeder schools and corporate environments where they might have core professional skills though needing to learn more about the humanitarian context. In addition, there needs to be a greater emphasis on mentoring and coaching within organisations. Training community members in first aid skills can be helpful during disasters. The more prepared a community is, the more flexible it will be in the event of a disaster. However, there is always a need to develop a clear strategy on commencement from emergency phase to recovery and development with the overall aim of ensuring flexibility among households, to the recurring hazard of drought and other common shocks. There is a need to invest in building local staff capacity in disaster response to be able to provide rapid, timely response to emergencies leading to reduced delays associated with recruitment of international staff.
QUESTION 2 (25 MARKS)

With reference to local and regional examples, describe the 6R’s of sustainability.

We need to consider the impact we have upon the world in which we live. We need to increase our use of sustainable resources to ensure that our activities today do not have an adverse impact on others currently, or upon future generations. During the last century humans have used new and increasingly powerful technology to exploit the earth’s resources. As a result, supplies of natural resources like coal, oil, minerals and fresh water are likely to run out unless we act. The world’s population is expanding and feeding the world is an increasing problem. Many people are starving whilst others are overeating and throwing away large quantities of food. In order to support sustainable production, manufacturers must find ways of using more energy efficient processes. They must reduce the consumption of water, avoid waste and use sustainable resources.

- **Sustainability** focuses on meeting the needs of the present without compromising the ability of future generations to meet their needs. The concept of sustainability is composed of three pillars: economic, environmental, and social also known informally as profits, planet, and people (Triple bottom Line).

- Sustainability is the capacity to endure. In ecology the word describes how biological systems remain diverse and productive over time. For humans it is the potential for long-term maintenance of wellbeing, which in turn depends on the maintenance of the natural world and natural resources.

- Long-lived and healthy wetlands and forests are examples of sustainable biological systems. Invisible chemical cycles redistribute water, oxygen, nitrogen and carbon through the world's living and non-living systems and have sustained life since the beginning of time.

- Many consumers are trying to think of the environment and sustainability when they buy things; they are thinking of ‘green’ issues. Designers and manufacturers are required by law to try to reduce the environmental impact
of the products they create.

- Six keywords summarizes the approaches that can be taken by the consumer, the designer, the manufacturer and the retailer: Reduce, Reuse, Recycle, Rethink, Reuse and Repair

**The 6R’s of sustainability are as follows:**

- **Rethink**
  - Think about the things around you (living and non-living things) and consider how it stays alive, how it was made, used and how it will be disposed of eventually, and *reinvent* or introduce alternative, more sustainable ways to keep the living alive and have the non-living revived.
  - Think how sustainable the way in which we design, make, use and dispose the products.
  - For example, Rwacana Hydro Power and Hardap Solar Polar PV reduce burning of coals to produce energy and at the same time, make a significant contribution to reducing greenhouse gas emissions.
  - Designers and manufacturers can make products that do the same job more efficiently. They can design the packaging so that it is easier to recycle (for example, by making the packaging from a single material)

- **Refuse**
  - Purchase only what is as is required and limit purchases according to desires.
  - Making conscious choice to not generate waste. Consumers have choices as to whether they buy a product or not; therefore, we should refuse to buy or use the products that we do not need, or think their production and disposal is not sustainable.
  - Prior to going shopping, make up a list of what is required and stick to the list to avoid wastage of any sort.
Purchase locally as far as possible to lessen the carbon footprint, increase the GDP of Namibia and reduce unemployment through manufacturing and procuring products and services within the country rather than importing goods and services.

- Reduce
  - Consumers need to look to reduce the number of products they buy or consider buying products that use less energy.
  - Manufacturers are looking to design products that have less materials in the product, take less energy to manufacture and need less packaging during transport.
  - Continuously looking for ways to save energy, water, materials, etc.
  - By washing your laundry with cold water as opposed to warm/hot water, a lot of energy will be conserved since it takes a lot of energy to heat water. Cold water also preserves clothing better than warm water.
  - With the relatively recent droughts experienced in and around Africa, water should be used wisely, limiting of car washes and reuse of bath water for gardening purposes.
  - Look for ways to save energy, water and materials. In other words, we need to make decisions that decrease the amount of waste produced. This can be achieved by reducing the number of products we use or buy, or considering using or buying products that use less energy.
  - Retailers can reduce carbon emissions by transporting products straight to the consumer from the place of manufacture, instead of via warehouses and other distribution centers.

- Reuse
  - Employ innovative ideas to use materials multiple times.
  - Avoid or minimize usage of plastic bottlings and rather replace some of
by using glass water bottle to drink water from which can be refilled and be recycled.

- Many retail shops across the country are now discouraging the use of plastic bags as they are non-biodegradable and thus encouraging green initiatives, for example Fruit and Veg sells reusable paper bags that are much more environmentally friendly.

**Repair**

- We should repair/fix something before throwing it away. Repairable items and be used more than once.
- Why buy new if the cost for the repair of an item is almost half less the price of a new item? This way you don’t only save money, but also save on energy and other factors to produce new products.
- Demand for a new product drive supply of a new product, while demand to have something repaired will drive spare parts to be manufactured rather than the production of a whole new product.
- We need to repair the items and continue to use them, before we throw them away. By doing so, we expand the shelf-lives of products. Repairing requires less resources comparing to manufacturing new items
- It would be cheaper and requires less energy to repair many old furniture at NUST instead of buying new ones.
- Designers have a responsibility to design products that can be repaired more easily.

**Recycle**

- Recycling refers to the returning of goods back to the manufacture so that they can be transformed back to original raw materials.
- Recycled materials typically require less energy to process compared to developing new materials.
- Repairing a product instead of disposing of it (e.g. fitting a new bearing to
a washing machine, upgrading a computer) refusing a product (refuse a disposable cup from a coffee shop; take your own mug instead!) reusing a product (a cotton carrier bag at the supermarket, or using a food container to store and organize other products).

- A product may have many different uses with more than one consumer/owner.
- For example, Namibia breweries saves energy by recycling aluminum cans.
- Returning goods to their source so that they can be transformed back to original raw material.
- Waste bins are strategically placed in our town to discard of plastic, paper, glass and other items separately. This is to assist in the broader recycling project to break down goods to its original source.
- Rent a drum has a variety of recycling initiates, for various number of companies, such as Namibian Breweries.