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Humanitarian Supply Chain & Logistics Aid Management at Global Relief Services

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Global Relief Services

Case Body

“Ah, come in, come in.” Jeffrey Moore, Director of Global Logistics at Global Relief Services (GRS) sat at his desk in his Geneva office smiling as he gestured for you to take a seat. You sit across the desk from Moore as he continued, “GRS wants to build a new facility to warehouse medical supplies and other relief resources. We need your consulting firm to help us on a site location strategy. Your consulting firm, ABC Inc. has supported the United Nations on multiple crisis situations over the past ten years and has experience assisting with site location decisions.”

Mr. Moore rested his elbows on his desk touching his fingertips together as he explained his request. “As the VP of supply chain and logistics management for ABC Inc. you will be working closely with myself and, under your guidance, your logistics team at ABC Inc. will assist GRS to determine an optimal site(s) for warehousing supplies in areas distant from vendor donors. Vendor donors are companies that supply actual physical supply donations rather than financial contributions. We have enough capital to fund the construction of a maximum of three warehouses. The staff of GRS is currently stretched across the globe and mobilizes in a variety of crisis situations. GRS needs to become more efficient with a strong supply network globally. And, on a separate note, an impending disaster is within days of occurring in Latin America where our experience is limited. I need your assistance in creating a relief strategy for the Latin American nation of Nicaragua which is in the direct path of Hurricane Harold.”

Moore stood up, and while relatively large in stature, his eager smile and gentle face had a calming effect. He walked across the room to a wall covered in framed photographs depicting various disasters and relief operations from countries around the world. He took a moment to gaze at the different pictures before turning back to face you, slipping his hands in his pockets. “Since 1988 GRS has served people around the globe impacted by natural disasters, disease, and war. Beyond the initial period of crisis, we work to build and improve confidence and self-reliance within local health care systems in countries of need. Our six key priorities defined by the organization are rapid emergency response and preparedness, training local health care workers, providing lifesaving care to women and children, integrating mental health into primary health care settings, promoting the use of clean water, sanitation, and hygiene, and lastly providing nutrition services.”

An essential aspect of effectively providing the needed services in the least amount of time is heavily reliant on a well-developed logistics network. Currently the GRS logistics team is led by Jeffrey Moore who joined GRS in 1993 during the crisis in Bosnia and Herzegovina. As Global Director of Logistics

he has led teams all around the world. His efforts are supported by the Deputy Manager of Global Logistics, Lesley Smith, a retired Major, who served 18 years in the British Armed Forces. She is a short stocky individual with a well-disciplined no-nonsense personality. At the current time, the Logistics team is partnered with three organizations; the Humanitarian Logistics Association, Fritz Institution, and CIV-MIL Solutions.

“When emergencies occur, my team must react on multiple fronts.” Moore pulled one hand from his pocket listing each example off his fingers. “Our operations include procuring supplies for medical care, setting up equipment for surgical operations, and providing temporary shelter for the injured, homeless and incoming medical staff. Also, clean water supplies and personnel are dispatched to the affected area as efficiently as possible. In most cases, infrastructure is damaged, utilities are out-of-service, and communication systems are disrupted. In every case, coordination with local officials, customs personnel, available ports of entry, and volunteers are keys to success for an emergency operation. After the crisis is over, ongoing health care and infrastructure development is often necessary to rebuild the communities affected. These programs may be necessary for many years, even decades. Such has been the reality of ongoing projects in the war-torn Middle East and tumultuous areas of Africa.”

Moore sat once again behind his desk before concluding his requirements of ABC Inc. and your logistics team. “The situation at hand is we have realized in order to continue our sustained operations in the Middle East and Africa GRS needs to build a large warehouse to store more supplies. Currently GRS occasionally passes up vendor donations because we do not have the storage capacity, and we need to correct that. Also consider, when deciding on a building site, proximity to relief operations, the economic and political stability of the region, technology available for logistical support, and available modes of transportation of resources. I look forward to hearing the solution ABC Inc will come up with.”

Your meeting now over with Mr. Moore, you leave his office and immediately assemble your logistics team.

Literature Review

Academic and industry practitioners have been working together for years to help with humanitarian and crisis aid response. Van Wassenhove (2006) outlines a detailed framework for supply chain logistics of humanitarian aid laying some of the groundwork for the field. Kunz, Van Wassenhove, et al. (2017) build upon this work and lay the groundwork for future cases and research in this area. Distribution of water, food, agricultural, healthcare, and pharmaceutical products are critical - especially during regionalized natural disasters (Altay & Green,

2006; Gupta et al., 2016; Ye et al., 2020), but also international pandemics such as COVID-19. During COVID-19, healthcare and food supply chains were suddenly under the microscope (Bakalis et al., 2020; Bumblauskas et al., 2020; Hobbs, 2020). Researchers have addressed models for supply chain humanitarian aid logistics as it relates to clustering (Santos Lima et al., 2014), flood response (Rodríguez-Espíndola et al., 2018), earthquakes (Sakuraba et al., 2016a; Sakuraba, 2016b; Santos, 2009), facility location optimization (Boonmee, 2017), and last-mile vehicle routing (Penna et al., 2018).

Logistical Network Assessment

For the most part, GRS orders supplies as needed using donated financial resources. Ordering using a needs-based approach is especially important for medications that have a limited shelf life and require very specific storage facilities. GRS has no centralized distribution center for holding bulk supplies that can be either purchased at quantity discounts or received as donations. Instead, small warehouses are set up at each field site. These are needed to make sure operations have a minimum level of safety stock on hand to maintain operations.

GRS is dependent on either their-own warehouse inventories or the donation of items from suppliers to the third-party providers. Currently, the organization has only three occasions for receiving donated supplies:

1. When an emergency happens, a request is made to third-party partners who then communicate with direct suppliers to determine the availability of donatable goods in the suppliers' warehouse locations.
2. For sustained operations, new requests are sent to the third-party partners to determine what supplies are available.
3. At any time, companies or the providers sometimes offer extra inventory to non-profit groups. However, without facilities for warehousing such goods, GRS often must pass on these opportunities.

The long-term commitment by GRS to aid ongoing crisis situations in Africa and the Middle East has created awareness among administrators for the need to gain more control of inventory. Administrators have also been aware of lost savings by not being able to purchase and house stock at discount quantities or house donations due to a lack of centralized distribution warehousing.

Hurricane Harold and Needed Resources

The International Weather Service has just indicated that tropical storm Harold has intensified and changed its course. Forecasters formerly predicted the storm would fizzle out in the eastern Caribbean Sea with minimal disruption to the island countries. The sudden intensification of winds and change to a western

path put Nicaragua right in the path of the storm and what will likely be one of the most devastating hurricanes in the nation's history. For comparison, in 1998, the Central American region was hit by Hurricane Mitch. In just a few days nearly 50 inches of rain was dumped in some regions. Most of the mountains in the area have not been reforested from years of slash and burn agriculture. When Mitch hit Honduras, the rain caused the soils on the bare mountain sides to slide into the valleys burying whole villages (visualize the disaster of Mt. Vesuvius erupting and burying Pompeii). Raging rivers washed out bridges and roads making rescue attempts difficult at best. Communication systems and electrical power were non-existent for weeks in past hurricanes. This scenario will surely be played out in Nicaragua with the incoming storm, Harold.

Hurricane Harold is posing a major disaster situation intensified by limited availability of GRS human resources team members and supplies. GRS staff and resources have been tied up in the Middle East because of escalating violence in Syria. For example, one supply chain management challenge is acquiring distribution vehicles as most vehicles are purchased from Toyota Gibraltar Stockholding or from local dealerships in the host country (that way it's easy to maintain warranty for the vehicles and ensure access to spare parts).

As with the vehicles, generators are mainly procured in the host country in which the GRS is working. The support services available are very important when purchasing a generator. A preferred brand is called Perkins, a UK brand with global distribution which can be found in many countries. Otherwise, suitable local alternatives are sought. However, the procurement decision is highly dependent upon the budget and availability in each country. With the impending storm approaching, sources must be quickly identified and prioritized.

Depending of the severity of a situation, Global Relief Services enters each emergency with a staff team consisting of:

- An Emergency Response Team Coordinator,
- Logistics coordinator,
- Finance officer,
- Health Technical Unit Representative,
- Monitoring Evaluation Specialist,
- Communications Officer.

The standard hospital tents utilized by GRS are packed compactly to facilitate immediate air shipping. Recently purchased basic hospital tents without furniture or equipment are 82 meters square, and can accommodate between 18 to 50 people depending on the intended use of the tent. Tents are either used as a clinic facility with equipment for treatments or used as housing. Each tent comes in two boxes – each measuring Length 227 cm x Width 73 cm x Height 50 cm and weighing 524 kg. 24 tents will fit into a 20 ft. container (*Standard Pallets are*

40" x 48" and 5 pallets equal 20 feet. 10 standard pallets fit a twenty-foot equivalent unit, TEU, container).

Medical supplies (disposable gloves, tongue depressors, syringes etc.) and basic medicines are bought recurrently. GRS project sites utilize these types of supplies daily causing the need for constant restocking. These products are listed as renewables or consumables. More specifically, The Interagency Emergency Health Kit (IEHK) was designed by the World Health Organization (WHO) to meet the primary health care needs of a displaced population without any medical facilities. It contains essential medicines and medical devices (renewables and equipment) to sustain a population of 10,000 persons for a period of 3 months.

The IEHK consists of two different sets of medicines and medical devices: a basic unit and a supplementary unit. In addition, optional modules are available.

Basic Unit: The Basic unit contains essential oral and topical medicines and medical devices that can be used by primary health care workers who have limited training. To facilitate distribution to smaller health facilities on-site, the quantities of medicines and medical devices in the Basic unit have been divided into 10 identical units for 1,000 people each (basic kit contents list available upon request).

Supplementary Unit: The Supplementary unit contains medicines and medical devices for a population of 10,000 people and is to be used only by professional health workers or physicians. The Supplementary unit itself is made up by a Drugs, Renewables, and Equipment module. As the name implies, the Supplementary unit and the Basic unit complement each other and can therefore best be used at the same time.

Optional Modules:

- Malaria Module
- PEP Module (Post-Exposure Prophylaxis)
- Wound Module
- Burn Kits
- Cholera Module

Doctor Travel Packs (DTPs) from International Health Partners UK (IHPUK) are used by response teams. About 500 of these fit into a 20' container.

The Ready Relief Box (RRB) is a portable pharmacy designed by Heart to Heart in partnership with Becton Dickerson & Company, made for short term medical teams, disaster response, and for clinics and hospitals that are operating on an ongoing basis. The RRB contains such items as over-the-counter pain relievers, antibiotics, topical creams, vitamins, oral rehydration salts, antacids, allergy medications and first aid supplies. A doctor's bag with a stethoscope, otoscope and blood-pressure cuff can be optional upon request. Each RRB can treat as many as 500 people and its contents remain largely consistent throughout the year. Between 430 and 500 RRBs fill a 20' container. Hygiene kits are also

needed in both disasters and for ongoing programs. 200 kits fit into a box and 1300 boxes fill a 20' intermodal container.

For reference, on the scale of the products typically needed in disaster relief, in Libya a response of 94.58 tons of supplies with an approximate volume of 70 m³ (cubic meters) were delivered in the first three months alone. These were mainly medicines, medical supplies and different types of medical kits (including surgical kits) with smaller quantities of food items for health facilities. These items were shipped from abroad through procurement and Gifts in Kind (GIK) by a mix of air freight and ocean freight.

In some situations, large quantities of supplies are often shipped within a country. During the Ethiopian emergency, just in the Dolo region the GRS stored and distributed an average 124 tons of food received from the World Food Program (WFP) every month. This food gets delivered through GRS's resources utilizing a donor for secondary warehousing near camps being served. From these warehouses, GRS distributes the food to the nearby camps on a structured schedule to maintain food and health safety for beneficiaries.

Past disasters in the region provided insights into the level and impact of government agency corruption for donated funding. Most external government and non-government agencies chose to provide the relief and restructuring services directly instead of allowing the government to handle the funds and coordinate efforts.

Team Deliverables

Your consulting firm, ABC Inc., has been asked to advise the GRS Logistics team on developing an optimal distribution network to serve the development needs in Africa and the Middle East. Having the warehouse(s) in place would allow for more direct relationships with companies, such as Johnson & Johnson, instead of having to work through the Third-Party Provider organizations to get donations and supplies. Eliminating one tier in the supply chain can result in faster response times in emergency situations and make general operations more efficient. Staffing requirements must also be considered. It is uncertain whether it is possible to place the site(s) near a current country office to utilize present staff and office resources.

GRS has determined that the cost and staffing requirements dictates a *maximum* of three sites be set up to maintain inventory of items needed on a regular basis. The team needs to determine the number of sites required and provide appropriate placement of site locations best suited from a global perspective to serve the populations in the area.

Your consulting group must plan for two months of immediate relief work and one year of restructuring support for the eastern half of Nicaragua. Unfortunately, it is the region of the country with the poorest infrastructure.

Since your firm has become familiar with the organization's supply chain and staff, your team has been asked to assist in developing a strategy to assist the soon-to-be devastated area by developing a logistics plan of action to provide aid to as many people as possible. The hurricane will make landfall in 5 days and time is of the essence. It is up to your team to decide what resources and strategic actions are necessary for short and long term operations along with the acquisition, transportation, and distribution of resources. Secondarily, consider the location site(s) of relief operations as the geographical landscape and location will have an impact on our operations. A series of appendices and exhibits follow to help aid your team's individual research and decision making.

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Appendix A: On-going projects sites (2016)

Country	Medical Kits used monthly	Hygiene Kits needed monthly	Nutritional Support items	Medicine (in KG)
Afghanistan	65	n/a	n/a	689
Burundi	n/a	1145	10 beneficiaries	n/a
Cameroon	62	n/a	253 beneficiaries	65
Central African Republic	70	n/a	127 beneficiaries	73
Chad	176	32	427 beneficiaries	185
Darfur	343	n/a	82 beneficiaries	360
Democratic Republic of Congo	210	n/a	69 beneficiaries	220
Ethiopia	25	107	1010 beneficiaries	26
Gaza	n/a	n/a	n/a	1.26
Iraq	N/A	328	n/a	n/a
Jordan	29	n/a	n/a	
Kenya	211	25	1268 beneficiaries	221
Lebanon	n/a	n/a	n/a	34
Libya	68	n/a	n/a	72
Pakistan	1144	397	473 beneficiaries	1201
Sierra Leone	9	n/a	1260 beneficiaries	10
Somalia	0	50	n/a	n/a
South Sudan	2	n/a	37 beneficiaries	171
Turkey	249	350	n/a	165
Yemen	12	n/a	n/a	70

Appendix B: Preferred Vendors

Company	Products purchased	Quantities	Shipping site
Dell	Laptop Computers	Deliveries within USA	USA
Rubhall W. Giertsen	RubHall Storage Tents		Africa
Blackberry	Phones	N/A	Worldwide
Rofi	tents	Stockholding	Molde, Norway
Staples	Office Supplies	Domestic deliveries	USA
Galaxy 1	Satphones, BGANs	Small parcel shipments	USA
Danimex	HF and VHF radios, other communication equipment	Average 300 kg / 0.5 m3	Sondenborg, Denmark
BluMed	Complete Field Hospital for Trauma and Surgical interventions	57,831lb (26,231kg) and 5,913 cubic ft. – airfreight ready	Santa Clara, USA
IMRES	IEHK, other medical kits, medicines, medical Supplies	As needed with addition of stockholding for 2 IEHKS and medicines (9,325 kg, 21 m3)	Amsterdam, Netherlands
IDA Foundation (International Dispensary Association)	IEHK, other medical kits, medicines, medical supplies	As needed, average shipment size 2,000 kg / 6 m3	Amsterdam, Netherlands
Medical Export Group (MEG)	IEHK, other medical kits, medicines, medical supplies	As needed, average shipment size 2,000 kg / 6 m3	Amsterdam, Netherlands
Missionpharma	Medicines and medical kits	As needed, average shipment size	Lynge, Denmark

		1,000 kg / 3 m ³	
CHMP Kenya	Medicines and medical supplies	As needed, average shipment size 1,000 kg / 3 m ³	Nairobi, Kenya
UNICEF Supply Division	IEHK, other medical kits, medicines, medical supplies	As needed, average shipment size 1,000 kg / 3 m ³	Copenhagen, Denmark
WesternAuto	Vehicles and vehicle spare parts	As needed, one vehicle with spare parts per 20-foot container, 2 vehicles per 40-foot container	Dubai, UAE
Toyota Rwanda	Vehicles and vehicle spare parts	As needed, delivery on own wheels	Kigali, Rwanda
Kjaer Group	Vehicles and vehicle spare parts	As needed, one vehicle with spare parts per 20-foot container, 2 vehicles per 40-foot container	Svendborg, Denmark
Toyota Gibraltar Stockholdings	Vehicles and vehicle spare parts	As needed, one vehicle with spare parts per 20-foot container, 2 vehicles per 40-foot container	Gibraltar, UK

Appendix C: GIFT in KIND suppliers (Vendor Donors)

Organization	Port of Departure	Contents	How much available
Wings of Meds/Wings of Help	Frankfurt, Germany	Medicine	4 pallets
International Aid	Spring Lake, MI-USA	Medical supplies and medicines	Based on needs (3) 20' or 40' containers annually-
IMRES Medical Solutions	Amsterdam, Netherlands	Medicine	6 pallets if procured and donated
Medical Teams Int'l	Portland, OR-USA	Disposable Medical Supplies	(2 to 3) 40' containers per year
International Health Partners UK	London, UK	Medicine	3 pallets
Americares	Stamford, CT-USA	Medicine	4 to 5 shipments yearly (air and ocean) approximately (4) 40 ft. containers
Wings of Meds	Frankfurt, Germany	Nutritional Supplements	90 Metric Tons
IOCC	Rochester, NY-USA	Hygiene kits	20' container
MAP International	Amsterdam, Netherlands	InterAgency Emergency Health Kits	(4) 40' containers annually
Heart to Heart	Olathe KS- USA	Surgical Kits, Hygiene kits	(3) 20' containers annually

Team Rubicon, Inc. is the non-profit organization that utilizes the "best practice" skills of veterans in disaster relief and emergency situations. First utilized during the recent Haiti earthquake, founders realized the valuable application of military skills in disaster emergencies. The organization is located in Inglewood, CA and has partnered with the Global Relief Services in areas such as South Sudan. Typically, the organization supplies 4 to 6 volunteers to a project at any particular time.

Appendix D: Nicaragua



Nicaragua is a Spanish speaking country that is ranked second poorest in the western hemisphere after Haiti. The average level of education completed is 5th grade. Tourism and Coffee are two very important sources of revenue to the country. A young democracy emerged following a devastating civil war in the 1980s. The transportation and communication systems in the country are still in the development stage with many areas not being adequately served. The main international airport is located in the capital of Managua.

Appendix E: Third Party Providers (Warehousing)

Organization	Country	Area serving
Agility Logistics (Donated Service)	Dubai, UAE	Middle East, North Africa
Agility Logistics (Donated Service)	Jakarta	Asia
WFP – Humanitarian Response Depot	Ghana	Africa
WFP – Humanitarian Response Depot	Dubai	North Africa – Middle East
WFP – Humanitarian Response Depot	Jakarta	Asia
WFP – Humanitarian Response Depot	Panama	South America

Humanitarian Response Depot (HRD) facilities are not used often. Eighty percent of transportable goods are controlled medicines purchased directly when needed and are not warehoused. These are utilized in emergency situations when quick action is required and other warehousing is not available in the region.

Appendix F: GRS Organizational Chart, Network, and Staff**Los Angeles based operations:**

- Chief Executive Officer
- Hosts Communications team
- Finance and Resource Development
- Human Resources

Washington, DC based operations:

- Hosts all Operations Senior and Junior staff
 - Program/Desk officers,
 - Regional Coordinators who liaise between field programs and donors (USAID/OFDA etc.),
 - Health Technical Unit,
 - Mental Health Unit,
 - Monitoring and Evaluation team,
- Nutrition department;
- Finance/Logistics support staff;
- Human Resource and recruiting;
- Resource Development (+ Gifts in Kind);
- Public Policy and Advocacy, Domestic and Int'l Affairs

Split, Croatia office:

- Finance Staff (Regional finance, Roving finance, internal auditors, etc.)
- Logistics Staff (regional logistics, trainers, systems and inventory tracking and monitoring etc.)

Each country with on-going operations has a main office and possible sub-offices based on how large programs are or how far apart the projects in that country are located. Some of these offices are in the capital cities but many are in remote areas. Location is based on the need and infrastructure in each country. Currently the 25 country offices each have a country director, medical director, finance director, and logistics coordinator on staff. Sub-offices are staffed as needed.

Globally the GRS has approximately 4500 staff members. The majority of the staff is from the local countries being served. Approximately 500 staff are actually expatriates serving outside their home country.

Appendix G: Medical Volunteers

In addition to the large, well-trained staff of the GRS, volunteers are a tremendous asset for the organization. There are approximately 109 doctor and 60 nurse volunteers on an ongoing roster. Over 80% are United States citizens with the rest from Canada and Haiti. Medical volunteers generally are in country for an average of fourteen days. This requires coordination of individuals in such a way that important services are fully staffed at any time. Others can volunteer for support or non-medical service with a minimum of two months availability. Job opportunities and volunteer registration are listed on the organization's website.

GRS UK

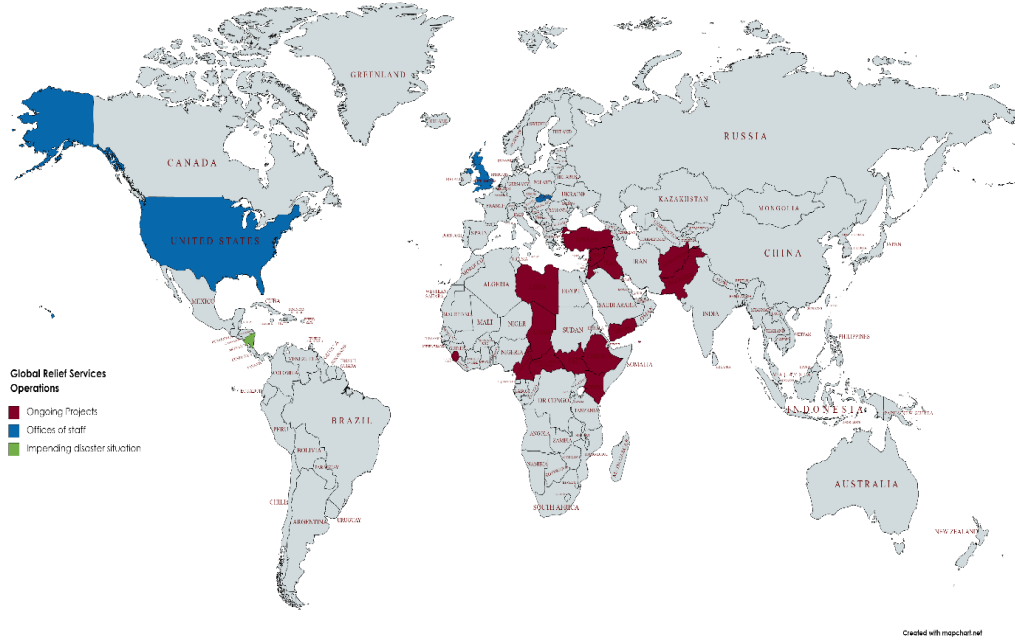
The UK GRS organization is a separate entity from the United States GRS. The UK office deals with all EU based donors and grants as more of a "sister" organization not directly part of the U.S. organization. However, the UK organization can assist in securing various supplies.

Appendix H: Global Financial Information

Ninety-two percent of resources (products and services) are used directly by program activities. This reflects the GRS's deep devotion to fiscal responsibility. Information on the past two years financial activities are indicated in this appendix. It should provide a guideline for future financial budgets. Using an average of these items should be a conservative method of forecasting revenues for the coming two years.

	2016	2015
<i>SUPPORT AND REVENUE</i>		
Global Relief Services-UK	43,855,644	30,289,741
Global Relief Services	100,760,980	88,413,808
<i>TOTAL contract and grant support</i>	144,616,624	118,703,549
Global Relief Services-UK	6,206,483	4,071,726
Global Relief Services	32,714,294	43,876,864
<i>TOTAL donated services and supplies</i>	38,920,777	47,948,590
<i>Total Support and Revenue</i>	183,537,401	166,652,139
<i>EXPENSES</i>		
<i>Program</i>		
Global Relief Services-UK <i>program expenses</i>	47,659,229	32,908,633
Global Relief Services <i>program expenses</i>	121,533,675	113,506,013
<i>Support Services</i>		
Global Relief Services-UK <i>management and general</i>	2,172,677	1,577,453
Global Relief Services <i>management and general</i>	11,756,188	8,898,908
Global Relief Services-UK <i>fundraising</i>	15,987	46,217
Global Relief Services <i>fundraising</i>	1,366,493	794,614
<i>Total Expenses</i>	184,504,249	157,631,838
<i>Change in Net Assets</i>	(966,848)	9,020,301
<i>Net assets are beginning of year</i>	13,381,112	4,360,811
<i>Net assets at year end</i>	12,414,264	13,381,112

Appendix I: GRS Operations Map



Teaching Note

This teaching note was prepared by the authors and is intended to be used for class discussion. The information represented here are those of the authors and do not necessarily reflect the views of the Society for Case Research. The views are based on professional judgment. The case was originally drafted for the 2013 Operation Stimulus competition. Sixteen universities across North American competed and provided a wide variety of solutions for the actual non-profit organization the case was designed around.

Case Overview

Global Relief Services (GRS) Director of Global Logistics, Jeffrey Moore, sat at his desk in the Geneva office contemplating what to do next. Moore was debating working with a world renowned international consulting firm on a site location strategy. The consulting firm, ABC Inc., had previously supported the United Nations (UN) on multiple crisis situations over the past ten years and had experience assisting with site location decisions in the past. Jeffrey had been working very closely with the supply chain and logistics management team at ABC Inc. Under GRS Deputy Manager Lesley Smith's guidance, the logistics team of ABC Inc. had been working with GRS to assist with determining an optimal site(s) for warehousing supplies in areas a great distance from vendor donors. Vendor donors are companies that supply actual physical supply donations, rather than financial contributions. The staff of GRS is currently stretched across the globe and mobilizes in a variety of crisis situations. Not only does GRS need to become more efficient with a strong supply network globally, but an impending disaster is within days of occurring in Latin America where GRS's experience is limited. *The case is most appropriate for courses in supply chain management, international business, and global logistics.*

Learning Outcomes

In completing this assignment, students should be able to:

1. Develop a world view of servicing a wide array of situations
2. Determine warehousing location(s) and needs most relevant to an organization
3. Assess how government regulations can impact a decision for organizational operations
4. Realize the impact of random events that occur in planned operations

Research Methods

The first author worked directly with executives of a non-profit organization for situations faced by that group. In addition, other aspects of the case are based on actual experiences in disaster relief and women's development programs. While the case uses an alias, GRS, it is inspired by a real organization, real events, and is a very realistic scenario faced in this region of the world. The Latin America region of the world detailed in this case study has major needs for humanitarian and crisis aid support. This unique humanitarian aid supply chain and logistics management case has garnered interest from researchers and instructors in academia to be used in the classroom. This includes readers of the *Journal of Business & Entrepreneurship*, members of the Society for Case Research, journal editors, industry partners, etc.

Discussion Questions

It is important to consider the preferred vendor list and locations of supply depots for those products and the aspects of ownership or leasing facilities. Questions to ask for discussion include:

1. What infrastructure exists to support the site for ingress and egress?
2. What government regulations might impact the choice?
3. How easy is it to move supplies through customs?
4. Are there cultural issues that might present challenges?
5. What kind of visa requirements might affect either set of decisions?
6. Are there regional conflicts that could create challenges in moving the goods through certain neighboring countries?
7. Will tariffs be charged for moving the goods? How much?
8. What issues must be considered when assisting in a disaster situation?

1. What infrastructure exists to support the site for ingress and egress?

It is important for the students to determine the availability of good roads, port and air transport feasibility. Many of the countries listed in this case do not have well developed transport infrastructure that could add time to moving items in a crisis situation.

2. What government regulations might impact the choice?

Governments have regulations concerning foreign ownership of real estate in the country. Some countries do not allow for real estate ownership by foreign entities. Often many documents must be filed to even lease a facility. The determination of which government ministries are in control of these transactions to avoid challenges in the future is an important consideration. Labor laws may also impact operations.

3. How easy is it to move supplies through customs?

All goods must move through customs upon entry into a country and file other paperwork if leaving the country. Determine if this is a place where the process can be hindered by the capabilities of the customs officers and regulations. Some countries give preference to moving goods for humanitarian situations, others do not. Make sure there is no embargo from the country of the warehouse to other countries that GRS serves.

4. Are there cultural issues that might present challenges?

Various holidays and religious beliefs could impact the movement of materials. It could also have an impact on the gender of staff members able to accomplish various tasks. For example: women are not allowed to drive in some countries.

5. What kind of visa requirements might affect either set of decisions?

Consider whether staff and volunteers are required to have visas for working either short-term or long-term in the country to assist with operations. Determine the type of visa (if needed) for the different countries' volunteers and how rapidly these can be acquired.

6. Are there regional conflicts that could create challenges in moving the goods through certain neighboring countries?

Consider all the social unrest and military actions going on around the country chosen for the warehouse. For example: If Togo was in a social upheaval and items needed to go from Ghana to Benin, could these be safely transported through Togo. A different route or transport method might be necessary to avoid items being pirated or confiscated.

7. Will tariffs be charged for moving the goods? How much?

If tariffs must be paid to enter the country, or countries, of the warehouse(s) it could add a lot of cost to the relief efforts. It would be wise to consider these costs when determining a site location.

8. What issues must be considered when assisting in a disaster situation?

There are a great number of issues to deal with. First, identify personnel available for the project. Then determine where these people are located and how to get them into the disaster zone. Decide the best route for relief and medical materials being delivered to the problem areas. Clear all activities with the government at all levels to ease tension and provide transparency. Determine contingency plans in case the original strategy does not work. Remember time is of the utmost importance in rescue and relief efforts.