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ABSTRACT

The United States uses humanitarian assistance and disaster relief efforts after manmade and natural disasters to meet long-term strategic goals and reduce human suffering. Each fiscal year these humanitarian assistance and disaster relief projects are primarily administered through the Department of State and the Department of Defense. In the past decade, the frequency and intensity of man-made and natural disasters has increased, subsequently increasing the number of individuals living in vulnerable or recovering communities around the globe. However, overall spending on humanitarian assistance by the United States has decreased compared to levels of assistance provided in the past. As a result, it has become imperative that financial and physical assistance is allocated as effectively and efficiently as possible in order to truly decrease human suffering. The focus of this thesis is on Department of Defense projects funded through the Overseas Humanitarian, Disaster, and Civic Aid (OHDACA) Appropriation program. Currently, there is no transparent, geographically scalable, data driven, or consistent process used by the Department of Defense for their site selection decision-making process. Therefore, the Department is criticized for potentially selecting a suite of ineffective, repetitive, biased projects for funding. To help combat this issue, the Army Corps of Engineers has designed a decision process incorporating multi criteria decision analysis, presented here. This proposed process will create transparency, allow for flexibility, apply to all regions of the globe, and ultimately increase effectiveness of Department of Defense humanitarian assistance and disaster relief projects.

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Chapter 1

Introduction

This century has witnessed extreme large-scale natural and human-induced disasters. Events such as an earthquake or terrorist attack can ripple into a variety of negative consequences due to the spatial and temporal interconnectedness and interdependencies of social, physical, ecological, and economic infrastructures (Hamilton, 2014). These consequences intensify when strikes are compounded and the same vulnerable populations are devastated (Rinaldi, 2001). To combat such negative consequences, a country must distribute timely and effective humanitarian assistance to those communities affected by the disaster. As defined by the Humanitarian Assistance Development Initiative humanitarian assistance is “the aid and action designed to save lives, alleviate suffering and maintain and protect human dignity during and in the aftermath of man-made crises and natural disasters, as well as to prevent and strengthen preparedness for the occurrence of such situations (GHA Development Initiative, 2014).”



Figure 1 United States food aid in Liberia.

Source: USAID, 2014

Humanitarian assistance is distinguished from other types of aid, such as economic or military aid, because it is administered using four guiding principles: humanity, impartiality, neutrality, and independence. In other words, humanitarian assistance saves human lives, acts solely on the basis of need without discrimination, does not choose sides during an armed conflict, and is given without considering the selfish goals of the donor. Embedded within humanitarian assistance is the concept of disaster response and relief. Defined by the World Health Organization, disaster relief is “a sum of decisions and actions taken during and after disaster, including immediate relief, rehabilitation, and reconstruction.”

Generally speaking, the task of providing humanitarian assistance has fallen on the shoulders of developed countries. First and foremost, developing countries, especially those with high population density, poor infrastructure, and fragile economies, have major difficulty financing adequate relief. Second, humanitarianism has become a key component of the new global security agenda. When large humanitarian efforts first began during and after World War I, aid was used to reconstruct the infrastructure of Europe. As assistance efforts continued during and after World War II, assistance aided with reconstruction, but also served as a way to steer the weakened countries away from communist regimes. After the World Wars, the focus shifted to providing aid that combatted devastation from natural disasters, such as famine, and encouraged sustainable development in an effort to maintain global peace and stability. Beginning in the 1990s, however, humanitarian assistance was again used as a tool to influence the global political sphere and, since September 11th, 2001 that has further solidified. Today, humanitarian assistance is strategically used to combat extremism, empower the host nation, and protect the security of the United States while at the same time provide immediate, life-saving assistance

(“Global Humanitarian Terms”, 2008). In other words, since 2001, humanitarian assistance efforts have shifted from simply providing relief from a natural hazard to serving as a tool for sustainable development and conflict management (Rigby, 2001, Jacoby & James, 2010).

Providing humanitarian assistance and disaster relief to communities outside national borders began after the Napoleonic Wars. The idea came from Henry Dunant, a businessman who wrote that medical volunteers and financial assistance from one country could and should be sent to support suffering populations in another country after witnessing the Battle of Solferino. Further, it was not until World War I that the United States began to show support to other countries in need by distributing foreign aid through Congress. Following the passing of programs such as the Marshall Plan and Foreign Assistance Act, United States humanitarian assistance initiatives have grown and are now run through both the Department of Defense and the Department of State as the efforts grew to be too much for just one single department to manage and a line was drawn between military and non-military aid.

While each department is charged with a unique mission, the humanitarian assistance and disaster relief efforts from both share in the same goals: alleviate human suffering and maintain the security of the United States. The Department of Defense generates humanitarian assistance through programs such as the Denton Program and the Humanitarian Assistance Program, both of which are described later in the thesis. In addition, the Department of Defense works closely with United States Agency for International Development (USAID), the pillar organization for humanitarian assistance in the United States “that works to end extreme global poverty and enable resilient, democratic societies to realize their potential (“Who We Are”, 2014).” Complimentary to the efforts of those organizations, the Department of State administers humanitarian assistance and disaster relief in an effort to maintain positive international

relationships and promote long-term global stability. The institutionalism of humanitarianism differs by organization. The Department of Defense delegates the specific task of humanitarian assistance site selection to the different combatant command zones. Each fiscal year (FY), through the various zones, the United States Department of Defense receives hundreds of proposals for potential projects across the globe and spends, on average, \$1 billion on providing humanitarian assistance and relief. Currently, the decision-making methodology used to determine which projects are funded and which projects are rejected lacks some key properties. First, there is no written, consistent system used to assess projects across the combatant command zone; each zone has its own unique process for humanitarian assistance site selection. For example, projects for Africa are evaluated differently, considering health epidemics and extreme poverty, than those proposed for Central America, which more heavily consider the presence of natural disasters and drug trafficking. In addition, the current evaluation procedures cannot be applied to different geographic scales; a selection process may be applied to large-scale projects, such as those at a country level, but it is not ideal for assessing smaller scale projects, such as those proposed at the community level. Finally, the selection processes rarely take into account contextual data regarding the demographic, economic, or political characteristics in which a project would occur. Together, these weaknesses create an arguably unjustifiable system for humanitarian assistance site selection begging the question as to whether the Department of Defense is truly providing the best humanitarian assistance and disaster relief possible?

In the summer of 2014 I served as an intern for the Army Corps of Engineers Environmental Research Lab based in Concord, Massachusetts exploring the current decision making process for Department of Defense humanitarian assistance and disaster relief site

selection. My research for this internship exposed me to the fact that the current process is not consistent, transparent, scalable, or data driven. This reality motivates the goal of this thesis: how to improve the decision making process for site selection of Department of Defense humanitarian assistance investments in order to provide more efficient and effective disaster relief and ultimately reduce human suffering. This thesis will first discuss who initiated the idea of humanitarian assistance and how the concept spread through the global community. Next, it will elaborate on how humanitarian assistance efforts from the United States proliferated while at the same time detailing the difference between the two major channels of humanitarian assistance provided by the United States. Then, it will analyze the current system for Department of Defense site selection and further describe its current weaknesses. Finally, the thesis will propose and describe a new site selection process to improve the current system and ultimately ensure quality humanitarian assistance and disaster relief efforts.

Chapter 2

History of Humanitarian Assistance

The Birth of Foreign Aid

The idea of humanitarian assistance originated in the 1800s during the second War of Italian Independence between Austria and Emperor Napoleon III's army. In 1859 Swiss businessman Henry Dunant purchased a large tract of land with the intention of exploiting its resources for the benefit of his company Financial and Industrial Company of Mons-Gemila Mills. However, to fully benefit from the land, Dunant needed to acquire water rights, and decided to appeal to Emperor Napoleon III himself. On his way to Napoleon's headquarters to plea for water rights, he witnessed the Battle of Solferino at Castiglione on June 24, 1859. Solferino is described as one of the bloodiest in the nineteenth century with 29,000 casualties and over 10,000 wounded. Influenced by his altruistic upbringing and overwhelmed by the violence, Dunant remained in Castiglione after the battle to care for the wounded and was inspired by the sheer despair and disorder that ensued (Passy, 2015).

After his generous efforts, Dunant wrote a book detailing the experience. He called for "the nations of the world to form relief societies to provide care for the wartime wounded (Dunant, 1947)." This book inspired the founding of the Geneva Society for Public Welfare, of



Figure 2 Portrait of Henry Dunant, founder, The Red Cross.

Source: International Federation of Red Cross and Red Crescent Societies, 2015

which Dunant was a member. The Society's first action step was to host a conference that gathered thirty-nine delegates from sixteen countries to discuss methods of improving public welfare. The conference, which took place in 1863, essentially founded the Red Cross and inspired the Geneva Convention of 1864. The Red Cross was designed as a society that would appeal to all individuals to become a trained volunteer regardless of race, gender, age, or ethnicity. In addition, it would serve as an organization that trained volunteers to care for wounded on the battlefield and trained volunteers to care for the wounded after the battle until they were fully healed; it was the answer to the "relief society" Dunant called for in his book (Passy, 2015). The Geneva Convention of 1864 successfully set regulations regarding neutrality of humanitarian volunteers during battle, expedited service for relief resources, and adopted a common symbol of recognition for all response efforts: the red cross on a white ground. As a recognized organization, the Red Cross first responded to a crisis in Denmark in 1864. Soon, national governments were taking the initiative to provide humanitarian assistance on their own. As one example, the British government supported those suffering from famine in India during the 1870s by establishing a Famine Relief Fund that distributed over 400,000 sterling pounds of financial assistance to the victims. The establishment of the Red Cross ultimately provided the spark for a broad range of humanitarian assistance and disaster relief actions in the future (Pictet, 1951).

The Geneva Convention planted the seed of humanitarian assistance only within the European community. The United States was less motivated to distribute resources for humanitarian and civic assistance until decades later. In fact, financial or medical resource support for disaster relief was not provided by the United States for the first one hundred years of the country's existence because it was believed by American citizens that the Constitution did

not allow the government to use the people's funds for foreign charity (The Department of State, 2014). What little assistance was contributed came from religious institutions and private organizations; private and religious funding went towards operating schools in Africa or sponsoring foreign students to study abroad within the United States.

Humanitarian Assistance in the United States

The first large-scale example of United States international humanitarian assistance occurred during World War I. The United States donated over \$300 million to the Committee for Relief in Belgium, a group that provided food to the citizens of the war torn country. While a large portion of that money was originally given in the form of loans, most of those loans were eventually forgiven. After World War I the federal American Relief Administration, directed by Herbert Hoover, continued to assist the distressed European countries by supplying food. At the same time, this organization reached out to Russia by providing food and working to combat typhus. Under the Russian Famine Relief Act of 1921 the United States designated \$20 million to American Relief Administration ("The Great Famine", 2008). During this time, relief was still given to areas that both needed assistance and provided political value; for example, preference was given to towns that opposed Communist beliefs.

For the United States, humanitarian assistance expanded during World War II. At this time there were no departments or funding streams that distinguished between military and non-military aid. For example, Congress passed the Lend-Lease Act in 1941, which authorized the government to provide arms and defense materials to governments whose defense was deemed crucial to the defense of the United States. The first primary recipient was Great Britain, as the

Lend-Lease Act was passed before the United States entered the war, but soon the Soviet Union and other British Commonwealth countries received support. In total, by 1945 when the program was stopped, \$50 billion had been leased out and little was repaid. In contrast to this military based assistance, Congress passed the Foreign Assistance Act in 1948 and established the Economic Cooperation Agency (ECA). This was the beginning of modern United States humanitarian assistance measures. This act solidified the Marshall Plan, a strategy for reconstructing Europe, and set the precursor for USAID. The Plan targeted 17 countries that needed help with stabilization in order for democracy to survive, as poverty, unemployment, and dislocation were environments that reinforced a communist mentality. The ECA was a specialized bureau designed to distribute the \$13 billion. Under the Marshall Plan and through the ECA, the United States gave \$13 billion to help with the recovery of Europe and Asia's infrastructure and economies, \$60 billion in today's terms. The financial support focused on restoring agricultural production, expanding trade, and developing a robust economic system. A well-known example of one of these efforts came in June of 1948 through the Berlin Airlift, when supplies were flown into the Western-held sectors of Berlin, over the blockade. The Marshall Plan and ECA were extremely successful as the gross national products of many Western European nations increased within a range of 15 to 20 percent (Serafino, 2008, Payne and Thakkar 2012, Weissman 2013). The regeneration and success of much of Europe's steel and chemical industries is also attributed to the Marshall Plan.

Following the war, the United States focused much of the humanitarian assistance on Greece and Turkey. After the British government announced it would no longer support the Greek government in the fight against the Greek Communist Party, President Truman asked Congress to support the Greek government in an effort combat communism. Turkey was

supported because its government had also relied on British government aid and the President believed if Turkey fell to communism, so would the entire Middle East. As a result, in 1947, the Truman Doctrine was passed, stating that the United States would provide political, military and economic assistance to all democratic nations under threat from external or internal authoritarian forces. This was significant because it reoriented US foreign policy efforts away from the default idea of withdrawal from regional conflicts not directly affecting the country towards the idea of intervention in remote conflicts. In both cases, Truman also set a precedent that “free peoples” should be assisted by the United States in struggles against “totalitarian regimes” because a lack of democracy would undermine international peace and ultimately threaten the well-being of the United States. In addition to the Doctrine, President Truman extended the Marshall Plan in 1949 to support developing countries through the Four Points Program. While at first it was unclear what exactly assistance to developing nations would look like, eventually the program emphasized agricultural, medical, and educational assistance. For many years the United States used development assistance as a way to prevent the spread of communism while disaster assistance was distributed on a strictly need basis (Serafino, 2008).

Efforts to provide humanitarian assistance to vulnerable or struggling populations spread outside of a recovering European community after World War II. For example, in 1951, the United States sent food to India after locust plagues and flooding devastated the seasonal harvest creating a state of famine. Eventually, a line was drawn between military aid, long-term development assistance, and emergency relief with the passing of the Foreign Assistance Act on September 4, 1961. As the Act states, the goals of foreign humanitarian assistance are to “promote the foreign policy, security, and general welfare of the United States by assisting peoples of the world in their efforts toward economic development and internal and external

security, and for other purposes.” Furthermore, the Act advised that all humanitarian assistance and development cooperation projects undertaken by the United States should be given to reach the goals of: alleviating the worst physical manifestations of poverty, promoting conditions that enable developing countries to become self-sustaining, encourage development where civil and economic rights are respected, integrating developing countries into an equitable international system, and combating corruption by improving transparency and accountability. To support this Act, two months later, on November 3rd, the United States Agency for International Development was established as the sole entity in charge of non-military international aid. This directed military aid under the Department of Defense. From this point forward aid efforts began to take on many forms as military and non-military assistance efforts were split and private citizens started to be engaged. In 1971 Bob Dylan and George Harrison organized a concert in Madison Square Gardens that raised money for victims of the Bangladesh genocide. After an evaluation of previous programs the government also changed assistance efforts by tweaking the Foreign Assistance Act via the “New Directions” provisions that called for the prioritizing of food, nutrition, and healthcare supplies when supporting a foreign country. This new approach was illustrated in 1985 by the United States response to a drought in Ethiopia in which the country provided famine victims food and water handouts (Serafino, 2008).

From the onset three key rationales for foreign assistance have existed: national security, commercial interests, and humanitarian concerns. When the United States began to administer foreign assistance, national security was the primary rationale as the country maneuvered through the Great World Wars and the Cold War trying to prevent the spread of communism. Then there was a transition to humanitarian concerns when aid became centered around Middle East peace initiatives and illicit drug production and trafficking in the Latin America. But,

beginning again in the 1990's, the United States foreign assistance budgets declined as no real security threat loomed so for the next decade humanitarian assistance was once again used as a tool for more regional political influence. In 1995 the famine in North Korea was used in an attempt to leverage political changes in exchange for food. Similarly, the United States provided food to some municipalities in Serbia and not others as a way to send a message to regions of democratic opposition. Actions such as these began to create tension within the United States and often met opposition from those who argued that the bottom line was to relieve suffering and not exert political dominance. A majority of that criticism, though, was put to rest on September 11, 2001. Policymakers now use foreign aid to fight the war on terror, funding substantial projects in the Middle East and foreign humanitarian assistance has been closely tied to the United States strategy in countries such as Iraq and Afghanistan.

The Cost of Foreign Assistance

Since the First World War, the geographic distribution of humanitarian assistance from the United States has broadened while total financial investments fluctuate on a year-to-year basis based on the political scene and the occurrence of natural disasters. There was a noticeable drop in foreign humanitarian assistance spending during the 1990s, specifically in 1994 (budget year 1995) as the government tried to balance the federal budget and in 1996 (budget year 1997) when the Republican Party took over Congress. Investment numbers were exceptionally high in FY1999 as the United States paid off a \$400 million debt to the World Bank, assisted with the Kosovo campaign, and financed relief efforts for Hurricane Mitch. By the following year, in

2000, the amount of aid returned to levels seen in the 1960s of about \$10 billion (Serafino, 2008).

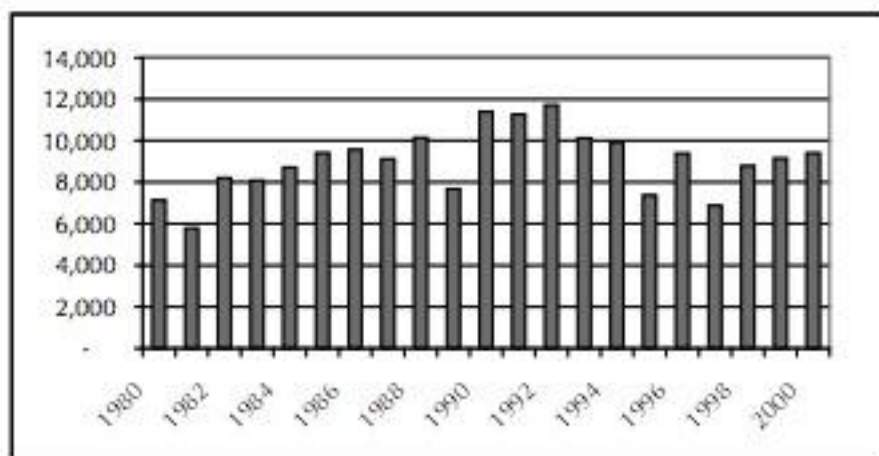


Figure 3 Amount, in billions, of international foreign assistance provided by the United States from 1980-2000.

Source: Global Issues, 2014

At the turn of the century new trends began to emerge in US foreign humanitarian assistance spending as the US responded to different world events and changing priorities. In an effort to better track the spending, six different types of aid were established: humanitarian, political/strategical, civilian security, military, bilateral development, and multilateral development. The proportion of total aid given for each of these six programs has varied since 2000. From the late 1990s to FY2002, due to an emphasis on civilian security concerns, development and humanitarian aid decreased to about 41% of the aid distributed by the United States. However, by 2006 the percentage jumped to over 50% as new presidential initiatives such as the Millennium Challenge Corporation and the President's Emergency Plan for AIDS Relief were launched; this was the highest proportion of the budget give to humanitarian assistance projects since the 1980s. Such a large increase in humanitarian aid can be attributed to the increase in physical health assistance as foreign aid for health programs alone has seen a proportional increase from 5% in the 1990s to 21% in 2010. By FY2010, the total share of

humanitarian assistance funding stood at 53%. In contrast to a rise in developmental, health, and humanitarian aid, military aid has steadily declined since FY2005 as the United States was supporting partner nations in the war on terrorism in other ways (Serafino, 2008).

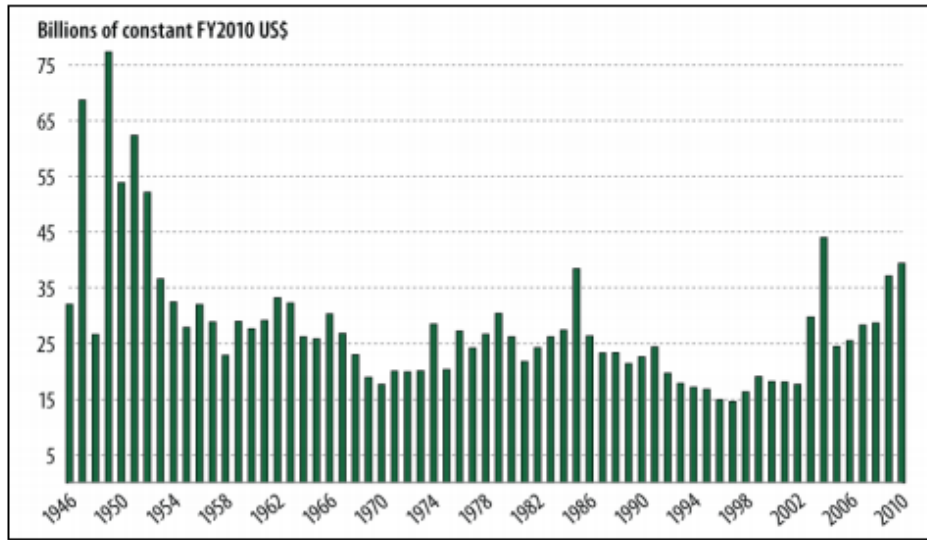


Figure 4. United States Foreign Aid Spending FY1946-FY2010.

Source: Tarnoff, 2011

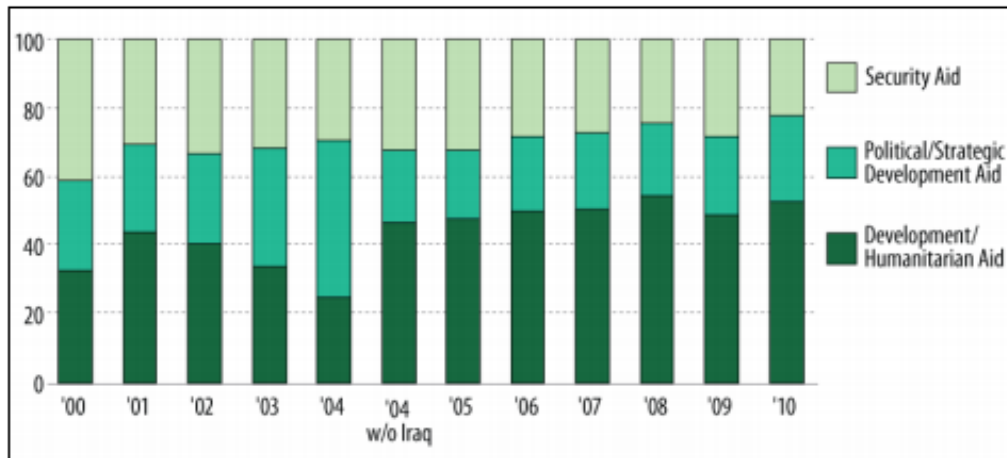


Figure 5 Shifts in Program Emphasis FY2000-FY2010 as a % of total US foreign assistance appropriations.

Source: Tarnoff, 2011

Overall, since 1946, the amount of assistance provided by the United States has actually declined. There were a few exceptional years when major foreign policy initiatives were implemented, such as 1961 with the Alliance for Progress for Latin America and 1986 with a spike in military assistance, but overall the percentage of discretionary budget appropriations and the percentage of gross domestic product spent on foreign aid has decreased for the United States.

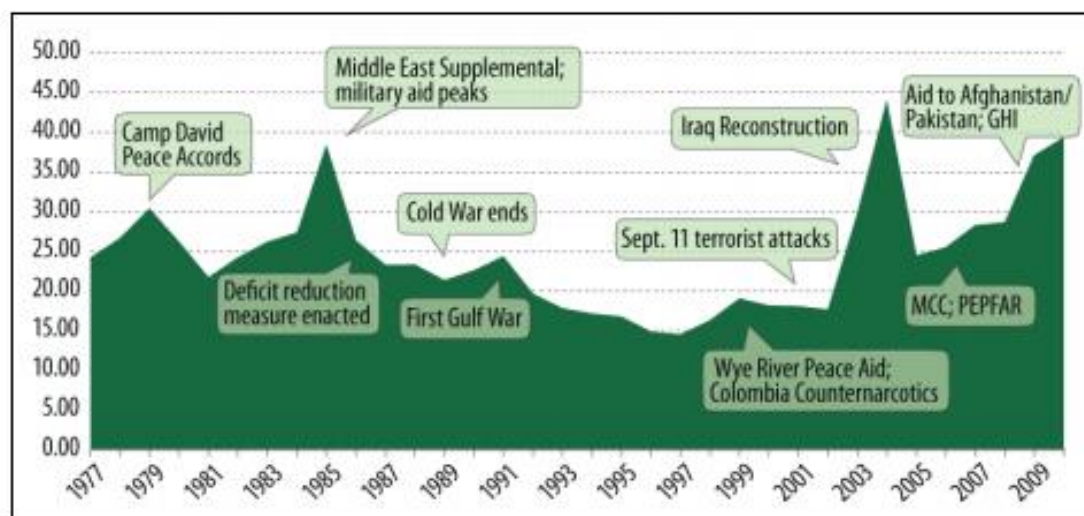


Figure 6 Foreign aid funding trends in comparison to major events, FY1977 -FY2010.

Source: Tarnoff, 2011

While the overall numbers have declined, the United States remains the largest government donor of official humanitarian assistance within the global community. However, the percentage of gross national product the US donates to humanitarian assistance ranks as the lowest of any advanced, industrialized country at 0.1%. In the 1940s and 1950s the percentage was well over 1%, but now the percentage ranges from 0.1% to 0.5%. In FY 2013, the United States provided 4.7 billion dollars towards foreign humanitarian assistance, which accounted for .2% of the gross national income, an 18% increase from the year before. In 2014, 90% of the

money spent on foreign humanitarian assistance went to fragile countries, or countries designated by The Organization for Economic Cooperation and Development as those that “face severe development challenges such as insecurity, weak governance, limited administrative capacity, chronic humanitarian crises, persistent social tensions, violence or the legacy of civil war.” Most recently, from the overall donations within the past half decade, 60% has gone to countries in sub-Saharan Africa, specifically Sudan (\$1.7 billion), Ethiopia (\$3.1 billion), and Pakistan (\$1.7 billion (Shah, 20014).

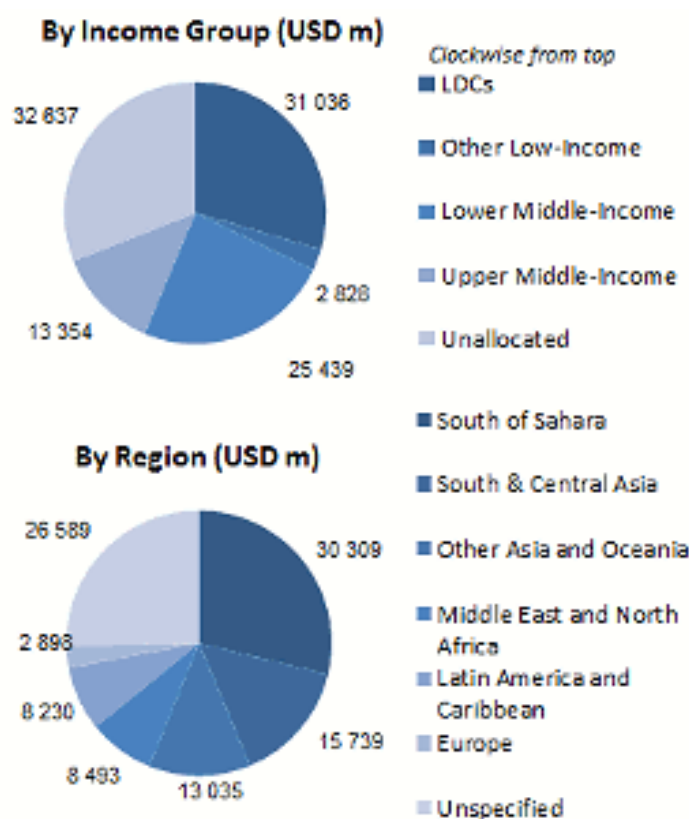


Figure 7 United States Official Disaster Assistance spending by Income Group and Region FY2012

Source: OECD, 2014

Other major recipients of United States humanitarian assistance include Japanese tsunami victims, Haitian earthquake victims, and Syrian political crisis victims as priority foreign humanitarian assistance for each FY is first given to countries that experienced a recent disaster (Bonventre, 2014). Beyond the expression of dire need, there is no explicit priority given to certain countries over others. Ultimately, through time, the United States has contributed an “unprecedented” amount to international humanitarian assistance and disaster relief efforts as hundreds of projects have attempted to serve the greatest number of individuals as possible while also maintaining important diplomatic relationships (“Global Humanitarian Assistance”, 2014).

While assistance has now been given for over a hundred years, and USAID was formally established in the 1960’s, it was not until 1992 that Congress and the President recognized that Department of State and Department of Defense spending should be separated. In 1992, “Operation Provide Relief” was established, a program that supported refugees of the Somalia crisis. However, the DOS aid was looted in country, an event that solidified that protection and security was needed for humanitarian assistance efforts abroad. This prompted a reorganization of humanitarian assistance efforts; now, instead of stemming from foreign affairs within the Department of State, these programs could be designated as a military operation with a goal of providing humanitarian assistance and restoring order within a country. From the response to the Somalia crisis was born a symbiotic partnership between the Department of Defense and the Department of State. Today, foreign humanitarian assistance and foreign disaster relief programs are funded and completed by two federal executive departments: the Department of State and the Department of Defense. As it states in a 2006 Congressional Report Service report for Congress, “The President can provide emergency humanitarian assistance through several sources whose funding is authorized and appropriated by Congress. These are funds appropriated to the Office

of Foreign Disaster Administration in the Agency for International Development...the State Department Emergency Refugee and Migration Account... and funds appropriated to the Department of Defense, Overseas Humanitarian and Disaster and Civic Aid (OHDACA) (Library of Congress, 2005).” For both, distribution is complicated by tensions between political parties, tension between the executive and legislative branches, and a less cohesive consensus of national interests (Serafino, 2008). Since the Second World War, the institutional organization of humanitarian assistance has developed and grown. Theoretically this is positive because it means aid has increased and become better targeted at the neediest populations. However, criticisms have arisen that this growth has only created a fragmented, incoherent system further complicated by legislative attempts to reform the complexities. The following chapters will discuss the evolution of humanitarian assistance structures within the United States government, highlighting some of the complexities.

Chapter 3

Department of State and Humanitarian Assistance

History of Department of State Involvement

The Department of State is the original department responsible for managing humanitarian assistance and disaster relief projects supported by the United States. In the year 1787 a Constitutional Convention was convened in Philadelphia; the goal of this meeting was to address the weakness of the centralized government established under the Articles of Confederation. As a result, the constitution of 1789 delegated more specific powers to each branch; relations with foreign governments and general responsibilities regarding foreign affairs was given to the executive branch. As Thomas Jefferson stated,

“...the President is the only channel of communication between this country and foreign nations, and it is from him alone that foreign nations or their agents are to learn what is or has been the will of the nation.”

For example, Article II, Section II gave the President the ability to build treaties with “the advise and consent” of the Senate. While the document did not specifically call for the creation of departments it was quickly realized they would be needed as foreign policy could not be handled by one person alone. Therefore, in their last session that year, Congress established the Department of Foreign Affairs (“Short History”, 2014). However, there was not enough work to be done for a Department of Home Affairs, so domestic duties were also assigned to this newly

created group, which was shortly thereafter renamed the Department of State (“Short History”, 2014).

For the past two hundred years the Department of State has seen its role fluctuate. In the early 19th Century the country sought to become more established by focusing on internal expansion and trade and so the importance of the Department declined. After the Spanish-American War in 1898 though, the country began to establish itself among the global community, so the Department was active with adopting new foreign policies and diplomatic practices to suit that goal such as political isolation. However, when the international equilibrium of power shattered between 1914 and 1945 the Department struggled to handle the changing position of the United States on the international stage. After American shipping vessels came under attack from German U-boats, the country struggled to maintain the previous position of neutrality as citizens began to care about foreign relations. However, the Department remained left out of major foreign decisions, such as the decision to intervene on behalf of the Allies in 1917, and therefore lost influence over foreign policy issues. After feeling its power limited from exclusion on major issues, the Department worked to regain prestige, ultimately emerging from the World Wars more prepared to handle the role of leading policy processes and educating others about the importance of freedom, tolerance, and respect (“Short History”, 2014).

In 1951, at the conclusion of the Marshall Plan, the Mutual Security Acts of the following seven years established new structures for foreign humanitarian assistance, authorizing that “military, economic, and technical assistance to countries with the aim of developing their resources in the interest of their security and independence on the condition that such assistance be in the national interest of the United States.” Furthermore, the Act set a mission to include all countries that received aid into the United Nations in an effort to promote world peace,

international empathy, and collective stability. To accomplish this, the Act called for the distribution of humanitarian assistance based on region, namely Africa and Asia, with consideration of specific context characteristics. In addition, the ECA was discontinued and replaced by the Mutual Security Agency. As mentioned by the Act, this new agency combined non-military and military aid with more technical assistance. The result of these changes focused American humanitarian assistance on the Southern Hemisphere instead of a rebounding European continent; it was believed that developing these struggling economies and raising the standard of living would help win the “battle” between the democratic and communist systems within the southern half of the world (Zusman, 2014). Still, the institutionalism of humanitarian assistance continued to evolve. By 1953 the Security Agency was replaced by the Foreign Operations Administration, an agency outside of the State Department that functioned independently and managed humanitarian assistance outside of federal structures. However, within one year responsibility returned to the State Department as that Administration was replaced by the International Cooperation Administration. At this time, foreign humanitarian assistance efforts had a broadened scope but less autonomy as the charge of allocating foreign humanitarian assistance was back within the federal structure. Finally, in 1961 came the Foreign Assistance Act, which formally separated military aid from civic relief and development aid. The existing civic relief and development aid programs were supervised by a new agency, the USAID.

Contemporary Department of State Involvement

The United States Agency for International Development (USAID) was a program imagined by President John F. Kennedy after he recognized international aid promoting economic and social development should be the responsibility of one organization, not multiple

different agencies. As mentioned before, in 1961 Congress passed the Foreign Assistance Act, which established USAID. The overarching objective for USAID was to rationalize and consolidate foreign humanitarian assistance programs. Improvements to the Agency came in 1964 with the establishment of the Office of Foreign Development Assistance within USAID. As the title describes, the purpose of this more specified group was to provide rapid assistance to victims overseas. More improvements came in 1973 when amendments to the Act established specific target sectors for humanitarian assistance in an effort to help narrow the focus of allocation and appease budgeting issues. The sectors created were food and nutrition, population planning and health, and education and human resource development. Since its inception, the Foreign Assistance Act continues to serve as the backbone for the US foreign aid policy.

Today, USAID serves most populated areas of the globe through a total of 283 projects while still spending less than 1% of the federal government budget. Their development projects actively support US foreign policy interests and are now considered just as important as acts of diplomacy and defense. The two largest assistance programs are located in Afghanistan and Pakistan, demonstrating commitment to the region's long-term sustainability and increase in quality of life. Projects in Africa work to support those fighting for their personal freedom, projects in Asia combat issues of poverty, malnutrition, and food insecurity among the fastest-growing region on earth, and projects within Latin America addresses severe poverty, fledgling economies, and social inequality (Shah, 2014).

Top Ten Recipients of Gross ODA (USD million)	
1 Afghanistan	2 924
2 Congo, Dem. Rep.	1 060
3 Pakistan	951
4 Iraq	926
5 Kenya	768
6 South Sudan	740
7 Ethiopia	720
8 Tanzania	555
9 South Africa	535
10 Haiti	524
Memo: Share of gross bilateral ODA	
Top 5 recipients	24%
Top 10 recipients	36%
Top 20 recipients	49%

Table 1 Top 10 Recipients of US Official Disaster Assistance FY2012.

Source: OECD, 2014

On their website, USAID actively updates an interactive map of every single project currently under way; this map assists with transparency, monitoring, evaluation, coordination, and accountability of USAID humanitarian assistance efforts.

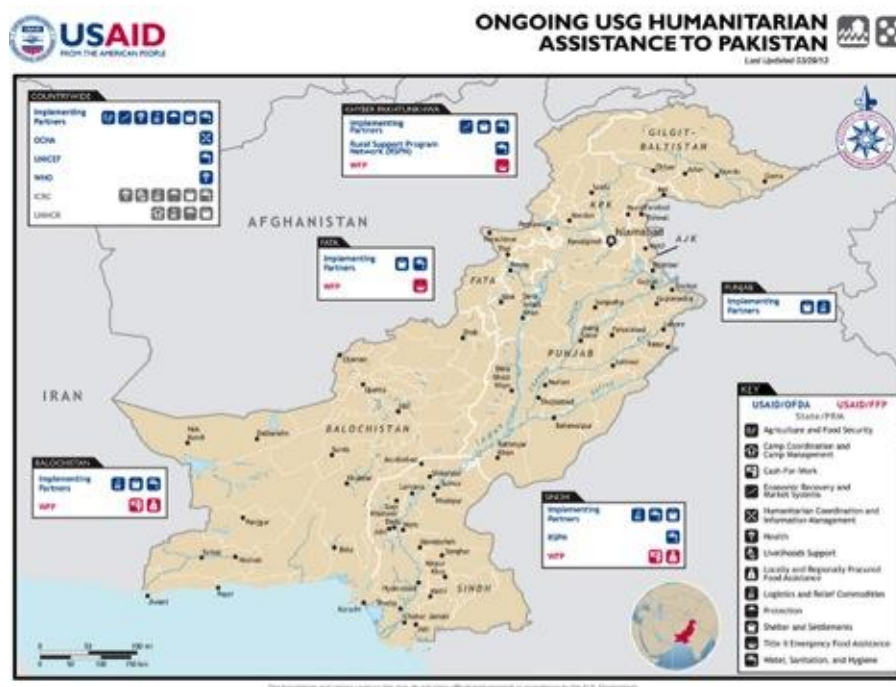


Figure 8 Example online USAID interactive map.

Source: USAID, 2014

USAID is motivated by nine overarching principles. These principles include economic prosperity, human rights, global health, food security, education, and humanitarian assistance. The organization's mission links two interdependent goals: ending extreme poverty and promoting democratic development by building resilient populations. As a result of their programs, over 3 million lives are saved each year. More specifically, 850,000 people have been reached with HIV/AIDS prevention programs and 50 million couples now successfully use family planning strategies, both of which decrease hunger, disease, and poverty ("Who We Are", 2014). Once an idea in the mind of President Kennedy, USAID has grown into one of the most iconic sources of global humanitarian assistance of its time.

In reality, while USAID is often the face of United States humanitarian assistance, it is not the only player in the game. USAID and their internal Office of Foreign Disaster Assistance will take the first steps in responding to a natural or manmade disaster, but does so in conjunction with the Department of State. Furthermore, the Department of States sets itself apart by mainly assisting with refugee populations. The third principal department that provides humanitarian and disaster assistance abroad is the Department of Defense, which does so in coordination with military efforts and programs overseen by the other two organizations.

Chapter 4 Department of Defense Humanitarian Assistance

History of Department of Defense Involvement

The other prominent player in United States foreign humanitarian assistance is The Department of Defense. Throughout this thesis, the Department of Defense is referred to as one whole unit instead of stating the “United States military” because the Department often uses private or public civilian contractors in addition to troops to implement their humanitarian assistance efforts; the term United States military can only be associated with activities that exclusively rely on troop efforts. The Department of Defense is the oldest and largest of the executive departments as the military can trace its roots to pre-Revolutionary times. It, too, was established in 1789 as the War Department, but was later renamed. Technically, the Army, Navy, and Marine Corps were created in 1775, followed by the Coast Guard in 1790, and the Air Force in 1947. Originally, the Department of Defense was largely concerned with addressing physical conflict and focused simply on protecting American borders. But, beginning in the 20th century the army gained experience with supportive medical assistance and engineering projects overseas. As one study cited in Depauw & Luz (1992) and Bartholomees (2012) states, “By the time of World War II, a propensity toward military civic action was already part of the fabric of the U.S. soldier.” The report goes on to detail that the recovery effort implemented after the Korean War in Korea was the “first concerted US military civic action.” The activities in Korea served as a model, and set a precedent, for US military personnel to be involved with small-scale assistance efforts abroad. Furthermore, it set the precedent that United States troops assist in the humanitarian recovery efforts, but host nation citizens are in charge of performing most of the

work. The formal role of the armed forces of the United States was officially detailed in Title 10, an Act passed by Congress on August 10, 1956.

The Title 10 United States Code passed in 1956 successfully governed the military's role for about twenty years until, in the 1980s and 1990s, controversy forced authorities to add to the code to provide the Department official authority to assist with humanitarian emergencies and recovery efforts abroad. For example, in the 1980s the Reagan administration looked for ways to support key allies in Central America, such as the Salvadoran government's counterinsurgency campaign, and Afghanistan without the use of sheer force. To do so, the government turned to the Department of Defense as their manpower, tangible resources, and institutional structure could serve as an asset to administering efficient foreign assistance. To encourage this involvement, Congress passed an amendment in 1985 that provided the Department of Defense the ability to target arenas with nonlethal excess Department of Defense property at the request of the State Department. In 1986, Section 401 was added to Title 10 US Code explaining the explicit humanitarian assistance activities the Department was able to perform such as well-drilling, construction of transportation services, and medical care to underserved communities. Not only does it detail the types of projects but it describes the conditions under which these projects can take place. The projects must not duplicate other assistance measures, they cannot benefit one specific individual or group, they must serve a basic social or economic need, and they must promote the security interests of the United States. In 1987 the "Denton Amendment" was passed which authorized the Department to provide free transportation of supplies from private or non-governmental donors, as space allowed and as long as the Department of State approved the designated supplies as appropriate assistance for the intended disaster recovery area. Finally, an amendment that passed in 1992 "is the Department of Defense's primary

authority to transport humanitarian supplies.” It also allows the Department to execute assistance projects including the construction and maintenance of important infrastructure such as medical facilities for rural areas. The role of the Department within foreign assistance was further solidified in 1994 with the establishment of the Overseas Humanitarian, Disaster, and Civic Aid budget account, the sole purpose of which was, and still is, to fund Department of Defense foreign assistance programs. With official objectives, regulations, and funding streams, the Department of Defense became engaged in the field of foreign humanitarian assistance and a pillar of support for underserved, conflict ridden, and developing countries abroad.

When overseeing foreign assistance, the Department served three major purposes: responding to humanitarian and basic needs, building foreign military capacity and capabilities, and strengthening foreign governments’ ability to handle their threats. By incorporating the Department of Defense, the United States enhanced its image among communities abroad as the Department had the ability to quickly respond and insert itself into recovery efforts after an emergency. Additionally, inclusion of the military also allowed for the establishment and growth of relationships between the United States and key players from the host nation. As the humanitarian assistance branch chief at European Command, Paula Battistoni, states in a Department of Defense news article from 2005, “Humanitarian assistance projects naturally help open lines of communications with host nations' leaders, be they civilian, military or from other government agencies. By having access to the key people in the region, we're able to help shape the local security environment.” Ultimately, the involvement of the Department of Defense started as a way to serve the strategic needs of the United States while at the same time serve struggling populations and, due to the effectiveness of that involvement since the 1980s, the mission and responsibility has only grown.

Contemporary Department of Defense Involvement

Today, the Department of Defense foreign humanitarian assistance programs encompass a broader range of activities than simple food aid or emergency supplies. The official mission of the Department of Defense, as stated on their website, remains closely aligned with the original purpose for the creation of the Department, “to provide the military forces needed to deter war and to protect the security of our country.” In reality their mission extends beyond the provision of firepower and boots on the ground to include humanitarian assistance, disaster relief, and host nation capacity building. According to the Joint Chiefs of Staff report published in 2014, the US Department of Defense defines foreign humanitarian assistance as “activities conducted outside the US and its territories to directly relieve or reduce human suffering, disease, hunger, or privation.” Foreign humanitarian assistance activities includes foreign disaster relief operations which are “ activities that directly address a humanitarian need and may also be conducted concurrently with other Department of Defense support missions such as dislocated civilian support, security operations, and foreign conflict management.” Complimentary to that report, a 2014 Department Instruction paper establishes exact policies, assigns responsibilities, and provides processes on how to carry out humanitarian and civic action activities governed by the Department of Defense under Title 10. This instruction paper established that all humanitarian and civic assistance activities:

(1) Are conducted in conjunction with authorized operations and exercises of the Military Services in a foreign country (including deployments for training). (2) Are conducted with the approval of the host nation’s (HN) national and local civilian authorities. (3) Complement, and do not duplicate, other forms of social or economic assistance provided to the HN by the Department of State (DoS) and the U.S. Agency for International Development (USAID). DoDI 2205.02, June 23, 2014 2 (4) Serve the basic economic and social needs of the HN. (5) Promote, as determined by the Secretary of Defense or the Secretary of the Military Department concerned: (a) The security and foreign policy interests of the United States. (b) The security interests of the country in which the activities are to be performed. (c) The specific operational readiness skills of the Service members who participate in the HCA activities.

Furthermore, the programs must cooperate with the host nation military but not solely support the military. The characteristics outlined by the 2014 report are a result of an iterative process of refinement and are set forth as guidelines to ensure fair, effective humanitarian and civic assistance projects.

Currently, there are five major programs that dictate Department of Defense foreign assistance programs abroad. These current programs parallel the original responsibilities the Department of Defense was charged with through Title 10. Under the Jeremiah Denton Amendment, The Denton Program allows the military to transport privately financed humanitarian assistance cargo to areas overseas, as space allows, without charging the donating agency. Similarly, the Funded Transportation Program, under the same authority that allows for humanitarian assistance, permits the Department to transfer resources donated via non-governmental organizations and international organizations to the target destination overseas. This program covers both transportation and administrative costs related to the distribution of these materials. The Excess Property Program makes it possible for the Department to distribute excess property overseas at the request of the State Department; excess property is given to areas where the United States is working to alleviate humanitarian crisis, promote democratic development, secure regional stability, and enable host nations to recover from conflict on their own. Finally, and most important for this thesis, is the Humanitarian Assistance Program and the Humanitarian and Civic Assistance Program. Projects completed under these programs are often done alongside military operations and training missions and can include, but are not limited to, establishment of medical facilities, dental and veterinary care in rural areas, construction of water and general sanitation facilities, training of host nation personnel, and emergency response planning (Department of Defense, 2014).

The greatest change in Department of Defense humanitarian assistance programs since the beginning has been the substantial increase in projects, the subsequent increase in costs, and the organization of humanitarian financial assistance allocation. The number of projects implemented and overseen increased eightfold from the early 1990s to FY2007. From FY2005 to FY2007 the number of projects doubled, with over 600 projects funded by 2007.

Table 2 Projects and total cost projections, by command, during FY2007.

Source: OHDACA, 2006

<u>Combatant Command</u>	<u>Number Projects</u>	<u>Estimated Cost (\$M)</u>
USCENTCOM	58	\$ 8.9
USEUCOM	192	11.8
USPACOM	133	7.7
USSOUTHCOM	<u>237</u>	<u>11.9</u>
	620	\$40.3

As a consequence, the cost has increased tenfold. From FY1993 through FY2007 the total amount spent by the Department jumped from \$4.7million to \$40.3 million. These numbers were compiled and reported by Section 401 FY Reports for the respective years. In recent years the amount allocated for foreign humanitarian assistance and disaster relief worldwide has skyrocketed and then begun to fall, similar to trends seen in Department of State funding levels. In FY2012 the total spent was \$117 million, with around \$108 million being spent specifically on humanitarian assistance projects (FY Report, 2006). However, the amount requested for FY2014 is \$109million, \$84million of which will be spent on humanitarian assistance projects (Department of Defense FY Report 2014, 2013).

Table 3 Total Department of Defense OHDACA Spending by FY.

Source: DSCA, 2013

Programs	FY 2012 Actuals	FY 2013 Estimate	FY 2014 Estimate
Humanitarian Assistance Program (HA)	108,801	83,678	84,322
Humanitarian Mine Action Program (HMA)	3,808	5,081	5,178
Foreign Disaster Relief (FDR)	4,766	20,000	20,000
Total	117,375	108,759	109,500

In order to organize and fairly allocate funding for international humanitarian assistance and disaster relief projects managed by the Department of Defense, the Department divides the globe into combatant command zones. Each zone has a combatant commander who acts under the guidance of the missions and responsibilities assigned to their geographic area through the Department of Defense Unified Command Plan in April of 2006. There are nine combatant commanders, seven of which have individual geographic command zones and therefore actively participate in the selection and management of foreign assistance projects; United States Strategic Command and United States Transportation Command oversee issues across all geographic regions.



Figure 9 United States Combatant Command Zones.

Source: Department of Defense, 2011

For example, European Command or EUCOM, handles all business related to continental Europe, Russia, Greenland, and Iceland. Each year this command zone operates with a budget of \$15 to \$20 million, providing 60 of the countries within their geographic region assistance in the form of projects such as water wells, disaster response centers, orphanages, medical clinics, schools, and HIV testing centers. In the words of Paula Battistoni, humanitarian assistance chief of EUCOM, "The goals for Department of Defense's Humanitarian Assistance Program in the post 9-11 world are that we gain access and influence and we build friendships and common understanding with host-nation civilians through cooperation on a project (Kimsey, 2005)." For the Department of Defense, humanitarian assistance is a tool used to build security and cooperation within a host nation. Through these projects, local populations become more familiar with the United States' core goals and values of freedom, democracy, and peace. For example, in 2005 \$250,000 from the Department of Defense was used to build and equip a gym

for school students at the primary and secondary level in the Republic of Croatia, a project that emphasized the United States commitment to that struggling country at that time. An article posted by the Department of Defense reported that this project was a small example of the \$407million donated to Croatia since 1992 in an effort to bolster democratic institutions within the country while at the same time supporting major social reforms. The gym is an illustration of the relationships the Department of Defense initiates and maintains through humanitarian assistance (Kimsey, 2005). Interestingly, while project number and financial dollars have both increased, the total number of countries served has remained relatively level around 45, shifting between regions based on natural disaster occurrence and perceived need. For example, when comparing FY1995 with FY2006, humanitarian and civic assistance projects were implemented in 43 countries. However, between those two years, the number of countries served in Africa and Europe increased while the number of countries served in Asia/Pacific and the Middle East decreased. A visual guide to the combatant command zones and their corresponding host nation partners can be seen in Figure 10.

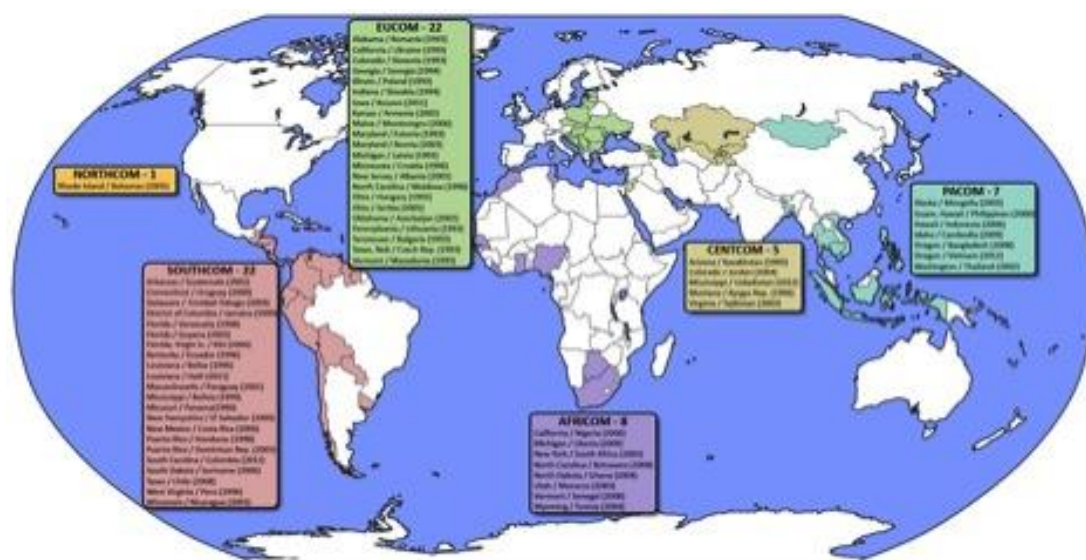


Figure 10 The United States partner nations by combatant command zone.

Source: Department of Defense, 2011

Funding for Department of Defense Involvement

When the Department of Defense first became heavily involved with providing humanitarian assistance and disaster recovery abroad the financial burden fell within the Departments overall budget. Just \$5 million was provided in FY1985, a number that fell to under \$2million in FY1989. Today, the funding streams have been restructured as a majority of humanitarian assistance projects are now run through the combatant command zones. The majority of financial support comes from the previously described Overseas Humanitarian, Disaster, and Civic Aid Appropriation (OHDACA) established in 1994. According to the Department of Defense unclassified information paper, OHDACA funds humanitarian assistance, disaster relief, and humanitarian mine action programs. The funding appropriated to each combatant command is available for two fiscal years from the date of appropriation. In addition to the financial support received from OHDACA, combatant commanders can also use funding from the Combatant Commander Initiative Fund, established in 1991. Originally, the fund was established to assist commanders with education and training of foreign military personnel, with some flexibility to use the money for, as it was vaguely put, “humanitarian and civil assistance (Serafino, 2008).” In 2006 this fund was revamped and the mission expanded so the money can now be spent on “urgent and anticipated humanitarian relief and reconstruction assistance...particularly in a country where the armed forces are engaged in a contingency operation.” While this fund is available to complement the resources by OHDACA, a research report by Congress in 2007 found that, up to that point since 1991, under \$1 million had been tapped into. Even with this other funding stream, it seems the combatant commanders

predominantly rely on OHDACA funding to fulfill their project requests each fiscal year.

Ultimately, all foreign humanitarian assistance and disaster relief projects run by the Defense Department are designated as Overseas Humanitarian, Disaster and Civic Aid (OHDACA) investments.

Selecting, implementing, and maintaining foreign humanitarian assistance programs across all six combatant command zones is no small task. In order to assist the combatant command zones with comprehensive management of the full cycle humanitarian assistance and relief investments the Department of Defense established the Overseas Humanitarian Assistance Shared Information System (OHASIS) system. It is mandated that humanitarian assistance managers from each zone update and maintain their project list through this system. While the combatant zones make independent decisions on which projects to support and which to deny, they must demonstrate proof of where and how OHDACA resources are being spent. The system coordinates the efforts of in-country team members, embassy staff, and foreign humanitarian assistance offices in addition to serving as the tool through which the United States government releases appropriate documentation on Department of Defense humanitarian assistance information to the public in an effort to maintain transparency of government spending. Essentially, OHASIS maintains the records for all of the OHDACA projects. As a result, OHASIS access has been given to all of the Geographic Combatant Commands (GCC) zones. Currently the Department of Defense supports and tracks 3,000 projects, 100 Denton and Funded Transportation Shipments, and three warehouses maintaining humanitarian excess property each fiscal year according to the Army Corps of Engineers documentation (Johnson, 2006).

While the global projects are monitored and compiled, there is no long-term evaluation plan completed by the command zones. Theoretically, one year assessments should be completed for each project but up to 90% of these evaluations never occur. This is where the question arises: how is the Department of Defense ensuring their decisions are providing the best assistance and relief efforts possible? With a budget of over \$100 million each year, can the government, the Department of Defense, the American public and, most importantly, the underserved populations be sure resources are being spent efficiently? The next chapters will outline the current decision making process, highlight the weaknesses, and propose a possible avenue for change.

Chapter 5

Multi Criteria Decision Analysis

The Current Decision Making Process for Site Selection

Understandably, the selection, placement, and prioritization of humanitarian assistance projects requires many complex decisions with options and constraints to consider. Ultimately, in-country teams identifying and drafting potential project proposals, known as Security Cooperation Organizations, as well as the combatant command humanitarian assistance managers, must assess a variety of tradeoffs regarding investment suitability to fit a combination of needs such as: agency mission, local community hazard exposure, local community resilience, and investment sustainability. The selection of which projects to accept is further complicated by funding limitations set by the Department of Defense, OHDACA limitations, and tight fiscal year budgets that need to invest across broad regions of varying need (Curran, 2014).

Surprisingly, no geographic combatant command zone currently maintains or utilizes a coherent, replicable process for deciding which proposed humanitarian assistance projects are selected for their zone and funded by the Department of Defense. In other words, there is no universal scoring or evaluation mechanism that is used across the combatant command zones to assist with the decision making for project selection. Pacific Command, or PACOM, has a loose system revolving around ranking the projects on a numbered scale; however the details of that decision making process are for official use only and are not available to the general public. What we do know is that within each combatant command zone security cooperation organization (SCO's)

managers, employed by the Department of Defense, use their on the ground knowledge to propose potential humanitarian assistance projects. Total price, timeline, relevance to Department of Defense goals, relevance to specific command zone goals, and specific assistance sector served must all be described through the proposal. For every fiscal year, the complete batch of proposals is reviewed and loosely prioritized by the combatant command zone commander and his support staff. Ultimately, some are selected for funding and the rest are rejected. The decision-making process that exists across the combatant command zones has three major points of weakness.

First, the people inside each security cooperation organization may have a different vision about the overall mission of the Department of Defense. People interpret information differently and there is no guarantee that a proposed project will help fulfill the overall Department of Defense objectives. Instead of considering how the project aligns with the Department goals, individuals may consider personal goals, such as job security, or fall prey to bribery, such as perks from those that are requesting funding, which would cloud their decision making process. In the same vein, people may interpret the goals of the host nation incorrectly and propose a project the local community does not support.

Second, each context provides different factors to consider. For example, factors influencing long-term project sustainability in South Asia, such as the threat of massive tsunamis or typhoons, are very different than factors that influence projects in Africa, such as extreme drought and disease epidemics. The current system does not provide a way to incorporate context specific criteria related to natural disaster frequency, health status of populations, education status of populations, or key realities such as crime rate and gender equality.

Third, the current system is a closed-door process. Simply put, proposals are submitted by the security cooperation organizations in country to the higher-ups within the leadership of each combatant command and by the end of each fiscal year, all the funding designated for humanitarian assistance and disaster relief has been spent on some projects while many proposals are rejected. At the same time, there is fear that funded long term projects that employ military troops are simply done so for political purposes, like when the United States wants to maintain contact with a country or cultivate an ally. Critics, and even a few proponents, are also concerned that the funded projects are not meeting the most urgent needs of the host nation, and are not sustainable, but exist to fulfill a gap where other funding might not be available. Additionally, there is criticism that projects are not effective on the ground while at the same time repetitive of efforts from civilian agencies or projects run through the Department of State. Finally, there is concern that using a military force to influence change has the unintended result of reinforcing the notion that military forces, not civilian forces, are the best at fulfilling basic needs; this consequence is damaging in regions where the United States is trying to promote democracy. Basically, the process needs to become more justifiable so those countries or projects that are denied can have a viable explanation as to why they did not make the cut while those projects and countries that are supported are done so in a way that is following the OHDACA funding regulations, Department of Defense objectives, and United States strategic and diplomatic goals. There needs to be proof the decision making process is not arbitrary but does consider the consequences of each proposed project.

Research has substantiated the criticisms and identified the weaknesses of the decision-making behind the allocation of Department of Defense humanitarian assistance. In 2012 the Government Accountability Office produced a report on the United States' humanitarian and

development assistance efforts as a whole. The study found that, while most of the projects aligned with the strategic goals and steps were taken to complete interagency project coordination, poor data management, limited program evaluation, and limited program guidance were all issues that plagued the Department of Defense foreign assistance programs. For example, the Department did not have complete information regarding the total cost of each OHDACA project nor had it, as mentioned, completed 90% of the required 1-year project evaluations for the OHDACA projects (Nowells, 2006). In 2007 a paper was published in *Military Medicine* that proposed a seven-step “monitoring and evaluation” process for humanitarian assistance programs that incorporated the use of a matrix consisting of 5 goals, 14 objectives, and 100 activities. However, that system appears bulky and too time intensive, observations supported by the fact that it has not been implemented by any of the combatant commands since publication. This thesis provides a more user-friendly but comprehensive solution to project evaluation incorporating multi criteria decision analysis instead of matrices and feedback loops.

Multi Criteria Decision Analysis Science

To fix the current weaknesses and add further strengths to the decision-making process for international humanitarian assistance projects issues, Multi-Criteria Decision Analysis (MCDA) could be used, as this field of decision science would overcome current weaknesses on many levels. MCDA refers to a group of decision-support methods that impart structure to and enable analysis of complex decision-making processes. This decision analysis tool is a result of work performed by operations researchers and management scientists over the past fifty years as

their fields sought ways to apply assessments to disparate sets of data such as quantitative health statistics and qualitative public opinion polls. MCDA has been applied to a variety of problems such as infrastructure projects, economics, policy-making, and environmental protection and individuals, such as Daniel Kahneman, have been awarded the Nobel Prize for their work in the field of decision science. MCDA methods are used in situations requiring evaluation of alternatives based on a variety of influencing factors. It is important to note that MCDA incorporates both spatial and non-spatial data. In fact, MCDA methods have often been likened to GIS in the past (Malczewski, 2006, Keeney, 1992).

In the case of Department of Defense humanitarian assistance efforts, MCDA could be used to score and compare different relief projects in a way that considers a large amount of context specific data while at the same time accounting for the priorities and motivations of the decision makers. Furthermore, for Department of Defense projects, it would be useful to capitalize on existing context characteristic analysis by pairing MCDA with risk and vulnerability assessments. Risk and vulnerability assessments are a helpful resource in this case because they can identify target areas of operation in an effort to determine where resources are most needed to aid struggling populations. MCDA is particularly useful for evaluating and prioritizing alternatives that are assessed using criteria that are measured by disparate data (e.g., frequency of natural disasters, number of literate women, mean distance to the nearest hospital facility). By developing transparent lists of criteria and scoring mechanisms, assigning specific weights to establish relative importance of each criteria, and calculating project totals based on performance across each criteria through the use of data or developed value functions, MCDA approaches provide traceability and replicability to the decision process, two characteristics that are currently lacking (Curran, 2014).

Chapter 6

A New Site Selection Tool

Development of the Tool

In recent years, under the direction of the Department of Defense, the Army Corps of Engineers Environmental Research Lab has conducted extensive research on the current decision making process for Department of Defense foreign humanitarian assistance projects and initiated the creation of a MCDA evaluation system for site selection. Their product, Spatial Humanitarian Assistance Portfolio Evaluation (SHAPE), is a management tool that brings transparency, flexibility, and mathematical rigor to an otherwise uncertain and subjective planning and selection process (Curran, 2014). Members of the Engineer Research and Development Center (ERDC) involved in the “disaster response chaos” of the Haiti earthquake in 2010 noticed the weaknesses of the current evaluation system. Realizing an improved system would be an invaluable contribution to the Department of Defense, especially one that incorporated MCDA disaster response technology, the SHAPE project was proposed and funded in 2013. Since then, ERDC has worked closely with PACOM to improve PACOM’s fledgling system and ultimately create a system comprehensive but flexible enough for use by the other combatant commands. In addition to PACOM’s interest, the Office of Naval Research also sees the value in the project as they support multiple combatant commands and were involved in the Haitian relief efforts.

When the project first began the team closely examined their audience to compile a list of objectives the end product needed to satisfy. A tool created to improve the decision making process behind humanitarian assistance and disaster relief needed to maintain United States

foreign policy goals, Department of Defense objectives, combatant command responsibilities, and host nation priorities. To compile an extensive list of all goals and objectives extensive primary research was done. Journal articles, the Department of Defense Security Assistance Management Manual, OHDACA documents, Department of Defense directives, mission statements, fiscal year financial reports, and interviews were all explored in an effort to identify the key targets. After thorough review it was clear effective and efficient site selection would need to fulfill two broad goals: support the strategic goals on the United States and provide humanitarian aid and disaster relief. As a result, the team decided the tool would consist of two major parts.

The overall purpose of using multi-criteria decision analysis to design the two parts for site selection was two fold. First, it would address the issues with the current system. One, there would be a documented process utilized across the combatant commands. Two, the decision process could vet each project for authenticity and effectiveness. Three, chosen projects could be controlled to prevent duplication and biased motives. Four, the process would help managers steer clear of implementing total military control in an area, selecting projects that incorporate host nation military and community efforts, as it is important to build coping capacity and capability. Second, it would enhance the decision making process by incorporating context specific data and allowing the user flexibility. Through the use of MCDA, the user is able to identify optimal solutions given user-specified inputs. If one command zone thought a certain set of data, such as health infrastructure, was more important than another set, such as crime rate, they would have the ability to weight rankings differently to gain a context-specific outcome. In addition, the two filters themselves could be weighted differently if a certain combatant command zone believed meeting strategic characteristics was more important than vulnerability

characteristics and vice versa. While there would need to be a ceiling placed on the weight one could assign, the decision could be tailored to the specific region of the world, the specific country, and the specific region. At the same time, optimal solutions would take risk, vulnerability, and strategic goals into consideration, covering the needs of both the host nation and the Department of Defense. Overall, an improved evaluation and selection process reduces operational risk and increases project effectiveness; numerous project types and placement sites are effectively analyzed to create successful matches. In the end, a two segment tool harnessing the power of MCDA creates a decision making process that allows the user, combatant commanders and their site selection teams, to define relationships, objectives, and constraints related to the variables that should drive the decision making process.

This analytical approach allows for the comparison of traditionally incongruent criteria and data values via value functions and importance weights. Data that can be analyzed ranges from health infrastructure, education, and natural disasters to cost and economic stability. Overall, by incorporating MCDA, the new tool would address the issues that needed to be fixed while at the same time provide further improvements.

Part I: Risk and Vulnerability Filter

The first part of the tool constructed is known as the Risk and Vulnerability Filter. Aptly named, this filter focuses on analyzing spatial and non-spatial data related to the host nation applying for support. A paper published in 2014 by the ERDC team details the basis on which the risk and vulnerability filter was developed. The paper describes how the Pacific Disaster Center (PDC) annually completes risk and vulnerability assessments for countries within their

geographic area, reporting the results to their corresponding combatant command zone Pacific Command (PACOM). These assessments influence the site selection process for that combatant command zone. The PDC assessments aim to distinguish where and why each country is most vulnerable with respect to natural and human-made disasters. The risk and vulnerability filter largely reflects the PDC risk and vulnerability assessment (RVA). As stated by a member of the development team, “The RVA is backed by extensive social science and humanitarian assistance domain research, which enables it to characterize areas of operation and help determine where resources are needed to aid at-risk populations and build coping capacity to natural and manmade hazards and emergencies.” Given the original motivations for a better decision-making process, ERDC, in partnership with PDC, has begun to transfer PACOM over to the new site selection decision making process including the risk and vulnerability filter as well as the second filter, described below. The RVA filter addresses three key topics: Hazards, Lack of Resilience, and Investment Sustainability, each of which is further broken down into individual criteria. Within the filter, hazards is defined as natural hazards and health hazards; lack of resilience considers water infrastructure resilience, recent disaster impacts, economic resilience, health related resilience, transportation resilience, and education resilience; and investment sustainability includes economic stability, permissiveness of sexual violence, and gender equality. Not only did ERDC establish the main goals and identify the major criteria based on the risk and vulnerability assessments already conducted by PDC, they identified which data would be consistently used to illustrate each major criteria across each combatant command zone. For example, health hazard is evaluated by considering H1N1, HIV, Dengue Fever, and malaria incidence while permissiveness is evaluated based on the homicide rate, theft rate, and sexual assault rate. In practice, data for each criterion would be gathered from previously conducted collection efforts

by other agencies, such as health data from the World Health Organization. The data supporting each criterion is then used to assign the project a score. The three scores assigned to each key point are combined to create a total risk and vulnerability score for the project. This score is designed to assist in painting an accurate, detailed, informative picture of the overall risks and vulnerabilities for the host nation of the proposed project. The score received for the risk and vulnerability filter serves as one of two parts needed for the grand total project score.

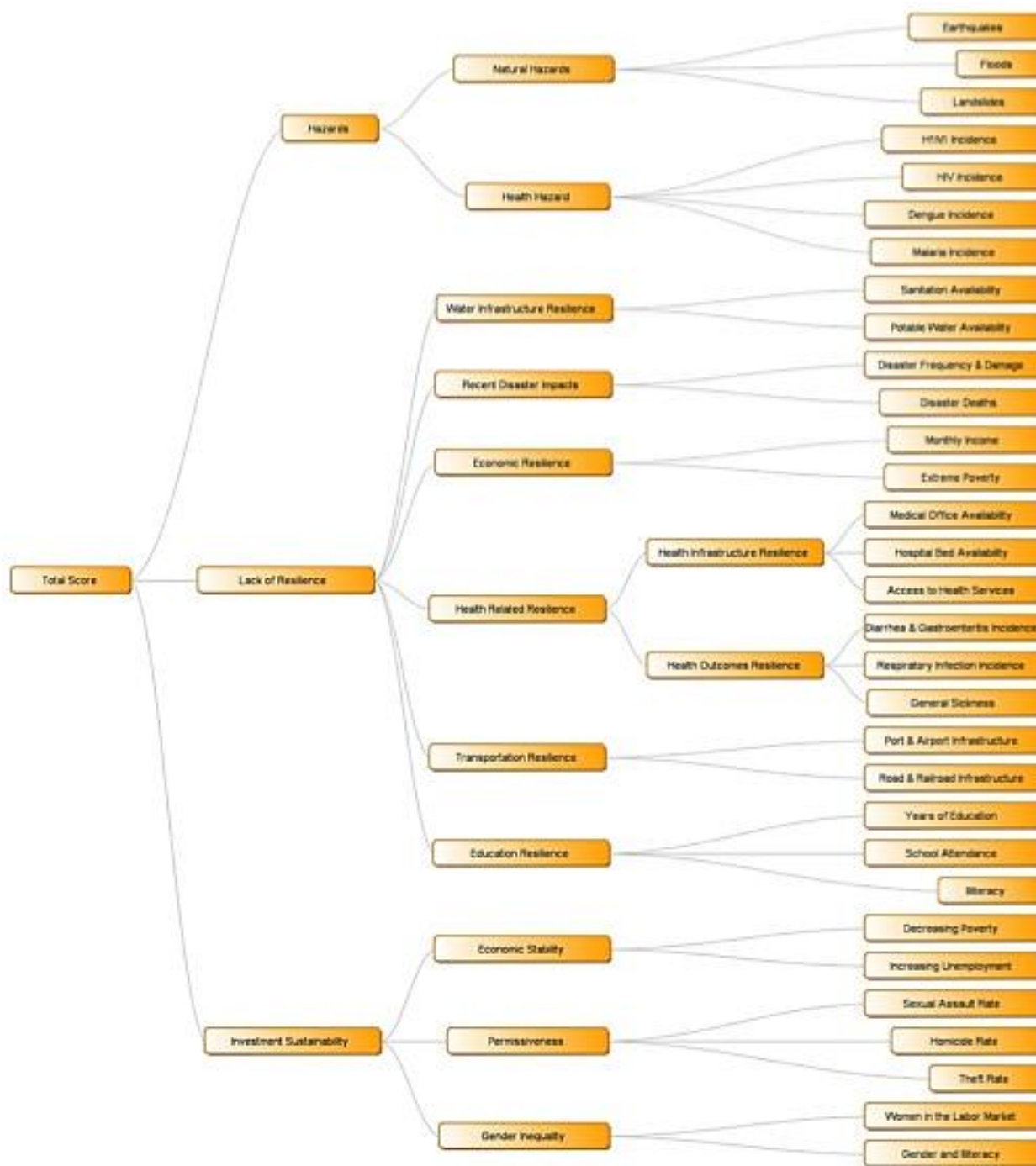


Figure 11 Risk and Vulnerability Filter.

Source: Curran, 2014

Part II: The Strategy Filter

The second part is called the strategy filter; this filter incorporates data related to Department of Defense and general United States strategic interests.

The strategy filter addresses four major goals which align with Department of Defense objectives found within guiding documents such as Presidential directives, the Department of Defense Security Assistance Management Manual, OHDACA documents, Department of Defense FY reports, and Congressional reports on humanitarian assistance planning. The four major goals are: Enhance Security and Stability, Improve Department of Defense Access and Visibility, Enhance Host Nation Legitimacy and Capacity, and Strengthen and Build Alliances.

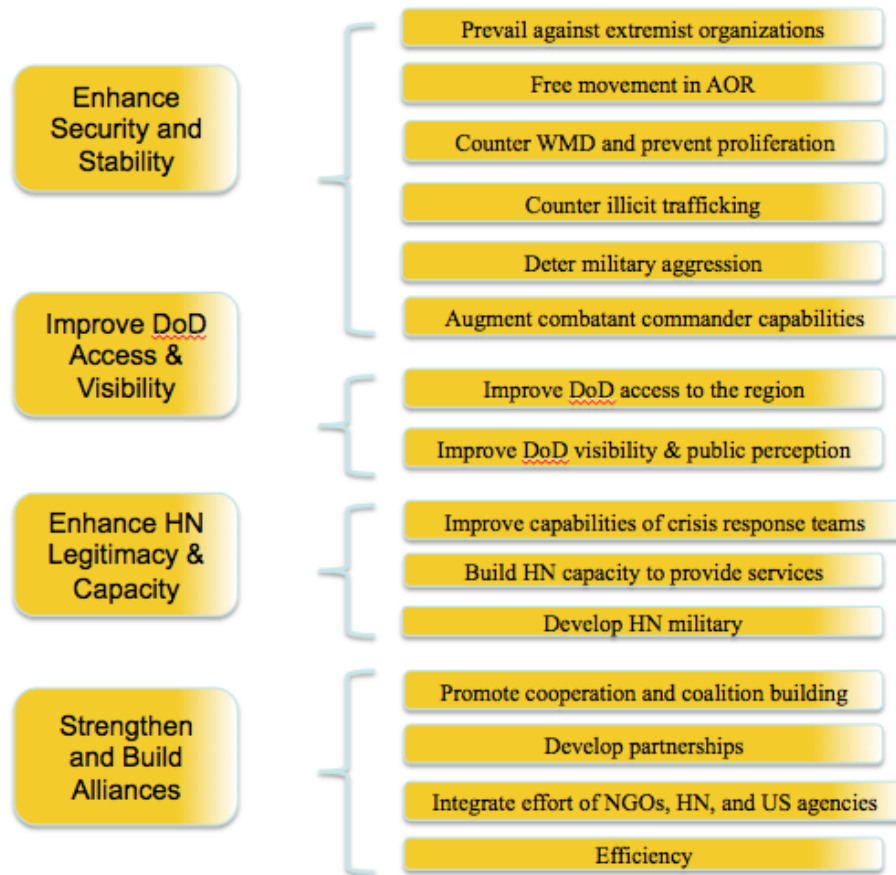


Figure 12 Proposed Strategy Filter.

Enhance Security and Stability is defined as averting a political and humanitarian crisis while promoting sustainable regional and democratic development; this goal is broken down into the criteria of prevailing against extremist organizations, free movement in the area of interest, counter weapons of mass destruction and prevent proliferation, counter illicit trafficking, deter military aggression, and augment combatant commander responsibilities. Improving Department of Defense Access and Visibility is defined as providing a positive influence in host nation and distributing materials and resources to areas in need through a transparent and rational process;

this goal is broken down into the criteria of increasing Department of Defense access to the region and increasing positive public perception of the Department of Defense. Enhance host nation Legitimacy and Capacity is defined as helping US recipients of humanitarian assistance and disaster relief help themselves with low cost, non-obtrusive, effective activities that increase trust in the host nation and enable countries to recover from crisis; this goal is broken down into the criteria of improving the capabilities of host nation crisis response teams, building the host nation capacity to provide services, and developing the host nation military. Strengthen and Build Alliances is defined as increasing interoperability between US assistance efforts and host nation systems and building long-term collaborative relationships with the US; this goal is broken down into the criteria of promoting cooperation and coalition building, developing partnerships, integrating the efforts of non-governmental organizations, host nation, and US agencies, and improving efficiency.

The table in Appendix A presents a detailed description of goals and criteria for the Strategic filter that pairs with the Risk and Vulnerability filter to facilitate evaluation of proposed projects. A proposed definition of each criterion is listed; these definitions were drafted by ERDC team members and interns and are pending approval from ERDC leadership and combatant commanders. Similar to the categories for the risk and vulnerability filter, the definitions for the strategy filter are based on goals and objectives found within the Department of Defense Security Assistance Management Manual, OHDACA documents, and Department of Defense reports. However, unlike the Risk and Vulnerability filter, which capitalizes on concrete quantitative data such as number of hospital beds or percentage of educated women, the strategy filter metrics are much more subjective. Therefore, in addition to designing the strategy filter, the team also designed a potential way to score the more subjective criteria. In the Appendix, in

addition to the definitions, suggested scoring scales for each criterion are provided. The scale for each strategy criterion is 0-4 as the team believed this range would allow for some variability in scoring without providing too many levels.

Implementing analysis that uses the two filters would help to strengthen the current process by addressing the weaknesses and adding strengths. The decision process would become more transparent. Users, host nations, and government officials could see the detailed motivations and specific criteria each project must encompass in order to be considered a strong contender for funding. Additionally, it would educate decision makers and expose the decision rationales and tradeoffs that drive resource allocation decisions. This system would acknowledge the trade offs, varying priorities, and preferences that are inherent with such complex decisions. Site selection would now rely on data instead of an individual's perception or educated guess about the reality of a community. In other words, it will provide justifiable support when resources are requested for geographic locations so decision makers can demonstrate how multiple, sometimes conflicting, expectations are met through particular project funding. Furthermore, it pushes the user to gain insight from people with the right answers if they do not know how to judge a specific criterion themselves. This helps to overcome variability in decision-maker knowledge, experience, and personal bias and ultimately allows the user to make the most informed decision possible. This method also finds a way to blend both quantitative and qualitative data, which is important when considering the magnitude of such decisions. The use of the MCDA-based filters also permits for rapid re-assessment and "what-if" scenario evaluation with new criteria weights based on changing stakeholder inputs. Finally, and most importantly, mission consistency is maintained across multiple, unique regions as the approach allows for the scaling of analysis.

While the tool does seem to provide an answer to the common criticisms and weaknesses of the current process it is not a perfect solution. As mentioned, the strategy filter could be seen as too subjective as different evaluators even with a provided definition set could perceive a value from 0-4 differently. Next, the filters do not inherently incorporate cost benefit analysis. Perhaps a project receives the highest score but would require the entire OHDACA budget for that FY while funding projects ranked at 4, 5, and 6 on the list could be done with half of the budget. The ERDC team has developed a process through which a cost benefit analysis of each project is performed, establishing a way to identify an “optimal portfolio” or best complete set of projects. However, that process will not be discussed within this thesis. Finally, MCDA could require too much data collection for the risk and vulnerability filter to the extent that the work to obtain the numbers would not be worth the reward and, as a result, that filter is ignored or the method is abandoned entirely.

The tool has yet to be officially accepted as the standard for the Combatant Commands. However ERDC is currently working with PACOM to test and transition the project by scoring projects from FY2012 and FY2013 to see which sites would have been selected and rejected based on this scoring system and if the end batch of selected projects would have been different than the actual projects chosen for those respective fiscal years. Ultimately, the team hopes the combatant commanders find the filters to be a useful tool for assessment and alignment of command zone priorities while at the same time facilitating a more efficient, justifiable decision making process through a transparent, consistent, documented work flow. In principle, the filters could be altered and applied to Department of State funded humanitarian assistance. However, the criteria within each filter would need to be altered as the goals and objectives would need to align with the goals and objectives of the Department of State humanitarian assistance programs.

Chapter 7

Conclusion

From the Battle of Solferino to the combat zones of current day Afghanistan, human suffering persists through time. However, as the Haitian proverb states: tout mon se mon – we are all human beings. We are all human beings, and we each deserve the right to a life free of pain and full of dignity. Through time, the developed nations of the world have realized that a responsibility to provide aid to devastated populations, within or outside their borders, has fallen into their hands. As a developed nation, the United States has stood beside its global partners for over a hundred years now in the efforts to help relieve human suffering. Since World War I the country has given support to victims of war, famine, earthquakes, and other disasters. In fact, humanitarian assistance and disaster relief programs managed by the United States have grown so much, the efforts and responsibilities are now internally divided between two pillar departments, the Department of State and the Department of Defense.

Together, these two organizations do the best they can to serve the growing number of people living in disaster or recovery situations. However, in more recent years the amount of financial support from the United States has started to decrease. As a result, now more than ever, it is important the United States allocates its resources as efficiently and effectively as possible. Unfortunately, there are valid criticisms of the current humanitarian assistance and disaster relief efforts administered by the Department of Defense. One glaring weakness is the complete lack of a justifiable, transparent, cohesive decision-making process behind humanitarian assistance and disaster relief site selection. People have proposed potential solutions in the past, and a more

flexible and user-friendly approach is needed. Presented in this thesis is one potential solution, a decision-making process that incorporates multi criteria decision analysis to maintain strategic and humanitarian goals while at the same time allowing for a context specific decision making process. While not a flawless system, the use of a two-filter scoring method would fix the identified weakness and add other strengths, ultimately creating a decision making system for the Department of Defense that increases effectiveness and decreases suffering.

Improve Access & Visibility of DoD	Access DoD Resources	- Demonstrates the help DoD gives - Demonstrates DoD willingness to assist general population, increases visibility Only benefits civilians or non-combatants	No access	Potential access	Access during	Access to other resources during	Access during and after
	Improve Public Perception	- Generates positive perceptions - Increases trust, engage in ad campaigns that provide support of equitable benefit, with consideration of cultural norms	Impedes cooperation	Neutral	May improve	Small improve ment	Large improvement
Enhance HN Legitimacy	Improve Capabilities of Crisis Response Teams	- Increase disaster relief capacity in communities by improving education support, health support, disaster preparedness (DP), and basic facilities - Assist with planning for disaster response and recovery - Assist with exercise design and development, conduct, and evaluation and the training of emergency responders	Does not improve	May improve	Small improvements	Modest improvements	Large improvements
	Build HN ability to Provide Services	- Increases social services personnel, materials and supplies - Increases and improve infrastructure - Provides education that fosters the survival capabilities of the populace by providing the tools necessary for self-reliance in addressing issues with limited support and resources	Does not build	May build	Minimally builds	Modestly builds	Expands services
	Develop HN Military	- Increase education, personnel, and resources - Enhance HN security and stability	Does not develop	May indirectly develop	Small develop ment	Modest develop ment	Large develop ment
Strengthen & Build Alliances	Promote Cooperation and Coalition Building	- Promotes interoperability, supports strategic end states and is consistent with the relevant embassy's Mission Strategic Resource Plan (MSRP) and USAID's Country Development Plan - Involves civilian and military counterparts, strengthening inter/intra-regional relationships	Impedes cooperation	No attempt at cooperation	Poor cooperation	Good cooperation	Full cooperation
	Develop Partnerships	- Establishes inter/intra-regional relationships - Ensures coordination, site ownership, equal access, and maintenance and sustainability guidelines are shared when possible and respectful of partners	ignores partners	Neutral	Involves current partner	Develop 1 partner	Develops 2+ partners

		- Implements projects by engaging bilaterally and multilaterally					
	Integrate efforts of NGOs, HN, and US Agencies (USAID)	- Jointly identifies the humanitarian needs of the civilian population and develops projects and activities that directly address those needs with NGOs, HN, and USG Agencies i.e. - Health focused projects, especially those emphasizing public health capacity building, must be closely coordinated with USAID - Education support activities integrate into the national education agenda of the HN Ministry of Education (or relevant government institution), and involve the full participation of local stakeholders and other pertinent organizations - Construction must meet relevant local, national, international standards.	Sole project	Involves previous projects	Involves 1 other agency	Involves 2 other agencies	Involves 3 other agencies
	Efficiency	- Does not repeat efforts of previously funded projects or projected projects - Enables project comparison across countries, regions, and Combatant Commands (CCMDs) - Does not use excessive resources i.e. Opportunities to stock public health facilities with EP medical supplies will be explored prior to expending funds to purchase new items, consider multi-use functionality for buildings in the project design-phase; military assets are provided primarily to supplement or complement the relief efforts of the affected country's civil authorities or humanitarian relief community.	Not Efficient	Poor Efficiency	Adequate Efficiency	Good Efficiency	Excellent Efficiency

*Efficiency = ability to do something/produce without wasting materials, time, and energy

* Partnership = legal relation existing between two or more persons contractually associated

* Coalition = joining together with another for a common purpose

* Cooperation = association of persons for common benefit; situation where people work together to do something

*Capacity = ability/power to do, experience, or understand something

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