Evaluation of Assessment Methodology to Support Combined Joint Task Force-Horn Of Africa[1]

by

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ABSTRACT

In support of Combined Joint Task Force- Horn of Africa located in Djibouti we conducted a review of their current assessment methodology with the goals of making recommended improvements and develop a means to aggregate their assessment methodology. This research demonstrates an approach to capture the many political, social, and economic factors that exist for this nation and others in the region face and to capture and convey a quantitatively based measure of nation stability. The product developed is intended to be utilized by the defense and other agencies and private organizations interested in the stability of a country. We used multi objective decision analysis to develop a weighted scoring methodology using Kenya for a proof of principal demonstration study. This methodology is an improvement over existing methodologies in that it uses a weighed scoring in lieu of a simple additive model. We also investigated numerous means to best convey the results to include spider plots, bubble charts, stacked bar graphs, and stop light charts to capture both the change in stability as well as the magnitude of the change.

PROBLEM STATEMENT AND BACKGROUND

Problem Statement

This research was conducted to develop implementable and sustainable methods, processes, and tools (MPTs) to predicts stability/instability in Africa. These MPTs presented have a real-time capacity to be updated and reshaped to produce a quantifiable and defensible value that dictates the stability levels within a country. This stability index produces an indicator that a country is moving towards instability/stability. We chose to use Kenya for a candidate demonstration study. We also needed to develop different means to display the results of our stability research. We hope to develop a quantitatively based and defensible stability scoring methodology and index that might serve as a model for the variety of stakeholders interested in this problem. Our approach is centered on the many political, social, and economic problems that this nation and others in the region face and to capture and convey a quantitatively based measure of nation stability. The products developed here are intended to be utilized by the Department of Defense (DoD) and the stability operations community as a means to predict the potential for conflict in regions such as Kenya and Eastern Africa.

As shown in Figure 1 assessment is conducted at all levels and drives a host of operational and strategic issues. This research was focused on conducting macro level assessment.

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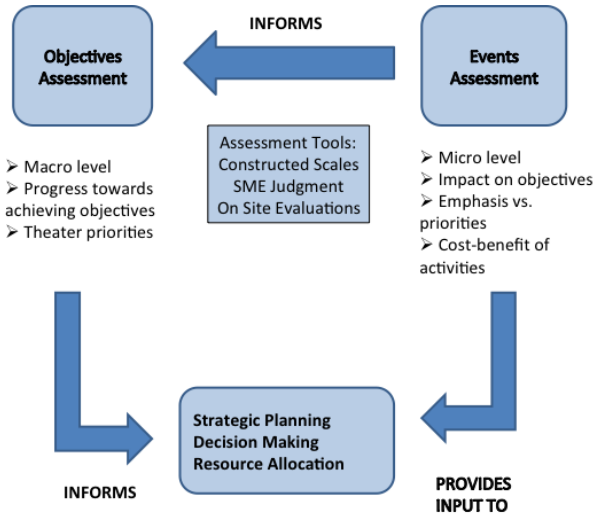

Figure 1. *Assessment process*

Background

Combined Joint Task Force - Horn of Africa (CJTF-HOA) is the only official permanent DoD presence on the continent of Africa and is responsible through U.S. Africa Command (AFRICOM) for the assessment of U.S. Government military activities. Through Civil Affairs (CA) teams, open sources such as the CIA Factbook (2011) and the DoD (200), other government agencies, etc., they are responsible for assessing how government projects contribute to security, improved governance, and economic development. They should also contribute to the situational awareness as a key member of the government team. Another purpose of this research is to review and make recommendations to the current assessment methodology, in hopes to replace it with a user-friendly, transparent, sustainable, quantifiable, and most importantly relevant set of MPTs.

AFRICOM is one of six unified Combatant Commands (COCOMs) that are regionally focused; it is devoted solely to Africa. AFRICOM is responsible to the Secretary of Defense for U.S. military relations with 54 African countries. USAFRICOM better enables DoD to work with other elements of the U.S. government and others to achieve a more stable environment where political and economic growth can take place. AFRICOM is committed to supporting U.S. government objectives through the delivery and sustainment of effective security cooperation programs that assist African nations build their security capacity to enable them to better provide for their own defense. The mission of AFRICOM is to protect and defends the national security interests of the United States by strengthening the defense capabilities of African states and regional organizations and, when directed, conducts military operations, in order to deter and defeat transnational threats in order to provide a security environment conducive to good governance and development.[3]

U.S. AFRICOM commands CJTF-HOA which is stationed in Camp Lemonnier in Djibouti City, Djibouti. CJTF-HOA's mission is to conduct operations in the combined joint operations area in order to enhance partner nation capacity, promote regional stability, dissuade conflict, and protect U.S. and coalition interests.[4] The area of responsibility for CJTF-HOA is Djibouti, Eritrea, Ethiopia, Kenya, Seychelles, Somalia, South Sudan, and Sudan. CJTF-HOA's area of interest consists of Burundi, Chad, Comoros, Democratic Republic of the Congo, Madagascar, Mauritius, Mozambique, Rwanda, Tanzania, Uganda, and Yemen.[5] Figure 2 shows the area of responsibility and interest.

[3] http://www.africom.mil/AfricomFAQs.asp accessed November 2011
[4] http://www.hoa.africom.mil/index.asp# accessed November 2011
[5] http://www.hoa.africom.mil/hoaAORAOI.asp accessed November 2011

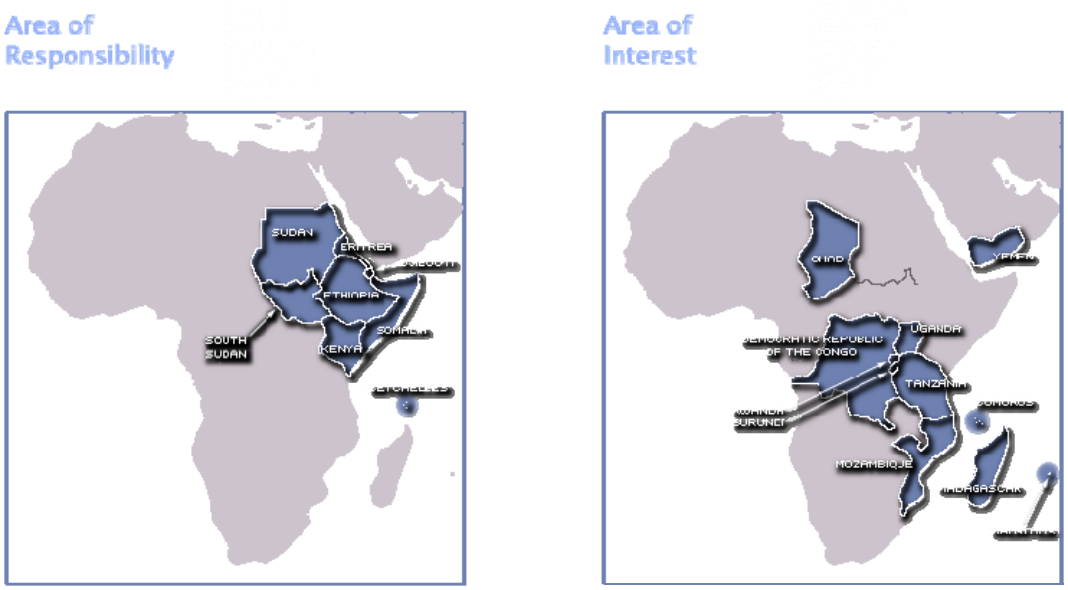

Figure 2. *Areas of responsibility and interest*[6]

CJTF-HOA is currently conducting a myriad of operations in the AFRICOM area of responsibility (AOR) to include building partner capacity (BPC) operations along with some limited stability operations. Conducting TSC operations is one of the most important tools the DoD because it is focused on engaging other countries to deter unwanted actions and to defend the United States' and our allies' national interests. Theater security cooperation primarily builds relationships that promote specified U.S. interests. Stability operations are conducted in order to eventually give the host nation control when a legitimate government exists without the help of the U.S. Marine Gen. Peter Pace, the 16th Chairman of the Joint Chiefs of Staff, said to his troops, "We are operating in Afghanistan and Iraq right now because the international community was not able to get those nations straight before it was necessary to use force." He continued, "We'll get through Iraq. We'll get through Afghanistan, but then we're going to need nations like Djibouti in places around the world to help our nation and their nations prevent the kind of conflict that we're fighting right now."[7]

RESEARCH METHODOLOGY

The Systems Decision Process (SDP) is a structured process used in the conduct of this research. It is a comprehensive and proven method for problem solving and decision-making. It is flexible enough to accommodate the needs of almost any problem and is shown in Figure 3.[8]

[6] http://www.hoa.africom.mil/hoaAORAOI.asp accessed November 2011
[7] http://www.defense.gov/news/newsarticle.aspx?id=47047 accessed November 2011
[8] Parnell, Gregory S., Patrick J. Driscoll, and Dale L. Henderson. *Decision Making in Systems Engineering and Management.* Second Edition. New York: John Wiley and Sons (2010), p. 17.

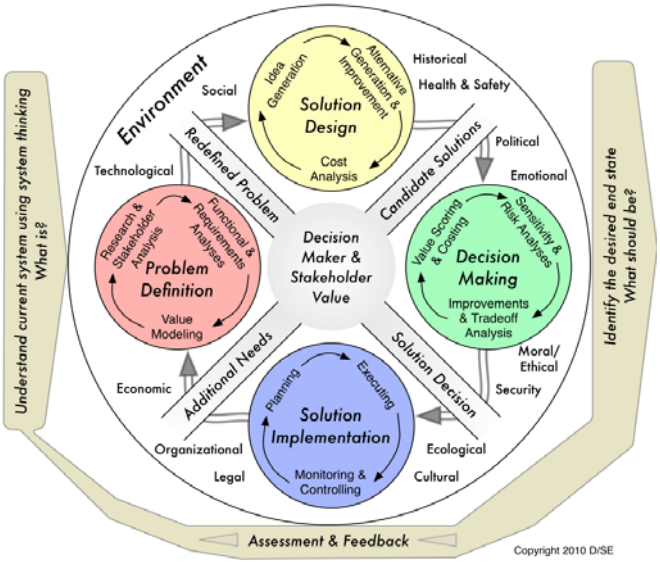

Figure 3. *The USMA systems design process*

Problem Definition for the Kenyan Stability Model began in the summer of 2011 when we were tasked with developing an adaptive, real time weighted scoring solution to evaluating stability in Kenya for CJTF-HOA. We conducted background research on U.S. policy to date, the surrounding regions (Somalia, Rwanda, Sudan, etc), the role of religion, terrorism, Kenya's history, etc. We presented our findings to various stakeholders and subject matter experts while also researching literature on Kenya. We first began by developing a comprehensive Systemigram, which allowed us to develop an initial scaffold of the weighted value model. After submitting our initial work and receiving feedback from the J-5 (i.e., assessments) at CTJF-HOA, we had our research statement clearly defined to create a tool for assessing Kenya's stability. During *Solution Design*, we used our stakeholder assessments along with a literature review to update and update our problem statement and develop a functional hierarchy. The *Decision Making* phase is left to the analysts working for CTJF-HOA. Time constraints, limited our work to the creation of the multi objective decision analysis (MODA) model. Future work in this area involves interpreting the output and determining the significance of specific numerics. Sensitivity analysis is also a possible area of future work. *Solution Implementation* is left to the CJTF-HOA stakeholders. The MODA model and scoring system provides them the tools that can easily be modified and used to analyze operations in Kenya and other countries in their area of operations.

CURRENT ASSESSMENT METHODOLOGY

Overview

The current assessment methodology utilized by the CJTF-HOA can be broken down into a number of different components. First, there are the steps taken to define the fundamental objectives for the region, describe their desired effects, and create different missions to accomplish said goals. After the problem definition is completed the process becomes entirely about assessment, which consists of both qualitative and quantitative information and data. For every objective and mission there are developed measures of effectiveness and measures of performance. These assessments are done at every echelon of the objective and then summarized to give overall effect levels for the fundamental objectives and for all of Kenya on a quarterly basis.

The specific objectives and missions used for the current assessment methodology are not based on specific issues or arising problems in Kenya. The results of the analysis are solely reviews of completed or in progress desired effects. The output does not give any indicators of future issues; it recaps progress on the effects of missions. The quarterly assessment results consist of a summarized description of the main objectives labeled based on their current progress in effectiveness, and the amount of evidence and

confidence with which they can prove the effectiveness. A table describing engagements with key leaders and the purpose of those meetings, a table of the different effects desired for each Objective labeled based on the Measures of Performance, and written descriptions of different Civil-Military Operations (CMOs) Missions, Military-to-Military Operations, and other Objective Missions, with reports of their measures of effectiveness.

Assessment Process

The assessment process occurs on many different levels. The broadest of which is the overall assessment of the different objectives, missions, and effects. The first step is the quantitative labeling process, which measures 3 things; the level of effect the missions or objectives had, the evidence with which the effectiveness can be proved, and lastly the confidence with which the effectiveness can be proved. As shown in Figure 4, the quantitative measures of performance are seen below, where color represents effectiveness, and the letters 'E' and 'C' represent evidence and confidence respectively.

E	Significant Evidence
e	Some Evidence
C	High Confidence
c	Low Confidence

	Significant Effect
	Some Effect
	Negative Effect
	Insufficient Data

Figure 4. *Overview of AFRICOM assessment measures*

The missions are first assessed and given basic color coding and the main objective assessments are compilations of all the missions that fall under that objective, they are given both color coding and two letter labels to represent all three factors shown in the table above.

The next process is the qualitative descriptions. This is done in two major parts. First, a description is done of the overall effects of the different types of missions, a brief summary is written about Military-to-Military (M2M) effects in that quarter, followed by CMOs, and then Functional Specialty (FXSP) teams like Medical or Veterinary actions. Following the broad overviews, the descriptions are broken down by objectives. For each objective a description is written about the impact of each of the three aforementioned areas (M2M, CMO, and FXSP).

These different assessment parts fit into a much larger scheme of analysis for the region. For each assessment cycle, components are analyzed on the tactical level, which conducts task assessment, looks at primarily quantitative data, and asks, "*Are the HOA Projects being done right?"* The operational level, which includes Effect Assessment, is both qualitative and quantitative analysis, and asks, "*Are we doing the right projects?"* Finally, the Strategic Level, which is the Campaign assessment, uses qualitative and quantitative data in addition to distribution of effort throughout the region, and asks, "*Are we accomplishing the mission?"* This three tier approach covers the spectrum working from the small tactical missions with civil affairs teams all the way up to a strategic view of the mission that deals with USAFRICOM's mission. Figure 5, below, is a diagram directly taken from CJTF-HOA's explanation of their current methodology.

Another part of the assessment output, which goes along with the tables of labeled objective results is a tabular recount of all interactions with key leaders. This result shows the official involved, and the reason for contact with him.

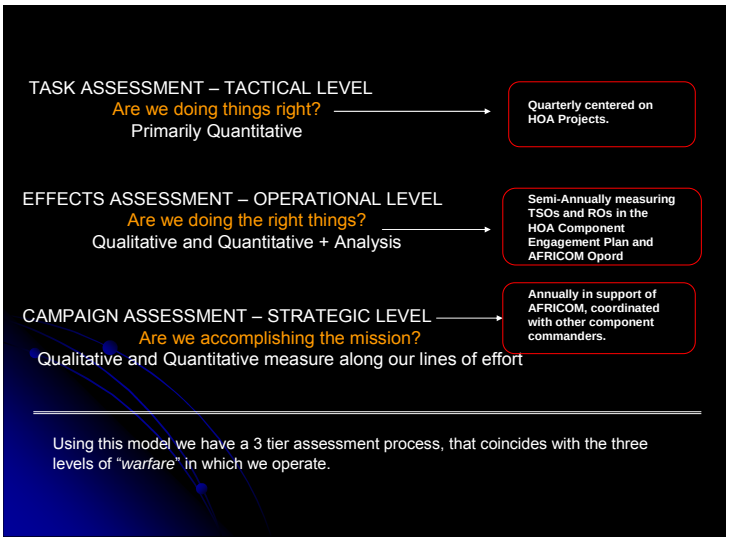

Figure 5. *Level of assessment and corresponding cycle time*

SOLUTION METHODOLOGY

Our stability model is based mainly MODA, which ranks alternatives to assist in selection of the preferred alternative. Specifically, it is useful in enhancing decision making for allocation of resources and solidifying support for a particular portfolio of projects. Our model will help to identify an appropriate mix of projects at this level, to maximize overall value.

It is important to first identify what is meant by the term "portfolio". A portfolio or mix of post-conflict reconstruction projects may be viewed at two levels. An overall portfolio of projects for the post-conflict country exists at the upper level and is comprised of the lower level of individual agency portfolios of projects. This lower level is the mix of projects from each of the stakeholders involved in the post-conflict reconstruction effort. A representative sample of the agencies or stakeholders, with their own portfolio of projects for a post-conflict country, includes the DoD, Nongovernmental Organizations, USAID, the World Bank, International Organizations, Commanders Emergency Response Program (CERP)[9], etc.

The MODA process begins with the post-conflict reconstruction value hierarchy that was developed as previously discussed. The five core outcomes are broken down into central tasks, and the central tasks identified can be further broken down into evaluation criteria in the value hierarchy model. The evaluation criteria presented here are representative critical tasks that may be performed during reconstruction operations. Their scope is not meant to be specific, as the execution of each task is situationally dependent.

As the evaluation criteria are dependent upon the situation and type environment, they are not presently assigned local weights in the value hierarchy model. It is not predetermined which, if any, of these evaluation criteria will be a factor so they cannot be assigned "constant" local weights in the model. Appropriate evaluation criteria and local weights will need to be determined, based on current information, when applying the model.

Again, the value hierarchy above does not depict constant local weights for the sample evaluation measures because these measures may not always be appropriate for the situation and type of environment. In addition, some information may not be made available or does not currently exist, so this

[9] CERP was established to enable local commanders in Afghanistan and Iraq to respond with small-scale, humanitarian relief, and reconstruction projects and services that immediately assist the indigenous population and that the local population or government can sustain.

must also be taken into account when determining appropriate measures. In the example above, local agencies may not openly share information regarding productivity, or there may not be a method in place to measure the unemployment rate in a particular rural area. Appropriate evaluation measures and local weights will need to be determined, based on current information, when using the model.

Multi-objective value analysis (Kirkwood, 1997) uses an overall value function which combines the multiple evaluation measures into a single measure of the overall value of each evaluation alternative, or portfolio of projects. Thus, different mixes of projects in a portfolio may be compared to determine the appropriate mix for maximizing value. Multi-objective decision analysis is useful for structuring the judgments used in assessing the value of projects that comprise a reconstruction portfolio in an organization with multiple and conflicting objectives. Multi-objective decision analysis methods are based upon structured objectives, evaluation measures, value functions, and weights.

Multi-objective decision or value analysis (Kirkwood, 1997 and Keeney and Raiffa, 1993) uses an overall value function which combines the multiple evaluation measures into a single measure of the overall value of each evaluation alternative. Multi-objective decision analysis is useful for structuring the judgments used in assessing the measures on instability. Multi-objective decision analysis methods are based upon structured objectives, evaluation measures, value functions, and weights.

The additive value function $V(a_i)$ has the form:

$$V(a_i) = \sum_{k=1}^{m} w_k v_k(a_i) \tag{1}$$

with

$$\sum_{k=1}^{m} w_k = 1$$

and $0 \leq v_k(a_i) \leq 10$ for all k=1, ……., m

The quantity $v_k(a_i)$ is the assessed value of alternative a_i. The weights w_k presents the tradeoffs across the criteria. Decision makers maintain the flexibility to manipulate the function (both weights and value functions) to fit the current situation.

When using MODA a structured approach must be taken to develop the weights, objectives and functions. In this research we presented objectives and functions based upon the experience of the authors, a literature review, and input from some subject matter experts. We then surveyed a group with experience in reconstruction to develop the weights using the swing weight matrix approach. This provides a realistic model to demonstrate the utility of this approach. This top down approach provides a starting point for allocating resources. Ideally, stakeholders should be involved at all levels. A structured decision process involving funding agencies and local governments should be used to develop objectives and functions. Note that function should always be quantifiable and measurable. Once these objectives have been developed, the task of assigning weights can begin. Again, some type of structured decision methodology should be used with stakeholders at all levels providing input. In general, there is often very little disagreement on the objectives, functions, and how to quantify the functions. However, when assigning the weights are when stakeholder interests are reflected. For example, one group of stakeholders might place a high value upon security. Whereas another group of stakeholders such as the local populous would place a higher weight on meeting basic needs. Stakeholder buy in is critical with all parties agreeing to the framework. Sensitivity analysis can play a key role here to show how varying the weights over different ranges can have little or major impact on the objective function.

DEMONSTRATION STUDY RESULTS

MODA Value Model

Developing a pictorial representation of the value model is the first step in MODA. The fundamental objective is the most basic high-level objectives the stakeholders are trying to achieve. Our objective for the Kenya stability model is shown in Figure 6. Figure 6 also shows along with our fundamental objective the associated functions. Our value measures are aligned with these functions.

The next level of the value hierarchy is the primary functions associated with the fundamental objective. Based upon the literature review presented, interviews with subject matter experts, etc., we chose four functions shown. They are the broad categories that must be addressed in order for us to solve the fundamental objective. They represent what must be done to accomplish the fundamental objective.

Once the hierarchy and associated value measures are developed we must then develop the appropriate weights. The value model is where we capture the importance of each function and objective. There are many techniques for trying to capture importance. This model does not champion any one particular technique (normally importance or weighting occurs during the stakeholder analysis phase). Table 1 shows the swing weight priorities the highest weight being associated with value measure that has highest impact and variability.

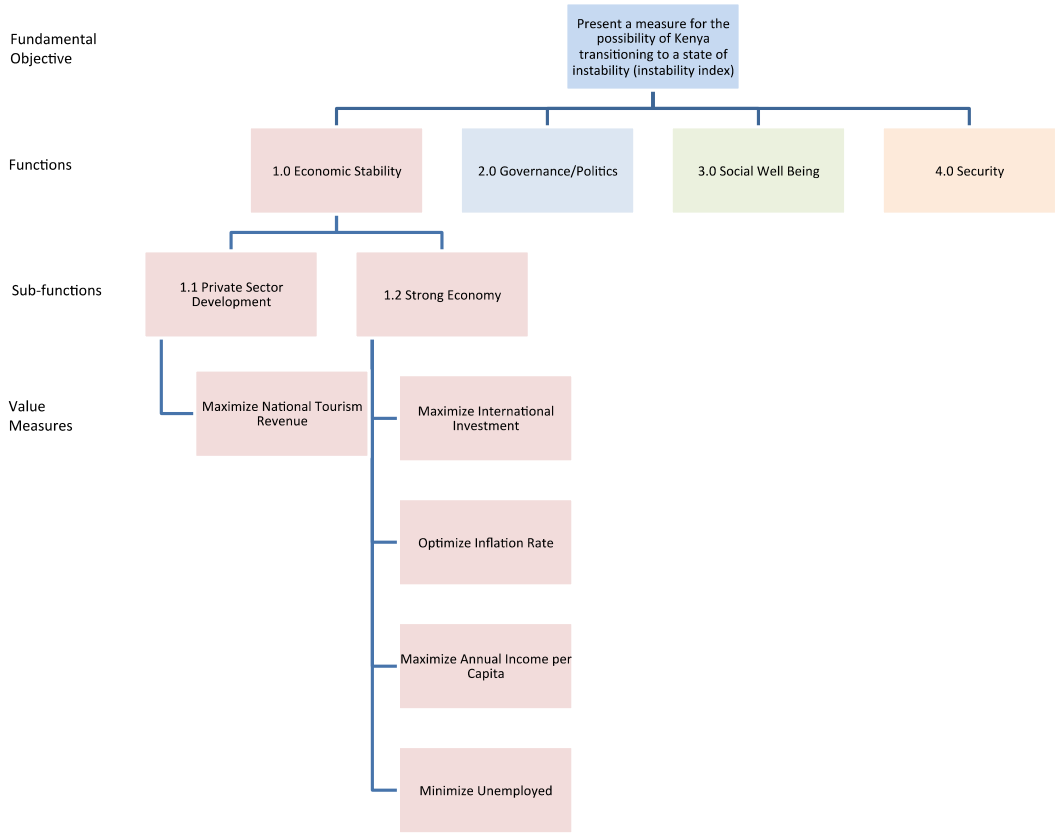

Figure 6. *Value hierarchy model showing the value measures for the economic stability function*

After scoring each of our weighted value measures we added them together for an aggregate score that presents the stability of Kenya as an index value as shown in Figure 7. The higher the index value the more stable the country is based on factors ranging from political, economic and military facets in the region. From our model we calculated a relatively high stability in 2007 that dipped significantly in 2008.

However, for the remaining two years we noticed a steady increase in the stability of the region that indicates effective investment and security operations in the region by various non-state actors to include the JTF-HOA presence based in Djibouti. Moreover, one of the most volatile factors in the model was political unrest. This is often out of reach of US civil affairs teams or other agencies, yet we see a significant decrease in the amount of unrest in the years of 2009-2010 which can be attributed to the success of the other measures outside supports took to minimize overall instability in the region. Looking ahead we would expect this stability index to increase as long as the conditions established in 2009-2010 persist and are adjusted to meet the changing needs of the region.

Table 1. *Swing weight matrix for Kenya stability index value model*

		Importance of the Value Measure to the Decision Makers and Stakeholders		
		High	*Medium*	*Low*
Variation in Measure Ranges	*High*	• Minimize Number of Terrorists Attacks • Percent Unemployed	• Size of Military • Infant Mortality Rate • Inflation Rate	• Government IT Organization • Labor Participation Rate
	Medium	• Percentage of Population below Poverty Line • Corruption Index	• Government Anti-terrorist Organization • Citizens Killed or Captured by the Government • Tourism Revenue • Amount of Drugs Imported/Exported	• Number of Attempted Acts of Piracy • Investment Climate Ranking
	Low	• Life Expectancy • Defense Budget Spending	• Average Annual Income • Education Spending • HIV/AIDs Deaths per Year	• Literacy Rate

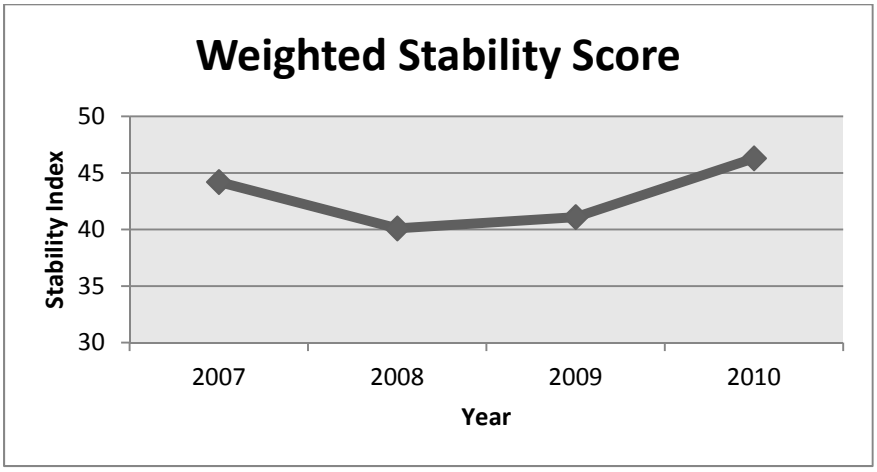

Figure 7. *Kenya stability score from 2007 to 2010*

Stop Light Chart

Stoplight charts are named for their traffic signal color code use of red (no or some level of satisfactory performance), yellow (partial or some level of satisfactory performance), green (some level to full performance) provide a simple and effective way to visualize and present metrics to the ultimate decision-

makers. Table 2 presents a stop light representation of our value measure over the period 2007 through 2010.

Bubble Plot to Capture Magnitude of Change of Value Function

Figure 8 contains a bubble chart version of the Swing Weight Matrix. The chart represents marginal change from the data from the year 2009 to the year 2010. The size of the circle represents the size of the change and the color represents the direction, whether positive, negative, or no change. This chart can be used effectively with the stoplight chart, as the stop light chart shows the values discretely by year, and this bubble chart shows the change between two of the years.

Stability Profiler Visual Representation Method

After generating our model we were able to use the weighted scores to produce a *Kenyan Stability Profiler*. This figure not only charts the levels of variability in the data from year to year, but it combines the most important value measures to show an annual representation of the country. For instance in 2010 we can see from Figure 9 that from 2009 there was a significant decrease in the number of citizens infected with AIDS. This represents not only a continuation of the current trend but also the largest decrease in our model. In a quick snapshot we can use this figure to analyze individual value measures over time, their response to surrounding factors and the overall stability picture within the region. In the future this graph could be broken down into individual components- years, value measures and/or degree of change that would allow additional perspectives with which to view stability across the region. The multiple perspectives and a clear visual representation the *Kenyan Stability Profile* can be used to clearly understand how major measures of stability change over time.

Weighted Stability Score Comparison with Other Indices

Taking a look at Figure 7, we see that since the year 2008 the weighted stability score has steadily been increasing, indicating an increase in stability within Kenya. The different factors that have contributed to more stability in Kenya within the economic stability function includes: the increase in national tourism revenue, Kenya's rank as top three in investment climate ranking in Africa, and increase in average annual income. In terms of the governance political function, these factors increased Kenya's stability: the decrease in infant mortality rate, increase in education spending, and decrease in the corruption index. Within the social well being function, increases in Kenya's stability was attributed to the following factors: increase in labor participation percentage, decreases in deaths related to HIV/AIDS, increase in life expectancy, and increases in literacy rate. Finally within the security stability function, these measurements: the increase in defense spending as a percentage to the GDP, increase in government monitoring of cyber-space activity, and presence of a force protection agency, have contributed to more stability within Kenya. Fund for peace (FFP) developed Figure 10 to depict their own index on failed states.

In order to depict the degree of change across the areas analyzed in our model we generated a stacked bar chart (see below, Figure 11). The bars are delineated by year and show the relative change in each of the four categories analyzed: political, economic, social well-being and security. Surprisingly, with little in the way of economic reforms from the government it seems to be the driving factor in the increased stability of the nation as of 2010. Additionally, in 2008 and 2009 economics also seems to be the driving factor in the overall stability in those years.

Table 2. *Stop light chart for our assessment value measures from 2007 to 2010*

Function	Sub-Function	Value Measure	2007	2008	2009	2010
Governance and Politics	Military and Govt Corruption	Minimize Corruption Index (#)				
	Country Health Status	Minimize Infant Mortality Rate (Deaths/1000 Births)		NI	NI	
	Political Unrest	Minimize Citizens Killed or Captured by the Govt (#)				
	Parallel Beliefs, Goals, and Morals	Maximize Education Spending (% of Govt Budget)	NI	NI	NI	
Economy	Strong Economy	Minimize Percent Unemployed (%)				
		Maximize Average Annual Income				
		Optimize Inflation Rate (%)				
		Maximize Investment Climate Ranking (#)				
	Private Sector Development	Maximize Tourism Revenue ($ Mil)				
Social Well Being	Poverty	Minimize % of Population Below Poverty Line (%)		NI	NI	
	Conflict between Ethinic Groups	Maximize Labor Participation Rate (%)				NI
	Pandemic Influenza and Decease	Minimize HIV/AIDs Infection (Deaths/Year)				NI
	Life Expectancy	Maximize Life Expectancy (Yrs)				NI
	Education	Maximize Literacy Rate (%)				NI
Security	Terrorism	Minimize Terrorism Attacks (# of Attacks/Year)	NI	NI	NI	NI
	Size of Military	Maximize Size of Military (% Military per Labor Force)				
	Defense Budget	Maximize Government Defense Expenditures (% of GDP)				
	Internet Monitoring	Existence of Cyberspace Monitoring Activity (Y/N)				
	Federal Force Protection Agency	Existence of Govt Anti-Terrorism/Force Protection Agency (Y/N)				
	Piracy	Minimize Attempted Acts of Piracy (# of Attempted Acts/Year)				
	Drug Trafficking	Minimize #vof Drugs Crossing the Border (1000 Kg Khat/Yr)				

	Description:	Frequency by Year:			
	= Value between 66 - 100	8	7	5	8
	= Value between 33 - 66	6	6	8	7
	= Value between 0 - 33	7	8	8	6
NI	= No Information Found				

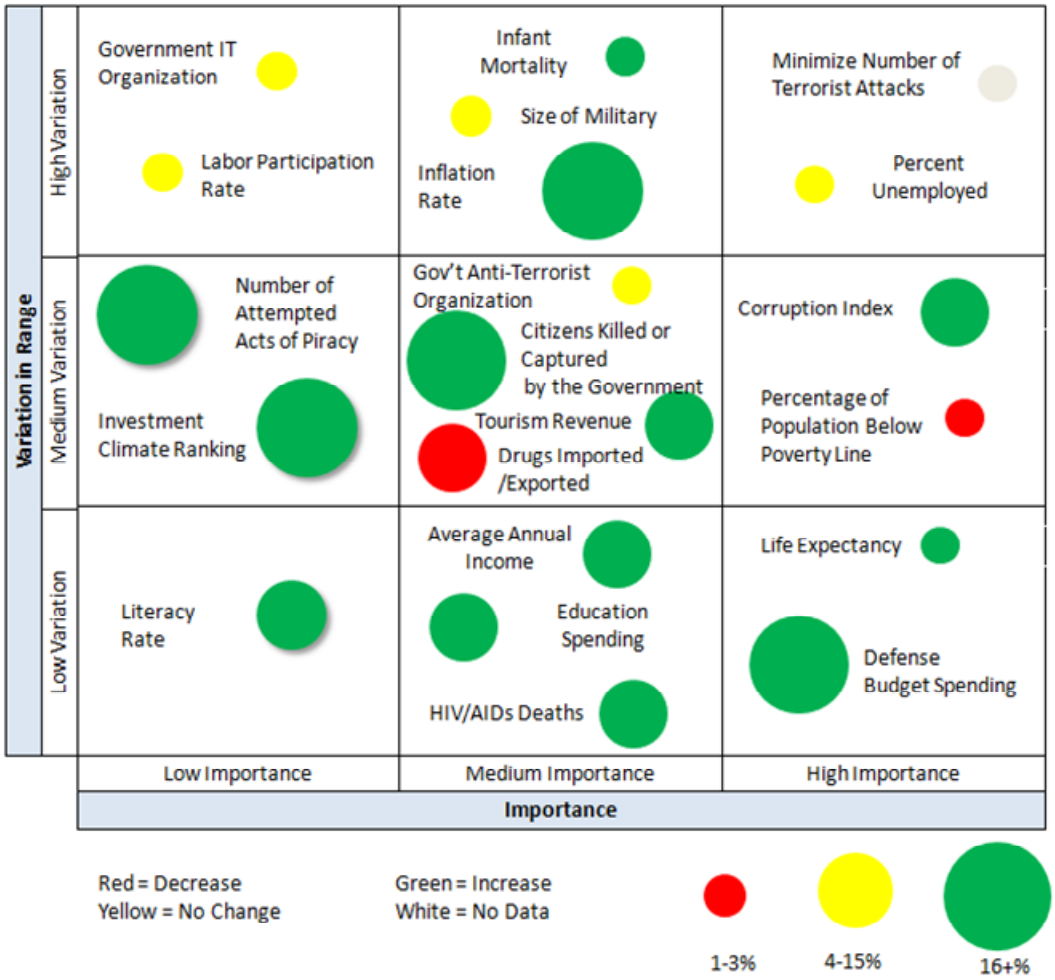

Figure 8. *Bubble plot*

CONCLUSIONS AND SUMMARY

Conclusions and Future Work

In order to comprehensively understand the data, calculations, and computations of our project, we must look to the end state and outcome of our project. According to the swing weight matrix the values with the most effect to the overall stability score of Kenya are Terrorist Attacks, Percent Unemployed, Percentage of Population Below Poverty Line and Corruption Index. These four have a swing weight score of 100, 100, 80, and 80 respectively. These scores account for 9.0% and 7.2% of the overall total value score. Terrorist Attacks is not accounted for in the final score because the data for this value measure could not be compiled, but when it is the total value could change significantly. If all four prove to demonstrate stable scores, Kenya will be determined to be stable. This report can be used as a starting point. A Kenyan official can easily look at our value model and identify which values (areas of the country) make Kenya stable and which values bring instability. With the knowledge of important value measures, the official and the country itself, we hope, will be able to focus on the improving the stability of a few value measures in order to improve stability within Kenya. .

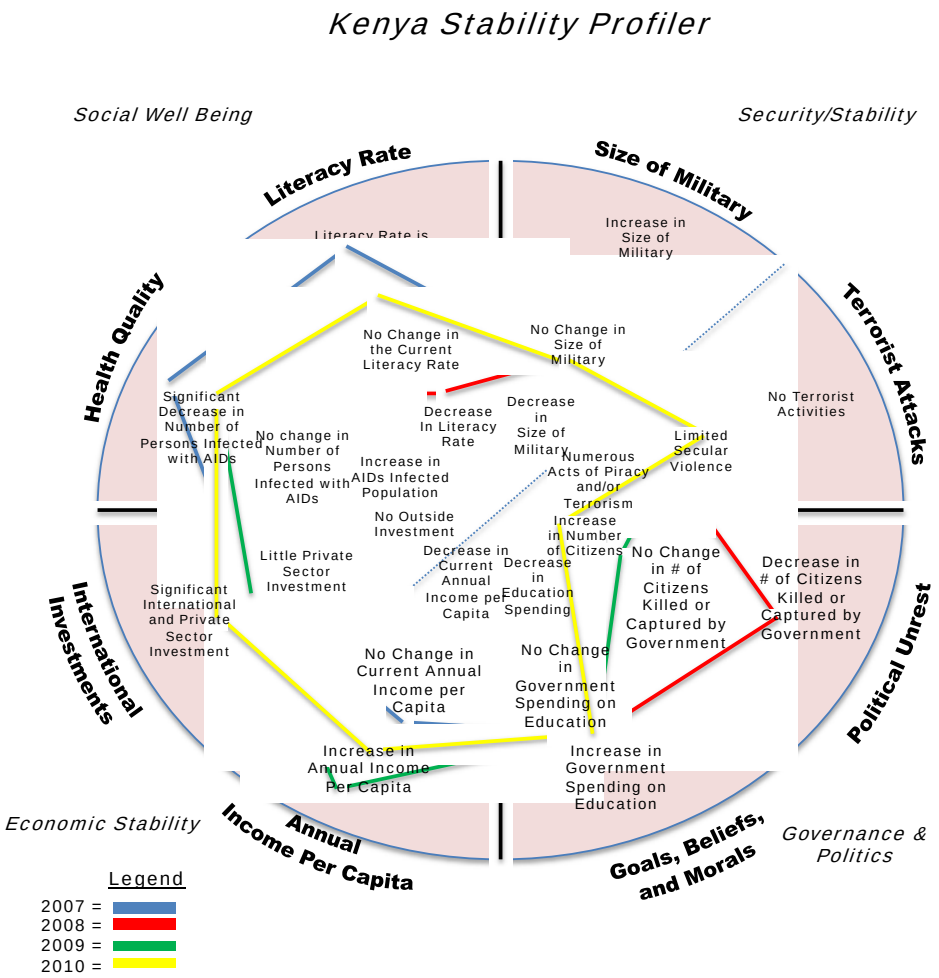

Figure 9. *Kenya stability profiler*

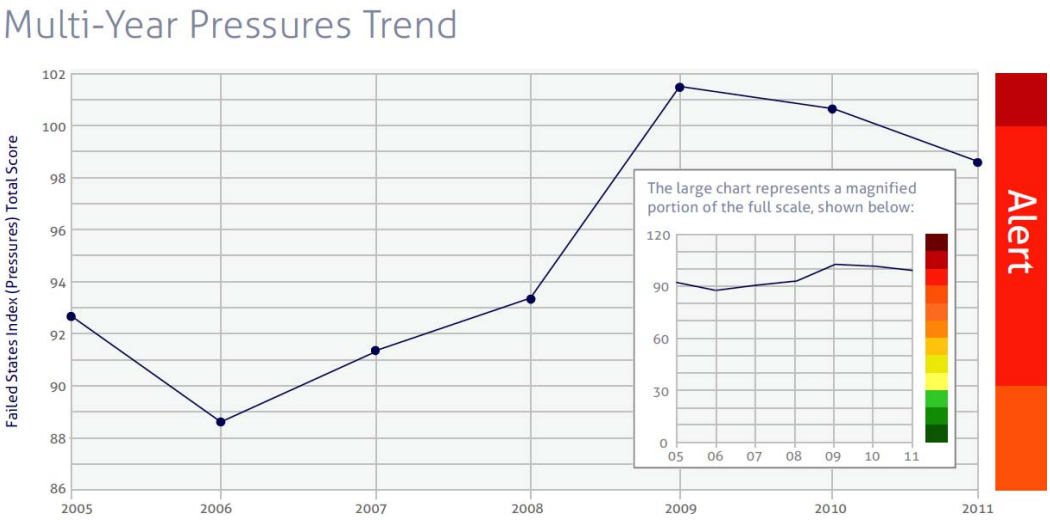

Figure 10. *Fund for peace failed states index on Kenya*

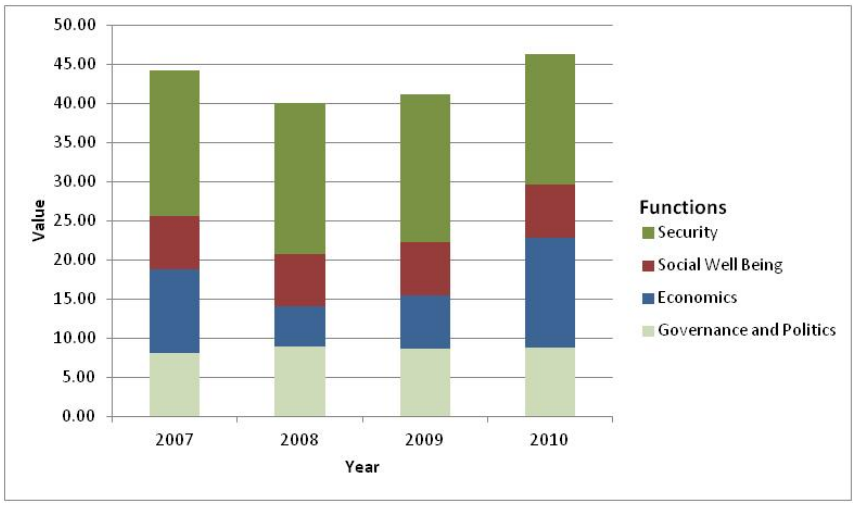

Figure 11. *Total value stacked bar chart*

Summary

Research was conducted to see what research has been done previously to predict future instabilities in countries. Four different assessment methodologies were investigated as potential tools in lieu of developing our own index. All of methodologies systematically came up with their own criteria that they deemed important enough to score as to assess the current stability situation or predict future instability. Several scored their criteria/indices in their own distinct method with most not publishing their process or scoring system. Our index is an improvement over these in that it weights scores and uses quantifiable and defensible measures.

A future consideration for study is to do a more comprehensive study on what value measures the Kenyan people value the most. While our stakeholder's interests may weigh terrorist attacks as the most important value measure to our mission, a Kenyan may consider literacy rate a much more important factor that determines the stability of their country. Doing further research with Kenyan academics will definitely aid in improving our model's accuracy in determining the stability of Kenya.

ACKNOWLEDGEMENTS

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AUTHOR BIOGRAPHIES

Gregory Elgort grew up in Montgomery, NJ. During his time at the United States Military Academy he studied Systems Engineering. While at West Point, Cadet Elgort worked with Admissions Office as the President of the Cadet Public Relations Council, and with the Scoutmasters' Council Club. Cadet Elgort will graduate as a Second Lieutenant in the Infantry. After graduation in May 2012, he will work briefly over the summer in support of Cadet Field Training, then head to Fort Benning for the Infantry Basic Officer Leadership Course and then Ranger School. After which, he will move to Fort Hood, Texas to be a Stryker Platoon Leader in the 3d Calvary Regiment.

Eric Jones is a 2012 graduate of the United States Military Academy. He was born in Santa Monica, California on August 4, 1989; however, he is from Springdale, Arkansas. He is an Operations Research major. He will be commissioned as a Second Lieutenant in the infantry and posted to Fort Campbell, Kentucky. He will be assigned to the 4th/101st Airborne (Air Assault) Division. At the academy he played varsity football for two years and men's team handball for another. He is currently the Physical Development Officer for Echo Company First Regiment.

Eric Kim is from Fullerton, CA. He is a member of the class of 2012 at the United States Military Academy and majored in Systems Engineering. He also is a member of the Army Water Polo team and will commission as a 2nd Lieutenant in the Infantry branch in May 2012. His first assignment station is at Joint Base Lewis-McChord with the 3rd Brigade 2nd Infantry Division. He is currently the Company Commander for Foxtrot Company First Regiment.

Taylor Mosera is a Systems Engineering Major and member of the Class of 2012. Upon graduation he will begin his career as a Military Intelligence Officer at Fort Huachuca, Arizona and then move on to serve in 2nd Brigade of the Second Infantry Division at Fort Lewis, Washington. During his time as a Cadet, Taylor played Lacrosse and served as the Regimental Operations Officer for the Third Regiment. He has traveled abroad to Nicaragua and Nepal to study nation reconstruction and the impact that engineering can have on a community's infrastructure and sustainability and the larger nation.

John V. Farr is a Professor of Engineering Management and Director of the Center for Nation Reconstruction and Capacity Development at the United States Military Academy at West Point. Prior to returning to West Point in 2010 he was a Professor of Systems Engineering and Engineering Management in the School of Systems and Enterprises at Stevens Institute of Technology. He was the founding Director of the Department of Systems Engineering and Engineering Management at Stevens, which he led from 2000 to 2007. He served as Associate Dean for Academics from 2007 to 2010. He taught at West Point from 1992 to 2000, and achieved the rank of Professor of Engineering Management. Dr. Farr was one of the first permanent civilian professors in engineering at the Academy. He is a past president and Fellow of the American Society for Engineering Management, a Fellow of the American Society of Civil Engineers, former member of the Army Science Board and the Air Force Studies Board of the National Academies, and currently serves as a Commissioner for the Engineering Accreditation Commission of the Accreditation Board of Engineering and Technology. He is a former editor of the Journal of Management in Engineering and the founder of the Engineering Management Practice Periodical. He has authored over 150 technical publications including three textbooks. He is a registered Civil Engineer in New York and Mississippi, and holds an undergraduate degree from Mississippi State University, a master's from Purdue University, and a Ph.D. in Civil Engineering from the University of Michigan.