

Abstract

Defense Sector Indicators Aiding Early Warning in Africa
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Researchers and policymakers have demonstrated a keen interest in early warning systems aimed at preventing conflict and other violent outcomes since the 1970s. The end of the cold war and the numerous conflicts taking place in the 1990s added urgency to the task of developing effective monitoring systems. African countries responded with the creation of the African Union's Continental Early Warning System (CEWS), as well as several regional early warning systems, such as the West African ECOWARN. The purpose of early warning systems (EW) is to identify deteriorating situations and aid in the prevention of the outbreak of conflict. EW is comprised of monitoring specified indicators, performing risk analysis, and communicating risk alerts to appropriate audiences. Yet, our preliminary analysis of early warning mechanisms shows a gap in attention directed at the role of the defense sector. Current evidence indicates the security sector broadly, and the defense sector specifically, plays a critical role in the stability of states. This project focuses on developing a better understanding of how indicators within the defense sector can contribute to early warning systems. A second goal is to determine if there are specific indicators related to distinct types of conflict, in particular: (1) Mass Atrocity; (2) Intrastate Conflict; and (3) Violent Extremism. This paper presents the theoretical model of the research project.

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Early warning efforts began in the 1950s. Scholars and practitioners have put forward various models to forecast future events. Some are designed to focus on broader state and international dynamics, including system and state stability; other models focus on particular types of crisis, such as famine, drought, pastoralist conflict, and mass atrocities. The general models tend to cover the international system, using state-level data. The models that focus on more specific events often operate at the national or sub-national level relying on real time data in specific contexts.

In looking at the models that focus on conflict, state failure, and similar incidents, we noted the lack of incorporation of security sector indicators more broadly, and defense (or military) indicators more specifically. Despite national militaries playing integral roles in these types of violent events, sometimes as a protagonist, sometimes as a defender, and sometimes as a neutral bystander, few early warning models focus on indicators within the military that could forecast the trajectory of fragile situations. This paper proposes a model for incorporating such indicators into our thinking about conflict early warning.

The overall intent of the paper is to argue for the incorporation of defense sector indicators into conflict early warning thinking and early warning models. Section 1 provides an overview of existing models. Section 2 reviews existing models for security sector indicators, and highlights the gaps in this area. In Section 3, we present our model in detail. The model suggests five components of the defense sector that are important for stability: professionalism, force cohesion, civilian accountability, respect for rule of law, and adherence to international human rights and humanitarian law. We define these areas and suggest relevant indicators that could be used to measure the level of capacity in each area. A military that promotes stability would rank highly on all five components. Militaries that contribute to instability, for any number of reasons, would rank lower in some or all of the five components. Understanding these dynamics, and incorporating this thinking, and these indicators, into early warning models, could aid in improving our forecasting ability of violent events.

I. Early Warning Models

Early warning is closely tied to conflict prevention. Early warning should provide indications of deteriorating situations such that conflict prevention efforts can be put in place in a timely fashion. The United Nations defines conflict prevention as “action to prevent disputes from arising between parties, to prevent existing disputes from escalating into conflict, and to limit the spread of the latter when they occur.”² One could even add that conflict prevention aims to prevent the relapse of countries into conflict. The UN therefore considers conflict prevention at various stages of conflict: prior to its initiation (before), preventing escalation (during), and preventing relapse (after). Although early warning systems could be used at each of these stages, the tendency is to use early warning systems to prevent the initial emergence of conflict.³

¹ Ms. Karna Cohen and Dr. Jennifer Hazen are contractors with BAE Systems Inc., and currently work as Social Scientists in the Social Science Research Branch of US Africa Command. This research is funded by a grant from the Office of the Undersecretary of Defense for Intelligence (OUSDI). The views and research presented here represent the work of the authors alone and in no way represent the views or positions of BAE Systems, US Africa Command, the OUSDI, or the US Government.

² International Peace Institute, *The UN Security Council and Conflict Prevention: A Primer*, October 2011. http://reliefweb.int/sites/reliefweb.int/files/resources/e_pub_conflictprevention_oct2011.pdf

³ There are arguments being made for UN peacekeeping operations to develop early warning mechanisms. See Ralph Mamiya & Haidi Willmot, “Early warning, the protection of civilians and United Nations peacekeeping operations,” *African Security Review* 22:2 (2013), 68-77.

Numerous entities – from national governments to inter-governmental organizations to think tanks – have developed a number of early warning models to predict conflict, state instability, and other violent episodes in an effort to respond sooner and more effectively to emerging crises (see Appendix for a number of the most common early warning models). These models rely on different methodologies, including both quantitative and qualitative measures, but almost all rely upon some set of specified indicators that aid in forecasting problem areas with the goal of providing policymakers more time to take preventive actions and forestall conflict.⁴

Early warning models rely on four primary sources of quantitative and qualitative data: statistical indicators (normally collected from existing global datasets); event data; expert knowledge; and, news-wire (or increasingly social media) monitoring. There is debate about the relative utility of quantitative versus qualitative approaches. Evidence suggests that time-series quantitative models can be effective in monitoring structural factors that influence the risk of conflict. These models are better at identifying situations that are “at-risk,” than predicting when crises will occur. By contrast, evidence suggests that qualitative data based on locally-generated information is more effective at identifying the specific factors contributing to instability, especially as these factors tend to vary considerably across contexts, and when situations begin to deteriorate. Quantitative time-series data analysis, because it is often based on existing datasets and country statistics, can take place anywhere. Qualitative data collection and analysis, by contrast, is usually locally or nationally-based, relying on context-specific indicators and data sources, and often informed through daily observation of political, economic, and other events.

It is important to underscore the utility of early warning systems in identifying changing patterns. However, it is equally important to emphasize that early warning systems cannot predict the future.⁵ No one model or source of data has proven consistently reliable at predicting the onset of violent events. They can suggest areas of concern. They can identify situations that are improving or deteriorating. They can tell a story about the direction in which a country, or part of a country, is heading. They cannot predict the exact timing of the outbreak of conflict, or other types of violent events.

Early warning relies on both the systematic collection of data and the ongoing monitoring of data against a relevant baseline to enable the early detection of changes in a situation. Data collection and data analysis are equally important to effective early warning systems. Timely analysis of incoming data within a given country context can ensure policy makers have the information they need to assess situations and policy. The analysis and reporting is early warning; choosing to act on this information is early response. The design of possible strategic responses based on early warning reporting is the critical link between early warning and early response. While we recognize the importance of bridging this gap for early warning systems to be effective, we do not focus on early response in this paper. However, we raise this issue to point out a continuing challenge for early warning systems. While enormous effort is made to improve early warning systems and improve the reliability of forecasting, many of those working on early warning and conflict prevention have suggested to us that the problem is not being able to know that a situation is deteriorating. Instead, they consistently point to the difficulties in getting policymakers to respond to reports of problems. This suggests that while we should continue to make efforts to improve

⁴ These indicators vary across models, with more than 500 different indicators, in total, being used by different approaches. See Frederick Barton and Karin Von Hippel, *Early Warning? A Review of Conflict Prediction Models and Systems*, CSIS, February 2008; Oliver Walton, *Helpdesk Research Report: Early Warning Indicators of Violent Conflict*, Governance and Social Development Resource Centre, July 2011.

⁵ Estimates of prediction rates run from 40% to 90% accuracy, depending on the model, yet what these models predict varies widely. For example, PITF forecasts some form of instability with a claimed 90% accuracy, but the model does not predict what type of instability will take place. These challenges suggest why decision makers have often noted that early warning models often tell them what they already know. Barton and Von Hippel, 2008, p. 11.

our forecasting abilities, and we argue incorporating defense sector indicators would do this, equal effort should be placed on breaking down the political barriers to action.

II. Critical Gap in Existing Early Warning Models: The Defense Sector

Despite the plethora of existing early warning models, very few of these models incorporate security sector indicators, and even fewer incorporate defense sector indicators. Security sector indicators could complement, not replace, the existing social, economic, and political indicators already in use in many models. This section first highlights how security sector indicators are used in existing models, and then offers some reasons why security sector indicators have not been better incorporated.

Drawing on existing reviews of a number of early warning models, it is clear that while many of these recognize the importance of the security sector, or more often security-related indicators, the incorporation of these factors into early warning models remains nascent and incomplete.⁶ Not all of the models incorporate security-related indicators, and very few include security sector or defense sector indicators specifically. Many of the models use outcomes we are interested in preventing (e.g. number of raids, armed clashes, military interventions, crime) rather than indicators that could aid in forecasting these events.⁷ Using events to predict future events is common however this is a different type of analysis. We are looking to identify indicators that could help forecast when these violent events are more likely. Another common indicator used is military spending or military build-up. This can be a deceptive indicator. While increased military spending and military build-up can indicate possible future violence, they can also result from efforts to reform, modernize, or right size a military. Thus, without understanding the context, it is difficult to use this indicator alone as a signal for future violence.

An examination of 30 early warning models looked at whether these models incorporated five security indicators, defined as: accountability, civil-military relations, external defense, internal stability, and professionalism.⁸ None of the 30 models used indicators of professionalism. Most of the models focused on internal stability, with external defense coming in a distant second. Few incorporated factors of accountability or civil-military relations.⁹

There are a number of possible reasons for the absence of security and defense sector indicators. There is no clear framework for identifying which security sector indicators should be incorporated. This theoretical work has not yet been done. Publicly available data on these sectors can be extremely limited. Budgets and conflict events are more commonly available, which may be why these are used as best available proxy indicators. The lack of regularly collected statistics on security sector indicators makes their inclusion difficult as well. Political, social, and economic data are more regularly collected and disseminated by academic and international organizations. There are also significant political sensitivities to collecting this information. National governments are rarely interested in sharing detailed information about their forces or their activities. It is possible that even national governments do not collect information on many of the indicators we suggest as important in the defense sector. While many may presume that accessing such information is difficult, and it is, we suggest that it is possible to gather this information. However, the collection of such data would probably need to be done at the national (and

⁶ Barton and Von Hippel, 2008; Walton, 2011.

⁷ Walton, 2011.

⁸ Barton and Von Hippel, 2008.

⁹ The authors do not define each of these categories. Within these categories, a number of indicators are included. They vary across the models reviewed. However, there is some comparability. For example, in the category of accountability, models look at: uncontrolled police and military forces, emergence of state-sponsored or special military units for political purposes, and the persecution or repression of certain groups. While not measuring exactly the same thing, each of these does represent a way of measuring accountability and impunity.

likely sub-national) level using qualitative methods. This would make it difficult to establish comprehensive time-series datasets that could be fed into global early warning systems. That being said, such data could feasibly be collected and used in sub-national, national, and possibly regional early warning systems.

This research aims to investigate this gap and determine whether defense sector indicators should be incorporated into existing conflict early warning efforts, and if so, which indicators could be of most use for forecasting violent events. Furthermore, although not discussed in detail in this paper, this research aims to determine whether the relevant indicators may vary depending on the type of violent event that could occur (e.g. mass atrocity, violent extremism, internal conflict, coup, etc.). In other words, our research endeavors to determine whether there may be specific indicators for certain types of violence that would enhance not only early warning efforts, but also better direct early responses.

III. Adding the Defense Sector into Early Warning

A post-conflict reconstruction framework developed in 2001-2002 by CSIS and the US Army reflects the importance of addressing a number of deficiencies in national security institutions and practices in post-conflict situations in order to achieve stability and security.¹⁰ It identifies six key areas of focus: control of belligerents; territorial security; protection of the populace; protection of key individuals, infrastructure, and institutions; reconstitution of indigenous security institutions; and, regional security. Each area consists of a number of activities and goals to be achieved during post-conflict interventions, including across time from the initial response to supporting sustainable reforms. While the document does not provide a set of early warning indicators per se, it does provide insights into which factors could produce instability and should be addressed to improve the prospects of stability. Security sector reform efforts and literature reinforce the need to consider factors specific to the security and defense sectors in efforts to support stability and security.¹¹ These various examples and documentation provide a wealth of information to begin the process of developing early warning indicators focused on the defense sector.

Our research is based on the assumption that the defense sector plays a key role in conflict. In some cases, the defense sector provides the first line of defense against violent outcomes. In other cases, the defense sector is a prominent facilitator of, or participant in, violent events. We also assume that when the defense sector plays a deterrent or protective role, that this improves prospects for stability, whereas when the defense sector engages in violent acts against civilians that it increases the likelihood of instability.

We define the defense sector as the national military force of a country, whether formal or informal, and the ministry that administers that force. We recognize that in many countries other forces play a role in national security (e.g. the police, the border police, gendarmes, presidential guards, militias, etc.). While we will consider the roles of these other security actors in the contextualization of the case studies, the focus of our investigation will be the national military, and how it is situated within the defense sector, the broader security sector, and the political, economic, and social dynamics of the country.

We also recognize that the defense sector is one part of a broader security sector structure that includes the judiciary, prisons, and the rule of law, among others.¹² Understanding the stability of a country

¹⁰ Center for Strategic and International Studies and the Association of the United States Army, Post-Conflict Reconstruction Task Framework, May 2002. <http://csis.org/files/media/csis/pubs/framework.pdf>

¹¹ GFN SSR, *A Beginner's Guide to Security Sector Reform*, December 2007, http://www.ssrnetwork.net/publications/ssr_beginn.php.

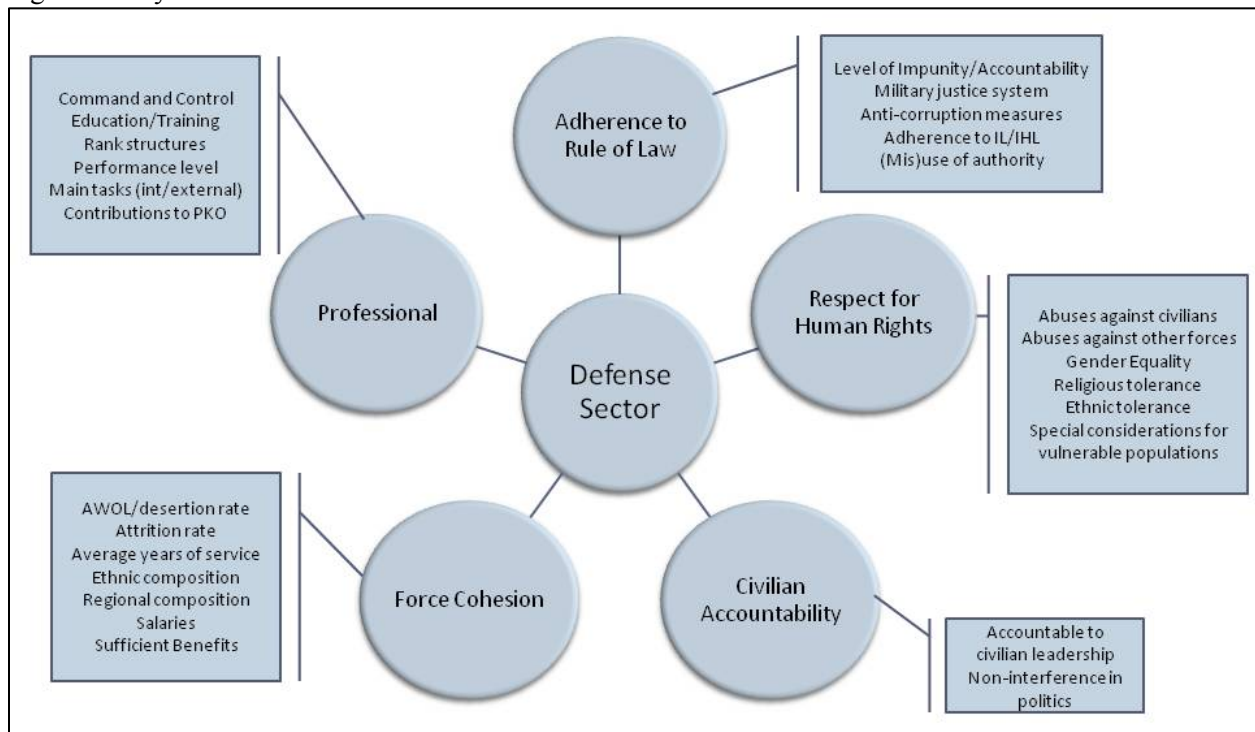
¹² Dylan Hendrickson, *Key Challenges Facing Security Sector Reform: A Case for Reframing the Donor Policy Debate*, Working paper, May 2009, <http://www.ssrnetwork.net/publications/reframing.php>; OECD DAC, The

requires identifying how these various pieces fit together, and the strengths and weaknesses of each piece. While our study will reflect on how the defense sector fits into this broader security sector structure, again, the focus of our inquiry will be the defense sector.

We begin our inquiry with a basic model that represents the key components of a functioning, legitimate, and effective defense sector that promotes state stability (see Figure 1 below). We developed this model based on existing literature on security sector reform, defense sector reform, military training manuals, and conflict and early warning. We have also presented this model to military trainers and security sector reform experts for their review and inputs. We are using this framework to assess past cases of civil war and mass atrocities to determine whether these factors played a role in the ensuing violence, and if so, whether they provided early indication of the deteriorating situations that could have provided (or perhaps did provide) early warning of these violent events.

The model consists of five main components (indicated in the circles in the model below): Professionalism; Force Cohesion; Civilian Accountability; Respect for Human Rights; and, Adherence to the Rule of Law. We consider each of these components to consist of a “basket” of indicators that could be used to measure the performance of the military on each of these components. Some of the possible indicators are listed in the boxes next to their respective component. The following describes each of the components and their related indicators.

Figure 1: Key elements of the defense sector



Professionalism

Professionalism entails more than just being an effective military. Effectiveness is related to command and control, training, and competence. While expertise is important, professionalism also includes a sense

of corporateness and duty to society.¹³ Corporateness relates to the sense of a military culture premised on engaging in certain duties and codes of conduct. This military identity is based on a set of clearly defined roles in society, and the separation of the military from the politics of the country. Duty to society refers to the purpose of the military. A professional military will see its duty as protecting the state, not a particular regime, and as such its role is to protect all civilians, not just particular groups.

Indicators for the level of professionalism include:

- Clear command and control structures
- Promotion based on merit, not on patronage
- Clearly defined roles and responsibilities for the military, and for other security forces
- Sufficient levels of education and training; regular training
- Competent and effective force in executing tasks, missions, and other military duties
- Clear military identity (culture) of being a professional institution with a set of values and standards divorced from other realms of governance; importantly, the military believes in non-interference in politics
- Identity that is associated with the protection of the national population (human security), not a particular regime

High levels of professionalism can contribute to state stability in a number of ways. The non-interference in politics ensures the military will not play a role in the governance of the state. Clear command and control structures, competence, and clearly defined roles can support a military that focuses on its defense purpose, and can provide a clear deterrent to threats, as well as address any threats that do emerge. When promotion is based on merit and equal opportunities exist for entering into the military and rising through the ranks, this reduces resentment within the military, which could lead to divisions and coups. When the military perceives of its role as protecting the population, not a particular regime, it is less likely to be used as a political tool for regime survival, and more likely to be used to ensure national defense.

However, we cannot think of professionalism in a vacuum, nor should we forget the many elements that contribute to professionalism. If we consider professionalism solely as the ability to operate as an effective military force, we could miss the signs of serious problems. For example, a very well trained and effective force, if not guided by rule of law and human rights and non-interference in politics, could be a devastating tool for politicians to guard their interests. The militaries engaged in mass atrocities and genocides have often been well-trained, disciplined, and organized troops.

Low levels of professionalism, on the other hand, can contribute to instability when the military becomes highly politicized. The regime may use the military to ensure its survival, to persecute certain populations, or in other ways that infringe on the population's security. The military may use its power to dictate how a country is governed. Without sufficient structure or training the military could be ineffective in carrying out its national security role. Without clearly defined roles the military may fail to carry out its duties, or it may compete with other security forces to address security concerns, leading to duplication of efforts or even clashes among security forces. This also leads to confusion among the population as to who should provide security.

Force cohesion

Force cohesion is “the absence of latent conflict, whether caused by racial, economic or political reasons, among others, and the presence of strong social bonds, as noted by the existence of trust, reciprocity, and

¹³ Samuel P. Huntington. *The Soldier and the State: The theory and politics of civil-military relations*, 1957.

associations cutting social divisions and the presence of institutions of conflict management.”¹⁴ It entails “the bonding together of members of an organization/unit in such a way as to sustain their will and commitment to each other, the unit and the mission.”¹⁵ Force cohesion thus relates to the existence of bonds within the military that supersede other divisive factors, such as religion or ethnicity, and a situation in which the forces share a common goal that supersedes individual interests.

Indicators for the level of force cohesion include:

- Desertion rates
- Attrition rates
- Sense of community / shared identity / shared purpose
- Level of force morale
- Opportunities for professional advancement; military seen as a viable career track
- Voluntary recruitment
- Societal cleavages (e.g. along ethnic, religious, or political lines); factionalism
- Conditions of service (e.g. salaries, paid regularly, housing, health care, benefits)

Force cohesion contributes to stability by ensuring a force that is unified in its purpose and composition. A cohesive force does not divide along particular social, political, or economic lines, which can contribute to the military remaining a neutral force, rather than engaging in internal politics based on social dynamics.

It is important to note that force cohesion based on a single group, such as a single ethnic group or religious affiliation, could actually contribute to instability. Cohesion along one dimension can create conditions for discrimination against other groups. It can also create the conditions for politicians to use the military to achieve particular gains that favor one group over another. Militaries composed of one group can generate fear in the population, spurring self-defense behavior, which could include actions against the military.

A lack of force cohesion contributes to instability in a number of ways. It can encourage factionalism, which not only disrupts the effectiveness of the military, but also, when taken to the extreme, can lead to discrimination against particular groups in the population. A lack of shared purpose and sense of community can also lead to factionalism or low support for the military. Limited opportunities for advancement and poor conditions of service can lead to low morale, high desertion and attrition rates, and, an unwillingness to perform one’s duties. These conditions can ultimately affect the ability of the military to operate.

Civilian accountability

Civilian accountability refers to the “control of the military by civilian elected officials.”¹⁶ Such a characterization assumes democratic control of the military, and thus the existence of a democratic polity. In authoritarian states, there may still exist a level of civilian control over the military, however, it is more likely to be skewed toward maintaining the regime, than protecting the state and its population. Thus civilian accountability is likely to be lower in an authoritarian regime. One cannot refer to civilian accountability in situations of military autocracies or military states.

¹⁴ Lisa Berkman and Ichiro Kawachi, *Social Epidemiology*, Oxford: Oxford University Press, 2000, p. 175.

¹⁵ William Eugene Warner, *A Framework for the Representation of Cohesion in Small Combat Units*, PhD Dissertation, Old Dominion University, May 2006, p. 11.
<http://vawarner2000.tripod.com/sitebuildercontent/sitebuilderfiles/Dissetation.pdf>.

¹⁶ Richard Kohn, “An Essay on Civilian Control of the Military,” *American Diplomacy*, March 1997.
http://www.unc.edu/depts/diplomat/AD_Issues/amdipl_3/kohn.html

In democratic contexts, civilian accountability implies that “every decision of government, in peace and in war -- all choices about national security -- are made or approved by officials outside the professional armed forces.”¹⁷ The military does not make policy, but instead, implements the decisions and policies determined by policymakers. The military may be given leeway in how it achieves the goals set forth by the government, but it does not determine what these goals should be. In principle and in practice, “no decision or responsibility falls to the military unless expressly or implicitly delegated to it by civilian leaders.”¹⁸

Civilian accountability has two parts: the military respecting civilian authority, but likewise, the civilian authority not misusing the military. In other words, the emphasis on civilian control over the military should not overlook the possibility for the civilian authority to use the military to its own purposes, rather than for the protection of the state. Thus civilian accountability entails both the military’s respect for civilian rule, as well as the adherence of the civilian authority to popular accountability and upholding the rule of law.

Indicators for the level of civilian accountability include:

- Political attitudes of military toward civilian government
- Attitudes of civilian government toward military and its role
- Popular attitudes toward military; civil-military relations
- Civilian (democratic) management
- Oversight by defense ministry
- Oversight by parliament
- Oversight by media / civil society
- Culture of non-interference in politics
- Transparency of policies toward military
- Transparency of military budget

Strong civilian accountability contributes to stability when it ensures the military operates within the rule of law, fulfills its roles as assigned by government, and submits its activities to regular oversight by relevant government authorities. Such oversight restricts the military to authorized activities, and ensures it is the government that decides when and how the military operates. However, civilian authority must also have checks on how it uses the military to ensure that policy makers do not misuse this power for their own gains.

A lack of civilian accountability over the military contributes to instability because it removes the constraints on the military, enabling it to behave how it chooses. This can open the way for the military to engage in politics, controlling not only how it behaves, but also how the country is governed. It can also leave space for the military to choose when and how it acts, including whether it engages in internal security matters, rather than focusing on external defense. It can also leave the military free to ignore its obligations to respect the rule of law and human rights.

Respect for human rights

Respect for human rights entails the protection of the human rights of all individuals living in the state. The Universal Declaration of Human Rights describes in detail a number of human rights considered to

¹⁷ Kohn, 1997.

¹⁸ Kohn, 1997.

be the inalienable rights of all human beings.¹⁹ There are ten core human rights instruments, along with a number of optional protocols.²⁰ There are two international covenants on human rights: one that focuses on civil and political rights,²¹ and one that focuses on economic, social and cultural rights.²² Despite the number of international instruments supporting the protection of human rights, there remains some debate on the universality of these rights and the extent to which states are required to ensure all of these rights. We do not wish to engage in this debate in this paper, but instead provide this background in order to place our discussion here in context. Here we focus on three core human rights – the right to life, liberty and security of person – that are deemed essential to the enjoyment of all other rights.²³

Indicators for the level of adherence to human rights include:

- Abuses/protections of civilians
- Abuses/protections of other forces
- Tolerance of difference (e.g. ethnic, religious, regional, gender)
- Training in human rights
- Codes of conduct
- Views on human rights and their protection (societal and within military)
- Special consideration for vulnerable populations

Respect for and protection of human rights contributes to stability because it demonstrates the commitment of the military to protecting the population, not just protecting certain populations or the ruling regime. The protection of a population's core human rights contributes to a population's sense of security, limits abuses against a population, and reduces the need for self-help measures.

A lack of respect for and protection of human rights contributes to instability because it demonstrates that the military is not willing to protect the population. Significant abuses of civilians can lead to popular grievances, resentment, and fear. Such conditions provide incentives for organizing and reacting against government, whether by demonstrating, joining existing opposition or violent groups, or creating new groups to oppose the government. Whether it is against the general population or against formed opposition and/or insurgent groups, the heavy use of force by the military can further exacerbate grievances and encourage popular support of or recruitment to such groups. In addition, infringing on human rights can be an early test of the tolerance of the population and the international community, and how far the military will be able to go before there is an adverse reaction. The lack of reaction to human rights abuses can be viewed as a green light for further abuses.

Adherence to rule of law

The rule of law requires that clear and consistent rules and regulations for behavior must be in place and publicly known. These laws should be consistent with international human rights and standards. Adherence to the rule of law requires the military to believe the laws apply to the forces, that the forces

¹⁹ United Nations, *Universal Declaration of Human Rights*, 1948, <http://www.ohchr.org/EN/UDHR/Pages/Introduction.aspx>

²⁰ United Nations, *The core international human rights instruments*, <http://www.ohchr.org/EN/ProfessionalInterest/Pages/CoreInstruments.aspx>

²¹ United Nations, *International Covenant on Civil and Political Rights*, 1966, <http://www.ohchr.org/EN/ProfessionalInterest/Pages/CCPR.aspx>

²² United Nations, *International Covenant on Economic, Social and Cultural Rights*, 1966, <http://www.ohchr.org/EN/ProfessionalInterest/Pages/CESCR.aspx>

²³ United Nations, *Universal Declaration of Human Rights*, 1948, <http://www.un.org/en/documents/udhr/>; *Fact Sheet No.2 (Rev.1), The International Bill of Human Rights*, <http://www.ohchr.org/Documents/Publications/FactSheet2Rev.1.en.pdf>.

follow existing laws and regulations, and that any infractions are fairly, efficiently, and transparently adjudicated and punished.

Indicators for the level of adherence to the rule of law include:

- Clear constitutional and legal frameworks
- Existence of Codes of conduct
- Level of impunity / level of accountability
- Level of corruption
- Culture of lawfulness (or impunity)
- (mis)use of authority
- Existence of a military justice framework
- Access to justice (military and/or civilian)

The clear establishment of rules and regulations for the military sets the parameters for acceptable behavior. Respect for and adherence to rule of law by the military contributes to stability by providing a clear and predictive pattern of behavior that the population can see and rely upon in times of insecurity. It enforces certain behaviors by the military, punishes bad behavior, and reduces the culture of impunity. It also improves the effectiveness of the military by reducing the ability of individuals (and groups) to operate independently.

By contrast, the failure to establish clear rules of behavior and enforce these rules can create opportunities for abusive behavior by the military. When the military fails to respect and adhere to the rule of law, it may be more willing to engage in inappropriate behavior, commit abuses, and ignore orders. The failure to enforce the rule of law contributes to a culture of impunity, which further reduces the ability to control the military.

Conclusion and Next Steps

We have identified five components of the defense sector that are important for assessing the role the military plays in the stability (or instability) of a country. We believe that the indicators we have highlighted can provide a measure of each of these components. That being said, we are still in the process of determining which of these indicators are most useful for early warning. We are also in the process of determining the ordering and weighting of these components (and their respective indicators). Finally, we are endeavoring to determine whether certain indicators are more useful in forecasting particular types of conflict, in particular: mass atrocities, intrastate conflict and violent extremism.

We are currently undertaking a number of case studies to investigate the role of national militaries in conflicts. These case studies will aid in identifying the most relevant defense sector indicators for early warning. We anticipate that the case studies will not only highlight important indicators, but also contribute to a better understanding of how and when these factors contribute to instability. Understanding these dynamics is important to constructing effective conflict prevention efforts. These efforts may include: incorporating defense sector indicators into early warning systems; encouraging the collection of data on these indicators; using this knowledge to reconsider existing security and defense sector reform efforts; and using this knowledge to reconsider existing military-military engagements with partner nations.

APPENDIX: CATALOG OF PROMINENT CEW MODELS

*The following is a list of the most common conflict (or instability) early warning models.

African Governance Indicators

Managed by the United Nations Economic Commission for Africa (UNECA), the model measures and monitors the state of governance in 28 African countries. The scores are sample averages drawn from the expert surveys for the 28 countries in the African Governance Project. The indicators first cover political representation, then institutional effectiveness, then service delivery, then taxes and corruption.

<http://www.uneca.org/agr/>

CIRI Human Rights Dataset

Managed by the Cingranelli-Richards Human Rights Data Project, the dataset contains quantitative information on government respect for 13 internationally recognized human rights for 195 countries, annually from 1981-2004. The human rights indicators consist of Extrajudicial Killing, Disappearance, Torture, Political Imprisonment, Freedom of Speech, Freedom of Movement, and Women's Economic, Political, and Social Rights among others. The data set contains measures of government human rights practices, not human rights policies or overall human rights conditions (which may be affected by non-state actors).

<http://ciri.binghamton.edu/index.asp>

<http://merchantinternational.com/globalrisk.html>

Country Indicators for Foreign Policy (CIFP)

Managed by Carleton University (Canada), the CIFP presents indicators for 196 countries on: History of armed conflict; Governance and Political stability; Economic performance; Militarization; Environmental stress; International linkages; Population Heterogeneity; Demographic Stress; and, Human Development.

<http://www.carleton.ca/cifp/rank.htm>

Country Risk Evaluation and Assessment Model (CREAM) Country Index

Managed by Exclusive Analysis (UK), the index forecasts violent and political risks; including war, terrorism, civil unrest and business risks in 108 countries. There are four main categories of risk: War; Terrorism; Civil Unrest; and Political Risk For each country, these four categories are given numerical ratings on thirty day, one year and three year horizons. They are therefore predictive and represent the average level of risk to assets and people over the time.

<http://www.exan.info/help>

<http://www.exclusive-analysis.com>

EIU Country Risk Rating

Managed by the Economist Intelligence Unit, the model provides comparable and regularly updated country risk scores for 100 developing and highly indebted countries. It measures political risk based on: threat of war, social unrest, disorderly transfers of power, political violence, international disputes, regime changes, institutional ineffectiveness, but also include the quality of the bureaucracy, the transparency and fairness of the political system, and levels of corruption and crime in the country in question.

http://www.eiuresources.com/ras/help_about.asp

Ethno-linguistic and Religious Fractionalization Index and Political Instability Index

Created by Anthony Annett, the *index of fractionalization*, measured along ethnolinguistic and religious scales, is a proxy for the number of competing groups in society. *Political instability* is captured by the following indicators: (1) genocidal incidents involving communal victims or mixed communal and political victims (2) the occurrence of a civil war (3) the number of assassinations per thousand population; (4) the number of extraconstitutional or forced changes in the top government elite and/or its effective control of the nation's power structure ; (5) the number of illegal or forced changes in the top

government elite, any attempt at such change, or any successful or unsuccessful armed rebellion whose aim is independence from the central government; (6) violent demonstrations or clashes involving more than a hundred citizens involving the use of physical force ; (7) the number of major government crises, where a crisis is defined as any rapidly developing situation threatening to bring the downfall of the present regime, excluding instances of revolt aimed at overthrow ; (8) the number of times in a year that a new premier is named and/or 50 percent of the cabinet posts are occupied by new ministers; and (9) the number of basic alterations in a state's constitutional structure, the extreme case being the adoption of a new constitution that significantly alters the prerogatives of the various branches of government combined index.

<http://www.imf.org/External/Pubs/FT/staffp/2001/03/annett.htm>

Failed States Index

Managed by Foreign Policy and Fund for Peace, the index assesses violent internal conflicts and measures the impact of mitigating strategies. In addition to rating indicators of state failure that drive conflict, it offers techniques for assessing the capacities of core state institutions and analyzing trends in state instability. The index ranks 177 countries in order of their vulnerability to violent internal conflict and societal deterioration, using 12 social, economic, and political indicators.

<http://www.fundforpeace.org/programs/fsi/fsindex.php>

Fragile States Index

Managed by Carleton University, the index examines state fragility using a combination of structural data and event monitoring. The index is based on up to 75 structural indicators, selected on the basis of their relation to state fragility and their level of country coverage. They are grouped into six clusters: Governance, Economics, Security and Crime, Human Development, Demography, and Environment.

<http://www.carleton.ca/cifp/>

Global Peace Index (GPI)

The Global Peace Index is a quantitative measure of peacefulness designed to provide a greater understanding of the mechanisms that nurture and sustain peace in a given country. It seeks to determine the cultural attributes and institutions that are associated with states of peace. It is composed of 24 indicators, ranging from a nation's level of military expenditure to its relations with neighboring countries and the level of respect for human rights.

<http://www.visionofhumanity.com/introduction/index.php>

Global Terrorism Index

Managed by World Markets Research Centre (WMRC), the index is designed to assess the risk of terrorism in 186 countries, and against these countries' interests abroad.

http://www.worldmarketsanalysis.com/application/t-index_2003.html

Human Rights Commitment Index

Managed by the Danish Institute for Human Rights, the index includes indicators of government formal and actual behavior relating to human rights in 42 states, including: Formal Commitment to human rights measures; Commitment to civil and political rights; Commitment to Economic, Social and Cultural Rights; and Commitment to eradication of gender discrimination.

<http://www.humanrights.dk/departments/international/PA/Concept/Indicato/>

Index of State Weakness in the Developing World

Managed by Brookings Institution, the index ranks 141 developing countries according to their relative performance in four critical spheres: economic, political, security, and social welfare.

http://www.brookings.edu/reports/2008/02_weak_states_index.aspx

International Country Risk Guide (ICRG) Ratings - Composite Risk Rating

Managed by Political Risk Services (PRS Group), the index evaluates economic, political and financial risks and warns of major changes. The index comprises 22 variables in three subcategories of risk: political, financial, and economic. A separate index is created for each of the subcategories. The Political Risk index is composed of Government Stability, Socioeconomic Conditions, Investment Profile, Internal Conflict, External Conflict, Corruption, Military in Politics, Religious Tensions, Law and Order, Ethnic Tensions, Democratic Accountability, and Bureaucracy Quality.

<http://www.icrgonline.com>

Least Secure Countries

Managed by the Human Security Centre, the index of more than 150 countries includes two categories of political violence, non state violence and one-sided violence, not considered by other conflict datasets.

<http://www.humansecurityreport.info/>

Major Military Spenders

Managed by the Stockholm International Peace Research Institute (SIPRI), the index ranks countries in terms of their level of military expenditure in US \$bn, at constant (2000) prices.

http://web.sipri.org/contents/milap/milex/mex_major_spenders.pdf

http://www.sipri.org/contents/milap/milex/mex_sources.html

Minorities at Risk

Managed by the University of Maryland, it monitors and analyzes the status and conflicts of 284 politically-active groups from 1945 to present in countries with a population over 500,000. It focuses specifically on ethnopolitical groups as well as non-state communal groups that compose at least one percent of the country's population and have "political significance" because of their status and political actions, identifying where they are, what they do, and what happens to them.

<http://www.cidcm.umd.edu/mar/> (*Registration is required to obtain quantitative data.)

Peace and Conflict Instability Ledger

Managed by the Center for International Development and Conflict Management, University of Maryland, the index ranks 160 countries in terms of their risk of future state instability.

<http://www.cidcm.umd.edu/pc/>

Political and Economic Risk Map

Managed by AON and Oxford Analytica, the index rates the economic and political risks in more than 200 territories worldwide, and includes a table of key supply chain disruption events and threats, and a list of the year's most significant global stress points.

http://www.aon.com/about/publications/issues/political_risk_map.jsp

Political Terror Scale (PTS)

Managed by Purdue University, the scale measures the levels of political violence in more than 175 countries.

<http://www.politicalerrorscale.org/>

Polity IV Country Scores

Managed by the Center for International Development and Conflict Management, the index codes annual information on regime and authority characteristics of 161 states (with populations over 500,000) to monitor regime change and study the effects of regime authority.

http://www.cidcm.umd.edu/polity/country_reports/report.htm

<http://www.systemicpeace.org/polity/polity4.htm>

Stability Index

Managed by Deutsche Bank and Eurasia Group, the index measures stability in emerging markets to anticipate critical trends and provide a measure for the country's capacity to withstand political, economic, security, and social shocks.

<http://www.eurasiagroup.net/si/index.html>

State Fragility Index

Managed by George Mason University, the index assesses the fragility of 162 countries across four performance dimensions: security, governance, economic and social development.

<http://www.systemicpeace.org/Global%20Report%202007.pdf>

The Observer Human Rights Index

Managed by Guardian Unlimited, the index rates human rights in 100 countries.

<http://www.guardian.co.uk/rightsindex/0,2759,201749,00.html>

World Military Expenditures and Arms Transfers Rankings

Managed by the US Department of State, the index ranks 167 countries according to 17 indicators of military importance, including: military expenditures; Armed forces; Arms exports; Arm imports; GNP; Central Government expenditures; and Population.

http://www.state.gov/t/vc/rls/rpt/wmeat/1999_2000