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Proposal for a Security Matrix

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December 20, 2006

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Introduction

The Canada-based Human Security Centre published in its 2005 *Human Security Report* that there has been, over the years, “considerable debate about creating a human security index.”¹ It goes on to say that one of the largest drawbacks of existing indices is that they focus “primarily on development issues; neither includes any measure of violence; neither is regularly updated.”² Measuring human security and the perspective of state security is controversial because attempts to do so often depend on data that is provided by states themselves, and, of course, it is not always in a state’s interest to report accurately. This is particularly the case when dealing with armed conflicts. The Human Security Centre argues, in part, that because of the unreliability of the available data, developing a matrix that measures security is not a desirable task. One of the major reasons why data may be unreliable is that much of it comes directly from governments. In order for an index to provide an accurate description of state security, it has to be somewhat detailed. The Human Security Centre argues that, if an index is too simple, it can actually provide false information because it has no way of accurately reflecting factors that may have had an influence on the data or the means by which it was being measured.³ At the same time, the Human Security Centre argues, it is important to include not only states that are insecure; it is also important to indicate how *secure* a state is.

Traditional concepts of security usually considered security from the state perspective; however, it is becoming more widely accepted that the human-security perspective provides a more effective tool, in some instances, for measuring security. This is largely because this perspective takes into consideration that “threats to people’s safety come from states themselves.”⁴ While such threat may not come from the state that the individual inhabits, those factors that characterize security for the individual (economic prosperity, human rights, civil liberties, freedom of movement) are largely a result of state policies and actions. Therefore, in order to fully understand a security perspective that can provide useful and accurate data for the state, human security must make up part of the assessment.

At this point, it is important to identify what we are discussing when we talk about security and how we define a threat or a security issue within the study of international relations. With regard to this understanding, we subscribe to the definition as it was proposed by Barry Buzan, Ole Waever, and Jaap de Wilde in 1998: “The answer to what makes something an international security issue can be found in the traditional military-political understanding of security. In this context, security is about survival. It is when an issue is presented as posing an existential threat to a designated referent object (traditionally, but not necessarily, the state, incorporating government, territory, and society).”⁵ While this definition refers only specifically to the military and political understanding, this is also applicable to the notion of human security. From this perspective, security remains, at the core, about survival.

This paper proposes a matrix that is more comprehensive and detailed than existing matrices. Our proposed matrix includes an extensive volume of data that eliminates the potential weaknesses mentioned by the Human Security Centre. Despite the level of detail offered by a matrix, one must ask whether or not it is truly possible to measure security and, if so, what value this can offer for the study of human and state security.

As globalization has worked to connect states and traditionally understood borders have given way to a more cyber-border system, states have become more dependent on one another. As a result, when security issues are addressed, they can no longer ignore the transnational implications that a particular security threat may pose. Security threats such as transnational terrorism, transnational crime, trafficking, poverty, and migration are all borderless in nature. Consequently, a study of security must look not only at individual states but also regions and ultimately at the balance of security in the entire international system. Measuring security and constructing a matrix that can accurately reflect perceived security can therefore seem like a daunting task. However, developing a detailed matrix that can look at all aspects that can affect the security of an individual as well as the security of a state can be useful in determining where funding and logistical support are required and where weaknesses may be in order to avoid the eruption of conflict or full-scale war. As globalization has tied countries to one another, a security threat to one can have potentially devastating effects on a broader scale.

The level of state security was traditionally defined by a state's ability to defend itself against external attack. As contemporary definitions of security have emerged, however, it has become clear that the individual and various groups within society are important parts of the security puzzle. Measures of security can prove useful in trying to determine both the level of state security and the level of security of the individuals within the state. This provides a tool for understanding how the state provides for the security of the individual and can better identify problem areas before large-scale destruction by the state can take place – either through direct or indirect means. The following matrix will take all of these considerations into account, particularly when looking at how security at the micro level can have macro implications for global security.

This paper will present a new matrix that includes information and variables from a comprehensive list of existing tables designed to measure security. A review of these matrices will reveal the lack of a more detailed and comprehensive study that can provide the umbrella that all of these matrices may fall under. By combining these matrices and providing new variables that are not represented, a complete assessment of the security experienced by a state and its contribution to global security may be determined, even at its most fundamental stages.

While each of these matrices offers its own perspective on a particular measure of security, they all provide a limited picture of the entire scope of security. The number of conflicts that a certain country has experienced, the safety of minorities, economic security, and institutional security are all important aspects of the broader concept of security; however, the value of each index is limited to the perspective that it takes. In contrast, our matrix proposes looking at many of the variables that can influence how secure people feel within a state at any given time and how they feel about their state's ability to protect them in the case of internal or external conflict. This matrix aims to measure both the perceived security of a state and its institutions and the safety perception of the individuals within the state. Furthermore, we aim to look at how the state contributes to this perceived security. Is the state a source of security or insecurity for those residing within it? This means examining political, economic, societal, military, and environmental sectors in order to make an accurate assessment of the realities and perceptions in terms of the security of a state or region.

Comparison of Matrices

(1) Other Measures of Security

A literature review of existing measures of security revealed the matrices that are presented in the following table. Each of these matrices either measures the security of a state in terms of a specific threat to the system, such as terrorism; looks at the development of conflict and how crime and justice are handled within state institutions; or measures the vulnerability of certain groups within the state, such as minorities. Each of these indices presents an important aspect of the measurement of security; altogether, they provide an excellent overview of what currently exists in terms of tools for measuring the level of security within a particular state. The variables presented in Table 2 were largely derived from existing indices and were also supplemented by what we felt were important aspects of security that were missing. The indices appear in chronological order based on their initial date of publication.

Development of the New Matrix

Devising the most effective way of measuring how secure individuals feel they are, as well as how states and institutions perceive their level of security, is not easy, considering that the experience or perception of security is not always obvious or even measurable. Nevertheless, it is possible to make a fairly accurate assessment of perceptions of security by taking into account a number of variables. The methodology presented in this section is based on a number of factors that were found in existing matrices, as well as those that security literature widely claims to be factors contributing to broad perceptions of state and human security.

The most basic component of any matrix is determining which units of analysis will be included in the measurement and utilized for determining a "value" for each state assessed.

The subjective nature of selecting any of these variables is hard to avoid; therefore, the choice of these factors was based on a literature review of the existing matrices presented in Table 1, as well as a review of relevant security literature. After this assessment, the variables that appear in this matrix were selected. This was the result of a comprehensive and exhaustive review of how existing matrices measure security and of what variables are measurable through existing data channels. This is an important determining factor, as the selection of variables that cannot be quantitatively measured provides little value in the construction of a matrix. In addition to the requirement that each variable be quantifiable, the data that our calculations are based on must be derived from reliable and reputable sources. Therefore, institutions such as the World Bank, UN agencies, and the OECD account for the factual information that will provide the basis for the matrix analysis.

Once this information has been compiled into a matrix (see Table 2), a specific formula for measuring these factors and assembling the data into a single security ranking for each country assessed must be devised. Some existing matrices provide data based on a specific aspect of security, such as the Global Terrorism Index, which is produced by the World Markets Research Center.⁶ Aimed specifically at measuring how prone a country is to terrorist attack, it provides an important tool for assessing perceived security. However, this matrix only provides one snapshot of what is needed to see the entire picture of security from the human and state perspective.

In order to utilize the best that the current market in security measures has to offer, we have combined those aspects measured and explored in various existing tables (see Table 1). In order to make the ranking simplistic in nature for the purposes of quick analysis, we have devised a system based on a 1, 2, or 3 ranking. While it could be argued that this simplifies an otherwise very complex measurement, it provides for a quick, concise evaluation. The variables considered either contribute to the overarching security of a state, the insecurity of a state, or make a borderline contribution. Simply put, this measurement captures the essence that is most vital in each of these variables. The next methodological issue to be addressed is to determine the weight of each variable in relation to the state it is assessing.

Within the international system, every state reacts to different aspects of security or insecurity in various ways. While it is the opinion of these authors that none of these security factors carries more importance than any other, some of them will be more significant within a particular state due to the political, economic, and military situation within the country in question. Therefore, it is critical to assemble a panel of experts to assess the level of importance that each of these variables has for the country of their expertise. Each sector and sub-sector is granted a contributing value, expressed as a percentage, for the year and country under consideration. Thus, the matrix would provide the most complete and accurate picture of security in that particular state. Aspects of security do not exist independent of other

mitigating factors and must therefore be weighed within the relevant context. In the United States, the military sector is quite prominent, but this is not the case in Ghana, for instance. Collapse or corruption in this sector therefore has a different value in each country, and this matrix reflects that reality.

Once the variables have been weighted, each factor is systematically assessed using the data and analyses from the indices described in Table 1. A value of 1, 2, or 3 is assigned to each variable (such as in A.1 Job Security) within all of the sub-sectors. These sub-sector scores are then used to determine a value for each of the larger sectors (for example, A. Economic). In order to best calculate this sector value, again using a ranking of 1, 2, or 3, an average, based on the predetermined weighted values, is taken. This then provides a ranking for each of the sectors (e.g., A. Economic, B. Environmental, C. Military) that contributes to the overall ranking of the state in question, which is determined with respect to that state's current internal situation and ranking within the international system (as determined by the expert panel). This is reflected in the weight that each variable is given when discussing security aspects and components of the state in the year that the measurement is taken. Since the values may shift over time, we would recommend that this be reassessed on an annual basis.

Such a measurement would reveal how security is experienced or perceived in the state being studied. It would be interesting to see where countries stand in comparison with one another in order to see improvement and regressions in the system over a given period of time as the matrix is continually applied. As the ranking of the percentages remains entirely subjective, it would be important to strengthen this link in the assessment. While removing the subjective nature entirely remains impossible in the way this matrix is constructed, one way to reduce the subjectivity of the measurement would be to assign a few experts to sit on each of the individual panels in order to ensure consistency, at least in part, of the assessments. In addition, we would recommend that a scale be developed in order to provide a range of values for each factor based on general criteria that were laid out when the expert panels for each country were assembled. Basing these maximum and minimum criteria on the type of political and economic system is one possibility for determining these values, although other points that can be used as a foundation for these appraisals might also prove useful.

Any of the dynamics that we are proposing would be measured from the perspective of the state and its institutions, as well as from the viewpoint of the individual. The perception of the state and the institutions within it has grown from a historical and evolutionary perspective. This understanding has not emerged suddenly and so in order to properly understand the measurements that would be determined for each country by this matrix, it is also vital that the context in which these factors exist be understood and taken into account when using this data as a basis for further analysis. However, due to the limitations of this proposal, it would

be beyond the scope of this chapter to determine how this could be applied as each application of the matrix can vary significantly depending on how the matrix is employed.

Application of the Matrix - Results

(1) GCSP Security Matrix

The GCSP Security Matrix provides a comprehensive measure of state security. The variables used have been selected on the basis of a review of other indices that measure security or related issues, in addition to factors that we assess as being central to the security of a state. Our matrix provides the means for measuring current perceptions of security, as well as for analyzing potential trends and future scenarios.

Discussion of the Results

As has become obvious from the overview presented here, there are a number of existing indices that have attempted to measure security within states. Most have focused on the number of conflicts that a state has been involved in, a state's vulnerability to the threat of conflict, or how a state handles the security threat posed by some of the other dimensions examined. When discussing security and globalization, Ian Clark writes: "the most common depiction of this relationship is that of globalization impinging upon the state from the outside and transforming the security environment within which it operates. As a result, the state is portrayed as having a diminished capacity to produce security: globalization of security presents yet another policy challenge to the already embattled state."⁷ While he goes on to say that this does not give an accurate account of the impact of globalization on the state,⁸ the relationship between the state, security, and globalization is one that cannot be ignored in modern discourse. Our proposed matrix attempts to take all of these elements into consideration, and the following section will discuss how these elements are linked to globalization and the discussion of state and human security.

The economic dimension is often associated with security and is the aspect of globalization that is most often analyzed. Throughout history, economic links often provided the catalyst that facilitated the exchange of knowledge, culture, and language, and this continues to work in this way today. Therefore, including this dimension in any comprehensive review of globalization and state security is critical for the resulting analysis to be accurate. Martin Wolf, in his defense of a global market economy, indicates that the two factors that must be in place in order for a strong economy to flourish are competition and the protection of property.⁹ He argues that both of these components must be in place in order for a global economy to be maintained. This is becoming increasingly difficult on a global scale, but it must begin with individual states. In our matrix, this is reflected in the way that job security and the spread of wealth are ensured. Competition for jobs helps to ensure that the most qualified people are hired, thereby boosting economic performance. And job security not only means protection of

employment, it also promotes creativity in the work place. Wolf argues that: "Protection of *property* is the necessary condition for a sophisticated market economy. Indeed, it is the most important single condition."¹⁰ In this case, property can be understood to be those creative ideas that are promoted by job security. The matrix that we have compiled here reflects the most important elements of ensuring a sound state economy that can integrate and participate in a global market economy. Globalization can seemingly make the protection of ideas and goods more difficult, as more people have access to the information that can provide the basis for other developments, which makes international regulatory bodies essential.

From an environmental point of view, it is difficult to measure how a country manages resources in situations where the information available to those outside of the state is limited. Consequently, the political situation in a country has a large part to play in determining how well the environment is managed and what the rest of the world knows about it. Increasingly, wars have been fought to control resources or to protect them. The cod wars fought between the United Kingdom and Iceland over fishing rights in the first part of the 20th century and the first Gulf War in 1990, where the US desired to protect oil availability, provide good examples of the link between resource preservation and management as catalysts for war. The age of globalization has resulted in new challenges and pressures for the environment. J.R. McNeill feels that current developments in the world have had a large impact on the timeline of environmental history. He argues that, "In environmental history, the twentieth century qualifies as a peculiar century because of the screeching acceleration of so many processes that bring ecological change."¹¹ He goes on to say that, while none of these developments are new, "for the most part the ecological peculiarity of the twentieth century is a matter of scale and intensity."¹² The increased production and movement of people due, in part, to globalization can account for some of this movement and increased environmental pressure. As a potential source of conflict as resources become more scarce, the environment and how it is managed and how waste is disposed of become important aspects of security and for the resulting implications for states and regions.

The military has traditionally been used to ensure security and stability within state structures. In modern times, the military is used in broader ways and contributes to the security of societies through disaster relief and other soft ways of ensuring security at every level of society. Naturally, any assessment of the security of a state and of those that operate within it is linked with the views and defined roles of armed forces. The impact of the military on the security of a state depends on its legitimacy, its transparency, and the level of confidence the general public has in it. Without these elements, a state's military loses its ability to properly serve. As modern security is no longer defined only from the perspective of the state, but also from the perspective of individuals, who sometimes require protection *from* the state itself, when discussing state military (versus private military firms), how they operate within civil

society and what they do to contribute to its security are critical. If the security forces do not provide sound security and are rather a source of insecurity, it would be difficult, at best, for the state to be secure. It is important to link the military and the state's political and economic structures and understand how they operate together. The amount of money that is invested in the military and personnel is also an indicator that can help to accurately assess the contribution of this sector to the security of a state. Often, "issues pertaining to security are subsumed under the more general discussion of globalization of production. Supply of military equipment is very much a part of this global system of production, as well as of exchange. Moreover, the individual state, as supplier and consumer, has less control over either of these systems."¹³ Consequently, the way in which these exchanges are controlled, the state's role therein, and the confidence of the people in state control must be considered when looking into the military contributions to state and societal security.

One of the most important factors to consider when measuring the security of a state is the way in which the political and governmental structures contribute to security. By doing so, our matrix considers what may be the most critical element of them all. Due to the impact that the type of governmental system has on the other dimensions, the assessment that takes place here can have far-reaching influence on the other institutions within state structures and their ability to contribute to security. As the role of "the state as security actor is undergoing transformation in globalized conditions, it would seem to follow that the capacity of any state – democratic or otherwise – to produce 'peace' will be substantially different, even if not necessarily less."¹⁴ Authority must be given and exercised from the global, institutional level and, "[a]lthough there is no substitute for the UN as the international political broker and avenue of collective decisionmaking, the role of the UN agencies requires systematic re-examination to revise their functions, funding modalities, and skill sets to acquire the ability to be catalysts to enhance government capabilities."¹⁵ The way in which governments avoid corrupt behavior, guarantee human rights, and adopt democratic processes all contribute to the probability that the particular government in question will be able to secure itself and its citizens from internal and external threats. Globalization can assist in this process by facilitating the exchange of ideas of democracy and justice, but it alone cannot account for these developments. Rather, the state system must be set up in a way that is accountable and transparent. There is a need for the international political system to empower international institutions. As Ashraf Ghani and Clare Lockhart argue: "Where the limits to the use of military force have clearly been manifested, power can now most usefully be generated through imagination and collective endeavour. Therefore, this is a unique moment for the United States to use its convening power to lead the renewal of the existing global institutions and to fashion a consensus for forming new collective institutional arrangements. Such a renewal, however, must go beyond integration around currently perceived U.S. interests alone and should offer a compelling vision of making the whole world stakeholders, and thereby, defenders of collective security."¹⁶

When looking at the security of society, the most important shift in contemporary views of security is the notion that the state must also be considered a threat, in some cases, to its citizens. Traditional concepts of security put the state at the center and, while this remains an important element in understanding the security of a state and the way in which it contributes to regional and global security, it is no longer the *only* element to consider. Perhaps the most complex and diverse component of measurement in our matrix, societal security encompasses topics such as demographic decline and the way that health dilemmas and threats are handled. As Kofi Annan has explained, “We know that we cannot be secure amidst starvation, that we cannot build peace without alleviating poverty, and that we cannot build freedom on foundations of injustice.”¹⁷ The security that individuals experience from the state and how they perceive the state’s role in their security play an important contributing role in terms of overall security. The key is that human security “focuses on the well-being and dignity of people rather than on the protection of national borders.”¹⁸ While it is difficult to determine those factors that should be included in any measurement of human security due to the problem of defining a threat from this perspective: “The broad conception of human security *can* be accurately measured. Threats must simply be limited using their severity and regional significance, rather than a preconceived list of threats or the global availability of data.”¹⁹ The variables that we have included here have been selected based on these criteria and are based on the threat levels that these elements have created or are creating in states. By doing so, our matrix ensures that those components being measured have a direct influence on the security of society and individuals and thereby contribute to the security of the state in question.

Conclusion

The power of a state within the international system and the way in which it uses its power to protect itself and its citizens are linked to the way its security can be viewed. Abuse of this power can lead to corrupt, secretive government policies that may foster insecurity from a number of perspectives. As indicated in a recent report dealing with national power, “State power can be conceived at three levels: (1) resources or capabilities, or power-in-being; (2) how that power is converted through national processes; (3) and power in outcomes, or which state prevails in particular circumstances.”²⁰ Therefore, the environment, the government, and the way in which the state contributes to global processes and institutions are all manifestations of this power and the view of it from the state’s perspective.

The relationship of each of these components to the way in which security is achieved, maintained, and understood within communities and states is reflected in the variables selected for inclusion in this matrix. In an attempt to identify all sources of insecurity and security, this matrix will provide the umbrella required for an accurate, modern assessment. Each of the matrices that were used to construct this matrix and the resulting list of variables

adds value to the debate and measurement in important ways. This matrix does not diminish the contribution that each of these matrices makes to the study of security; rather, it takes the most positive elements that each has to offer in an attempt to achieve a measurement of a complex phenomenon. The process of measuring security must be broad and inclusive, and our matrix has attempted through its comprehensive list of variables to achieve a realistic, yet broad understanding of security. In adopting anything less than this, we would be faced with the possibility of missing an important element in the security of the state and individuals. As Taylor Owen argued in his piece on measuring human security, “Narrow definitions of the concept simply leave out too many critical threats and ignore too much valuable data.”²¹ By identifying trends and patterns in security and in the development of insecurity within the state and subsequent regional institutions, policies can be orchestrated that bring greater fruition in delivering security to the international system.

**Table 1:
 Security Index Ratings¹**

UN: Global Report on Crime and Justice (est. 1977)			
Index	Variables (5 th Survey) ²	Measure	Methodology
<p>UN Global Report on Crime and Justice</p> <p>http://www.uncjin.org/Special/GlobalReport.html.</p> <p>For variable descriptions, see the <i>UN Global Reports Codebook</i> (5th edition), available at: http://www.uncjin.org/stats/5wcs/5intro.txt.</p> <p>Publication Cycle: <i>Originally published every five years; however, recently (in the last two reports) the aim has turned toward a publication every two years.</i></p>	<p>1. Intentional Homicide refers to death deliberately inflicted on a person by another person, including infanticide.</p> <p>2. Non-intentional Homicide refers to death not deliberately inflicted on a person by another person. This includes the crime of manslaughter, but excludes traffic accidents that result in the death of persons.</p> <p>3. Assault refers to physical attack against the body of another person, including battery but excluding indecent assault.</p> <p>4. Rape refers to sexual intercourse without valid consent.</p> <p>5. Theft refers to the removal of property without the property owner's consent.</p> <p>6. Robbery refers to the theft of property from a person, overcoming resistance by force or threat of force.</p> <p>7. Burglary refers to unlawful entry into someone else's premises with an intention to commit crime.</p> <p>8. Fraud refers to the acquisition of the property of another by deception.</p> <p>9. Embezzlement refers to the wrongful appropriation of another's property that is already in one's possession.</p> <p>10. Drug-Related Crimes refer to intentional acts that may involve the cultivation, production, manufacture, extraction, preparation, offering for sale, distribution, purchase, sale, delivery on any terms whatsoever, brokerage, dispatch, dispatch in transit, transport, importation and exportation of drugs and psychotropic substances.</p> <p>11. Bribery and Corruption refers to requesting and/or accepting a material or personal benefit, or promise thereof, in connection with the performance of a public function for an action that may or may not be a violation of law and/or promising as well as giving material or personal benefit to a public officer in exchange for a requested favor.</p> <p>12. Other refers to serious types of crime that are completely different from those listed above, and that are regarded as serious and frequent enough to require a separate category in the criminal statistics of a specific country (e.g., arson, kidnapping, conspiracy or membership in a criminal association).</p> <p>13. Crimes Recorded by the Police refer to the number of penal code offences or their equivalent, i.e., various special law offences, but excluding minor traffic and other petty offences, brought to the attention of the police or other law enforcement agencies and recorded by one of those agencies.</p> <p>14. Police or Law Enforcement sector refers to public agencies whose principal functions are the prevention, detection, and investigation of crime and the apprehension of alleged offenders.</p>	<p>The <i>Global Report on Crime and Justice</i> is a synthesis of research and data gathered by the United Nations Crime Prevention and Criminal Justice Program. In addressing the nature of crime, the operations of national criminal justice systems, and the state of crime prevention from a cross-national perspective, it brings together in published form a wealth of information about crime and justice from the member states of the United Nations. It presents crime trends and operations of criminal justice systems on a comparative basis. Drawing on numerous sources from within the United Nations and beyond, it examines emerging developments in crime and justice around the world.</p>	<p>Data used is collected from official national criminal statistics, including criminal justice statistics maintained in administrative records.</p> <p>The questionnaire used follows the sequence of the different agencies that are encountered by an offender passing through the system. The questionnaire is compiled in such a way that it can be broken down and sent to separate agencies, and reassembled in a central office before it is returned.</p>

¹ The methodology and description of the indices presented in Table 1 are excerpts taken from the websites and publications that describe them, referenced in the index portion of the tables. In some cases, they have been edited for clarity.

² This table presents the variables of the fifth UN *Global Report on Crime and Justice*.

	<p>15. Prosecutor refers to a government official whose duty is to initiate and maintain criminal proceedings on behalf of the state against persons accused of committing a criminal offence.</p> <p>16. Persons Prosecuted refers to alleged offenders prosecuted by means of an official charge, initiated by the public prosecutor or the law enforcement agency responsible for prosecution.</p> <p>17. Persons Convicted refers to persons found guilty by any legal body duly authorized to do so under national law, whether the conviction was later upheld or not.</p> <p>18. Judges and Magistrates refers to both full- and part-time officials authorized to hear civil, criminal, and other cases, including appeals courts, and authorized to make dispositions in a court of law.</p> <p>19. Prisons refer to all publicly and privately financed institutions where persons are deprived of their liberty. These institutions could include, but are not limited to, penal, correctional, or psychiatric facilities.</p> <p>20. Admissions to Prisons refer to the number of such events throughout the year and not the number of people admitted on a particular day of the year.</p>		
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Human Security Centre: The Political Terror Scale (PTS) (est. 1980)			
Index	Variables	Measure	Methodology
<p>Political Terror Scale</p> <p>L. Cornett and M. Gibney, "Tracking Terror: The Political Terror Scale 1980-2001," available at http://www.humansecurityreport.info/background/Cornett-Gibney_Political_Terror_Scale_1980-2001.pdf.</p> <p>M. Gibney and M. Dalton, "The Political Terror Scale," <i>Policy Studies and Developing Nations</i>, Vol. 4, 1996, pp. 73-84.</p> <p>Also see: http://www.humansecurityreport.info/HSR2005/Part2.pdf.</p> <p>Publication Cycle: <i>No longer published, last year of available data is 2001.</i></p>	<p>The data is taken from two reports as indicated in the "Measure" column. The variables depend on those two reports and include issues such as whether torture is used within a country, imprisonment, political murders, and the protection of civil liberties.</p>	<p>The PTS uses annual reports from Amnesty International and the US State Department to measure the human rights situation in individual countries.</p>	<p>At least two people code the pertinent countries, while a third party attempts to resolve conflicts between coders by employing a rule of majority vote. Coders are asked to provide a score and a few comments rationalizing their decision. Inter-coder reliability between the two original coders is in the range of 70-90 percent.</p> <p>The higher a country ranks on the five-level scale, the worse its human rights record.</p> <p>Level 1: Countries operate under a secure rule of law. People are not imprisoned for their views, and torture is rare or exceptional. Politically motivated murders are extremely rare.</p> <p>Level 2: There is a limited amount of imprisonment for non-violent political activity. Few people are affected, and torture and beatings are exceptional. Politically motivated murder is rare.</p> <p>Level 3: Imprisonment for political activity is more extensive. Politically motivated executions or other political murders and brutality are common. Unlimited detention for political views, with or without a trial, is also commonplace.</p> <p>Level 4: The practices of Level 3 affect a larger portion of the population. Murders, disappearances, and torture are a common part of life. But in spite of the pervasiveness of terror, it directly affects only those who interest themselves in politics.</p> <p>Level 5: The terrors characteristic of Level 4 affect the whole population. The leaders of these societies place no limits on the means they use, or the thoroughness with which they pursue personal or ideological goals.</p> <p>This scale assumes a constant interval between each level: thus, a Level 4 score is taken as equivalent to two Level 2 scores. This assumption allows researchers to sum the scores for all the counties in a region. The total score is then divided by the number of countries to arrive at an average score for the region.</p>

Center for International Development and Conflict Management (CIDCM): Minorities At Risk (MAR) (est. 1986)			
Index	Variables	Measure	Methodology
<p>Minorities at Risk Project (2005)</p> <p>http://www.cidcm.umd.edu/inscr/mar/.</p> <p>Minorities at Risk Project (2005), College Park, MD, Center for International Development and Conflict Management. Retrieved from http://www.cidcm.umd.edu/inscr/mar/ on July 20, 2006.</p> <p>http://www.cidcm.umd.edu/inscr/mar/margene/mar-codebook_040903.pdf.</p> <p>Publication Cycle: <i>Updated every two to three years.</i></p>	<p>1. Group Characteristics and Status</p> <p>a. Group Locator Codes</p> <p>b. Group Population</p> <p>c. Group-Type Identifiers</p> <p>d. Bases of Group Identity</p> <ol style="list-style-type: none"> 1. Ancestral Language Scores 2. Indicators of Ethno-cultural Distinctiveness 3. "New" Group Concentration Indicators 4. "Old" Group Concentration Indicators 5. Length of Residence Indicators 6. Group Presence in Adjoining Countries 7. Lost-Autonomy Indicators 8. Group "Categoriness" <p>2. Group Discrimination</p> <p>a. Inter-group Differentials</p> <ol style="list-style-type: none"> 1. Cultural Differentials 2. Political Differentials (Political Inequalities) 3. Economic Differentials (Economic Inequalities) <p>b. Collective Disadvantages</p> <ol style="list-style-type: none"> 1. Phase I Demographic Traits (1980s) 2. Phase II Demographic Traits (1990s) 3. Political Discrimination 4. Economic Disadvantages 5. Cultural Discrimination <p>3. Group Organization</p> <p>a. Indicators of Group Cohesion, 1980s-1995</p> <ol style="list-style-type: none"> 1. Group Identity Cohesion, 1980-1995 2. Group Organizational Cohesion, 1990-1995 <p>b. Group Organizations, 1990-1995</p> <p>c. Group Administrative Autonomy, 1990-1995</p> <p>d. Group Mobilization, 1980s-1995</p> <p>e. Group Organizational Cohesion, 1996-2000</p> <ol style="list-style-type: none"> 1. Group Support for Conventional or Militant Organizations, 1996-2000 2. New Organizations, 1996-2001 <p>4. Group Collective Interests</p> <p>a. Autonomy Grievances</p> <p>b. Political (Non-Autonomy) Grievances</p> <p>c. Economic Grievances</p> <p>d. Cultural Grievances</p>	<p>The main focus of the project is the collection and analysis of the Minorities at Risk database, a combination of qualitative and quantitative information concerning all communal groups that meet the criteria for inclusion as a minority "at risk." A minority at risk is a group that:</p> <ol style="list-style-type: none"> 1. Collectively suffers, or benefits from, systematic discriminatory treatment vis-à-vis other groups in a society; and/or 2. Collectively mobilizes in defense or promotion of its self-defined interests. 	<p>The project is designed to provide information in a standardized (data) format that will aid comparative research and contribute to the understanding and peaceful accommodation of conflicts involving communal groups. Selected project materials on 284 groups are available. Groups are decoded into six separate group types: Ethnonationalist, Indigenous, Ethnoclass, Communal Contender, Religious Sect, or National Minority.</p> <p>The project divides the world into six geo-political regions: the Western Democracies and Japan (Region 0), Eastern Europe and the former Soviet Union (Region 2), Asia and the Pacific (Region 3), North Africa and the Middle East (Region 5), Sub-Saharan Africa (Region 6), and Latin America and the Caribbean (Region 7). Groups are included in the study if the country in which they reside has a population greater than 500,000, the group itself has a population larger than 100,000 or 1 percent of the country population, and it meets one of the criteria for inclusion as a minority at risk.</p>

	<p>e. Advantaged-Minority Codes</p> <p> 1. Challenges to Advantaged Positions</p> <p>5. Group Conflict Behavior, 1940s-1998</p> <p>a. Intra-group Factional Conflict, 1990-1998</p> <p>b. Inter-group Communal Conflict, 1940s-2000</p> <p>c. Group Protest Activities</p> <p>d. Anti-Regime Rebellion</p> <p>e. Government Repression of Group, 1996-2000</p> <p>f. International Contagion and Diffusion</p> <p>g. Polity Characteristics</p>		
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United Nations Development Programme (UNDP): Early Warning Report (est. 1997)			
Index	Variables	Measure	Methodology
<p>UNDP Early Warning Report, Macedonian Country Report, 2005</p> <p>http://www.undp.org.mk/datacenter/publications/documents/EWREngDec05.pdf.</p> <p>Publication Cycle: <i>Country-dependent, depends on country being assessed, different reports are published at varying intervals, usually 3-4 times a year.</i></p>	<p>1. Political and Institutional Stability</p> <p>a. Confidence in the President</p> <p>b. Confidence in the Parliament</p> <p>c. Confidence in the Government</p> <p>d. Confidence in the Courts of Justice/Prosecution</p> <p>e. Confidence in Municipal Governments/Administrations</p> <p>f. Perception of Possibility of Joining EU in 5 years</p> <p>g. Trustworthiness of Media Reporting About Political Issues</p> <p>2. Economic Stability</p> <p>a. Unemployment, Registered With Employment Bureau</p> <p>b. Unemployed, not Registered</p> <p>c. Safety of Present Job</p> <p>d. Living Standard</p> <p>e. Readiness to Leave Macedonia to Live in Another Country</p> <p>f. Trustworthiness of Media Reporting About Economic Issues</p> <p>3. Interethnic Relations</p> <p>a. Perception of Current Interethnic Relations</p> <p>b. Perceptions of Media Contributing to Ethnic Tension</p> <p>c. Perceptions of Politicians Contributing to Ethnic Tension</p> <p>d. Support Future Public Protests, Strikes, Demonstrations Against Incidents/Actions Related to Ethnic Questions</p> <p>e. Trustworthiness of Media Reporting About Ethnic Issues</p> <p>4. Personal and Public Security</p> <p>a. Crime Rate</p> <p>b. Confidence in the Police</p> <p>c. Confidence in the Army</p> <p>d. Public Perception of the Situation in Terms of Personal Security</p> <p>e. Public Trust in Security Structures and Their Reforms</p>	<p>Provides an early-warning measure as to the risk of conflict.</p>	<p>The methodology applied in the Early Warning Report (EWR) is standardized and it is a subject of constant amendment and improvement. Brima Gallup – the branch of Gallup International in Skopje – saw to the methodological appropriateness of the public-opinion survey, which is the foundation of the analyses included in the EWR. The EWR uses a questionnaire that has already been supplemented with expertise provided by UNDP experts and is further supplemented with the Index of Political Stability. This index is a complex composite calculated on the basis of citizens' perceptions of elections and of the way in which the state is governed.</p> <p>The opinion survey for the Macedonia survey was carried out between 16 and 24 November 2005, on a standardized sample of 1,057 respondents.</p> <p>The measures used were:</p> <ul style="list-style-type: none"> -No Change (0-0.5%) -Slight Improvement (0.5-5%) -Slight Deterioration (0.5-5%) -Substantial Improvement (above 5%) -Substantial Deterioration (above 5%)

Forum on Early Warning and Early Response (FEWER) (est. 1998)			
Index	Indicators	Measure	Methodology
<p>FEWER</p> <p>http://www.fewer-international.org/pages/africa/index.html.</p> <p>Also see: http://www.carleton.ca/cifp/docs/CIFPCcompareMethods_AIndicatorDescriptions.pdf.</p> <p>Publication Cycle: <i>Every few months, reports are done when possible.</i></p>	<p>1. Identification of Conflict and Peace Indicators, considering:</p> <p>a. Root Causes</p> <p>b. Proximate Causes</p> <p>c. Triggers</p> <p>d. Indicator Trends</p> <p>e. Possible Scenarios</p> <p>2. Main Conflict Categories</p> <p>a. Regional/Inter-state Indicators</p> <p>b. Strategic and Military Indicators</p> <p>c. State Sovereignty and Monopoly of Power</p> <p>d. Political Opposition</p> <p>e. Fragmentation and Behavior of Main Actors</p> <p>f. Ideological Factors</p> <p>g. Social and Geographical Spread of Conflict</p> <p>h. Displaced Population/Refugees</p> <p>i. Violence</p> <p>j. Exclusion/Ethnic Tension</p> <p>k. Economic Factors</p> <p>3. Main Peace Categories</p> <p>a. Strategic Indicators/ Security/Stability</p> <p>b. Inclusive and Good Governance</p> <p>c. Co-operation of External Actors With Local Stakeholders</p> <p>d. Promising Economic Factors</p> <p>e. Strong Civil Society</p>	<p>FEWER provides analysis of conflict vulnerability as an attempt to produce an early-warning measure.</p>	<p>The objective of FEWER's methodology is to provide an analytical and action framework to plan preliminary responses to early warning.</p> <p>A) Conflict Indicators</p> <ul style="list-style-type: none"> ▪ Structural ▪ Accelerators ▪ Triggers <p>B) Peace Indicators</p> <ul style="list-style-type: none"> ▪ Systemic ▪ Processes ▪ Tools <p>C) Stakeholders</p> <ul style="list-style-type: none"> ▪ Agendas/Power ▪ Needs ▪ Actions <p>D) Summary Analysis</p> <ul style="list-style-type: none"> ▪ Trends Summary ▪ Conclusion: (a) – (b) / (c) <p>E) Entry Points and Contingency Planning</p> <p>The analytical assumption is</p> <ul style="list-style-type: none"> ▪ Conflict Trends – ▪ Peace Trends +/- ▪ Stakeholder Trends = Overall Trends

Global Environmental Change and Human Security (GECHS): Index of Human Insecurity (IHI) (est. 2000 ³)			
Index	Variables	Measure	Methodology
<p>Index of Human Insecurity</p> <p>"Index of Human Insecurity," AVISO, No. 6, 2000, available at http://www.gechs.org/aviso/06/index.html.</p> <p>Publication Cycle: <i>Published once.</i></p>	<p>1. Environment</p> <p>a. Net Energy Imports (% of commercial energy use)</p> <p>b. Soil Degradation (tons per year)</p> <p>c. Safe Water (% of population with access)</p> <p>d. Arable Land (hectares per person)</p> <p>2. Economy</p> <p>a. Real GDP Per Capita (US\$)</p> <p>b. GNP Per Capita Growth (annual %)</p> <p>c. Adult Illiteracy Rate (% of population 15+)</p> <p>d. Value of Imports and Exports of Goods and Services (% of GDP)</p> <p>3. Society</p> <p>a. Urban Population Growth (annual %)</p> <p>b. Young Male Population (% aged 0-14 of total population)</p> <p>c. Maternal Mortality Ratio (per 100,000 live births)</p> <p>d. Life Expectancy (years)</p> <p>4. Institutions</p> <p>a. Public Expenditures on Defense Versus Primary and Secondary Education (% of GDP)</p> <p>b. Gross Domestic Fixed Investment (% of GDP)</p> <p>c. Degree of Democratization (on a scale of 1-7)</p> <p>d. Human Freedoms Index (on a scale of 0-40)</p>	<p>The IHI is essentially a classification system that distinguishes countries based on how vulnerable or insecure they are, and groups together those countries that have similar levels of insecurity.</p> <p>For policy purposes there are two relevant applications:</p> <p>1. The IHI can be linked to more specific sets of indicators (e.g., water security or food security) to assist in identifying how sector-specific problems may affect overall levels of human insecurity.</p> <p>2. The IHI can be used to project how human insecurity may change over time. As the index changes (particularly if insecurity increases), it acts as a type of early-warning system.</p>	<p>Indicator selection followed a set of evaluation criteria that included: relevance to the selection framework in that the indicator measures either key structural relationships (i.e., linkages and defining characteristics) or key functional relationships (i.e., process flows) of the system with reference to either environmental, economic, societal, or institutional components.</p> <p>To calculate the IHI:</p> <p>1. A complete time series for all indicators and all countries was established.</p> <p>Data was collected, where available, for the years 1970 through 1995. As most countries did not have complete time series for most indicators, it was desirable to estimate missing data through some relatively simple statistical techniques (linear regression or data interpolation).</p> <p>2. The data was standardized.</p> <p>Indicators were adjusted in such a way that they used the same unitless scale and had the same range of possible values, so that all indicators were given the same weight in the composite index.</p> <p>3. The data was classified and the index calculated.</p> <p>Data for each indicator was classified for each year into 10 categories by cluster analysis. Countries were assigned a number between 1 and 10 for each indicator in which they had a known or estimated value. The corresponding IHI value was then calculated for each country in each year as the average category value for all indicators.</p>

³ The data was taken from the early 1990s; however, the index was published only in this report in 2000.

The International Institute for Strategic Studies (IISS): Armed Conflict Database (ACD) (est. 2001 ⁴)			
Index	Variables	Measure	Methodology
<p>IISS</p> <p>http://www.iiss.org/publications/armed-conflict-database.</p> <p>Publication Cycle: <i>The information is constantly updated. Reports on political, military, and humanitarian developments are published four times a year. There are also annual reports as well as daily timelines that are updated on a weekly basis.</i></p>	<p><u>Type of Conflict:</u></p> <p>1. International armed border and territorial conflict: Involving governments in armed conflict over sovereignty and territory.</p> <p>2. Internal armed conflicts: Taking place between government forces and organized groups that control sufficient territory to sustain concerted military operations. These conflicts can sometimes spill across international borders without being considered international conflicts between state parties.</p> <p>3. Terrorism: Attacks involving one or more factions in significant armed opposition to a state. The intensity of violence in such attacks varies. Violence directly attributable to organized crime is not included.</p> <p><u>Political Status:</u></p> <p>1. Active: Covers current conflicts, which may vary from low-intensity (or intermittent) encounters to high-intensity (or constant) combat.</p> <p>2. Cease-fire: Agreed by recognized leaders of disputants, but does not resolve the conflict. Does not suggest that all conflict has stopped.</p> <p>3. Peace Accord: Formal resolution of conflict ratified by recognized leaders of disputants. In some cases, conflict may still persist. Examines whether the combatants are currently in conflict or in negotiations. The current status is displayed in a fact box.</p> <p>4. Dormant: Applies to terrorist conflicts. Inactive for the past 12 months.</p>	<p>Compiled by the IISS Conflict Management Program, the ACD provides an interactive source of information on 70 armed conflicts.</p> <p>Derived from the IISS Chart of Armed Conflict, the database covers international and internal armed conflicts, as well as terrorism. It offers year-on-year analysis of conflicts, their political status, number of fatalities, and weapons used. It also covers current events, conflict backgrounds, and timelines.</p>	<p>Each conflict is analyzed in detail under the following headings:</p> <p>1. Quarterly Conflict Review: analyzes the latest noteworthy political trends and developments within the conflict.</p> <p>2. Military and Security Review: offers the latest military and security developments; information on parties involved in the conflict, including non-state armed groups; as well as procurements, arms acquisitions, major offensives, changes in tactics, and other security concerns.</p> <p>3. Human Security Review: maintains a check on the human cost of the conflict. This feature informs the user of both the total number of fatalities in the conflict, and the number of fatalities in a specific year, and information about refugees and internally displaced persons (IDPs). This review also provides information on other humanitarian indicators of conflict such as unemployment, lack of access to natural resources, ethnic and religious strife, and basic infrastructure.</p> <p>4. Annual Update: offers a comprehensive review of the main events during the year, including military and human security developments. A fact box covers the type of conflict, its parties, current status, the number of its fatalities, and the weapons used. With the fact box comes an update of the year's trends and incidents relating to all features of the conflict, including the status and type of conflict.</p> <p>5. Historical Background: provides a researched historical background paper to the conflict, placing recent developments into perspective by explaining the underlying causes and tension behind the fighting.</p> <p>6. Timeline: presents a constantly updated timeline relating to the conflict. When accessed, the user is automatically transferred to the current date, but by scrolling the user can quickly gain an insight into recent and historic incidents and developments.</p>

⁴ This index was created in 2001 but was officially launched in 2004.

The Uppsala/Human Security Centre (HSC) Dataset (est. 2002)			
Index	Variables	Measure	Methodology
<p>The Uppsala/HSC Dataset</p> <p>Information from the "Human Security Report 2005," Human Security Centre, p. 67, http://www.humansecurityreport.info/HSR2005_PDF/Part2.pdf.</p> <p>For information on the project itself, please see http://www.pcr.uu.se/research/UCDP/HumSec_index.htm.</p> <p>Publication Cycle: <i>Annually</i>.</p>	<p>1. The number of cases of political violence (armed conflicts plus cases of one-sided violence).</p> <p>2. The number of countries experiencing political violence.</p> <p>3. The number of reported deaths from political violence.</p> <p>4. The number of reported deaths per 100,000 people.</p>	<p>State-based armed conflicts</p> <p>Conflicts between states or between a state and a non-state actor, with at least 25 battle-related deaths per year. Includes all interstate wars and those civil wars where the state is a warring party. Updated data on the number of state-based armed conflicts compiled by the Uppsala Data Program are published each year in the <i>Journal of Peace Research</i> and the <i>SIPRI Yearbook</i>. Data on the number of reported battle-related deaths for each conflict and the death rate (fatalities per 100,000 people) for each country experiencing conflict.</p> <p>Non-state armed conflicts</p> <p>Conflicts in which none of the warring parties is a government and in which at least 25 battle-related deaths occur per year. Data on the number and location of non-state conflicts and the numbers killed have never before been systematically collected and published annually.</p> <p>One-sided violence</p> <p>The deliberate unopposed slaughter of at least 25 civilians in one year by a government or political group. Includes genocides, politicides, and other violent assaults on civilians.</p>	<p>For the Uppsala/Human Security Centre Dataset, relevant information is culled electronically from the Factiva⁵ news database using purpose-built automated software. The selected data is then reviewed and coded.</p> <p>For a conflict to be recorded, it requires:</p> <ul style="list-style-type: none"> ▪ A minimum of 25 deaths per year; ▪ That the cause of death be identified as political, rather than criminal, violence; and ▪ That the group responsible for the deaths be reliably identified.

World Markets Research Center (WMRC): Global Terrorism Index (est. 2003)			
Index	Variables	Measure	Methodology
<p>Global Terrorism Index</p> <p>http://www.globalinsight.com/publicDownload/genericContent/10-24-03_Dunn.pdf.</p> <p>Publication Cycle: <i>Published once in 2003, although current studies may also look at terrorism, and aspects of it, as it relates to security.</i></p>	<p>1. Motivation</p> <p>2. Presence</p> <p>3. Scale</p> <p>4. Efficacy</p> <p>5. Prevention</p>	<p>The WMRC Global Terrorism Index (2003/4) is designed to assess the risk of terrorism in 186 countries and against these countries' interests abroad.</p>	<p>The WMRC used its country risk modeling to produce a Ratings Methodology based on five components: Motivation, Presence, Scale, Efficacy, and Prevention. The individual rating scores for the five separate factors range from 1 to 10 (1=lowest risk, 10=highest risk), with each variable having a separate weighting depending on its significance.</p>

⁵ For more information on the Factiva database, please see www.factiva.com.

The Gallup Poll of Iraq ⁶ (est. 2003)			
Index	Variables	Measure	Methodology
<p>Gallup Poll of Iraq http://poll.gallup.com/content/default.aspx?ci=12172 (requires free trial or subscription to access). Publication Cycle: A variety of polls measuring the opinions of Iraqis are conducted at irregular intervals.</p>	<p>Questions posed: As an Iraqi, can you please tell me what are your great dreams and hopes about the future of Iraq?</p> <ol style="list-style-type: none"> 1. Stability and Security 2. Progress to the Level of Advanced Countries 3. To Have a Democratic Government 4. US Forces to Leave Iraq 5. To Have Iraq Be Free, Sovereign, and Independent 6. Unity and Cooperation Between Iraq's Sects, Ethnic Groups 7. Recovery of the Iraqi Economy 8. An Independent Kurdish State 9. Reconstruction and Rebuilding 10. Other (Various) <p>What are your greatest fears about the future of Iraq?</p> <ol style="list-style-type: none"> 1. Internal Strife Between Sects, Civil War 2. US Occupation of Iraq 3. Lack of Security 4. Partitioning of Iraq 5. Terrorism 6. Inability to Form a National Government/Risk to Have a Dictatorship 7. War with Coalition Forces 8. Islamic Fundamentalism/Fundamentalist Parties 9. Other (Various) 	<p>The Gallup Poll seeks to document Iraqi opinions on a number of issues.</p>	<p>The strict, probability-based sample design Gallup used to conduct this survey projects with scientific accuracy to all adults (aged 18 and older) residing in Iraq, with the exception of those residing in the governorates of Arbil and Dahuk. All 3,444 interviews were conducted face-to-face, in the privacy of the respondent's own home. Selection of the sample was done at the <i>qadha</i> administrative unit level, with a total of 350 primary sampling units selected on a strict, probability-proportional-to-size basis. An average of 10 interviews, one per household, was conducted in each of these locations.</p>

⁶ The Gallup Organization was first in Iraq conducting interviews in the Baghdad region in August 2003. Later in 2004, the organization returned. A total of 3,444 individuals were questioned, and each of these individuals was asked this question regarding their hopes and dreams for the country's future.

World Bank: Post-Conflict Performance Indicators (PCPI) (est. 2004)			
Index	Variables	Measure	Methodology
<p>Post-Conflict Performance Indicators</p> <p>http://siteresources.worldbank.org/INTCPR/1090479-1115613025365/20482305/Post-Conflict+Performance+Indicators,+2004-05.pdf</p> <p>Publication Cycle: <i>Published annually to assist in the allocation distribution decisions for states.</i></p>	<p>1. Security and Reconciliation</p> <p>a. Public Security</p> <p>b. Reconciliation</p> <p>c. Disarmament, Demobilization, and Reintegration</p> <p>2. Economic Recovery</p> <p>a. Management of Inflation, External Debt, and Adequacy of the Budget</p> <p>b. Trade Policy, Foreign Exchange, and Price Regimes</p> <p>c. Management and Sustainability of Post-Conflict Reconstruction Program</p> <p>3. Social Exclusion and Social-Sector Development</p> <p>a. Reintegration of Displaced Populations</p> <p>b. Education</p> <p>c. Health</p> <p>4. Public-Sector Management and Institutions</p> <p>a. Budgetary and Financial Management, and Efficiency of Revenue Mobilization</p> <p>b. Re-establishing Public Administration and Rule-Based Governance</p> <p>c. Transparency, Accountability, and Corruption in the Public Sector</p>	<p>The PCPI ratings framework is designed to measure change in countries that are eligible for exceptional post-conflict allocations from the World Bank International Development Association.</p>	<p>For each variable, there is an extensive written score description in order to standardize scoring.</p> <p>Countries are rated on a six-point scale where 1 equals ongoing or re-ignition of conflict and no positive change, and 6 equals a very strong performance.</p>

The Eisenhower Institute: Space Security Index (SSI) (est. 2004)			
Index	Variables	Measure	Methodology
<p>Space Security Index</p> <p>http://www.spacesecurity.org/</p> <p>Publication Cycle: <i>Annually.</i></p>	<p>1. The space environment</p> <p>2. Space security laws, policies, and doctrines</p> <p>3. Civil space programs and global utilities</p> <p>4. Commercial space</p> <p>5. Space support for terrestrial military operations</p> <p>6. Space systems protection</p> <p>7. Space systems negation</p> <p>8. Space-based strike weapons</p>	<p>The annual assessment has two key components:</p> <p>1. A policy-neutral fact base of trends and developments in space security based on primary, open-source research.</p> <p>2. An assessment of the status of space security based on a consultative process engaging a broad cross-section of space stakeholders through an online expert survey and a working group of space experts.</p>	<p>The SSI provides a comprehensive overview of eight indicators of space security. Spacesecurity.org staff develop an overview of space security that includes a description of each indicator and its impact on space security, and an analysis of space security trends. Yearly developments are tracked, documented, and synthesized from open-source literature.</p>

GCSP Security Matrix (est. 2006)			
Index	Variables	Measure	Methodology
<p>GCSP Security Matrix</p> <p>Nayef R.F. Al-Rodhan, Gérard Stoudmann, Marc Finaud, "Proposal for a Security Matrix," Geneva Centre for Security Policy Program on the Geopolitical Implications of Globalization and Transnational Security 2006.</p> <p>http://www.gcsp.ch/e/publications/Globalisation/Publications/index.htm.</p> <p>Publication Cycle: <i>It is proposed that this index would be published annually.</i></p>	<ol style="list-style-type: none"> 1. Economic 2. Environmental 3. Military 4. Political 5. Societal 	<p>The GCSP Security Matrix provides a framework for measuring and ranking states based on how secure they are from internal and external conflict, as well as the level of security experienced by individuals within its borders.</p>	<p>The methodology is based on compiling factors from other matrices that are currently in production and by adding factors that the authors feel are important contributors to state security. The matrix is based on a simple 1, 2, or 3 ranking system for each of the variables presented in each of the sub-sectors aimed at measuring whether an element contributes to security, insecurity or makes a borderline contribution to the state and human perspectives. Each of these values will be weighed based on the assessment of an assembled expert group for the country being measured. Each variable will then be granted a value of 1, 2, or 3 and a weighted average would be taken to give the sub-sector a value that is also based on the 1, 2, or 3 ranking.</p> <p>This would be repeated for the sub-sectors in order to give a value to each sector and then for the state being assessed. Countries would be ranked based on their security measurement in order to assess global trends and make predictions about security for the future.</p>

Table 2:
GCSP Security Matrix

SECTOR	SUB-SECTOR	VARIABLE	1	2	3
A. ECONOMIC	A.1 Job Security	Unemployment			
		Safety of Present Job			
	A.2 GDP	GDP Per Capita			
		Spread of Wealth			

Each factor is given a score of 1-3, where 1 indicates that the factor contributes to security, 2 indicates that it makes a borderline contribution to security, and 3 indicates that it contributes to insecurity.

SECTOR	SUB-SECTOR	VARIABLE	1	2	3
B. ENVIRONMENTAL	B.1 Resource Availability and Waste Management	Food Shortages			
		Land Availability			
		Soil Degradation			
		Safe Water			
		Handling of Waste Material			
		Control of Contested Resources			

Each factor is given a score of 1-3, where 1 indicates that the factor contributes to security, 2 indicates that it makes a borderline contribution to security, and 3 indicates that it contributes to insecurity.

SECTOR	SUB-SECTOR	VARIABLE	1	2	3
C. MILITARY	C.1 Militarization	Military Spending			
		Police State			
		Private Security Firms			
		Confidence in Army			
		Military Loyalty to Population			
	C.2 Conflict	Terrorism			
		Conflict Transfer			
		History of Internal Conflicts			
		History of International Conflicts			
	C.3 Arms Proliferation	Illicit Arms Trade			
		Disarmament Efforts			
Weapons Per Capita					

Each factor is given a score of 1-3, where 1 indicates that the factor contributes to security, 2 indicates that it makes a borderline contribution to security, and 3 indicates that it contributes to insecurity.

SECTOR	SUB-SECTOR	VARIABLE	1	2	3
D. POLITICAL	D.1 Governance	Type of Government/Ideology			
		Ability to Provide Security			
		Confidence in Head of State			
		Confidence in Parliament			
		Confidence in Government			
		Confidence in Municipal Government and Administration			
		Degree of Democratization			
		Ability to Form a Government			
		Rule- and Law-Based Governance			
	D.2 Political	Spread of Political Violence			
		Deaths from Political Violence			
		Transparency			
		Accountability			
		Corruption			
		Anti-Regime Rebellion			
		Public Perception of Politicians Contributing to Group Tension			
	D.3 Conflicting Interest	Autonomy Grievances			
		Political Grievances			
		Cultural Grievances			
	D.4 Discrimination	Advantaged Minority			
		Government Repression of Group			
		Institutional Bias			
	D.5 Rights	Human Rights			
	D.6 Law and Order	Police System			
		Confidence in Police			
		Security Forces on the Street			
		Curfews			
		Prosecution of Criminals			
		Conviction Accountability			
		Prison Environment			
Admission to Prisons					

SECTOR	SUB-SECTOR	VARIABLE	1	2	3
D. POLITICAL	D.7 Press and Media	Perception of Media Contributing to Violence			

Each factor is given a score of 1-3, where 1 indicates that the factor contributes to security, 2 indicates that it makes a borderline contribution to security, and 3 indicates that it contributes to insecurity.

SECTOR	SUB-SECTOR	VARIABLE	1	2	3
E. SOCIETAL	E.1 Demography	Population Total			
		Population Density			
		Urban Population Growth			
		Young Male Population			
	E.2 Group Components	Number of Distinct Groups			
		Group Saliency			
		Group Organization			
		Group Administration			
		Group Mobilization			
		Group Cohesion			
	E.3 Group Conflict	Intra-group Conflict			
		Inter-group Conflict			
		Group Protest Activities			
		Public Perception of Group Relations			
		Reconciliation Efforts			
	E.4 Discrimination	Inter-group Differentials			
		Collective Disadvantages			
		Institutional Bias			
		Elites			
	E.5 Crime	Intentional Homicide			
		Non-Intentional Homicide			
		Assault			
		Rape			
		Theft			
		Robbery			
		Burglary			
		Fraud			
		Embezzlement			
Drug-Related Crime					
Bribery and Corruption					

SECTOR	SUB-SECTOR	VARIABLE	1	2	3
E. SOCIETAL	E.6 Education	Illiteracy			
		Education Spending			
	E.7 Refugees	Refugee Strain			
		Reintegration Efforts			
		Internally Displaced Persons			
	E.8 Health	Death Statistics			
		Maternal Mortality			
		Infant Mortality			
		Life Expectancy			
		Health-Care System			

Each factor is given a score of 1-3, where 1 indicates that the factor contributes to security, 2 indicates that it makes a borderline contribution to security, and 3 indicates that it contributes to insecurity.

References

¹ *Human Security Report*, Human Security Centre, 2005. A full copy of this report and others can be found at <http://www.humansecuritycentre.org/>.

² *Ibid.*

³ *Ibid.* The 2005 *Human Security Report* claims that "composite indices can conceal more information than they convey" due to the simplicity of the index, p. 91.

⁴ S. Fukuda-Parr, "New Threats to Human Security in The Era of Globalization," in L. Chen, S. Fukuda-Parr, and E. Seidensticker (eds.), *Human Insecurity in a Global World* (Cambridge, London: Harvard University Press, 2003), p. 5.

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⁸ *Ibid.*

⁹ M. Wolf, *Why Globalization Works* (New Haven, London: Yale University Press, 2004), p. 47.

¹⁰ *Ibid.*

¹¹ J.R. McNeill, *An Environmental History of the Twentieth-Century World* (New York, London: W.W. Norton, 2000), p. 4.

¹² *Ibid.*

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¹⁶ *Ibid.*, p. 78-79.

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¹⁸ Fukuda-Parr, *op. cit.*, note 4, p. 1.

¹⁹ T. Owen, "Challenges and Opportunities for Defining and Measuring Human Security," *Disarmament Forum*, United Nations Institute for Disarmament Research, Vol. 3, 2004, pp. 15-24, p. 22.

²⁰ G.F. Treverton, S.G. Jones, "Measuring National Power," RAND National Security Research Division, Conference Proceedings, see http://www.rand.org/pubs/conf_proceedings/2005/RAND_CF215.pdf.

²¹ Owen, *op. cit.*, note 19, p. 22.