EARLY WARNING MECHANISMS AND CONFLICT PREVENTION (*With a Reference to the OSCE Economic and Environmental Dimension*)

Patrick Philippe MEIER

Consultant on Early Warning,
The Fletcher School of Law and Diplomacy,
Tufts University
(Medford, U.S.)

Dr. Daniel LINOTTE

Senior Advisor,
Policy and Legal Advice Center
(Belgrade, Serbia)

Introduction

International organizations are increasingly realizing the significance of information collection and early warning for conflict prevention. High-quality and continuous information gathering is "the nervous system of the humanitarian enterprise; without it, any form of

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principled action—whether now or in the future—is paralyzed."[1] Early warning analysis and early response thus lie at the heart of conflict prevention.

This article addresses the design and deployment of early warning mechanisms, with a reference to the context of the OSCE economic and environmental dimension. Specifically, three parts are distinguished. The first one addresses the meaning and the importance of early warning for conflict prevention. Part two overviews major early warning mechanisms that have been considered and, for some of them, that are currently used. The OSCE is considered in the third part.

The OSCE case is particularly important because the OSCE is presently the world's main regional security organization that, to a large extent, complements the U.N. system. Furthermore, after the adoption of the OSCE Strategy Document for the Economic and Environmental Dimension on 2 December, 2003, there is a growing emphasis on economic and environmental roots of threats and challenges to security. The (2006) Belgian Chairmanship of the OSCE is giving a high importance to economic matters in its work, in addition to the human, political and military aspects of security. Considering OSCE regions, that include the Balkans, Caucasus and Central Asia, early warning should be seen as essential. These regions and others have been confronted with open conflicts—most often separatism—among ethnic communities that had enormous costs in terms of lost lives and displacement of entire populations. The negative tendencies observed in some OSCE participating states might also have economic roots, namely the combination of mass poverty with wealth and power accumulated in a few hands. The outcomes of past conflicts and, for some countries, prevailing economic and social conditions can be a source of tensions that should not lead to unnecessary turbulences.

[1] *World Disaster Report: Focus on Ethics in Aid* 135, International Federation of the Red Cross and Red Crescent Societies, 2003, p. 158.

1. The Importance of Early Warning for Conflict Prevention

Conflict prevention is generally understood as encompassing operational prevention and structural prevention.[2] The former comprises early warning analysis and preventive diplomacy while the latter typically draws on capacity building and development. It is well recognized that an integral component in the process of conflict prevention is early warning.[3]

Early warning is generally defined as laying the ground for proactive engagement in the *early* stages of a potential conflict or crisis, to prevent or at least mitigate violent and deadly conflict.[4] Evidently, "early warning is not simply the sharing of information about an impending crisis, let alone the wail of a siren announcing the immanence of such a crisis."[5] Early warning goes beyond the continuous collecting and sharing of information to include both continuous analysis of the information and the formulation of appropriate response strategies for which promptness is essential.[6]

[2] See: *Carnegie Commission Report on Preventing Deadly Conflict* 16, New York, 1997.
[3] Ibidem.
[4] See: M. Siegfried, *Patterns in the Escalation of Armed Conflict: A Comparison of Conflict-Tension Barometers*, Universitat Freiburg, Schweiz, 2001.
[5] H. Adelman, "Defining Humanitarian Early Warning," in: *Synergy in Early Warning Conference Proceedings*, ed. by S. Schmeidl, H. Adelman, Toronto, Canada, 15-18 March, 1997, pp. 1-9.
[6] Ibidem.

Formulating early response options necessarily ties into the understanding and monitoring of the causes of tension and cooperation. Scholars designate some causes as structural and others as behavioral. Structural causes are typically "deeply rooted, underlying causes of conflict that may not always develop into violence."[7] In contrast, behavioral factors are "proximate" and arise from immediate group and/or individual interactions—hence the term "events-data analysis" for early warning. Scholars and practitioners alike maintain that "prevention should address underlying factors with long-run prevention strategies, including for instance development aid, and proximate causes with short-run prevention strategies such as sending peacekeeping forces and humanitarian relief."[8] Both strategies are complementary.

The purpose of early warning mechanisms is therefore to collect and analyze information in order to present decision makers with credible early response options in the medium and short term. In this sense, early warning mechanisms are a must for conflict prevention. There is thus a pressing need to actively engage in crisis prevention where the first step is the prognosis of when, why and where tensions are likely to escalate and become threats to peace and security, within or between countries.[9]

Early warning analysis requires the development of structural and/or events-data baselines in order to reliably monitor changes in tension and integrate these into early response options. The lack of adequate responses generally worsens conditions and raises the humanitarian and financial costs of future actions. Such changes or inflexions in baselines may signify a deviation from the "norm" which, if undesirable, may indicate a need for early response to prevent tensions from escalating. Baselines are developed by monitoring a pre-defined set of carefully formulated indicators within a specified domain such as economics and/or the environment.[10]

Baseline analyses enable the Situation Room to integrate early warning analysis with early response and thus conflict prevention. For example, when the level of tension within a specified domain passes a pre-defined threshold or limit, the Situation Room is automatically notified and presented with a host of pre-defined response options based on prior contingency planning exercises.

The Carnegie Commission on Preventing Deadly Conflict explains that dangerous circumstances seldom degenerate into violence without warning. Indeed, "early warning signals appear most clearly to those immediately around the disputants."[11] The Commission stresses the importance for *not* more information, "but rather the right kind of information and a reliable interpretation of its meaning." Early warning experts argue that there is an urgent need for the field monitoring of indicators with reliable predictive models.[12] In that context, the lack of early response can be the problem (see Fig. 1).

A topology of early warning methodologies is proposed in Fig. 2.

Our study will focus broadly on Module types A and B given that only these provide baseline analyses. The first module, Module A, is a situation and incident reporting-based early warning mechanism that draws on existing networks of local reporters to collect information that is processed downstream by the Situation Room to produce baseline analyses. The information is collected in a struc-

[7] F. Hampson, D. Malone, *From Reaction to Conflict Prevention*, International Peace Academy (IPA), 2002, p. 16.

[8] Ibidem.

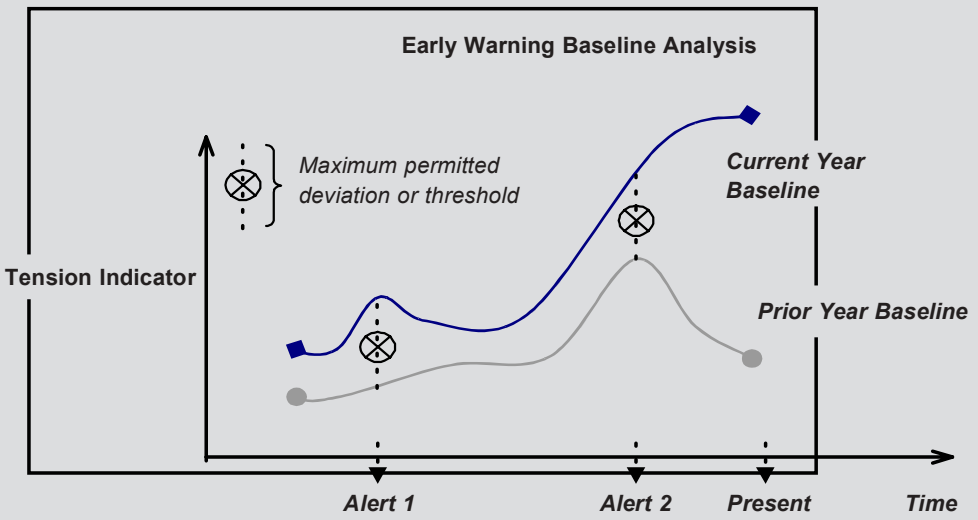
[9] See: A. Austin, *Early Warning and the Field: A Cargo Cult Science?* Berghof Handbook for Conflict Transformation, 2001.

[10] See: P. Meier, D. Bond, *Integrating Risk Assessment and Early Warning*, Columbia University, 2004 (unpublished).

[11] Harvard Global Program on Negotiation (PON), The Third Side [www.thirdside.org].

[12] P. Meier, *From Early Warning to Early Response: Bridging the Policy Gap*, Columbia University, 2003 (unpublished).

Figure 1



Alert 1 is followed by successful early response that deescalates tensions while early response to Alert 2 appears unsuccessful at present.

Source: P. Meier, D. Bond, *Integrating Risk Assessment and Early Warning*, Columbia University, 2004 (unpublished).

Figure 2

Type of Information Collected	Source of Information Collected: *Internally controlled*	*Externally controlled*
More Structured	A Field Reporting 1) Incidents 2) Situations	News Tracking B 1) Actors 2) Interactions
Less Structured	Information Exchange 1) Bulletin boards C 2) Web logs (blogs)	Data Mining 1) Message traffic 2) Web documents D

Modules A and B are particularly useful for conflict early warning as they draw on baseline analyses over time.

Source: P. Meier, D. Bond, op. cit.

tured format based on jointly developed pre-defined conflict indicators. The process of refining indicators is an iterative procedure that employs a multi-stakeholder approach. Field reports are then used to produce integrated field report baselines that communicate timely early warnings and response options to the Situation Room.

The second module, Module B, is an automated news report-based early warning mechanism. This module draws on Reuters (and other respected 24-hour news providers) news reports, and extracts key information from them to produce systematic baselines that track the ebb and flow of conflict situations in near real-time. The mechanism automatically "reads" (parses and codes) news reports, and whenever possible, identifies the basic "events data" parameters of ***who did what to/with whom, when, where, why and how*** for early warning purposes.

The Situation Room would use these events data, based on news reports, that become immediately available for distribution. Taken together the field and news reports baselines allow the Situation Room to "triangulate" the various reports and to gain a visual and geospatial "understanding at a glance" of evolving conflict behavior before they escalate into violence.

2. Overview of Existing Early Warning Mechanisms

The following early warning mechanisms were selected for review based on their "methodological proximity" to Module types A and B. Thematically, the reviewed mechanisms were also selected based on their likely contribution to the possible operationalization of the OSCE Strategy Document for the Economic and Environmental Dimension adopted by the 2003 OSCE Ministerial Council. The single most important criterion in their selection focused on the mechanisms' ability to produce relevant baselines for comparative analysis over time and space—a prerequisite for early warning analysis.

The reviewed early warning mechanisms fall into one of three categories: (1) structural risk assessments, (2) dynamic event analyses and (3) consultative processes. Structural risk assessments use structural indicators as inputs while dynamic event analyses draw on behavioral indicators. Consultative processes draw on consensus among/between area experts who evaluate quantitative and qualitative information with the aim of identifying, implementing, and/or monitoring intervention strategies[13] (see Table A for more detailed categorization).

Table A

Early Warning System VS Category Type	Structural	Behavioral	Consultative
Political Instability Task Force	***Primary***	**n/a**	***Primary***
Country Indicators for Foreign Policy	***Primary***	**n/a**	***Secondary***
World Bank Conflict Analysis Framework	***Primary***	**n/a**	***Secondary***

[13] See: M. Levy, Th. Parris, *Toward a USAID WatchList*, A Report Prepared for the U.S. Agency for International Development, 2004, p. 1.

Table A (continued)

Early Warning System VS Category Type	Structural	Behavioral	Consultative
IMF Currency Crisis Early Warning	***Primary***	**n/a**	***Primary***
Swisspeace FAST Early Warning	***Tertiary***	***Secondary:*** **Event-logging**	***Primary***
Virtual Research Associates GeoMonitor	***Tertiary***	***Primary:*** **Situation/Incide Event reporting & Event monitoring**	***Tertiary***
World Markets Research Center	***Primary***	***Secondary:*** **News tracking**	***Primary***
Control Risks Group	***Primary***	***Secondary:*** **News tracking**	***Primary***

We first review existing structural risk assessments and then consider dynamic event analyses. Lastly, we focus our attention on consultative processes as defined above. The purpose of Section 2 is thus to provide an overview of existing mechanisms based on the project requirements articulated above. Section 3 will consider how to bridge the gap between existing mechanisms and the needs of an early warning mechanism in the OSCE context.

2.1. Structural: Political Instability Task Force (PITF)[14]

Funded by the CIA and originally developed by a research team directed by Professor Ted Robert Gurr of the University of Maryland, the Task Force now comprises a consortium of academic institutions interested in State failure. State failure is a relatively new label that encompasses a range of severe political conflicts and regime crises exemplified by macro-societal events such as those that occurred in Somalia, Bosnia, Liberia, and Democratic Republic of Congo in the 1990s. The PITF web site lists comparative information on cases of total and partial state failure that began in 1955. Events included are revolutionary wars, ethnic/separatist wars, adverse regime changes, and genocides and politicides. The PITF attempts to predict the onset of conflicts at least two years in advance, relying on probability estimates.

This data is the most complete and carefully collected data on state failure. It covers more than 190 distinct countries and tracks over 1,000 variables compiled from a plethora of available sources. It codifies numerous qualitative insights and knowledge from a diverse variety of area studies and other experts are brought in to add their expertise to individual variables. The result is that the PITF dataset permits the testing of numerous theories, many for the first time, and better understand the root-causes

[14] See [www.cidcm.umd.edu/inscr/stfail/].

of conflicts.[15] One aspect of the statistical approaches used is that it provides estimates about the probabilities for future conflicts that seem to be accurate in light of the rarity of events (see Table B for indicator samples).

Table B

Early Warning System VS Indicators	Sample Indicator List (general)	Sample Indicator List (economic relevance)
Political Instability Task Force	Infant mortality, regime type, trade openness, total population, population density, conflict contagion	Trading partner concentration, GDP, change in GDP, change in inflation rate, cropland and irrigated area
Country Indicators for Foreign Policy	Refugees produced, level of democracy, corruption score, military expenditure, ethnic diversity, youth bulge, life expectancy, deforestation	GDP, inflation, exchange rate, foreign direct investment, net inflows, total debt service, trade openness, inequality score
World Bank Conflict Analysis Framework	Ethnic cleavages, weakening democratic system, politicized media, resource scarcity, unequal access to resources, refugees, diaspora, external assistance, availability of small arms	Negative economic growth, increasing debt and inflation trend, dependency on primary commodities, employment discrimination, development programs favor one group, lack of market access
IMF Currency Crisis Early Warning	n/a	n/a
Swisspeace FAST Early Warning	Defy norms, accuse, threaten, sanction, expel, use of force, riot, crowd control; improve relations, assure, agree, propose, consult, endorse, reward	n/a* **FAST economic indicators are inactive, that is, they are holding categories and are not being monitored and collected*
Virtual Research Associates GeoMonitor	Defy norms, accuse, threaten, sanction, expel, use of force, riot, crowd control; improve relations, assure, agree, propose, consult, endorse, reward	Government and private economic transactions, default on payment, balance of payments, currency reserves, exchange rates, equity prices, corporate earnings, commodity prices, interest rates

[15] See: G. King, L. Zang, *Improving Forecasts of State Failure*, Harvard Burden of Disease Unit, 2001.

Table B (continued)

Early Warning System VS Indicators	Sample Indicator List (general)	Sample Indicator List (economic relevance)
World Markets Research Center	**Political, Economic, Legal, Tax, Operational and Security** ***nb: these are clusters or aggregate indicators***	**GDP, inflation, budget balance, interest rate, unemployment, stock exchange index, exports, imports, current account balance, reserves, foreign direct investment, debt**
Control Risks Group	**n/a**	**n/a**

However, the PITF dataset has several methodological pitfalls.[16] The Task Force's forecasts and causal inferences are biased. The project uses list-wise deletion, which is known to produce bias when dealing with missing data. In addition, the explanatory variables (infant mortality, partial democracy, and so on) are in fact indirect indicators that the state has *already* failed, whereas their heterogeneous dependent variables (genocide, revolutionary wars and so on) are not really measures of state failure but instead are indicators of some of the disastrous *consequences* of state failure. One final point worth noting is the possibility of the fragmentation of states, which produces backward comparability problems regarding the dataset.

2.2. Structural: Country Indicators for Foreign Policy (CIFP)[17]

This Carleton University (Canada) project provides comparative demographic and development geopolitical data for countries. The website contains risk assessment reports and maps and tables showing country indicators, including political, conflict, military, economic, and environmental data. Individual country or comparative data in the database can be visualized. The CIFP database currently includes statistical data in the form of over one hundred open source performance indicators for 196 countries, spanning sixteen years (1985 to 2000) for most indicators. The indicators include economic performance as an issue area (see Table B). The project thus monitors indicators of relevance to the OSCE's work.

The visualizing of the data and the project's global coverage are two important advantages of Carleton University's initiative. There are some gaps in the database (macro data, lack of sub-national figures) and long time lags in data updates.

2.3. Structural: World Bank Conflict Analysis Framework (CAF)[18]

The Conflict Prevention and Reconstruction Unit has developed a Conflict Analysis Framework (CAF) to enhance conflict sensitivity and conflict prevention potential of World Bank (WB) assist-

[16] The pitfalls outlined here are drawn directly from G. King, L. Zang, op. cit.
[17] See [http://www.carleton.ca/cifp/about.htm].
[18] See [lnweb18.worldbank.org/ essd/essd.nsf/CPR/ConflictAnalysis].

ance. The CAF first analyzes key "pre-risk" factors influencing conflict, focusing on six areas: social and ethnic relations; governance and political institutions; human rights and security; economic structure and performance; environment and natural resources; and external factors. The pre-risk analysis is carried out to identify countries for further analysis.

The methodology uses a risk screening process to assess if a country needs to undertake the CAF. The risk screening process consists of nine main indicators, which aim to capture the deteriorating environment in a country (see Table B). The WB has also taken steps to differentiate between conflict escalating indicators and conflict-mitigating indicators; that is, pre-conflict and post-conflict analyses.

CAF's sub-indicators used for CAF's in-depth analyses are biased toward macro-economic variables that in turn pre-bias the outcome of the Bank's conflict analyses. CAF does not systematically repeat its analyses in the same country. This renders cross-country comparisons difficult and temporal analyses a challenge at best.

2.4. Structural: International Monetary Fund Currency Crisis Early Warning

The IMF is systematically tracking several early warning system models of currency crisis for emerging markets, both in-house and from private institutions, as part of its broader, forward-looking vulnerability assessments.[19] The IMF has drawn on the following models: the Kaminsky, Lizondon and Reinhart model, the Goldman Sachs model, the Credit Suisse First Boston model, and the Deutsche Bank model. The IMF's work draws on econometric and market models that use financial data (credit ratings, asset prices, stock exchange) to produce probabilities of external debts repayment default for countries with emerging markets.

The IMF produces quarterly reports that feed into the broader and more qualitative vulnerability assessments. The methodology is being refined to draw more substantially on information embedded in asset prices to model probabilities of debt/financial crises.

The results have been mixed and the quarterly reports are highly restricted in dissemination. Financial markets did not anticipate crises in most cases. It is worth observing that IMF recommendations regarding exchange rate and convertibility regimes have also changed over time.

2.5. Dynamic Analysis: Swisspeace FAST Early Warning Project[20]

Originally developed in collaboration with Virtual Research Associates (VRA), FAST's objective is the early recognition of tension for the purpose of early action and prevention of violent conflict. FAST's methodology includes both quantitative and qualitative analysis. The project's early warning methodology is based on the Integrated Data Event Analysis (IDEA) approach, an open source framework developed by VRA (see section 2.6). For each country a "unique" set of events are logged mainly from local media sources and FAST's own local information networks (LIN) of field monitors. LINs typically include one country coordinator based in a country's capital and 3-5 field moni-

[19] This section is based on a phone conference with Jorge Roldos, Research Department, International Monetary Fund, 20 October, 2004 (see also: IMF Working Paper, "Assessing Early Warning Systems: How Have They Worked in Practice?" March 2004).

[20] See [http://www.swisspeace.org/fast/default.htm].

tors based in other locations, including rural areas. FAST presently monitors 22 countries worldwide and has recently launched FAST International, a consortium of like-minded international development organizations, to finance and extend FAST's geographical network.

A distinguishing characteristic of FAST's approach is that field monitors document both conflict and cooperation events. These are then logged and visualized in the form of graphs, or tension barometers, the accessibility of which may appeal to policy/decision makers. These graphs form the basis of FAST's quarterly risk assessments which are publicly available on the Swisspeace website and readily available in hardcopy.

Some limitations of FAST include the expense of maintaining LINs and the substantial investments in time and resources for quality control and regular (re-) training due in part to turn over in field staff. The latter also face security risks when collecting local data. This has shut down some LINs such as in Eritrea, interrupting what needs to be continuous reporting if the data is to be used for forecasting purposes.

There are inter-coder reliability problems given that FAST's 60+ indigenous field monitors may perceive and code a "similar" event differently—especially when coding rules require that each decides whether or not to code an event based on the event's likely national significance.[21] The use of hand coding thus introduces a non-random error in the data collection and limits the cross-country comparisons.[22] The national-significance threshold requirement may also lead to an underreporting of salient incidents since more localized contentious events could eventually translate into an event of national significance.

The point of early warning is to prevent incidents of national significance. Solely monitoring them is a reactive exercise, not necessarily preventive. On the other hand, this type of macro-data when collected systematically over many years may enable statisticians to identify interesting patterns using econometric analysis. Whether the calculus can be trusted and convince policy makers is another question.

2.6. Dynamic Analysis: Virtual Research Associates GeoMonitor[23]

VRA developed the Integrated Data for Events Analysis (IDEA) topology, a conceptual framework for use in coding social, economic and political events data.[24] VRA's GeoMonitor (branded FORECITE for the army) illuminates countries' vulnerabilities to social hazards by monitoring global news wire service reports, assessing them and presenting up-to-the-minute intelligence in graphs, maps and tables. Drawing on an electronic archive of reports spanning more than fifteen years and a continuous news feed from Reuters and Agence France Presse, VRA makes it possible for analysts to identify and assess trends reported in large volumes of text using Hidden Markov Models, and still drill down to any specific report for reference.

Owing to the large costs and logistic problems of human coding, most risk and needs assessment datasets are not continuously updated. This often produces long time lags between information collection, decision-making and project implementation. However, information that once took months or years to code can now be processed in a matter of days or weeks with coding reliability that is

[21] See: G. King, W. Lowe, *An Automated Information Extraction Tool for International Conflict Data with Performance as Good as Human Coders: A Rare Events Evaluation Design*, Harvard University, 2002.

[22] Ibidem.

[23] See [http://www.vranet.com].

[24] See [http://www.vranet.com/idea].

comparable to human coders.[25] Given this capability for automated monitoring of an ongoing situation from global news feeds, custom datasets can now be generated at will. VRA software leverages the tasks that professionals already do by offering a 100% transparent and 100% consistent automated system of processing reports. By its technological leadership in natural language processing and events data analysis, VRA can support a number of risk management applications in a growing field of industries and professions, via a global, real-time system that is flexible, user customizable, intuitive, and low-cost to operate. GeoMonitor indicators include Economic Activity as a pre-defined indicator category (please see Table B).

Like the FAST project, GeoMonitor is also prone to serious limitations. The system presently relies on only two newswires as sources of input. Recent empirical studies in media bias suggest reliance on two sources is quite insufficient for reliability in analysis.[26] This limits the triangulation of baselines and forecasts. An important weakness of GeoMonitor is the graphical-user-interface which makes using GeoMonitor particularly difficult. Finally, the main constraint of GeoMonitor is that the system is only available at prohibitive prices that few, bar the Center for Army Analysis (CAA), can afford.

2.7. Consultative: World Markets Research Center (WMRC)[27]

WMRC is a country intelligence research firm that publishes comprehensive same-day analysis of the main news, events and trends as they occur. Written by in-house economists, political analysts and industry specialists, "Same-day Analysis" is made available each working day to tens of thousands of corporate, financial, government and academic users. The Political and Economic Forecasting Unit draws on open source information, e.g., public risk rating companies, *Factiva* and about 10,000 book-marked Internet sources to carry out their analysis. The Unit uses a filtering program to flag articles/reports of interest for analysts to use in their "Same-day Analyses".

WMRC systematically covers 202 countries worldwide on a daily basis (or as required by clients). The Political and Forecasting Unit has developed a risk rating methodology (scaled from 1 to 100) that draws on an analytical framework of six clusters: Political, Economic, Legal, Tax, Operational and Security (or "PELTOS"). WMRC is moving toward developing sub-risk clusters to further refine their daily analyses. The added value of this work stems from the professional analysis carried out on a daily basis by WMRC's expert analysts. The Political and Forecasting Unit integrates the econometric modeling and forecasting produced by WMRC's sister company, Global Insight. WMRC produces global, regional and national scenarios based on the analysis. The integration of risk ratings and scenarios is the added value brought to bear by WMRC's work on political and economic forecasting.

Despite Global Insights econometric contribution to the integrated risk ratings and scenarios, WMRC's core methodology is predominantly qualitative and may therefore not be fully conducive to the development of baseline analysis for early warning.

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[25] See: G. King, W. Lowe, "An Automated Information Extraction Tool for International Conflict Data with Performance as Good as Human Coders: A Rare Events Evaluation Design," *International Organization*, Vol. 57, No. 03, July 2003, pp. 617-642.

[26] See: St. Shellman, B. Stewart, *Media Generated Data: The Effects of Source Bias on Event Data Analysis*, Paper presented at International Studies Association (ISA), San Diego, March 2006.

[27] This section draws on a phone conference with Guy Dunn, Director Political and Economic Forecasting Unit, 19 October, 2004 (see also: [http://www.wmrc.com/]).

2.8. Consultative: Control Risks Group Political Risk Analysis[28]

Control Risks Group (CRG) is a private company that produces risk analyses for Top 500 Fortune companies. CRG's RiskMap is an annual forecast of the worldwide political and security situation. Corporations and government bodies use this product to assess political, security risks and travel risks. CRG has a team of 23 analysts and editors who work on the Country Risk Forecast and RiskMap. The analysts use their judgment and consensus for determining the risk ratings: insignificant, low, medium, high, extreme.[29]

In addition to commentary on key issues of global significance, the political and security trends in more than 200 countries for the year ahead are discussed and a critical assessment of global business issues is also provided. CRG's Country Risk Forecast provides independent analysis of the latest international political, security and travel situation in some 150 countries worldwide. It assesses the impact on business and forecasts changes—providing an early warning of deteriorating conditions or reassurance that improvements are ahead.

The City and Country Risk Forecasts are available on-line through subscription. City and Country Risk Ratings are visualized and updated on a daily basis. The forecasts draw on local news coverage in country and globally, as well as on-the-ground resources in the form of contracted "stringers" (local suppliers of information and consultancy). However, The methodology employed is predominantly qualitative and may therefore not be conducive to the development of baseline analysis for early warning.

3. Early Warning in the OSCE Economic and Environmental Dimension

As already mentioned, the OSCE is the world's major regional security and cooperation organization. It has 55 participating States (from Europe, CIS countries and North America). Security is seen as a multi-dimensional issue that is addressed through cooperation with different institutions covering human rights, minorities, democracy, the media, the military, gender, and the economic and environmental spheres. The OSCE has missions in some countries—mainly in the Balkans, Southern Caucasus and Central Asia—to support field activities, often with the participation of local NGOs and voluntary contributions from OSCE participating states, and promote the OSCE core values.

Considering the economic dimension of the OSCE, a specific relationship exists between the organization and the Economic Commission for Europe of the United Nations (UNECE). This section assesses existing early warning mechanisms (i.e., advantages and disadvantages) vis-à-vis possible UNECE-OSCE aims and expectations and provides some recommendations for establishing and maintaining an Early Warning Mechanism in the context of the OSCE economic dimension.

[28] See [http://www.crg.com/html/service_level3.php?id=363].

[29] Insignificant: environment for business is favorable and likely to remain so; Low: business can operate with few problems; Medium: foreign business is likely to face some disruption from state or non-state actors / long-term investment security cannot be guaranteed; High: business is possible but conditions are difficult or likely to become so in the near future; Extreme: conditions are hostile to/untenable for business.

3.1. The OSCE "Strategy Document" and Early Warning

Any OSCE Early Warning Mechanism should be mandated to address threats to security stemming from economic factors in accordance with the OSCE Strategy Document for the Economic and Environmental Dimension adopted by the 2003 OSCE Ministerial Council (see Box 1).

B o x 1: **Early Warning in the OSCE "Strategy Document"**

"We **[the OSCE participating States]** ***task the OCEEA*** **[Office of the Co-ordinator of OSCE Economic and Environmental Activities]** ***to continue cooperation with the UNECE and other partner organizations on developing early-warning mechanisms and indicators for the assessment of implementation of commitments, and to present a report on the progress achieved to the Economic and Environmental Subcommittee by the end of 2004."***

(OSCE Strategy Document for the Economic and Environmental Dimension, December 2003, para 3.2.4)

3.2. Findings

The early warning mechanisms reviewed in this study are generally biased toward structural indicators at the expense of other factors known to be important; such as behavioral monitoring (see Table A). Setting a strategy to operationalize an OSCE early warning mechanism requires a needs assessment to identify existing structural deficiencies *and* a means to monitor how these deficiencies evolve as delivery services are deployed. Structural deficiencies in at-risk countries typically decrease over the long-term; however, the process of change can be quite volatile and violent given that it is the product of human agency and is thus susceptible to individual and collective behavior.

Because human behavior is an intervening variable in any development process, tracking relevant behavioral indicators can provide reliable baselines to complement the initial needs assessments that draw predominantly on structural indicators. These dynamic baselines can be used to identify in real-time situations in which progress toward development goals is being undermined or enhanced, both before and after the prescribed interventions.

3.3. Cautions and Opportunities[30]

Structural assessments are by definition limited to macro-level analyses. This level of analysis does not adequately capture local facets such as food security.[31] In addition, the overall aggregation of macro-level statistics is too blunt an instrument when used in structural risk assessments. Moreover, there is a pressing concern that the mentality of international organizations continues to be: "if we can't measure potentially important indicators, we simply ignore them."[32] Indeed, the emphasis of

[30] See: P. Meier, *The Role of Conflict Analysis in Preventing Complex Emergencies*, Columbia University, 2003 (unpublished).

[31] The following is based on personal discussions with Alex de Waal at Columbia University, 1 December, 2003.

[32] P. Collier ignores the trafficking of small arms as potential indicator for armed conflict due to the difficulty in measurement.

most conflict and risk assessments on "quantitative data for a large number of countries and, for statistical models, long time series, biases them toward existing datasets at the expense of other factors known to be important."[33] The Inter-Agency Standing Committee's sub-working group on early warning is following a similar approach at the United Nations.

Conflict and risk assessments by themselves cannot "be expected to provide precise points at which events are likely to occur."[34] They generally record slowly changing variables such as demographic and socioeconomic indicators, gross domestic product per capita, infant mortality and ethnic fractionalization.[35] "As a result, some countries to which structural assessments assign high probabilities of conflict actually experience it, while others are capable of avoiding it."[36] Early warning analysis and adequate response may explain the variance. Indeed, events generally provide the final push toward violent conflict or just the opposite.[37] Therein lies the added value in supplementing conflict assessments and structural data with early warning and behavioral data. Monitoring and preventing adverse patterns of behavior before they impede structural development is a noteworthy prevention-oriented approach.

While the causes of conflict, poverty, and violence are important to understand, so are the causes of peace. Focusing on one of the two dynamics will only provide half the "picture." Although conflicts may tend toward total war in the abstract, this remains a theoretical extreme even in the direst of violent conflicts. "Amid every war and genocide, there are people who are nonviolent, opposed to hatred and revenge […]. Some of them are called saints. Most are ordinary people."[38]

Getting the full picture requires that specific indicators be developed to adequately capture cooperative behavior in addition to conflictive behavior. Simply negating escalating indicators may be misleading and may even lead to skewed analyses and harmful policy recommendations. Delineating the locus of peace-generating factors would provide policy makers with a better understanding of indigenous conflict coping mechanisms (and entry points for peace building), thus strengthening the self-help potential and indigenous conflict-coping strategies existent in all at-risk communities. This approach may be more sustainable in the long run than solutions "made at headquarters".

Collaborating on peace-generating factors builds trust between the international community and local at-risk communities. In return, affected groups are more likely to confide sensitive information relevant to early warning. Local stakeholders would also benefit from conflict prevention strategies that adopt a more participatory approach by recognizing the worth of all stakeholders in decision-making processes. At the end of the day, it is the stakeholders, the victims, who deserve the necessary support and information to address and mitigate the vulnerabilities that exist in their own communities.

3.4. Recommendations

No single approach is likely to meet all of the OSCE's requirements for early warning. Therefore we recommend that the OSCE design a strategy that combines the most reliable conflict early warning mechanisms by continually monitoring, evaluating and synthesizing risk assessments that

[33] M. Levy, Th. Parris, op. cit., p. 6.
[34] [http://www.carleton.ca/cifp/others/methodsreview.pdf]
[35] See: M. Levy, Th. Parris, op. cit., p. 3.
[36] Ibid., p. 2.
[37] Ibidem.
[38] P. Meier, *Towards an Ethical Foundation of the Third Side: A Case for Genocide Prevention*, Columbia University, 2004 (unpublished).

integrate *both* structural and behavioral monitoring. This effort would produce a synthetic "watch list of watch lists."[39]

This type of integration is not without precedents. The IMF's approach to early warning takes a similar approach, as does the World Bank's and Transparency International's. In addition, the United States Agency for International Development (USAID) is well underway in operationalizing a synthetic "watch list of watch lists" to help "identify priority countries for conflict analyses and conflict or transition programs."[40] USAID's list of lists is expected to be produced on "an annual basis with quarterly updates that would evaluate the outputs from multiple structural risk assessments, examining areas of agreement and disagreement to serve as points of departure for subsequent analysis."[41]

More recently, the Early Warning Working Group of the Consortium for International Conflict Prevention (CICP) is leading the development of a Watch List. Swisspeace is leading this initiative in collaboration with the International Security Network (ISN), the International Crisis Group (ICG) and International Alert. The Watch List will include a few questions about conflict trends and opportunities for peace building that can be quantified and graphed. This questionnaire will be submitted to local Nongovernmental Organizations (NGOs) in developing countries and counterparts at international NGOs on a monthly basis. The project is to focus on West Africa as the first pilot region.

Unlike the aforementioned efforts, however, we recommend that the OSCE integrate behavioral assessments into the multiple risk assessments as our findings clearly indicate the pressing need and added value of integrating structural data with dynamic data. We propose to follow-up this paper with a preliminary "list of lists" that will integrate the early warning mechanisms identified by participants of the UNECE-OSCE Expert Meeting on a Joint Early Warning Mechanism. Our goal in presenting this as a follow-up is to illustrate how the UNECE-OSCE might go about constructing a synthetic "watch list of watch lists" to operationalize an early warning mechanism in the OSCE context.

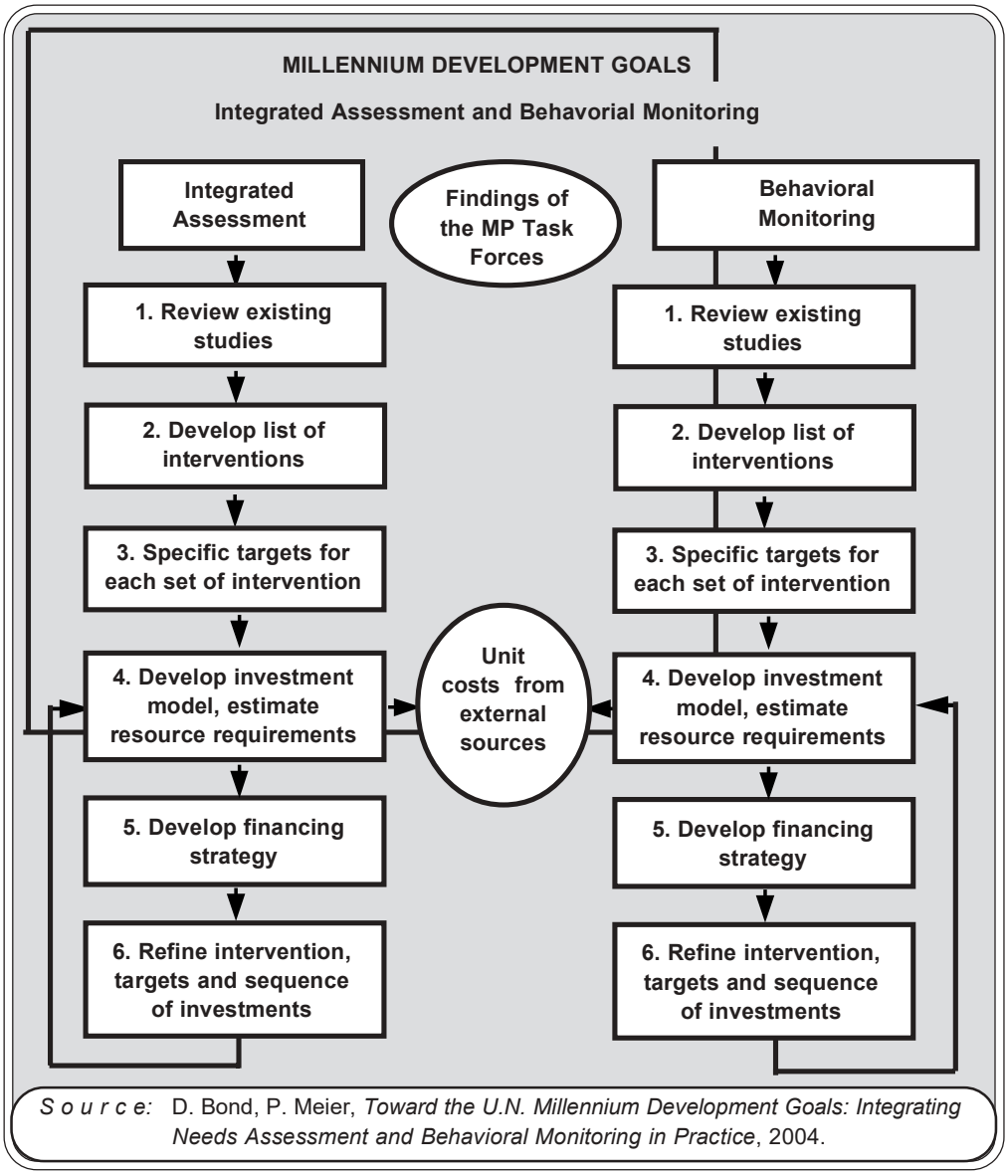
Conclusions

The next generation early warning mechanisms are expected to share several attributes as they continue to evolve. They will integrate quantitative and qualitative analysis, macro and micro level parameters, structural and behavioral indicators and geographical information systems (GIS). The use of GIS in policy circles adds considerable value. "A picture speaks a thousand words" and policy makers are more likely to respond to maps than tables, charts and/or textual analysis if only because maps "personalize" an otherwise abstract rendering of data. Indeed, country maps are easily recognizable and identified—this process alone creates a "personal tie" between the policy maker and the map in question, particularly when the policy maker recognizes the outline of her/his own country.

Another major advantage of geographic displays is that they are easily understood by anyone, regardless of language, background or training. Maps can therefore be shared among local communities and discussed in a more intuitive manner than tables and graphs. Maps also facilitate the local ownership and formulation of response options based on traditional, indigenous response mechanisms. This serves to empower at-risk communities through enhanced capacity building efforts at the local level.

[39] This section draws in part from M. Levy, Th. Parris, op. cit.
[40] M. Levy, Th. Parris, op. cit., p. ii.
[41] Ibidem.

Figure 3



Source: D. Bond, P. Meier, *Toward the U.N. Millennium Development Goals: Integrating Needs Assessment and Behavioral Monitoring in Practice*, 2004.

Our policy recommendations for the integration of early warning systems can be summarized more generally in the above scheme (Fig. 3) adapted from the "Millennium Development Goals Needs Assessments" (17 January, 2004).