MEETING OF GOVERNMENTAL EXPERTS
ON EARLY WARNING AND CONFLICT
PREVENTION

KEMPTON PARK, SOUTH AFRICA
17 – 19 DECEMBER 2006

PSD/EW/EXP/8(I)

MEETING THE CHALLENGE OF CONFLICT PREVENTTION IN
AFRICA – TOWARDS THE OPERATIONALIZATION OF THE
CONTINENTAL EARLY WARNING SYSTEM

BACKGROUND PAPER NO. 3

DEVELOPMENT OF INDICATORS FOR EARLY WARNING SYSTEMS
SOME CONCEPTUAL AND METHODOLOGICAL ISSUES

This document does not necessarily reflect the views of the African Union
DEVELOPMENT OF INDICATORS FOR EARLY WARNING SYSTEMS
SOME CONCEPTUAL AND METHODOLOGICAL ISSUES

1. The practical policy issue of “conflict prevention” and the attendant need for “early warning” to promote peace and security is a relatively recent addition to policy planning and research. These related concepts emphasize forward planning and inform early response to situations that seriously impede development initiatives; they became key elements in general policy directives with the dissemination of, then, U. N. Secretary General Boutros Boutros Ghali’s “Agenda for Peace” in 1992.

I. Background discussion of early warning models and indicators

2. There are two crucial questions that arise when the issue of identifying “early warning” indicators is posed. First is the question regarding the specific condition or situation for which we require early warning indicators (i.e., “of what”) and second is the question regarding “how early.” The answers to these questions will determine which indicators we should examine and monitor; how we might leverage the sequential, situational dynamics; and what the prospects for successful leverage might be. Early warning indicators must necessarily be factored with special attention to the role of the “state,” which is the principal organization among many political and identity groups that, acting together, determine the quality of the societal system, the nature of societal dynamics, and the prospects for managing those dynamics with an aim to sustaining and improving the system. In any case, most measures of societal factors are measured with the state as the unit of interest; there are few measures that capture regional variations within a state administrative structure. The lack of information on within-country variation is not necessarily a limiting factor in macro-system monitoring activities as societal conflicts that occur in specific localities should be monitored by local authorities and managed by local agencies. It is only when disturbances span localities and involve coordination among local groups in larger activities that directly challenge state authorities or the state’s conflict management capabilities that the larger system should be alerted and ready to assist. Inter-governmental early warning systems necessarily focus on macro-comparative indicators for monitoring and raising alerts so as to better filter information and maximize the “signal-to-noise” ratio in information processing in large and complex systems.

3. In the most general terms, the earlier a warning occurs in an interactive sequence between societal actors, the broader the options for applying leverage and the greater the opportunities for meaningful engagement. Again, when dealing with specific situations, local access and local knowledge are crucial to effective conflict management. The optimal situation would be defined by continual engagement and communication, cooperative monitoring and regulation of the terms of interaction, and maximization of productive outcomes. This optimal situation would be, then, characterized by integration, coordination, regulation, and reiteration, that is, a consolidated societal system. In consolidated societal systems, problematic situations that occur during reiterative sequences tend to be recognized early and corrected by cooperative engagement among the primary actors (stakeholders). Consolidated societal systems are largely self-actuating, self-regulating and self-correcting; they are also responsive and conducive to system innovation (self-organizing and adaptive). Leadership, of course, plays a crucial, entrepreneurial role in the management of societal system dynamics. In lesser-developed systems, the presence and capabilities of local agencies may be severely limited, particularly in marginalized areas.
Local problems are not engaged by local authorities and often go unmonitored and unreported, thus, allowing local problems to increase to unmanageable scope and magnitude before the state becomes involved. Lacking local access and knowledge, state authorities may overreact and exacerbate problems rather than defuse them. Identifying weak localities and assisting in the building of local capacity for conflict management is, in general, a much more effective option for preventing, managing, and containing local problems than are forceful interventions by distant authorities.

4. Problems that arise in societal system dynamics can stem from any of three fundamental aspects of the dynamic societal system: conflict, governance, and development; the quality of each of these three aspects affects the potential of the other aspects (see Figure 1). As such, the qualities of governance and development must be taken into account when analyzing or leveraging conflict. Likewise, the qualities of conflict and governance must be included when examining the qualities of and potential for development and the qualities of conflict and development affect the nature of governance.

5. At the most basic level, an effective “early warning system” must be able to establish valid baseline measures of the core attributes of each, distinctive societal system on each of the three fundamental aspects: governance, development, and conflict, and, it must monitor changes in the key qualities of those three aspects so as to alert designated agencies and policy makers to problematic conditions or situations that could lead to serious, systemic disruptions.

6. Research regarding political conflict has traditionally been concerned with identifying the “causes” of distinct “forms” of political conflict. The “forms” of political conflict have been categorized variously as conventional or unconventional; internal (intra-state or civil) or external (inter-state or international); communal, ethnic, or revolutionary; terrorism, repression, or genocide/politicide; etc. The “causes” have often been distinguished according to their temporal relationship to the defining quality, or qualities, of political conflict (i.e., conflict processes); such causes have been variously categorized as “root” or “structural” causes, “proximate” or “dynamic” causes, and “immediate” causes (e.g., triggers, accelerators/decelerators, etc.). A second perspective argues that, while social conflict itself may be viewed as being “caused,” the expressions, tactics, and strategies used to settle disputes are conditional on, or contingent upon, such things as attitudinal predispositions, emotional impulses, available technologies, policy alternatives, rational calculations of interests/goals, structures of incentives, and opportunities for effective or exploitive political action. Additionally, some forms of political conflict are positive (and should be tolerated or promoted) and some are negative (and should be neutralized or controlled).
7. Pure causal relationships are largely deterministic; observed variations are due to errors in measurement and misperceptions. Pure conditional relationships are largely probabilistic; observed variations are due to rational, or irrational, decisions or imperfect information available to conflict actors. In practice, it is reasonable to assume that there are no “purely” causal or conditional relationships and that all indicators can be associated with a higher or lower “risk factors.” Political conflict, by its social nature, involves collectivities that span multiple interests and goals and, so, combine “risk factors” in complex, and unique, ways. Given these, and other, considerations and complexities, the choice of indicators and methodologies must be informed, first, by their availability, second, by their effectiveness and consequent usefulness and, third, by their sustainability over time and adaptability to varying and changing conditions. Risk management is a probabilistic science that proactively operates to accurately identify risk factors, adjust policy to minimize those risks, engage to transform higher risks to lower risks, and calm (or contain) high risk situations until the risk factors can be lowered.

8. One of the characteristics of societal systems is that lower system development is most often associated with limited governance and more pervasive/violent conflict. A second characteristic is that the systems themselves are characterized by sectoral and locational differences in the situational qualities of the three fundamental aspects. Some sectors or locations within the system will enjoy relatively better qualities of conflict, development, and governance than the other sectors or localities. The key for improvement of the system, as a whole, is to ensure that the higher quality sub-systems take a leading role in guiding greater societal-system integration, coordination, regulation, and reiteration. If the leading sectors of the system are overtaken by the dynamics of the lower quality sectors, if they become disconnected from the other sectors, or if they fail to take the lead in improving the larger societal system, the system will falter, or fail. External factors may also interfere with “normal” societal system dynamics and contribute to system falter or failure.

9. Over the past decade, there have been, and continue to be, efforts to design, operationalize, and implement risk assessment and early warning and monitoring systems, by international organizations, development agencies and individual government, NGOs and academic institutions. However, there are a few such systems that have progressed to operationalization. These models can be categorized as “general risk and/or capacity models,” “conditional and/or causal factor models,” and “predictive models”.

II. General Risk and Capacity Models

10. General risk and capacity models avoid the technical difficulty of exact specification of complex and interactive risk factors in early warning models by emphasizing the strong relationship between general societal system weakness and/or underdevelopment and both a lower capacity of the state to manage conflict positively and higher risks of negative conflict outcomes (i.e., low development = high risk of negative conflict and low conflict management capacity = high risk of instability onset). General risk and capacity models can be used to rank order countries from weak to strong, building on the general association between weakness, social problems, political conflict, violence, and poor state performance. As such, these models are fairly good at identifying the states most likely to experience political violence and instability; however, they cannot predict when state will experience an actual instability onset. These models provide a broad and fairly comprehensive array of indicators and attempt to gauge specific weaknesses as a way to evaluate the system and highlight specific areas of weakness or vulnerability. “Early warning” in this class of models
focuses on capacity building and conflict prevention. The addition of dynamic indicators measuring changes in key factors or the tracking of changes in the various indicators from year to year provides additional information on trajectory, that is, whether the conditions in a particular country, or specific sectors within the country, are improving, stagnating, or deteriorating. They can also include indicators of negative conflict behavior to distinguish generally among “fragile, failing, and failed” conditions. However, although the broad array of indicators can allow a high degree of distinction in gauging relative strengths and weaknesses, there is little or no understanding of specific patterns or “syndromes” of differential development. That is, they can identify relative weaknesses but not the relative importance or strength of effect among those weaknesses.

III. Conditional and Causal Factor Models

11. Conventional and applied academic research into the “causes” or “drivers” of civil war events has produced a vast array of quantitative models that identify “leading indicators” associated with the onset of political violence events. These models are designed to test theoretical propositions operationalized according to specified hypotheses concerning relationships between “independent” and “dependent” variables. Applied research adds consideration of policy implications in the specification of models. These models are intended to establish evidence of temporal association and are not designed to be predictive of actual onsets of violent conflict or identify specific countries with risks of such onsets. They are important, however, in establishing the validity of indicators and, as the various models inform subsequent research and the general accumulation of knowledge, they provide for the progressive development of models and, so, help to establish the veracity of predictive models.

IV. Predictive Models

12. While critically informed by the evolution of theory in the social sciences and the accumulated “wisdom” derived from conventional and applied academic research, predictive “early warning” models are designed very specifically to maximize their ability to identify target outcomes (effectiveness) and for their compatibility with the prevailing political culture of intelligence and policy in applied settings (usefulness). As a result, predictive models rely on far fewer indicators than the “general risk and capacity models” while they also rank order countries according to their relative risks of problem onset; in this case, however, the ranking is based upon imminent risk. In order to gauge the imminence of risk, the models necessarily include one or more “dynamic” indicators (i.e., indicators that can change fairly abruptly) in combination with the more static “structural” indicators (i.e., those that tend to change slowly, if at all). The inclusion of “dynamic” indicators links the model outputs with monitoring or general surveillance support activities (i.e., “real-time” or “near real-time” information gathering and analysis). Additionally, while many key indicators are common across the full array of targeted problems, the exact specification of the target condition is crucially linked to the precise specification of key indicators.

13. When models are based on only a few indicators, great care must be taken in interpreting the findings. Also, each indicator must be examined for accuracy and trajectory as its inclusion or exclusion as a determining factor in the model is crucial to the model output (i.e., the prediction for a particular country). The model itself is mechanical, once the model parameters have been set, but the inputs must be scrutinized and validated (borderline values suggest alternative model outputs depending on whether the indicator
value is measured as an included risk factor or excluded risk factor) and the output must be analyzed in accordance with possible mitigating factors.

V. Factionalism as a Key Factor in Risk Assessment

14. Perhaps the most important finding from the research summarized above is the proposition that the more problematic outcomes of political instability and breakdown are preceded by periods of less problematic, but no less distinct, periods of contentious politics. Serious political crisis requires a period of “build up” during which contentious actors organize and prepare themselves to engage in, and sustain, greater magnitudes of political action. These periods of increasing tension and mobilization are, at once, logistically essential for local groups preparing for the “coming crisis” of political instability and a “window of opportunity” for early response to leverage a more favorable outcome (conflict management) before the conflict actors have invested too much energy and have aroused too much emotion to be swayed from “acting out” their tensions and hostility toward the opposing group or state authorities.

15. In general terms, the (Polity) conceptualization of “factionalism” refers to an advanced, macro-systemic stage of group polarization that transforms political behavior in distinct ways that are both systematic and sustained. Factionalism transforms the conventional politics of deliberation to the unconventional “anti-system” politics of disruption. In conventional political dynamics, there is always a “factional” group or groups that promote uncompromising agendas (radicals) or practices (extremists); these groups often remain obscure but may gain prominence during periods of high or increasing social tensions. In many situations, factional groups become institutionalized and may persist over long periods as one or the other gains political control and acts to limit the ability of political contenders to act openly and/or effectively. The influence of factions is normally mitigated by moderate groups that design and implement inclusive and cooperative responses/solutions to common demands/problems and gain legitimacy/agency/constancy through superior performance outcomes. Under duress, moderate groups may gravitate toward more radical or extreme positions or form alliances/coalitions with radical/extreme groups or they may lose popular support and, thereby, their political relevance may become greatly diminished. As groups polarize they tend to focus group identity and organization on key/core issues (poles) and submerge other factors that distinguish the group politically. Factionalism, then, is distinguished by systematic, or patterned, acts of contention between groups promoting diametrically opposed viewpoints or policy responses; such systematic contention tends to persist over time as points of contention are associated more with symbolic group identity and less with practical issues affecting group interests. In the advanced state of polarization, the number of relevant (main) factions will approach two and the issues of contention will become “compacted” and difficult to define and disaggregate, apart from the symbolic issue(s) that are used to mobilize, and maintain, group polarization. The “window of opportunity” identified, and characterized, by factionalism and group polarization usually lasts between ten years, under circumstances where there is little or no prior collective experience with political violence, and as little as two years, in cases where opposing groups (such as ethnic or regional groupings) have a priori political mobilization and organization based on prior episodes of contention. In either case, such opportunities must be identified early, monitored continuously, and engaged actively in order to maximize policy leverage and management potential.
VI. Baseline Attributes of Societal Systems

16. While the standard unit of measurement and analysis in early warning models, that is, the country or the “state,” shares a set of fundamental, common structural attributes and socio-political dynamics, each unit is also defined by a very unique set of attributes and dynamics. Intimate knowledge of these unique qualities (such as relevant social groupings and “lines of contention”) and the baseline attributes any particular unit under analysis will enable a more refined comprehension of the particular risks and likely outcomes in any given situation. Country and area expertise are invaluable complements to risk models in the operation of an early warning system. In particular, there is very little information that can be used in general risk models regarding crucial within country variations on key indicators. Even when such information is available, it can be very difficult to incorporate that information in the more general models. Area expertise is an essential component in applied research and risk analysis.

VII. Sequential Dynamics and “Early Warning” in Societal Systems

17. Data-driven (indicator-based) risk assessment is a crucial component in early warning systems; they are particularly useful components in larger systems that are designed to monitor risks at the global, continental, or regional system level. Macro-systemic risk assessment for early warning can help to focus attention, and scarce resources, on key risk areas or high-risk countries within the larger system. However, risk models are largely based on structural factors that change very slowly. As such, general risk assessments need only be conducted on an annual basis to trace changes in baseline attributes. The imperatives of early warning, however, require a more continuous monitoring of high-risk situations. Once the key indicators of a risk assessment system have been “fixed,” regular monitoring of changes in those key indicators makes it possible to readjust risk assessments higher or lower at any time. Also, as mentioned above, reexamination of the measures for individual indicators for individual countries used in making general risk assessments, especially when the values for those indicators are borderline values in regard to the established (estimated) model parameters, provides an important mechanism for refining and reevaluating risks. Risk assessments are, after all, a dual-purpose tool: they help “downstream” by predicting problem onsets but, more importantly, they identify access points and provide essential information on leverage possibilities/necessities for prevention policies. In order to make risk assessment models more effective, they must be augmented with continuous monitoring on both ongoing and emerging problem events and considered within the context of local system capacity (governance, development, and conflict).