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ANNOTATED BIBLIOGRAPHY:
EARLY WARNING SYSTEMS OF POLITICAL DISASTERS

by

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INTRODUCTION

"Early warning and conflict prevention are based on proactive responses to potential threats to national and/or human security" (Leatherman, et. al. 1995:4).

USAID recently began to explore the relationship between development and conflict, focusing in particular on the utility and effectiveness of preventive diplomacy, early warning systems, and conflict resolution mechanisms. Discussions of "failed states"; the perception that USAID and other donors seemed unprepared to deal with the events in Rwanda, Somalia, Bosnia, and Haiti; the new application of chaos theory[1] to political events; concern over the persistence and costs of ethnic conflict and "complex disasters" -- all these factors contribute to the need for USAID and other donors to examine these topics. This annotated bibliography, by examining key literature on early warning systems, is intended to contribute to this ongoing discussion.

In response to increased international attention to political disasters, USAID's Policy Bureau sponsored two informal workshops on early warning, in October 1994 and April 1995. These workshops brought together Agency and other US government staff, donor representatives, academics, and conflict resolution experts to discuss early warning systems and preventive action. In the process of preparing for these workshops, an initial literature search was launched. The documents uncovered in the search were subsequently requested by Agency staff and others. This annotated bibliography collects many of those documents, and focuses on the main theoretical questions identified by the Agency. It will be a useful tool for USAID staff as they attempt to come to terms with countries in transition.

This annotated bibliography, organized into four main sections, also gathers selected writings from mostly non-donor sources. The first section examines early warning systems documents which take a general, more theoretical, approach to the subject. The second section reviews articles which focus on issues related to early warning systems. The third section lists supporting documents that are not annotated. The last section includes the agendas from the two Agency workshops on early warning systems.

This bibliography is not intended to be an exhaustive list of materials or literature. Instead, it provides readers with an overview of major theoretical issues and models relevant to early warning systems. USAID staff and contractors can contact PPC/CDIE/DI's Research and Reference Services by telephone at (703) 875-4974 or by email at "hmchugh@usaid.gov" for information on how to obtain copies of these documents.

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[1]The essence of chaos is that a relatively complex behavior is strictly governed by a discernable pattern, but is, nonetheless, relatively unpredictable due to the sensitivity of local conditions (University of Pennsylvania 1996:3). The assumption by many chaos theorists is that the ultimate result of chaos is conflict and war (Saperstein 1984). Because of the relative unpredictability of political systems, many actors have tried to control global and local conditions so that chaos does not overtake the system. However, some experts believe that instead of attempting to force a chaotic system back into the desired stable condition, information about the structure of the system can be used to engineer a stable version of the target design (Mayer-Kress 1992:10). Then, internal dynamics will assist extremely small interventions in bringing the system closer to the desired condition (Ibid.). The relevance of chaos theory to development organizations is still being explored; it seems that the macro-level discernable patterns of systems (with short-term predictions) may assist development decision-makers in making better program and project decisions.

PRINCIPAL DOCUMENTS

_____. July 1994. "Early Warning of Communal Conflicts and Humanitarian Crisis." Proceedings of a workshop held at the Center for International Development and Conflict Management, University of Maryland, November 5-6, 1993, Sponsored by International Alert and Korea Foundation. As reported in Journal of Ethno-Political Development, Vol. 4, No. 1. (131 pages)

> This journal contains seminal information on the field of early warning of conflict. It is divided into the following sections: (I) theories and models of communal conflict, including genocide, politicide, and humanitarian crisis; (II) evaluations of early warning models, including WEIS, PIOOM, event data, real-time test cases, and more; (III) policy uses for early warning models, including preventive diplomacy; and (IV) assessments and critiques of early warning research.

Auvinen, Juha Y. February 1995. "Socio-Political and Economic Indicators for Conflict Early-Warning." Paper prepared for the Annual Meeting of the International Studies Association, Chicago, Illinois, February 21-25, 1995. Helsinki, Finland: University of Helsinki. (42 pages, 8-page bibliography, 1 table)

> Several socio-political and economic indicators are proposed for the early warning of intra-state conflicts. The indicators are incorporated in a conceptual model constructed on the basis of relative deprivation and resource mobilization theories. The validity of the indicators is first theoretically discussed and subsequently tested by regression techniques. Low levels of economic development and International Monetary Fund (IMF) finance, long history of IMF intervention, high levels of inflation, urbanization and previous levels of conflict, presence of moderately authoritarian regimes, and ethnic dominance are all situations associated with political conflict. The analyses were made on a sample of 70 developing countries in 1981-1989. (Based on the author's abstract).

Bloomfield, Lincoln P. and Amelia C. Leiss. 1995. "Heading Off Conflicts Before they Happen: Early Warning and Preventive Diplomacy." Paper presented at a Briefing of the Greater Horn of Africa Initiative, Conflict Prevention Reporting, Analysis, Decision-making and Response System (RADARS) Team, US Department of State and US Agency for International Development, November 6, 1995. DRAFT. (24 pages)

> The author briefly reviews early warning indicators proposed by various academic experts, including: Thomas Homer-Dixon's finding that four main factors underlie conflict in developing countries -- decreased agricultural production, economic decline, population displacement, and disruption of institutions and social relations; other experts who find poverty to be the single most important factor in predicting countries that will experience violent conflict; Norman Myers' correlations between population pressures (including environmental ruin) and political turmoil. Roy

Prosterman correlates land distribution with revolutionary potential; and the United Nations Development Program's (UNDP) work with "'operational indicators' of human security" -- where it uses its "Human Development Indicators" list to rank countries.

Bloomfield has been working for some 15 years on the Computer Aided System on Conflict (CASCON) at MIT, which assembles data on many historic conflicts throughout the world. He proposes that comparative data from historic conflicts can determine which indicators can affect or predict current or future conflicts .

Bond, Doug and William B. Vogele. August 9, 1995. "Profiles of International 'Hotspots.'" Prepared for the US General Accounting Office by the Program on Nonviolent Sanctions and Cultural Survival, Center for International Affairs. Cambridge, MA: Harvard University. (43 pages, 47 tables, 1 list)

This report was sponsored by the US General Accounting Office, the Albert Einstein Institution and the Center for International Affairs at Harvard University. Near real-time methodologies were used in order to develop profiles of international "hot spots" where crises requiring peace operations may be needed in the near future. The study developed "event data" profiles for nine armed conflicts using more than half a million worldwide news reports from Reuters. These reports were "coded" by a fully-automated "sparse parsing" computer program called the Kansas Event Data System (KEDS). In particular, the study focused on conflict interactions where violence was not yet employed, and where the prospects of peaceful and constructive interventions are most promising.

Three profiles were developed for nine armed conflicts that erupted between January 1984 and April 1995: (1) intensity of the conflict, (2) signals of violence, and (3) carrying capacity of a system or the ability of the government system to manage internal conflict. The study found that three countries are most at risk for eruption or escalation into violence: Afghanistan, Algeria, and Turkey.

Bond, Doug, Shin-wha Lee and Karen Rothkin. February 1995. "PANDA's Early Warnings on Conflict." Program on Nonviolent Sanctions and Cultural Survival, Center for International Affairs, Harvard University and Department of Political Science, Massachusetts Institute of Technology. Cambridge, MA: Harvard University. (25 pages, 1 table, 1 figure, 1 list)

The introduction of this report describes the history of early warning, and outlines the major projects involving early warning activities and related research. The rest of the report details the Protocol for the Assessment of Nonviolent Direct Action (PANDA) project. This system uses changes in the frequency and intensity of violent acts reported in the media to forecast the likelihood of a catastrophe (O'Neill 1996:2).

Brogan, Martha. July 1995. "Providing Security from the Scourge of Violence." <u>Strengthening the United Nations for its Second Half-Century</u>. (9 pages downloaded from Yale University Web Site "http://www.library.yale.edu/un/unhome.htm")

> This report briefly describes how the United Nations (UN) early warning system should collect and analyze information. The author then recommends that an office under the Secretary-General should be created to centralize this process.

CIDA/ACDI. July 1995. "Beyond Emergency Assistance ... Early Warning, Conflict Prevention and Decision-Making." CIDA/ACDI Discussion Paper. Ottawa, ON: Canadian International Development Agency. (51 pages, 4 tables/figures, list of Canadian contacts)

> In this report focused on events in Africa, CIDA suggests the foundations for an early warning system. It is proposed that the system should comprise: (1) fact-finding, to gather, process and analyze information, drawing pertinent conclusions, (2) decoding, to translate the information and analysis into social and political interventions in light of the political context, and draw conclusions; and finally, (3) developing and translating the information into "ordinary language" in order to provide policy-makers with a basis for action that will be viewed as legitimate by citizens.

de Raadt, J.D.R. Nd. (1995?). "Early Warning: A Multi-Modal System Analysis of the Chilean Situation 1970-1990." Luleå, Sweden: Luleå University.

> This document summarizes a research proposal to develop a theoretical model, based on a multi-modal systems approach, of national instability and collapse. In addition, the research will focus on the warning signs of such collapse, and guidelines that may help avert crisis and unrest. The author suggests that there are three main clusters of factors that may lead to a systemic crisis: adversity (all the unfavorable factors that may lead to collapse); unrest (the systems negative response to adversity); and restraint (the direct measures -- both positive and negative -- that the government uses to control the unrest).

Duffy, Gavan. February 1995. "A UN Early Warning System: What Should It Be?" Prepared for the Mershon International Studies Quarterly. Syracuse, NY: Syracuse University. (10 pages, bibliography, downloaded from WWW "gavan@mailbox.syr.edu")

> The author believes that centralized early-warning systems will fail because any decision made on the design of such a system is based, ultimately, on political choices. Particular event datasets or analytic methodologies reflect and articulate the world views of the designers of the early warning system. Thus, "proposals that would ground UN early warning on any single theoretical perspective would fail, no matter how sophisticated or intellectually defensible that perspective might be." The author believes that this is the reason, at least in part, why the UN early warning system has had major financial problems, because there is no global consensus for

early warning.

The author then introduces the proposal that a decentralized system -- such as the one based on the world-wide Internet -- may be a solution and may broaden participation to non-governmental organizations (NGOs) and individuals. He then suggests some concerns about this proposal, including the understanding that Internet access is unevenly distributed around the world, and that quality control and truthfulness of the information may be questionable. Academic responses to this proposal are included in the document.

Esty, Daniel, Jack A. Goldstone, Ted Robert Gurr, Pamela T. Surko, and Alan N. Unger. November 30, 1995. "State Failure Task Force Report." Science Applications International Corporation Working Paper. Washington, DC: Central Intelligence Agency. UNCLASSIFIED, available only through the CIA. (75 pages, 14 figure/tables, 2 lists)

> This report, sponsored by the Central Intelligence Agency, was prepared in response to a 1994 request from Vice President Gore. He asked the CIA to develop a methodology that would identify key factors and critical thresholds signaling a high risk of failed states approximately two years in advance. Using two advanced techniques -- statistical logistic regression analysis and a pattern methodology known as "neural networks" -- the study found three variables that best identify which states failed "during the historic period studied": degree of openness to international trade, infant mortality, and democracy. The study found that a combination of these three variables can correctly discriminate between failure and non-failure cases, two years in advance, for about 70 percent of the cases.

> The study also found that among more democratic countries, the risk of failure was greater when infant mortality was high and foreign trade was low. Among less democratic countries, the risk of failure was greater when trade was low, regardless of infant mortality rates. Other findings include: for cases involving ethnic war, the existence of a youth bulge increased the risk of state failure; and for cases involving adverse or disruptive regime transition, the length of time that a type of government has been in place emerged as a good indicator for failure (with new regimes facing a higher risk of failure than established regimes).

March 1, 1996. "Famine Early Warning System (FEWS)." In Rosemary O'Neill's "Unclassified Memorandum: Electronic Early Warning Systems." US Department of State. (8 page memo)

> FEWS was created as a direct result of the 1984-5 drought in Africa that first appeared in Ethiopia and the Sudan. It combines satellite imagery of vegetation cover with "ground truthing" to determine drought severity and the likelihood that famine might develop, based on estimates of the ability of populations at-risk to cope with the impacts of severe and prolonged drought. FEWS is a predictor of natural disasters, and has the potential to contribute to systems that predict conflict situations. It was developed under USAID contract, is highly regarded by USAID

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decision makers, and is in use today.

Gurr, Ted Robert. 1993. <u>Minorities at Risk: A Global View of Ethno-political Conflicts.</u>
Washington, DC: US Institute of Peace Press. (427 pages)

> This essential treatise codifies research on the status, demands, and conflict of
> communal groups since the 1940s. The accompanying analysis is based on coded
> profiles and substantive information on 233 politically active groups in 93 countries.
> The author finds that the Soviet successor states are the most likely candidates for
> escalating ethno-political conflict. He also makes tentative predictions for other
> regions of the world.

Gurr, Ted Robert. July 1994. "Testing and Using a Model of Communal Conflict for Early
Warning." <u>Journal of Ethno-Political Development</u>, Vol. 4, No. 1, Pg. 20. (4 pages, 2
figures)

> In this very brief article, the author calls for the development of early warning
> models in order to prevent or mitigate violent conflict. He suggests that the
> collection and interpretation of events data -- coded from news sources and field
> reports -- can lead to empirically based forecasts that determine the chances that
> specific conflict will intensify.

> With Barbara Harff, who directed previous research studies on the causes of gross
> human rights violations, the author developed an empirical basis for risk assessments
> based on his previous research titled "Minorities at Risk." The diagnostic model of
> risks described in the article attempts to: (1) assess background conditions, including
> legacies of past antagonisms between groups, loss of political status, political and
> economic inequalities, (2) intervening conditions, including the existence of political
> or communal organizations that are pressing group claims, high levels of communal
> conflict across national borders, and (3) response conditions, including a history of
> elite reliance on coercion, duration and strength of democratic experience, and
> extent of political and economic resource control.

IBM. 1996. "IBM 'infoSage' - Service Overview." (2 pages, downloaded from Internet
site "http://www.sage.hosting.ibm.com")

> Commercial information sources offer a variety of systems that may serve as part of
> an early warning system. IBM infoSage is an business-focused information delivery
> system individually tailored to the analysts' needs. Information is delivered to the
> analyst in a personalized newsletter twice a day.

Leatherman, Janie and Raimo Väyrynen. February 1995. "Structure, Culture, and
Territory: Three Sets of Early Warning Indicators." Paper prepared for the Panel on Early
Warning and Conflict Prevention in Intrastate Conflicts, Annual Meeting of the
International Studies Association, Chicago, Illinois, February 21-25, 1995. Notre Dame,

IN: University of Notre Dame. (83 pages, 8-page bibliography)

> This paper analyzes the relationship between early warning and conflict prevention. It examines various background conditions of intrastate conflicts, including structural perspectives, psycho-cultural approaches, institutional legitimacy and mobilization, and external actors. The authors compare the different types of early warning models being developed, including causal and corelational, sequential, intervention/response, and conjunctural.
>
> The paper concludes that early warning and prevention of conflicts require explicit indicators of background conditions and the escalatory dynamics of conflicts. Generalized indicators for the early warning of conflict are rejected because conflicts take place in specific contexts. However, the authors suggest that indicators such as a breakdown in channels of communication, increasing rigidity of positions, high levels of hostility, and more, can indicate a turn towards violence and the "destructive management of conflict." The authors then suggest that institutionalized mechanisms can provide the parties with the means to deal with conflict and peaceful change. Hence, "institutionalized mechanisms may enhance the stability and durability of outcomes in preventing or de-escalating conflicts. They may also provide one of the most effective means of averting a relapse into old conflict behaviors, or the re-emergence of similar conflicts."

Manor, James. May 22, 1993. "Panchayati Raj and Early Warnings of Disasters." Economic and Political Weekly (India), 1019. (1 page)

> This article examines the types of institutions that are most connected to individuals in the rural areas of India, and can, therefore, collect relevant information for an early warning system. The author dismisses journalists as sources of information because most of them have to take other jobs to ensure an adequate income. Likewise, many journalists tend to focus only on a few issues specific to their own districts. Both of these factors indicate that journalists may not able to provide adequate attention to gathering data for an early warning system. Local elected representatives, on the other hand, are viewed as the best source of information for an early warning system because they have established personal and information-gathering networks with their constituencies.

Maybury, Richard. July 1994. "US & World Early Warning Report." Early Warning Report. (4 pages downloaded from WWW "http://www.subscriptions.com/beacon" or "ewr@subscriptions.com")

> The author claims to be able to predict civil wars by monitoring weapons stocks on the Dow Aerospace and Defense Index.

Mayer-Kress, Gottfried. October 1992. "Chaos and Crisis in International Systems." Technical Report CCSR-92-15. Center for Complex Systems Research, the Bechman

Institute and the Physics Department. Urbana, IL: University of Illinois at Urbana-Champaign. (28 pages, 10 figures, and references)

Mayer-Kress, Gottfried and Cathleen Barczys. May 1994. "The Global Brain as a Modeling Paradigm for Crisis Management." Technical Report CCSR-94-5. Center for Complex Systems Research, the Bechman Institute and the Physics Department. Urbana, IL: University of Illinois at Urbana-Champaign. (27 pages, 7 figures, references)

Mayer-Kress, Gottfried. July 1993. "Global Network Information Systems and Nonlinear Methodologies in Crisis Management." Technical Report CCSR-93-6. Center for Complex Systems Research, the Bechman Institute and the Physics Department. Urbana, IL: University of Illinois at Urbana-Champaign. (17 pages, 4 figures, Internet contacts, and references)

> These three documents suggest that chaos theory supports only short-term predictions when systems are already experiencing stress. Therefore, a typical prediction time frame of five years is "too long in a world where time scales can be significantly shorter than one year (e.g., the eruption of regional conflicts such as those recently in eastern Europe)" (1994:18).

> The author(s) suggest that donor attempts to introduce "static order" in a region or country appear to actually increase instability since very little information about the internal state of the system and the actors in the system are taken into account. Thus, it appears that the most stable strategy donors adopt should attempt to encourage a dynamic order on the system which shows low level chaos -- where fairly accurate, short time predictions can be made. This means that the system is "unpredictable enough to keep the [donors] alert but also structured enough to allow for successful adaptation and anticipation" (1992:14).

> Furthermore, the author(s) suggest that in a complex, transitional world, it is better to use smaller models that need less input data and have fewer parameters to be estimated since small models can be updated more rapidly. A highly complex model may end up making predictions based on data or parameters that are already obsolete. The Internet is proposed as a data and parameter resource for the development of a global communication network that functions as a dynamic model for predicting political disasters.

> In addition, while there are indicators that are highly predictive for the outbreak of conflict based on empirical evidence (e.g., symbolic images of an enemy, national identification, charismatic leader, regional tensions, gradient in wealth, organizational capabilities, dissatisfaction with the standard of living, domestic repression, restricted information, military imbalance, and military-economic potential), the author(s) believe that mapping of a sample of the population (through opinion polls) can provide a highly predictive global model of change for policy makers.

Mizuno, Jiro. June 1995. "Humanitarian Early Warning System (HEWS): Progress and Prospects." A report of the Senior Advisor for Early Warning, UN Department of Humanitarian Affairs. New York, NY: United Nations. (15 pages, 4 charts)

> The Humanitarian Early Warning System (HEWS), based in the UN Department of Humanitarian Affairs (DHA), will compile and analyze information from several and varied sources with the purpose of identifying potential crises with humanitarian implications. The output of this system is intended to facilitate DHA's role in preventive humanitarian assistance and diplomacy. The system will increase the capacity of the humanitarian aid community for preparedness and timely response by shedding some light on the potential causes of crisis as well as on key elements to monitor for signs of deterioration. HEWS' database will provide systematized and updated information in the form of country profiles. Such a function, combined with the monitoring of events information, will serve a decision support role and contribute to the overall decision-making process of the international community. (Based on author abstract).

O'Neill, Rosemary. October 12, 1995. "GHAI Conflict Prevention RADARS Team." Unclassified Telegram, US Department of State, East Africa Bureau, REF: State 226929. (4 pages) *And _____.* December 1995. "Preventing Violent Conflicts: A Guide for Practitioners in the Greater Horn of Africa." DRAFT. Prepared by Creative Associates International, Inc. for the US Department of State, East Africa Bureau. Washington, DC: Creative Associates International, Inc. (186 pages, 1 figure, 4 tables) *Other materials related to RADARS are also available.*

> A specific regional preventive response to existing ethnic, political, and food-related crises has been the US inter-agency Greater Horn of Africa Initiative (GHAI). In 1994, President Clinton sent a delegation, led by USAID, to discuss with host governments and key donors appropriate short-, medium- and long-term responses to the situations in "affected" countries. This delegation recognized that there is strong economic and political interdependence in the Horn: ethnic conflict in one nation has the potential to destabilize its neighbors; food shortfalls in one nation may cut off traditional cross-border trading practices in another.

> This cable describes the RADARS Team, which was set up as an inter-agency system to provide early warning of and US government response to civil strife in the Greater Horn of Africa. "The RADARS Team's mission is to address the structure and likelihood of conflict in the Greater Horn of Africa, and to generate early assessments and recommendations for actions that lead to concerted, prevention-oriented responses" (October 1995:2). The RADARS program calls for two parallel information systems: a classified system within the US government and an unclassified system that is expected to be used by a variety of international players (NGOs, other governments, multi-lateral and bilateral donors, and more). It is expected that the system would include an electronic early warning network (Internet) and a response system.

Prepared for the GHAI RADARS Team, the draft document titled "Preventing Violent Conflicts" was written to guide foreign aid and development practitioners through the various conflicts in the Greater Horn. This massive guide describes potential root causes of conflict in the Greater Horn; defines the varieties of conflict prevention interventions and relates them to various stages and kinds of conflict; attempts to familiarize professionals with a variety of policy instruments and tools that may be used in conflict prevention; and describes organizations and resource personnel with expertise in various aspects of conflict prevention.

Scarborough, Grace I., Jill E. Lavigne, Laurie J. MacNamara, Richard E. Hayes, Margaret Daly Hayes, and Jamie A. Spector. September 30, 1993. "Societies in Transition: Political and Economic Reform Databases." Prepared for AMRD/ORD. Vienna, VA: Evidence Based Research, Inc. (22 pages, 9 figures, 3 tables, 2 appendices)

The Societies in Transition project was designed to explore and develop tools for analysts studying societies making the transition from autocracy to democracy. The project team created an overall framework for organizing information, an analytic tool, and a database for tracking political and economic reform. It also created a tool for forecasting different types and levels of instability.

Vanhanen, Tatu. 1992. "Social Constrains of Democratization." In <u>Strategies of Democratization</u>. Washington, DC: Crane Russak. (16 pages, 3 figures, 1 appendix)

The author suggests that the relative distribution of economic, intellectual, and organizational power resources is the determining factor in explaining transitions to and from democracy. Based on the models developed by the author, predictions are made about which countries are likely to become more democratic (Yugoslavia, Jordan, and Fiji), and which democracies are likely to fail (Botswana, Pakistan, Gambia, and Comoros).

RELATED DOCUMENTATION

Charny, Joel R. September 25, 1994. "Perspective on Relief: First Aid for a Suffering World; Disasters Keep Arising Anew with Urgent Claims on Humanitarian Aid -- A Task the UN was Once Ready to Take on." Los Angeles Times, Opinion Section, 5.

> This article examines the creation of the UN Department of Humanitarian Affairs (DHA), whose mandate includes providing early warning information. The author believes that the DHA has been a failure. On the other hand, he finds that international NGOs tend to provide better advanced warning of disasters, but do not have the capacity to respond comprehensively. Therefore, the author concludes, a re-empowered DHA is needed.

Fein, Helen. March 1990. "Lives at Risk: A Study of Violations of Life-Integrity in 50 States in 1987 based on the Amnesty International 1988 Report." Working Paper of the Institute for the Study of Genocide. New York, NY: CUNY. (31 pages, 2 figures, 5 tables, 1 list)

> This study examines the threshold between state violations of individual human rights and the deliberate annihilation of a group (or genocide). The author suggests that analysis of the scale and stages of such violations can lead to the development of an early warning system.

> The study categorizes the level of gross violations of human rights (from worst to least bad): (D) immediate danger/disaster level, where killings and massacres are perpetuated indiscriminately; (C) where states regularly produce calculated deaths targeted at activists, protesters, alternative political leaders of human rights workers; (B) where torture is commonly used by the state; and (A) where an extensive pattern of "disappearances" occur. States can be simultaneously at different levels of violence. In addition, the author points out that 96 percent of the world's refugees in 1988 were produced by states at levels D, C, and B.

Jenkins, J. Craig and Susanne Schmeidl. August 1995. "The World Refugee Crisis as a Global Problem: Its Origins and Prospects." Columbus, OH: The Ohio State University. (34 pages, 2 tables, 3 figures)

> This paper examines the growth and prospects of the refugee crisis -- the extent of the problem and its causes. The authors then call for the creation of international conflict-regulation and early warning institutions to address these problems in the short-term, and state a belief that permanent solutions will require reforms of both the international system and domestic policies.

Kassinis, Elizabeth V. January 1996. "Current Experiences in Developing an Early Warning System." Paper prepared for the Seminar on the Development of an Early Warning System for Conflict Situations in Africa, Organization of African Unity, Addis Ababa, Ethiopia, January 15-19, 1996. New York, NY: United Nations Department of Humanitarian Affairs. (4 pages)

> The author notes that one reason the world community fails to prevent wars is the unwillingness and inability of governments to respond to every crisis. Thus, by relying on this *ad hoc* response to crisis, international security concerns and action remain erratic. Early warning systems can assist organizations to adopt a preventive strategy for conflicts and help create an improved decision-making process.

Lund, Michael S. August 1994. "Preventive Diplomacy and American Foreign Policy: A Guide for the Post-Cold War Era." DRAFT. Washington, DC: US Institute of Peace. (202 pages, 2 figures, 2 tables, 3 appendix)

> In this paper for US policy-makers, the author defines early warning as determining the relative probability that the direction of events will lead to significant violence. He then calls for the development of more systematic data collection in order to track the antecedents and triggering processes in the emergence of conflicts. He warns that early warning needs to be tied to preventive response mechanisms for decision-makers.

Schmeidl, Susanne. August 1995. "Exploring the Causes of Forced Migration: A Pooled Time-Series Analysis, 1971-1990." Paper prepared for the Annual Meeting of the American Sociological Association, Washington, DC, August 18-23, 1995. Columbus, OH: The Ohio State University. (31 pages, 1 table)

> This paper examines forced migration between 1971 and 1990 using "pooled time-series analysis" and regresses the number of refugees based on political, economic, and intervening variables. The author finds that political violence is the basis for refugee out-flow, rather than economic hardship. "The level and type of violence, however, determines the size of the refugee displacement."

SUPPORTING DOCUMENTATION

_____. February 1, 1995. "RELIEFNET (Working Title): What Information Should be Available." DRAFT. Prepared by the US Department of State, Information Committee.

Alker, Hayward R., Ted Robert Gurr, and Kumar Rupesinghe. February 1995. "Conflict Early Warning Systems: An Initial Research Program." Prepared for the Annual Meeting of the International Studies Association, Chicago, Illinois, February 21-25, 1995.

Curtin, Kenneth and Jeffrey Klenk. February 1992. "Disaster and Emergency Management: A Study on UNDP's Role, Responsibilities, and Institutional Memory." Central Evaluation Office, Evaluation Series No. 2/92. New York, NY: United Nations Development Program.

Gleick, James. 1987. Chaos: Making a New Science. Harrisonburg, VA: R.R. Donnelley & Sons Company.

Homer-Dixon, Thomas. 1995. "On the Threshold: Environmental Changes as Causes of Acute Conflict." In Global Dangers: Changing Dimensions of International Security, edited by Sean M. Lynn-Jones and Steven E. Miller. Cambridge, MA: The MIT Press.

Jenkins, J. Craig. 1995. "Protest, Rebellion and Democratization: A Comparative Analysis of Political Change." Funding Proposal. Columbus, OH: The Ohio State University.

Mayer-Kress, Gottfried, Paul Diehl and Holly Arrow. November 1994. "The United Nations and Conflict Management in a Complex World." Technical Report CCSR-94-31. Center for Complex Systems Research, the Beckman Institute and the Department of Physics. Urbana, IL: University of Illinois at Urbana-Champaign.

O'Neill, Rosemary. March 1, 1996. "Unclassified Memorandum: Electronic Early Warning Systems." US Department of State.

Saperstein, Alvin M. 1984. "Chaos -- a Model for the Outbreak of War." Nature, Vol. 309.

University of Pennsylvania. March 1994. "Chaotic Systems." Internet document downloaded from "http://dept.physics.upenn...phys/subsection3_2_5.html" or from email address "larryg@truth.hep.upenn.edu".

van Creveld, Martin. 1991. The Transformation of War. New York, NY: The Free Press.
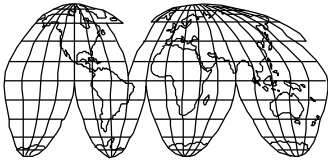
Agency for International Development
Center for Development Information and Evaluation

[AGENDA]
Workshop on Complex Disasters and Humanitarian Crisis:
Early Warning Systems for state/societal collapse and USAID Response

October 6, 1994   10:00 am - 1:00 pm
Department of State (Room 5951)

Introduction: John Eriksson, Director USAID's Center for Development Information and Evaluation (CDIE) and John Mullen, Director USAID's Global Center for Democracy

Opening Remarks: Joe Montville (Workshop Moderator), Center for Strategic and International Studies -- on *the relationship between early warning systems and conflict resolution*

Opening Remarks: Prof. Ted Gurr, University of Maryland -- on *the need for model based information systems*

Discussion Focus: After a recent briefing by the USAID/Rwanda mission staff on the events leading up to the violence which broke out in Rwanda in April of this year, a number of USAID employees began to explore the idea of early warning systems for state/societal collapse. Discussions of "failed states"; the perception in some media that USAID and the USG seemed unprepared to deal with the events in Rwanda, Somalia, Bosnia, and Haiti; the new application of chaos theory to political events; concern over the persistence of ethnic conflict and "complex disasters" -- all served to contribute to the need for USAID to begin to examine the topic of early warning systems. This workshop is intended to begin the discussion, to explore the possibilities, and examine the relevance of early warning systems to USAID policy and program operations. The following questions are intended to help guide the discussion, but are certainly not inclusive or comprehensive.

Discussion Questions:

What do early warning systems do, that "intelligence" gathering doesn't?

What early warning systems for state/societal collapse exist already?

When is information from early warning systems most useful to USAID?

What kinds of information are most useful to USAID?

How should USAID distinguish between competing sources of information?

How should USAID respond to early warning systems indicators?

How can USAID field missions and USAID/W best exchange information?

What are the problems, issues, etc. that USAID might experience if it adopts or develops an early warning system?

What can we learn from other sorts of early warning systems (eg, for natural disasters)?

Summation: What we have learned from this discussion. If there is sufficient interest, working groups will be proposed for post-workshop action – focused on the main issues and concerns arising from the discussion. These working groups should be prepared to produce action oriented reports at sometime in the future.

For more information, or follow-up ideas, please contact Heather McHugh at (703) 875-4974 (or via e-mail, hmchugh@USAID.gov).

[This event will be off the record]

**Workshop on Complex Disasters and Humanitarian Crisis:
Early Warning Systems for state/societal collapse and USAID Response**

List of Actual Participants at Workshop (10/6/94):

Non-US Government:

Michael Lund, USIP
Ted Gurr, UMD (speaker)
Joe Montville, CSIS (moderator)
Louis Rasmussen, USIP
Grace Scarborough, Evidence Based Research, Inc.
Edy Kaufmann, UMD
Jonathan Wilkenfeld, UMD
Victoria Elliott, World Bank (?)
Milton Leitenberg, UMD
George DiAngelo, UNDHA
Jim Kelly, Consultant (retired USAID)

US Government, Non-DOS:

Barbara Harff, USNA
Mary McCarthy, NIC
Ellen Tidd, CIA

DOS/USAID:

John Mullen, G/DG
John Eriksson, CDIE
Mike Morfit, PPC
Larry Garber, PPC
Kris Loken, G/DG
Jeff Seabright, PPC
Mike Calavan, CDIE
Kathy Blakeslee, G
Naydu Yaniz, LAC
Jennifer Douglas, PPC
Garry Bombardier, AFR (?)
Shirley Hoffman, BHR/OFDA
Krishna Kumar, CDIE/E
Linda Leonard, CDIE/DI
Don Krumm, DOS/INR (and assistant)
Heather S. McHugh, CDIE/DI
Mr. Jonathan Olssen (?), FEWS Project

List of other people interested in participating in future EWS efforts:

Lauren Landis, InterAction
Julia Taft, InterAction
Johanna Mendelson, BHR/OTI
Rosemary O'Neil, DOS/SOF
Anne Langhaug, LAC/DR
David Singer, University of Michigan
Bill Spencer, International Alert
Bill Pace, UN
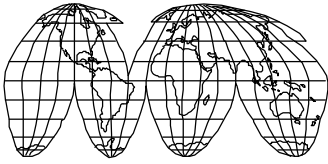
Agency for International Development
Center for Development Information and Evaluation

[AGENDA]

USAID and DAC Roundtable Meeting on Conflict, Peace, and Development:
Early Warning Systems and Preventive Diplomacy

April 26, 1995, 3:00 - 5:00 pm
Department of State (Room 5951)

3:00-3:10 pm Introduction

Toni Christiansen-Wagner, USAID, Bureau of Policy and Program Coordination (Meeting Moderator)

3:10-3:40 pm Overview of Current Issues and Approaches to Early Warning and Prevention

Michael Lund, US Institute for Peace -- *Status Report on the Development of Tools to Implement Preventive Approaches*
Ted MacDonald, Cultural Survival (PANDA Project) -- *Early Warning Systems: A Global Monitoring Based System and Complementary Anthropological Case Study Approach*
Louise Diamond, Institute for Multi-track Diplomacy -- *Track II Conflict Resolution Efforts*

3:40-4:15 pm Status Report on USAID'S Approach to Prevention, Conflict Resolution and Early Warning

Nan Borton, Bureau of Humanitarian Response, Office of Foreign Disaster Assistance -- *Practicing Community Based Conflict Mitigation*
Ted Morse, Africa Bureau, Greater Horn of Africa Initiative -- *Update on the Initiative*
Steve Morrison, Bureau of Humanitarian Response, Office of Transition Initiatives -- *Status Report on Transition Initiatives*
Toni Christiansen-Wagner, Bureau of Policy and Program Coordination -- *Update on PRD-50*
Paul Novick, Africa Bureau -- *Report on the Inter-Agency Plan and Progress Made in Implementing the African Conflict Resolution Act*
Jennifer Douglas, Bureau of Policy and Program Coordination -- *Burundi Update and Cultural Aspects of Early Warning in the Greater Horn of Africa*

4:15-5:00 pm Questions and Answers

USAID Responders: Dick McCall, USAID; Heather McHugh, USAID, PPC/CDIE/R&RS; Linda Howey, USAID, Africa Bureau; Bruce Bennett, USAID

Other Responders: Ambassador Jim Michael, DAC; Douglas Gallagher, Refugee Policy Group; Nichole Ball, ODC; Charito Kruvant, Creative Associates

Discussion Focus: Recently USAID has began to explore the relationships between development and conflict. In

particular, the Agency has focused on the utility and effectiveness of -- and relationships between -- preventive diplomacy, early warning systems, and conflict resolution mechanisms. Discussions of "failed states"; the perception in some media that USAID and other donors seemed unprepared to deal with the events in Rwanda, Somalia, Bosnia, and Haiti; the new application of chaos theory to political events; concern over the persistence of ethnic conflict and "complex disasters" -- all served to contribute to the need for USAID and other donors to begin to examine these topics. This meeting is intended to continue the discussion, to explore the possibilities, and examine the experience to date of USAID's preventive diplomacy, early warning systems, conflict resolution, and development efforts.

Discussion Questions: (the following questions are intended to help guide the discussion, but are certainly not inclusive or comprehensive)

What are the relationships between preventive diplomacy, early warning systems, conflict resolution, and development?

What role should donors play in preventive diplomacy, early warning systems, and conflict resolution?

When and what kinds of information from early warning systems are most useful to donors?

How can early warnings be turned into effective donor actions?

How can donors best exchange information?

What are the problems, issues, etc. that donors might experience if they adopt or develop a preventive action system?

What major lessons has USAID learned from its early warning, conflict resolution and prevention, preventive diplomacy, and development programs? What lessons have been learned from the Greater Horn of Africa Initiative?

What traditional development programs can donors emphasize to prevent and/or manage conflict?