

New Humanitarian Partnerships with Technological Communities

Real time alerts to help affected persons to get out of danger

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1. Introduction¹

The Aga Khan 1981 Study on Human rights and mass exoduses highlighted a need for early warning.² Two years later the UN Secretary-General requested to be informed “on an urgent basis of any situation which could give rise to a major humanitarian crisis that could lead to refugees.”³ Already at that time, UNHCR recognized the importance of early warning and timely action to deal with incipient refugee situations, and considered “to strengthen the early warning aspect” as not only relevant for the UN Secretary-General’s purpose but also for contingency planning and emergency preparedness; UNHCR, while agreeing to cooperate in this effort, responded in 1986 that information “would be provided on an informal verbal only basis.”⁴ Thirty years later, in November 2011, the Deputy High Commissioner for Refugees thanked everyone who worked on the UNCHR-Somalia Satellite Imagery Project “which has permitted us to count shelters in the Afgooye Corridor in Somalia through the volunteer work of folks like you around the world. This is such a wonderful project for us as it provides enormously important information to UNHCR and helps to create a worldwide virtual community involved in helping refugees and internally displaced people.”⁵

2. Background

As we already stated elsewhere in 1989,⁶ consequences from lack of systematic early warning during the decade of the 1980s included that the UN, UNHCR, and other humanitarian agencies were compelled to deal with massive refugee influxes both from the political management and humanitarian response side not always to the degree that would have been desirable. In 1978-79 for example, the United Nations and UNHCR were clearly overwhelmed by and unprepared for the mass influx of Indochinese refugees in South East Asia. The number of boat people washed onto the beaches there seriously challenged UNHCR's capability to cope. One of the issues was the lack of advance information. The result was much human suffering, including many deaths. It took too long for emergency assistance by intergovernmental and non-governmental organizations to reach the sites.

Another example is documented in the Eastern Sudan Case Study, which has been used in the UNHCR Emergency Management Training Program since 1985. Even though there had been reports, already in 1984, of a potential major influx from Ethiopia, UNHCR and other agencies were unprepared when the refugees began arriving. The speed with which UNHCR was able to respond to the refugee influx was greatly handicapped by the lack of emergency preparation throughout the organization. Insufficient prior planning, failure to identify trained staff, and new operational partners, materials, and food sources often resulted in an operation that was continually struggling to catch up with events. Whereas in some cases both early warning and consequent action were lacking, in others lack of acting on the early warning signals was the problem, despite the common goal to prevent a recurrence and seriously consider which lessons could be learned from the past to save human lives.

¹ Thank you to colleagues of the Harvard Humanitarian Initiative (HHI) Prof. Michael VanRooyen MD, MPH, FACEP, Director; Vincenzo Bollettino, PhD. Executive Director, P. Gregg Greenough, MD, MPH; HHI Director of Research, Jennifer Chan, and John Crowley, as well as Dr. Charlie Clements of the Carr Center and HHI, Nathaniel Raymond and Caitlin Howarth of the Satellite Sentinel Project, and Patrick Meier, PhD., co founder of International Network of CrisisMappers and the Standby Volunteer Task Force (SBTF) and Director of CrisisMapping at Ushahidi. They all provided valuable feedback and thoughtful comments. Their insight in this topic is reflected in the text. Research and editorial support was provided by Joseph Guay, MSPS Suffolk University, who is also co-author of section 4 of this chapter. We are also drawing on previous work in this area: Luise Druke, “Preventive Action for Refugee Producing Situations,” (PhD diss., University of Hannover/Harvard, Lang, Frankfurt and New York, 2nd ed. 1993) and “UNHCR and the Need for Early Warning,” 1989.

² UN doc. E/CN.4/ 1440, 27 January 1981, in Aga Khan, Human rights and mass exoduses, p. 6.

³ Note for the File, “Early Warning System”, by Michel Moussalli, Geneva, February 4, 1986, p. 1, The UN Secretary-General had pointed in his letter that “there was a need to render the UN system more effective in anticipating major humanitarian problems”. He pointed to those problems which could lead to mass displacement of populations, with a view to enable the UN to react more adequately and speedily in cases of emergency.

⁴ Ibid, 4.

⁵ “I’m Alex Aleinikoff, the Deputy High Commissioner of UNHCR and I’ve just learned about the wonderful work done by the Standby Task Force.... So I salute you for your work and for the time you have devoted to this project, it’s important to us, it’s important to people who have been forced from their homes and who are trying to create a new home and a new beginning, thank you.” <http://blog.standbytaskforce.com/>, accessed November 23, 2011.

⁶ Luise Druke, “UNHCR and the Need for Early Warning,” in *Refugee Abstracts*, Center for Documentation on Refugees, Vol. 8, No. 4 (December 1989). http://www.luisedruke.com/luise/unhcr_need_early_warning.htm.

While at that time there appears to have been agreement that contingency planning and emergency preparedness are good things, the necessity to have at one's disposal systematic and objective information at an early stage for this purpose seemed less understood. UNHCR officials in their daily work have access to much valuable information, often in a well-organized and systematic manner. But in the absence of any system and specific instructions from Headquarters, UNHCR field officers cannot be expected to take the time to systematically gather early warning information alerts. Human rights violations, which are among major causes of refugee situations and other problems, are often known in emergency-prone countries where UNHCR may be present. It is not a lack of quantity of information that results in the loss or underutilization of such valuable tools, but results from a lack of political will and support which hinders effective use and the translation of information into action on the ground.⁷ Furthermore, if it reached UNHCR policy-makers at all, it tended to reach them in a fragmented or watered-down manner.

Following crises in the late 1970s, a number of organizations had set up function-specific early warning mechanisms in a framework of decentralization and fragmentation as it exists in the UN activities which face challenges of coordination.⁸ The FAO's Global Information and Early Warning System (GIEWS) goes back to 1975. Since then institutional links and information-sharing agreements have been established with several UN organizations, 115 governments, four regional organizations, and sixty-one NGOs.⁹

For the purpose of this paper, we looked at a range of early warning and early alert activities and found more than sixty of such initiatives. Those we found include thirty-eight related to the United Nations, three within governmental spheres, six based at universities, eight through nongovernmental efforts and three by private sector entities.¹⁰ A closer review of this field indicates that such initiatives, often interdisciplinary, are evolving rapidly and that the inventory presented here is but a starting point of a whole range of initiatives, in particular when considering rapid developments in and by the information technology community and other NGOs and private entities at the sub-state level.

It was toward the end of 1989 when UNHCR itself took action and started preparations in this field.¹¹ These efforts resulted in—after consultations with colleagues at Headquarters in Geneva and in field posts/missions on the ground to the Refugee Emergency Alert System (REAS),¹²—the High Commissioner's policy decision

⁷ With the proliferation of technology, an explosion of critical information is now available for practitioners and policy makers in the humanitarian community. While it is often the case that lack of political will can lead to an underutilization of this information, it is becoming increasingly difficult to even aggregate and make sense of the data that comes in from the field in order for it to be used effectively. Thus, it is not just the quantity of information available, but the quality of that information.

⁸ The United Nations Disaster Relief Organisation began in 1972 and United Nations Environment Programme created the Global Environmental Monitoring System (GEMS) in 1975 (Ramcharan 1991). In the same year the Food and Agricultural Organisation of the United Nations (FAO) established the Global Information and Early Warning System on Food and Agriculture (GIEWS) and in the late 1980s the U.S. Agency for Development designed a Famine Early Warning System (FEWS) in order to avoid a repeat of the drought and famine disaster in the Sahel and Ethiopia (Rashid 1998, Whelan 1998). In 1987 the Office for Research and the Collection of Information (ORCI) became the focal early warning point in the United Nations system until its abolition by UN Secretary General Boutros-Ghali in 1992. The UN Department of Humanitarian Affairs – renamed Office for the Coordination of Humanitarian Affairs (OCHA) – developed the Humanitarian Early Warning System (HEWS) in 1993 (Dedring 1994, Ahmed and Kassinis 1998). In 1999, HEWS was disbanded and OCHA began to re-evaluate its role in the field of early warning (briefly considering a search for key indicators). Parallel to these mid-1990s initiatives, information consolidation emerged with the Integrated Regional Information Network (IRIN) and ReliefWeb under OCHA and ReliefWorld and RefugeeNet under UNHCR. The Department of Political Affairs also briefly toyed with the idea of creating an internal information system called POLIS (Vacchina 1992). In *Gender and Conflict Early Warning: A Framework for Action*. Susanne Schmeidl with Eugenia Piza-Lopez, June 2002, p. 34.

⁹ GIEWS is an open forum for the exchange of information on food security. The system continually receives economic, political and agricultural information from a wide variety of official and unofficial sources. Numerous international research institutes, news services, private sector organizations, and specialized government agencies also collaborate. A small unit in FAO's Rome headquarters is responsible for coordination with participating organizations. See: http://www.fao.org/giews/english/giews_en.pdf, accessed 178 November 2011.

¹⁰ Inventory early warning and early alert initiatives, initial draft prepared by Robert Kirkpatrick, Director of UN Global Pulse dated 27 May 2010 and updated by Luise Druke, 1 April 2011. See in the annex here.

¹¹ Selected communications on these preparations within UNHCR during Spring 1989 are reproduced in the annex.

¹² "...Emergency alert includes the identification, recognition, and interpretation of events that would indicate a potential emergency. In the past, emergency alert (previously called early warning) was not considered to be one of UNHCR's traditional functions. In practice, however, it has become an essential element of emergency preparedness and contingency planning. UNHCR Handbook on Emergencies, Chapter 2, p. 17, UNHCR Geneva. Typical Activities include : Prevention; Early warning; Contingency planning; Development of emergency response systems; Generation of support among potential host and donor governments; Provision of stand-by resources; Pre-positioning of supplies; and Training. Contingency planning reduces the lead time necessary to mount an effective response and is a crucial tool to enhance the capacity to respond. Contingency planning

to formally set up a “Working Group on Early Warning” with the terms of reference to “prepare UNHCR’s response to the UN Joint Inspection Unit on early warning”¹³ and “...to develop and recommend a policy framework for UNHCR’s involvement in early warning activities...”¹⁴ in mid 1990. This and subsequent work helped UNHCR to engage further in this field when from 1992 on, the United Nations through its Administrative Committee of Coordination (ACC) started to convene to discuss early warning within the UN system in the context of the Inter-Agency Standing Committee (IASC). A table of early warning and early action in the UN system covering the period from 1981 through 2006 provides a glimpse into these efforts.¹⁵

We agree with Susanne Schmeidl, that the “potential to use early warning both to prevent humanitarian disaster but also to block the entry of people fleeing terror has led to a dilemma in the early warning ...”¹⁶ This remains a factor to be taken into consideration, when fast forwarding to 2011 in considering NEW HUMANITARIAN PARTNERSHIPS WITH TECHNOLOGICAL COMMUNITIES.

Now, twenty years later, a new and promising partnership with UNHCR and several private non state actors (DigitalGlobe, Tomnod, Standby Volunteer Task Force (SBTF), and Ushahidi) are underway to geo-locate the positions and types of shelters in Somalia’s Afgooye corridor.¹⁷ The corridor, an area that is “hardly heard about” despite being “the world’s largest concentration of internally displaced people”, has an estimated 410,000 internally displaced people in just a few square kilometers.¹⁸ The project seeks to combine recent developments in information communication technology (ITC)—and the diffusion of this ICT to affected people—with the cost-effectiveness and speed of crowd sourcing (often using university students as volunteers) to estimate the total number of affected persons.¹⁹ This, according to Patrick Meier (co-founder of the Standby Volunteer Task Force, Ushahidi, and CrisisMappers International), helps UNHCR and other humanitarian communities to better apply limited resources toward realities on the ground.²⁰

This is but one of several UN initiatives launched in recent years to integrate UN capabilities with the human and technological capital of an ever growing and developing *non-traditional* humanitarian community. Just this past year, the Satellite Sentinel Project (SSP)—a consortium originally comprising of Not On Our Watch, the Enough Project, Google, UNITAR, Operational Satellite Applications Programme (UNOSAT)²¹, DigitalGlobe, Harvard Humanitarian Initiative (HHI), and Trellon, LLC—was launched as a pilot project to “provide an early warning system to deter full scale civil war between Northern and Southern Sudan, and to promote greater accountability on mass atrocities by focusing world attention and generating rapid responses on human rights and human security concerns.”²² DigitalGlobe provides the satellite imagery, HHI corroborates these images with on-the-ground reports (contributed by the Enough Project) to provide

helps predict the characteristics of the impending emergency – it increases the institutional analytical capacity which can be drawn upon should an emergency occur. UNHCR Handbook for Emergencies, Second Edition, p. 31 mentions early warning. Foreword Sadako Ogata, UN High Commissioner for Refugees.

http://www.the-ecentre.net/resources/e_library/doc/han_Em.pdf, visited 17 Nov. 2011

¹³ “The co-ordination of activities related to early warning of possible refugee flows”, by Ivan S. Kojic, Boris P. Prokofiev, UN Joint Inspection Unit, Geneva 1990.

¹⁴ Inter-Office Memorandum No 70/90, Field-Office Memorandum No. 58/90, of 21 June 1990 on “Establishment of a Working Group on Early Warning”, signed by the High Commissioner, see in the annex.

¹⁵ Based on and updated from Sharon Rusu and Susanne Schmeidl on “Early warning and early warning action in the UN system: UNDP and OCHA on : Humanitarian Early Warning in the United Nations – Key Developments” in Institutions for the management of ethno-political conflict in central and eastern Europe, By European Centre for Minority Issues, Council of Europe, 2008. See annex.

¹⁶ Susanne Schmeidle “The early warning of forced migration: State or human security?” In Newman, and van Selm, J. (Eds) Refugees and forced displacement: international security, Human vulnerability, and the state, United Nations University Press, Tokyo, 2003, pp. 130-154.

¹⁷ Patrick Meier, November 1, 2011, “Crowdsourcing Satellite Imagery Tagging to Support UNHCR in Somalia,” *iRevolution* Blog, accessed November 10, 2011, www.irevolution.net.

¹⁸ Peter Beaumont, October 4, 2010, “The Afgooye corridor: world capital of internally displaced people,” *Poverty Matters Blog*, <http://www.guardian.co.uk/global-development/poverty-matters/2010/oct/04/somalia-afgooye-corridor-displaced-people>; see also UNHCR spokesperson Melissa Fleming, “Afgooye corridor fast becoming the capital of Somalia’s displaced,” *UNHCR Briefing Notes* (October 2010), accessed November 10, 2011, <http://www.unhcr.org/4ca5d91f9.html>.

¹⁹ Patrick Meier, “Combining Crowdsourced Satellite Imagery Analysis with Crisis Reporting: An Update on Syria”, posted on September 19, 2011, source: <http://irevolution.net/2011/09/19/crowdsourcing-update-on-syria>.

²⁰ Ibid.

²¹ UNITAR/UNOSAT was a key member until the UNMIS mandate expired in July 2011 and is no longer involved in the current operation of the Satellite Sentinel Project. Any reference of UNITAR/UNOSAT with regard to SSP should reflect this throughout this working paper.

²² “About,” *Satellite Sentinel Project*, accessed November 10, 2011, <http://www.satsentinel.org/about>.

contextual human rights analysis, Google and Trellon collaborate to design the web platform for the publication of the images and reports, and Not on Our Watch put pressure on policy makers by urging the public to act.²³ Since it operates in near real time, SSP seeks “beyond merely recording evidence of crimes already committed and perhaps prevent them from happening in the first place.”²⁴

Since January of 2011, SSP has monitored and documented a re-emerging civil conflict in the contested areas of Abyei, South Kordofan, and Blue Nile state. This near real-time collection, analysis, and dissemination of critical information has, for the first time, recorded the stages of evolution in a generalized conflict scenario. This serves not only as an early warning response, but also as an evidentiary archive so that marginalized accounts of violence, often erased or overlooked, may be recorded for the purpose of accountability and prosecution in the future stages of the conflict resolution process. SSP does more than document human rights violations; it spurs calls to act.²⁵ Civilians are urged to move to safety and members of the international community are urged to act (both NGOs and the UN Security Council).

Conflict and crisis in Somalia and Sudan are but a few examples from a growing list of collaborative initiatives and operations. In Syria and Libya, SBTF, part of what is commonly referred to as the Volunteer Technology Community, (VTCs or V & TCs)²⁶ mobilized to monitor and map problems on the ground there. In Haiti and Japan, a plethora of formal and informal humanitarian organizations worked round the clock to help with faster, more efficient response to disaster. And in Kenya, activists innovated the way election results could be monitored and implemented. In all cases networking and peer to peer support helped to save lives.

Clearly a shift has taken place. No longer are governments the sole producers and users of the level of technology necessary to geo-locate a mass grave from space, or to communicate and verify the location of a trapped body in Port-Au Prince to a crisis-mapper half way across the world (almost free of charge, we might add). With the diffusion of ICTs, neither are they able to be the sole source and distributor of information, whether about election results or military re-enforcement. In recent years there has been a changing of the *status quo*, and in many aspects this is reflected in humanitarian work.

As mentioned before, one of the striking developments has been involvement of affected people *themselves*. What was once a one-way street of information and analysis from the humanitarian to a recognized authority has now transformed into a *two-way* flow of information, still gathered and analyzed by the humanitarian worker, but also gathered and disseminated to the international stage by the displaced person or the disaster survivor. What this means for disaster and conflict warning, response, and management is only beginning to be understood, but no one can now deny its impact. There have been many academic papers on what this means for the V&TC and the future of humanitarian work, both traditional and informal. According to a recent Harvard Humanitarian Initiative report:

²³ Ibid.

²⁴ William Wheeler, “The Saving Game” *Boston Magazine* (January 2012). Accessed February 22, 2012 http://www.bostonmagazine.com/articles/the_saving_game_can_michael_vanrooyen_build_an_army_of_super_humanitarians/page1. Indeed, the prediction and documentation of Sudan Armed Forces (SAF) invasion of Abyei in May of 2011 has led *Washington Post* Sudan correspondent Rebecca Hamilton to call it “perhaps the most clearly forecast crisis in history.”

²⁵ Data produced by the Satellite Sentinel Project is now being used by the International Criminal Court (ICC) in a memo to compile evidence against Sudanese Defense Minister Abdelrahim Mohamed Hussein, which alleges his central involvement in recent crimes in the border regions of South Kordofan, the Nuba mountains, and Blue Nile state in which over 2,000 civilians have been killed and tens of thousands more have been displaced. See Mark Benjamin, “George Clooney’s Satellites Build a Case Against Alleged War Criminal” *Time Magazine* (December 3, 2011). Accessed February 22, 2012 here: <http://www.time.com/time/world/article/0,8599,2101425,00.html>.

²⁶ The terms Volunteer Technology Communities (VTC) or Volunteer and Technical Communities (V & TC), have been used in practitioner and academic reports, for example a 2011 World Bank and Global Facility for Disaster Reduction and Recovery (GFDRR) report “Volunteer Technology Communities: Open Development”, refer to the “redefined role of volunteers during humanitarian emergencies and disaster risk management,” as traditional civil society volunteers have incorporated the emergence of the “humanitarian technologist” (see report, 1 accessed February 22, 2012 here: <http://www.gfdr.org/gfdr/sites/gfdr.org/files/documents/Volunteer%20Technology%20Communities%20-%20Open%20Development.pdf>).

The relationship between these new actors and traditional members of the humanitarian community and the various United Nations offices has been called a “humanitarian ecosystem” by Jennifer Ziemke, and “new groups and partnerships” by Robin Copeland of ICRC. We use VTC and V & TCs here in this paper to refer to these non-traditional actors and collaborations in the early warning, humanitarian response, and technical specialists that now make up this field.

“Humanitarian organizations have amassed deep wisdom and experience from decades of work in the field. Yet new voices are opening the possibility of closer interactions with communities affected by disasters. And new partners are offering faster, more effective means of analyzing an ever-increasing volume and velocity of data. The challenge ahead is how to create an effective interface between these resources, and create an ecosystem where each actor understands its role.”²⁷

It is the goal of this paper to bridge the divide between early and current UN work and new initiatives on the ground today. Conclusions drawn from this working paper are not novel: even in 1989, it was apparent that “UNHCR need[ed] to strengthen its early warning capacity, within the structure of its own organization as well as in cooperation with others.”²⁸ Many of the same challenges we have seen in the past continue to resonate today. “UNHCR field officers cannot be expected to take the time to systematically gather early warning information from the first refugees arriving in a country of refuge. It is not a lack of quantity or quality of information that results in the loss or underutilization of such valuable information. *Rather, it is a lack of systematic arrangement which currently hinders effective use of information.*”²⁹ With the emergence and proliferation of V & TCS, and with increasing ability of affected populations to now produce critical information, organizations like UNHCR face increasing challenges but also new opportunities.

But how do we contextualize this within a history of UN related actions and initiatives in order to lead the way in such endeavors? How can we know not only how to conceptualize a system and platform of interaction, but also, and perhaps more importantly, how can we know what to credibly expect? For the past forty years, there has been groundbreaking progress in this field. Recent initiatives such as Somalia’s Afgooye Corridor in the context of UNHCR’s work there and the Satellite Sentinel Project are providing means to corroborate information from the ground such as of the United Nations in Sudan. This might be a model to follow. But one must also ask, how did we even get here?

It is the purpose of this paper to attempt to answer this question and to combine a unique and often intimate field experience on the ground of nearly 30 years with an academic assessment of the state of the art in this field.

Any evaluation on the effectiveness of EWS as a whole³⁰ requires us to identify the distinction between warning and response. According to Wulf and Debiel, *response* is considered to be “any initiative that occurs in the latent stages of a perceived potential armed conflict with the aim at reduction, resolution or transformation,” but there is a close relationship with data collection, data formatting, and data analysis processes—elements traditionally gathered before the response period—and the successful functioning of the system as a whole.³¹ *Warning* then, is comprised of estimating and assessing risk and threats, analyzing the nature of those threats, and communicating this analysis to decision makers. This has been traditionally comprised of collection of information, the analysis of that information, and the visualization and communication of the analysis. It has been described as the “systematic collection and analysis of information coming from areas of crises for the purpose of: a) anticipating the escalation of violent conflict; b) the development of strategic responses to these crises; and c) the presentation of options to critical actors for the purposes of decision-making.”³²

Putting these two concepts together creates a system that according to the *Berghof Handbook on Conflict Transformation*, can be defined as “any initiative that focuses on systematic data collection, analysis and/or formulation of recommendations, including risk assessment and information sharing, regardless of topic,

²⁷ Disaster Relief 2.0: The Future of Information Sharing in Humanitarian Emergencies,” *Harvard Humanitarian Initiative*, Washington, D.C. and Berkshire, UK: UN Foundation & Vodafone Technology Partnership, 2011.9.

²⁸ Druke, “UNHCR and the Need for Early Warning,” 1.

²⁹ *Ibid*, 2, emphasis added.

³⁰ See also Susanna Campbell and Patrick Meier, “Deciding to Prevent Violent Conflict: Early Warning and Decision-Making at the United Nations.” Paper prepared for the 48th Annual Convention of the International Studies Association (ISA) in Chicago, 2007.; and Patrick Meier, “New Strategies for Effective Early Response: Insights from Complexity Science.” Paper prepared for the 48th Annual Convention of the International Studies Association (ISA) in Chicago, 2007.

³¹ Herbert Wulf and Tobias Debiel, “Conflict Early Warning and Response Mechanisms: Tools for Enhancing the Effectiveness of Regional Organisations? A Comparative Study of the AU, ECOWAS, IGAD, ASEAN/ARF and PIF,” *Crisis States Research Centre*, Working Paper No. 49, (2009): 3.

³² FEWER Mission Statement, “Forum on Early Warning and Early Response,” *FEWER*, (York: 1997):1.

whether they are quantitative, qualitative or a blend of both”.³³ The producers and consumers of early warning, as well as the scenarios in which they monitor and evaluate have changed over time.³⁴

In the context of political conflict over the decades, the paradigm of thought on early warning systems has shifted from the so-called “root cause” debates in the 1980s to a proliferation of quantitative models in the 1990s.³⁵ The 2000s have seen the emergence of the “Right to Protect” (R2P) in humanitarian affairs, and now in the second decade of the 21st century, the paradigm has shifted again, placing more capability—and thus more responsibility—on affected populations, as the diffusion of “liberation” and information communication technologies (ICTs) have changed the *status quo*. The following sections address these paradigm shifts within the context of the United Nations.

3. Brief Review of Selected UN Early Alert Initiatives

3.1 In the Context of Human Rights and Refugees

Perhaps no other phenomenon is quite so closely related to early warning as with refugees.³⁶ Early studies focusing on aspects of pre-refugee flow situations in the late 1970s and early 1980s have revealed a striking disparity between the international response to persons as refugees outside their countries and the response to potential refugees still inside their national boundaries, known as internally displaced people, or IDPs.³⁷ Legally and institutionally, not everybody “on the move” for survival, safety, and the fulfillment of their basic rights and needs is eligible for UNHCR’s international protection. Originally, only those who were fleeing persecution were recognized as refugees as defined in the 1951 Convention “due to well-founded fear of being persecuted for reasons of race, religion, nationality, or membership of a particular social or political group, being outside the country of nationality and unable or, unwilling to avail of the protection of that country.” Through the precedent of actual practice, however, the UNHCR mandate has been expanded to include displaced persons in a “refugee-like” situation,³⁸ and other categories of persons if so requested by the Secretary-General or relevant States,³⁹ including dealing with internally displaced persons since 1970.⁴⁰

³³ Alexander Austin, “Early Warning and the Field: A Cargo Cult Science?” *Berghof Handbook on Conflict Transformation* (2004), accessed November 10, 2011, <http://www.berghof-handbook.net>; quoted also in Wulf and Debiel, “Conflict Early Warning and Response Mechanisms,” 3.

³⁴ According to Wulf and Debiel, “[t]he origin of early warning systems began with military/intelligence communities in the 1950s, and was later developed to deal with natural disasters by the humanitarian communities in the 1970s and 1980s. Other applications dealt with gross human rights violations and the spread of diseases and economic crises during this time. Only since the 1980s, however, has the UN utilized EWS for political-humanitarian crises...” Wulf and Debiel, “Conflict Early Warning and Response Mechanisms.” 3.

³⁵ Wulf and Debiel list five major models that seek to understand the causes of conflict and systems of early warning initiatives: a) five models (mainly run by so-called “Conditional and Causal Factor Models”); b) a dozen institutions that rank and rate states according to their risks and capacities (called “Predictive Models”); c) about twenty efforts to integrate risk and capacity assessments into early response models (called “Risk and Capacity Assessments”); several private companies, NGOs and government agencies that offer or use investigative case study research (called Risk and Capacity Assessments with Early Response Component”); and e) intelligence for early warning (called “Crisis Watch Lists based on Investigative Case Study Research or Intelligence”). When talking about these studies and indicies, however, they conclude that “the 1990s saw a ‘boom’ in conflict-assessment tools; and in the last few years state-failure rankings have blossomed,” 6.

³⁶ This section draws from Luise Druke: Preventive Action for Refugee Producing Situations, diss., Peter Lang 2nd ed. 1993.

³⁷ Gervais J. Coles, “Pre-Flow Aspects of the Refugee Phenomenon.” Background paper prepared for the International Institute for Humanitarian Law, San Remo, Italy, April 1982.

³⁸ In 1980, for example, the Executive Committee noted with concern the continuance of large-scale movements of uprooted individuals and groups seeking refuge from man-made disasters, stressed the necessity for co-ordination among UN bodies concerned with man-made emergencies involving refugees and displaced persons in refugee-like situations. This “emphasized ... the leading responsibility of (UNHCR) in emergency situations which involve refugees in the sense of its Statute or of General Assembly resolution 1388 (XIV) and its subsequent resolution,” Report of the 31st session: UN doc. A/AC.96/588, paras. 29. A(c), 29. B(c) (e) (0, cited in Goodwin-Gill, “Refugees: The Functions and Limits of the Existing Protection System” in *Human Rights and the Protection of Refugees under International Law*, ed. Alan E. Nash, and Rapporteur John P. Humphrey (Canadian Human Rights Foundation, 1988): 151.

³⁹ Over time, however, UNHCR has been increasingly called upon to provide assistance to persons under its mandate. Moreover, the General Assembly has asked UNHCR to use its good offices in assisting and protecting a wide range of persons, particularly those fleeing armed conflict. With adoption of the OAU Convention and other regional accords, this broadened the definition of refugees to include such persons—neither the 1951 refugee convention nor the statute creating UNHCR explicitly covers those who are internally displaced. From at least the 1970s on, however, UNHCR has aided persons still within their home countries. Often, implementing programmes for returning refugees prompted UNHCR to offer its good offices to the internally displaced as well. This was the case in southern Sudan in the early 1970s when UNHCR assisted about 180,000 returnees and about 500,000

3.1.1 Human Rights Commission

In 1981, the U.N. Commission on Human Rights designated a Special Rapporteur for Human Rights and Mass Exoduses.⁴¹ Since several governments encouraged this move by the Commission, the Secretary-General appointed Prince Sadrudin Aga Khan, the former UN High Commissioner for Refugees, as Special Rapporteur. The Secretary-General directed him to prepare a study on human rights and mass exoduses, which aimed to contribute to the containment, if not prevention, of the ever growing problem of the displacement of millions of people. The study became a reference document, and the number of fresh concepts elaborated in it has made it an inspiration not only to researchers, but also to policymakers.

The Human Rights Commission asked the Special Rapporteur to focus on large exoduses of persons and groups who are frequently the result of human rights violations. The Secretary-General, however, cautioned him to maintain a broader view of the problem of the root causes of situations involving mass exoduses, as they may relate to political or military conflicts, internal or external, to civil strife, persecution, or other forms of violation of human rights, be they civil and political or economic, social, or cultural.⁴²

Using the Universal Declaration of Human Rights as a framework for his study, the Special Rapporteur presented innovative concepts and recommendations for action to the Commission on Human Rights. One of these recommendations was an *early warning system* that would impartially gather information on issues underlying the flow of refugees, including ethnic, economic, political, and social problems. The information would come from proved sources such as state governments, U.N. officials in the countries concerned, and other informed parties. After analysis and evaluation the available data would provide the Secretary-General and competent intergovernmental organs with the means of assessing different alternative scenarios for possible future development. Using his executive power, the Secretary-General could then decide on what course of action to take, such as initiating discussions with one or more concerned governments and humanitarian agencies. If warranted, appropriate regional organizations (such as the Arab League, Council of Europe, Organization of African Unity, or the Organization of American States) might be solicited to help achieve regional containment and prevent internationalization of the problem.

The conclusions of the Rapporteur's Study recommended, among other things, that foreign aid practices should be administered in terms of how they could best alleviate conditions causing mass flight rather than coping with it as a "fait accompli."⁴³ This Study led to the "root cause" debate and increased awareness of the usefulness and need for early warning and preventive action. This debate contributed to further concrete conceptualization in this field, especially by the Refugee Policy Group (RPG) in Washington.

3.1.2 Refugee Policy Group (RPG)

Throughout the 1980s the Refugee Policy Group (RPG) produced a series of analytical papers relating to early warning in problem spots that the UNHCR had identified in their work. Other UNHCR issues that the RPG helped to address included a lack of systematic collection of information from refugees, who are themselves the best sources for reporting about the conditions that led them to cross the border; lack of systematic reporting between UNHCR field staff and headquarters, which may be partly due to the absence of confidential channels; use of incorrect or irrelevant models in collecting and interpreting information; mistiming of early warning messages to UNHCR headquarters causing them to be ignored or reprimanded,

internally displaced persons (Holborn, 1975). In March 2000, UNHCR issued a position paper clarifying its relationship to internally displaced persons. The agency makes clear its interest in this population arises from its humanitarian mandate on behalf of persons displaced by persecution, situations of general violence, conflict or massive violations of human rights. See Susan F. Martin, "Forced Migration and the Evolving Humanitarian Regime," Working Paper No. 20 (Washington DC.: Georgetown University, July 2000).

⁴⁰ Audit Report of the UN Office of Internal Oversight Services on UNHCR's arrangements for managing its role in the cluster approach for internally displaced persons, (May 21, 2010).

⁴¹ U.N. Commission on Human Rights res. 29 (XXXVII), 11 March 1981. This section draws from Druke: "Preventive Action for Refugee Producing Situations," 49.

⁴² UN doc. E/CN.4/ 1440, 27 January 1981, in Sadrudin Aga Khan, *Study on Human rights and Mass Exoduses* UN Commission on Human Rights, 1981, 6.

⁴³ *REFUGEE*, Canada's Periodical on Refugees, (1982): 12 -14.

<http://pi.library.yorku.ca/ojs/index.php/refuge/article/viewFile/21438/20114>, accessed February 22, 2011.

to the discouragement of future efforts; or dilution or delay by supervisors of messages from field workers to headquarters, thus greatly inhibiting their effectiveness.⁴⁴

During the 1987 UNHCR Emergency Training Programs, the RPG developed material on early warning for seminars on Emergency Planning Skills.⁴⁵ For future such workshops, the RPG had begun to collect basic information about all major refugee flows since 1977. This cutoff date was selected in order to include such major refugee flows as that of Afghans into Pakistan, Ethiopians into Somalia, Cambodians into Thailand, and Vietnamese boat people into various countries in Southeast Asia.⁴⁶ The RPG's information-collecting activity was a pilot project to gather information about refugee inflows in the past decade for case studies and for monitoring early warning signs—across a region of Africa initially—as well as to establish a quick response for conducting field visits to countries that would potentially produce and receive new refugee flows.⁴⁷

Meanwhile, in the context of the United Nations and spurred by the “root cause” debate following the *Report on Human Rights and Mass Exodus* discussed before, the UN Secretary-General, Perez del Cuellar, took action by creating the Office for the Research and the Collection of Information (ORCI) in his office to deal with this matter, which will be discussed in the following sections.

3.1.3 The Office of the UN High Commissioner for Refugees (UNHCR)

In late 1989, UNHCR developed the Refugee Emergency Alert System (REAS) on the basis of input from regional and functional activities for concepts and analyses, tailoring an approach with specific focus on refugee producing situations through an internal consultative mechanism. Its purpose was both to strengthen preparedness of the Emergency Unit and to seek ways where appropriate to take a preventive approach in the face of a newly developing refugee situation anywhere worldwide. Working with asylum seekers and refugees implies information of the causes of their situation, which, if handled carefully, may be useful as early warning signs and can translate to more effective responses. UNHCR could thus further explore playing a useful role in early warning gathering, processing, and reporting in its ongoing activities with observations and contacts, as well as first hand insights into impending situations that could produce refugees.

Having just returned from a field assignment in Angola as the Namibian Repatriation Coordinator in the fall of 1989, which coincided with the publication of “UNHCR and the Need for ‘Early Warning’,”⁴⁸ UNHCR initiated the early warning project at Headquarters in order to crystallize thinking and conceptualizing further direction of such a project. Key documents produced in this process in 1989/1990 are listed here.⁴⁹ In June

⁴⁴ Lance Clark, "Selected Constraints on Early Warning Actions by UNHCR (And What To Do About Them)," (Washington, D.C.: Refugee Policy Group, 1988), 1-7.

⁴⁵ UNHCR Emergency Management Training Programs (EMTP), for 1987, (Geneva: UNHCR, 1987).

⁴⁶ Report of the Refugee Policy Group Study of Early Warning, n.d., 8.

⁴⁷ Lance Clark, Letter to Philip Sargisson, February 6, 1986, pp. 1-2. According to a personal interview with Lance Clark on November 16, 1988 in Cambridge, see "Training with UNHCR," No. 1 (April 1988), Summary of UNHCR Training Courses for 1988. On 30 November 1988, Lance Clark of the RPG made a presentation at an Emergency Management Workshop on his most recent findings about UNHCR's possibilities of early information collecting and reporting. Although the information system studied here is still designed primarily for the purpose of emergency planning for refugee emergencies once they have developed, the RPG's recommendations may in due course benefit UNHCR's ability to continue moving further into the terrain of preventive action.

⁴⁸ Druke. "Preventive Action for Refugee Producing Situations."

⁴⁹ A chronological account of documents include:

1. Note for the File on "Early warning systems", February 4, 1986 by Michel Moussalli, then the UNHCR Director for International Protection.
2. Note for the File, survey on "The Coordination of activities related to early warning of possible refugee flows and comparable emergencies" by Luise Druke, October 27, 1989.
3. Memorandum on "UNHCR Refugee Emergency Alert System (REAS)", by R. White, Chief, Emergency Unit, UNHCR, January 31, 1989.
4. Memorandum on "UNHCR Refugee Emergency Alert System (REAS), by O. Bakhet, Head technical Support Service, UNHCR, January 31, 1989.
5. Memorandum on "Future directions for the UNHCR Early Warning Working group", from the UNHCR EWWG to the regional Directors, at UNHCR, March 1, 1990.
6. Note for the file "Future directions for the UNHCR Early Warning Working group", by Luise Druke, March 6, 1990
7. Inter-Office Memorandum No. 70/90 and Field-Office Memorandum No. 58/90 by the High Commissioner on the "Establishment of a Working group on Early Warning", June 21, 1990.
8. Index of the Early Warning Files at the UNHCR Headquarters, June 21, 1990.

1990, through the Inter-Office Memorandum No. 70/90 and Field-Office Memorandum No. 58/90, the High Commissioner officially proceeded with the “Establishment of a Working Group on Early Warning”.⁵⁰ With the Memorandum on the “Refugee Emergency Alert System (REAS) – Revised Questionnaire,” arrangements were made for its inclusion into the Chapter on Emergency preparedness in the revised UNHCR Handbook for Emergencies with five operational annexes in June 1991. This and subsequent efforts have taken into consideration that any early warning information bears its risks, especially in the field of persons needing protection; this is augmented and made more complex by the fact that by definition cross border elements are involved. In fact, with increasingly more information technology involved in humanitarian and refugee operations, it is not so much the information about possibly new refugee situations that is lacking, but, rather the veracity of the source and the ability of the information to be processed and translated into action.

3.2 Within UN Political and Humanitarian Fields

3.2.1 Office for the Research and the Collection of Information (ORCI)

After the Commission on Human Rights’ initiative on mass exoduses—and in line with the authority of the Secretary-General under the UN Charter—the UN Centre for Human Rights had been the focal point in developing United Nations machinery for early warning purposes, and developed the reporting and evaluation guidelines. In March 1987, the Office for Research and the Collection of Information (ORCI) acquired these functions, and became responsible for the analysis and monitoring of potential threats to international peace and security. This reorganization/tasking assisted in implementing the General Assembly’s recommendations of 1986 regarding international co-operation to avert new flows of refugees.⁵¹

Prompted by the threat of losing a large percentage of operating funds, in 1986 a Group of eighteen high-level Intergovernmental Experts reviewed the structure and the functioning of the U.N. Secretariat. Among other suggestions, the Group sought to eliminate the duplication of efforts and increase productivity by reducing fragmentation and undue complexity in order to arrive at a leaner and more efficiently run Secretariat.⁵² This also contributed to the establishment of the Office for the Research and the Collection of Information (ORCI)—a centralized office for collecting information. Faster and more efficient communication was also a concern of U.N. member states overburdened by uncontrolled refugee flows, and so the streamlined flow of information emerged as a priority in the 1986 recommendations of the UN Group of Governmental Experts on International Co-operation to Avert New Refugee Flows, which the General Assembly endorsed in the same

9. Memorandum on the “Refugee Emergency Alert System (REAS) – revised Questionnaire” by R. White, Chief EPTS, for its inclusion into the Chapter on Emergency preparedness in the revised UNHCR Handbook for Emergencies with operational annexes, June 4, 1991.

“A Framework for People-Oriented Planning in Refugee Situations Taking Account of Women, Men and Children: A Practical Planning Tool for Refugee Workers”, by Mary B. Anderson et al, (Geneva: UNHCR, December 1992) mentions REAS—so does the revised UNHCR Handbook on Emergencies, see Refugee Emergency Alert System (REAS) in Chapter 2, p. 17.

See also Jeff Crisp on ‘Emergency Preparedness and Response’ in *Refugee Survey Quarterly* (2007) 26(1): 140-144, as it refers to UNHCR’s early warning work “UNHCR continues to develop more effective early warning mechanisms, including the Action Alert early warning system. The system classifies countries into one of four early warning categories (Red, Orange, Yellow, Blue) based on any anticipated increase in UNHCR’s operational activity and level of preparedness focussed on refugee movements. ..In addition, recommended preparedness activities (e.g. contingency planning, in-country stockpiling and establishing potential emergency teams) are linked to the new early warning categorization, providing the system with a more objective and systematic approach to early warning. EPRS continues to be an active participant of the IASC Working Group on Preparedness and Contingency planning which is working on improving and coordinating the agencies’ early warning and emergency preparedness systems with a view to more timely and efficient inter-agency response to emergencies. An early warning-early action report from the Working Group is presented to the IASC for endorsement on a quarterly basis. The report is a tool to enhance interagency early warning and preparedness”. Downloaded from <http://rsq.oxfordjournals.org/> at Harvard University on December 5, 2011 *Refugee Survey Quarterly*, Vol. 26, Issue 1 © UNHCR 2007, p. 142-143.

⁴⁹ “Emergency Preparedness and Response,” 140-144.

⁵⁰ See annex.

⁵¹ B.G. Ramcharan, “Early-Warning at the United Nations: the First Experiment”, *International Journal of Refugee Law*, Vol. 1, No. 3 (1989): 379-386. L. Druke Preventive Action for Refugee Producing Situations, 1993, see chapter on ORCI.

⁵² UN Doc. 49 (A/41/49), 15 August 1986, Report of the Group of High-Level Intergovernmental Experts to Review the Efficiency of the Administrative and Financial Functioning of the United Nations, General Assembly Official Records, Recommendation 18: “There is a duplication of efforts with regard to the dissemination of news and political analysis activities in various departments, namely, the Office for Field Operational and External Support Activities, the Department of Political and Security Affairs, the Department of Political Affairs, Trusteeship and Decolonization and the Department of Public Information. These activities should be rationalized and coordinated with a view to achieving substantial savings and better utilization of resources,” 13.

year.⁵³ The Secretary-General charged ORCI headed by James O.G. Jonah, then Assistant Secretary General, to report to him directly within the Secretariat⁵⁴ on early warning and refugee-producing situations.

These early warning and refugee-producing situations included providing early warning of developing situations requiring the Secretary-General's attention, monitoring factors related to possible refugee flows, and carrying out ad-hoc research for the immediate needs of the Secretary-General.⁵⁵

Although it was a slow process, ORCI worked towards fulfilling the Office's three major functions.⁵⁶ ORCI worked on computer models for crisis management in the context of UN conflict resolution and prevention along theoretical guidelines, including indicators for establishing its early warning work and drawing up comprehensive country profiles.⁵⁷ These initial steps were a beginning towards developing a system-wide capacity for early warning. From 1987 to 1992, the UN Secretariat centralized its early warning analysis in the Office for Research and Collection of Information.⁵⁸ After that, ORCI was merged into a consolidated Department of Political Affairs (DPA) in 1992, and early warning activities were integrated into the new Department for Humanitarian Affairs (DHA). This has been discussed in several instances before, such as at the workshop held at the King Ranch in May 1991, where elements of a proposed UN early warning system were tentatively agreed upon which then was taken into the Department of Political Affairs, which is being discussed here next.⁵⁹

3.2.2 Department of Political Affairs

Within the UN Secretariat, several departments currently have responsibilities for early warning, as do the various human rights bodies mentioned above. The Department of Political Affairs (DPA) has "primary responsibility" within the UN Secretariat for preventive action and peacemaking.⁶⁰ This includes a mandate to identify potential or actual conflicts in whose resolution the United Nations could play a useful role. In 1998, a Prevention Team was established within DPA to review selected cases each month that might necessitate preventive measures. For this purpose each of the divisions produce "prevention papers," with cases to consider. Another indication of the growing interest and commitment to early warning is the project, begun in

⁵³ A/41/324, 13 May 1986, Report of the Governmental Expert Group to Avert New Massive Refugee Flows, which, having noted in Paragraph 31 that, in many cases, such movements of refugees had taken place as a result of acts of aggression, alien domination, foreign armed intervention and occupation. In such cases, flight frequently has been the only way for the people of the victimized countries to escape the danger to life or extensive restrictions of their human rights, often compounded by the fear of losing their national, cultural and religious identity, recommended in its paragraph 68, that "the main organs of the United Nations are urged to make fuller use of their respective competences under the Charter for the prevention of new massive flows of refugees, with a view to considering at the earliest possible stage situations and problems which could give rise to massive flows of refugees".

⁵⁴ UN doc. ST/SGB/225, 1 March 1987: Office for Research and the Collection of Information.

⁵⁵ James O.C. Jonah, "Monitoring Factors Related to Refugee Flows and Comparable Emergencies: The Role of the Secretary-General's Office for Research and the Collection of Information," Speech, Florence, Italy, (January 27, 1988), 7.

⁵⁶ UN doc. ST/SGB/Organization Section, ORCI, 3 Organization Manual, "A description of the functions and organization of the Office for Research and the Collection of Information," (October 1988): 6.

⁵⁷ Tapio Kanninen, "New Prospects at the United Nations to Utilize Research and Technology Related to Data on International Relations," Background paper for participants at the Conference on New Technologies for the Codification, Storage, Retrieval and Analysis of International Events Data, held at the M.I.T., (November 13-15) 1987, See also Kanninen, "New Prospects," Kanninen presented in that paper a theoretical model for UN political data gathering, processing and utilization, to illustrate the framework of major aspects of its work. And also Tapio Kanninen, "Monitoring and Early Warning for Preventive Diplomacy of the Secretary-General," Paper, 7 (April 1986), 3 and appendix.

⁵⁸ This section draws from John Cockell, "Early Warning and United Nations Reform," in the *Humanitarian Exchange Magazine*, of the Humanitarian Practice Network (HPN), Issue 14 (June 1999), accessed on February 21, 2011, <http://www.odihpn.org/report.asp?id=1059>.

⁵⁹ "Towards Practical Early Warning Capabilities Concerning Refugees and Displaced Persons" *International Journal of Refugee Law* 4 (1) (Oxford University Press, 1991), 1.

⁶⁰ UN Secretary-General, 50th Anniversary Report on the Work of the Organization, United Nations (1996) see section on "preventive diplomacy and peacemaking", 193. DPA was created in March 1992, and was officially given responsibilities for preventive diplomacy and peace-making one year later. Prior to that, such functions were performed by the Executive Office of the Secretary-General. (See General Assembly resolution A/47/120 for the mandate of the Department of Political Affairs.) Cited from FN 1 in A. Walter Dorn "Towards an Effective UN Early Warning System: A Review and Recommendations," <http://walterdorn.org/pub/26>, accessed on 23 February 2011.

1998 under DPA, on "Early Warning and Preventive Measures: Building UN Capacity." This is an important long-term initiative to create an enduring institutional capacity for early warning and prevention.⁶¹

The DPA in the UN Secretariat, with its missions and staff on the ground, is engaged in support of preventive action and peacemaking, and monitors, analyzes, and assesses political developments throughout the world. It identifies potential or actual conflicts in whose control and resolution the United Nations can play a useful role and prepares recommendations to the Secretary-General about appropriate actions in such cases. The Department executes approved policies of a diplomatic nature and assists the Secretary-General in carrying out political activities decided by him and/or mandated by the General Assembly and the Security Council in the areas of preventive diplomacy, peacemaking, peacekeeping and peace-building, including arms control and disarmament. In 2011 there are 13 missions, with 364 uniformed personnel, 1,224 international civilian personnel; 2,513 local civilian personnel and 100 UNV Volunteers 100 bringing the total number of personnel serving in political and peace building missions to 4,201 persons.⁶²

These UN DPA-led field operations provide a forward platform for preventive diplomacy and other activities across a range of disciplines to help prevent and resolve conflict or to build lasting peace in nations emerging from civil wars. Political missions are part of a continuum of UN peace operations working in different stages of the conflict cycle. In some instances following the signing of peace agreements, political missions overseen by the Department of Political Affairs during the stage of peace negotiations have been replaced by peacekeeping missions. In other instances, U.N. peacekeeping operations have given way to special political missions overseeing longer term peace-building activities. Early warning information is one of the key ingredients of this work. Now we will narrow down from general political affairs work to the emerging concept of responsibility protect.

In recent years the United Nations has committed itself to moving from an approach of "reaction" to "prevention", to work with Member States as well as civil society to pursue comprehensive strategies that address more immediate as well as deep-rooted structural causes of conflict. DPA also works through interagency mechanisms in order to strengthen national capacities for conflict prevention.⁶³ The DPA and the UN through its system of bodies remains highly active in this field today, working increasingly in partnership with regional organizations and others in order to bring ongoing conflicts to an end, and to prevent new crises from emerging or escalating.

3.2.3 Responsibility to Protect (R2P)

The idea of the "responsibility to protect," now commonly referred to as "R2P", is that human beings count for more than the sacrosanct sovereignty enshrined in Charter Article 2 (7), which emphasizes non-interference in domestic affairs.⁶⁴ This is a significant initiative. In his report A/63/677 of 12 January 2009 on the integrated and coordinated implementation of and follow-up on implementing the responsibility to protect, the Secretary-General states that the report responds to one of the cardinal challenges of our time, as posed in paragraphs 138 and 139 of the 2005 World Summit Outcome: operationalizing the responsibility to protect (R2P). The Heads of State and Government unanimously affirmed at the Summit that "each individual State has the responsibility to protect its populations from genocide, war crimes, ethnic cleansing and crimes against humanity." They agreed, as well, that the international community should assist States in exercising that responsibility and in building their protection capacities. When a State nevertheless was "manifestly failing" to

⁶¹ "Conflict Analysis for Prevention and Peacebuilding," UN System Staff College, <http://www.unssc.org/home/news/conflict-analysis-prevention-and-peacebuilding>, accessed on 23 February 2011.

⁶² http://www.un.org/wcm/content/site/undpa/main/about/field_operations

⁶³ UN Peace making and conflict prevention, <http://www.un.org/wcm/content/site/undpa/main/issues/peacemaking>

⁶⁴ The idea emerged from the International Commission on Intervention and State Sovereignty's (ICISS) 2001 report *The Responsibility to Protect*. The commission's work grew directly from the inability of the Security Council to act in two particular instances: in the face of mass murder in Rwanda in 1994 and in the Kosovo disaster in 1999. The former resulted in action that was too little and too late (and 800,000 deaths in a matter of weeks), and the latter, in the view of many, in too much action too soon when the North Atlantic Treaty Organization began its "humanitarian bombing" without Security Council approval. ICISS pushed the envelope in three ways: 1) It argued that sovereignty also encompasses a state's responsibility to protect populations within its borders. 2) It shifted the emphasis toward the possibility—if not the legal obligation—of outsiders to come to the rescue of those suffering from war and violence. 3) It developed a three-part framework for the R2P that includes the responsibility to prevent and the responsibility to rebuild before and after the responsibility to react in the eye of a storm. "Peace and Security in UN Intellectual History Project," Briefing Note #14, April 2009, <http://www.unhistory.org/briefing/14PeaceHumSec.pdf>.

protect its population from the four specified crimes and violations, they confirmed that the international community was prepared to take collective action in a “timely and decisive manner” through the Security Council and in accordance with the Charter of the United Nations, underscoring, the “best way to discourage States or groups of States from misusing the responsibility to protect for inappropriate purposes would be to develop fully the United Nations strategy, standards, processes, tools and practices for the responsibility to protect”.⁶⁵

The 2011 civil war in Libya, for example, has brought focus to the critical and complex issue of the “responsibility to protect” populations from genocide, war crimes, crimes against humanity, and ethnic cleansing. United Nations Security Council Resolution 1973, which authorized force in Libya, invoked the responsibility to protect as part of its argument for action.⁶⁶

3.3 Analysis of Past UN Efforts:

Scholarly work has shed light on the effectiveness of early alert initiatives within the context of the United Nations. Tobias Debiel and Herbert Wulf provide a mixed picture of these efforts: “The most explicit response mechanism exists with regard to humanitarian emergencies at the UN level; however the... mechanism is far from being efficient since the UN is a bureaucratic organization with a ‘silo’ mentality among the different agencies and departments, and the UN Security Council is a highly politicized body.”⁶⁷ That the organization of the UN is an international body of individual member states should make this point obvious: information management (and sharing) remains one of the key obstacles to effective and efficient response. This was a fundamental reality that for many years has been difficult, if not impossible, to address, especially during the Cold War. But the humanitarian community is changing; what was once a situation of information sharing *within* the infrastructure of the UN in a one-way capacity has shifted to a situation of information sharing *within and around* the United Nations as new actors are emerging, and affected populations are gaining increasing ability to communicate directly through SMS, social networks, and other means, to participate in the gathering and dissemination of information with the international community. Several cases in 2010 and 2011 are indicative of this, such as Haiti, Egypt, Libya, Japan and Syria, which will be discussed below.

Analyses of best practices in disaster crises have often been applied to conflict related early alert literature. The evolution of early warning systems from the disaster relief community to political conflict and refugee issues is indicative of this fact, and will be discussed in more detail below. For now, it is pertinent to mention that studies conducted on the integration of disaster early warning systems (referred to as DEWS) have brought to the table a number of concerns regarding effective mobilization of coordinated relief efforts, most notably around information sharing and management⁶⁸. According to the “Disaster Relief 2.0” report,

“...interviews with multiple UN managers and field staff indicate that the politics of opening their internal data to other UN agencies is itself an issue, let alone opening the data to the hundreds of organizations that partnered with the IASC-led cluster system [in humanitarian emergencies]. Barriers such as cyber security, humanitarian protection, and distrust loom as large as the technical interoperability of proprietary systems.”⁶⁹

This brings to the table some implications of natural disaster crises management for humanitarian relief efforts that could be applicable to early warning/response systems *in general* (including conflict early warning systems, CEWS), particularly the coordination of information management between the formal humanitarian communities (i.e. the United Nations) and the informal humanitarian communities, which are usually considered to be non-governmental or private organizations or individuals. Consider the following example: the emergence of a volunteer and technical operation known as OpenStreetMap, a team that influenced the production of critical geospatial information at a time when the formal humanitarian community was lacking geospatial intelligence in Port AU Prince just after the earthquake in 2010. According to the “Disaster” report:

⁶⁵ A/63/677 provides for a strategy as follows: Pillar one, the protection responsibilities of the State (sect. II); Pillar two, International assistance and capacity-building (sect. III), and Pillar three, Timely and decisive response (sect. IV). The strategy stresses the value of prevention and, when it fails, of early and flexible response tailored to the specific circumstances of each case.

⁶⁶ Libya & the Responsibility to Protect, http://www.brookings.edu/events/2011/0616_libya_responsibility.aspx, visited Dec. 5, 11

⁶⁷ Wulf and Debiel, “Conflict Early Warning and Response Mechanisms,” 1.

⁶⁸ Which, as we will explain below, are related to data collection, evaluation, and warning (or dissemination).

⁶⁹ HHI, “Disaster Relief: 2.0,” 21.

...OpenStreetMap [used] geospatial wiki using tools that only required a simple web browser and time. In the process, this community turned a blank spot on the map into one of the most accurately mapped countries in the world—creating a map far better than any available to the UN. By mid-March [2010], OpenStreetMap had become the de facto source for Haiti map data within most UN agencies and the EC Humanitarian Unit.⁷⁰

Many scholars and practitioners also acknowledge that formal EWS in conflict scenarios have yet to adapt and adjust to the realities of affected people. Traditionally, Conflict Early Warning Systems (CEWS) have been structured according to “top-down” hierarchies, following a state-centric approach. But, “a state-centric focus in conflict management does not reflect an understanding of the role played by civil society organization in situations where the state has failed.”⁷¹ Furthermore, “while technology has long played a prominent role in disaster early warning systems, this is not equally true of conflict early warning systems.”⁷²

According to a 2009 OECD Report, “an external, interventionist and state-centric approach in early warning systems fuels disjointed, top-down responses in situations that require integrated, multilevel action.”⁷³ Patrick Meier dubs this typical of early warning initiatives of the first or second-generation; “These systems typically fail to leverage the potential of new information and communication technologies.”⁷⁴ CEWS are often considered “extractive” operations. This stands in sharp contrast to the more “service-based” system of the third and fourth generation EWS, favoring the “democratization of information collection and access,” which will be discussed in the following section.⁷⁵

4. Selected New Humanitarian Partnerships with Technological Communities

4.1 Recent External Developments

In recent years there has been an explosion in the number of volunteer and technology community (V &TC) initiatives in humanitarian efforts to warn and respond to affected populations in natural disasters and geopolitical conflict crises. On the one hand, this is caused by an increase in demand for these types of services due largely in part to significant increases and complexity in natural disasters (Japan, Pakistan, Haiti), political upheavals (such as the Arab spring and contested elections in Cote d’Ivoire, Iran, and Kenya, to name a few), and the continuation and emergence of violent conflict and repression (such as in Syria, Sudan, and Somalia)—all of which produce refugee-like situations and affect local populations in complex ways⁷⁶. On the other hand, the onset of V&TC initiatives is due to a surge in both the development of high-quality technology and its availability to non-state actors, and the spread and diffusion of low technology (such as mobile phones⁷⁷) to people everywhere. This has created both new sources of information regarding affected people, and new ways to capture and disseminate that information. According to Patrick Meier, “[o]ne important change is a shift from one-to-many forms of communication, such as television and radio, to many-to-many

⁷⁰ HHI “Disaster Relief 2.0”, 30.

⁷¹ Meier and Coyle, “New Technologies in Emergencies and Conflicts: The Role of Information and Social Networks (Washington, D.C. and London, UK: UN Foundation-Vodafone Foundation Partnership, 2009) 13.

⁷² Ibid.

⁷³ Patrick Meier, “Early Warning Systems and the Prevention of Violent Conflict,” in *Peacebuilding in the Information Age* ed. Daniel Stauffacher, Barbara Weekes, Urs Gasser, Colin Maclay and Michael Best, (Cambridge, MA: Berkman Center for Internet & Society at Harvard University, January 2011), 12. http://www.wmo.int/pages/prog/drr/events/MHEWS-II/Documents/Global_Survey_EWS.pdf, accessed November 2011; OECD Report “Preventing Violence, War and State Collapse: The Future of Conflict Early Warning and Response,” 2009.

⁷⁴ Ibid.

⁷⁵ Ibid.

⁷⁶ Martti Ahtisaari, “Preface” in *Peacebuilding in the Information Age, 2011*; “New Technologies,” and “Networking Disaster”. See also United Nations High Commissioner for Refugees, António Guterres, *Opening Statement to the 61st Session of the Executive Committee of the High Commissioner’s Programme (ExCom)*, Geneva, October 4, 2010. He emphasized that today’s challenges are interconnected and complex; population growth, urbanization, climate change, water scarcity, and food and energy insecurity exacerbate conflict in many ways that oblige people to flee their countries.

⁷⁷ A 2009 Vodafone/United Nations publication states that, for example, “The growth in the use of mobile phones has been one of the most remarkable features of the last decade. At the end of 2008, the number of subscriptions topped 4 billion, reaching 61 for every 100 people,” with Africa claiming “the highest growth rate in new mobile subscriptions, with a compound annual rate of 47% from 2003 to 2008,” (page 5). Just three short years later, the International Telecommunication Union (ITU) reports in 2011 that this has increased to over 117.8 mobile phones per 100 people in the developed world and 78.8 phones per 100 in the developing world (<http://www.itu.int/ITU-D/ict/statistics/>, accessed November 15, 2011).

forms of communication, such as social networking and crowdsourcing websites, that is changing the way in which information is delivered and exchanged.”⁷⁸

This sentiment is echoed by Ted Turner, United Nations Foundation Chairman:

“Powered by cloud-, crowd-, and SMS-based technologies, individuals can now engage in disaster response at an unprecedented level. Traditional relief organizations, volunteers, and affected communities alike can, when working together, provide, aggregate and analyze information that speeds, targets and improves humanitarian relief. This trend toward communications driven by and centered on people is challenging and changing the nature of humanitarian aid in emergencies.”⁷⁹

Because of this, a new responsibility has been placed on affected populations themselves, and they have been given a new voice by which to exert their new role. Barbara Weekes writes about a transformative switch in early warning initiatives from a rigid traditional top-down hierarchical approach, to a bottom-up approach, “focusing on the individuals in crisis areas, [and] encouraging communities and individuals to be prepared, self-sufficient, and reliant in times of crisis and conflict.”⁸⁰ According to Meier, the “shift towards people-centered disaster management also reflects the recognition that local communities have consistently evolved sophisticated yet flexible strategies to manage the constant threat of vulnerability in their lives;”⁸¹ this is a long way from traditional “forest fire” approaches to disaster response. In fact, this shift toward one of individual empowerment and agency is reflected by the UN Secretary General in 2006, when he stated that the goal of people-centered early warning is, “to empower individuals and communities threatened by hazards to act...” and to do so “in a sustainable way.”⁸²

Another source of information and form of communication for actors not traditionally associated with formal humanitarian warning, relief, and response efforts has been social media networking: when mainstream media falls behind or fails to report on a particular conflict or crisis (or when that media is stifled by repressive regimes), social media networking often provides a valuable source of information and communication. Twitter, Facebook, YouTube, and Flickr are being used to communicate, document human rights abuses, and in some cases, plea for help. “However, the mainstream humanitarian and human rights community remains largely skeptical of social media...The inability to verify (easily) a Twitter user’s identity and the information s/he tweets are two important factors that explain why many in the humanitarian community see little added value in following social media,” as they can lead to misinformation.⁸³ Furthermore, social media is often under-utilized due to the fact that some humanitarians have not yet fully grasped their own ability to *generate* information through social media.⁸⁴

In sum, low-technology capabilities are finally spreading to the developing world. Mobile phones and widespread access to the internet have connected people, even in the most geographically remote areas on earth, in ways never before seen. But high-level technologies are also being developed and used more widely, especially by non-state actors such as private companies and universities, creating space for new players to emerge in humanitarian and human rights work. For example, geospatial technology—which, according to Meier and Coyle and an American Association for the Advancement of Science (AAAS) website report includes satellite imagery, geographic information systems (GIS), and global positioning systems (GPS) that allow for mapping and analysis of multiple layers of geo-referenced data—is now readily available for sale to various organizations.⁸⁵ Geospatial technology “can be analyzed to identify crisis patterns, show evidence of military preparations, and can corroborate field reports of escalating conflicts and disasters.”⁸⁶

⁷⁸ Meier and Coyle, “New Technologies in Emergencies and Conflicts: The Role of Information and Social Networks” (Washington, D.C. and London, UK: UN Foundation-Vodafone Foundation Partnership, 2009) 1.

⁷⁹ HHI, “Disaster Relief: 2.0,” 2.

⁸⁰ Meier, “Early Warning Systems and the Prevention of Violent Conflict,” 6.

⁸¹ Ibid, 13; also mentioned in Bankoff, Freerks and Hilhorst, 2004.

⁸² Ibid, 13.

⁸³ Meier and Coyle, “New Technologies in Emergencies and Conflicts,” 29; Ushahidi, discussed below, is working on a validation system called “Swift River,” that will seek to “exploit the wealth” of large numbers of social media tags to cross check information across different media. In this way, they hope to overcome the validation obstacle of social media/crowdsourced material.

⁸⁴ We would like to thank Patrick Meier for pointing this out.

⁸⁵ Ibid; American Association for the Advancement of Science, <http://shr.aaas.org/geotech>, accessed November 2011. One immediately thinks of the widespread use of Google-maps, which allows individuals to map terrain and geo-locate—and even view three-dimensionally—any area that has been mapped by the Google team www.google.com/maps. Another example, discussed below, is Digital Globe, which provides satellite imagery to private companies, human rights groups, and governments.

⁸⁶ Meier and Coyle, “New Technologies in Emergencies and Conflicts,” 22.

4.2 Volunteer and Technological Communities (V &TCs), Crisis-mapping, and Crowd-sourcing

It is a unique combination of low technology diffusion and high technological advancement that has allowed an emerging VTC to make such a strong statement in humanitarian and human rights projects in recent years. According to “Disaster Relief 2.0”, NGOs like MapAction, Telecoms Sans Frontiers, and Sahana have provided mapping services, voice and data communications, and open-source management systems to the UN emergency clusters since 2003. But after the Haitian earthquake of 2010, a handful of “new V &TCs were established, contributing capabilities that had not heretofore been available to the cluster-led humanitarian system.”⁸⁷ By utilizing crowd sourcing applications and techniques,⁸⁸ these volunteer and technical entities have embraced information communication technologies in the field of early warning and response in humanitarian crises and have developed a phenomenon called “crisis mapping”.⁸⁹ According to the Crisis Mappers Network, “Crisis Mappers leverage mobile & web-based applications, participatory maps & crowdsourced event data, aerial & satellite imagery, geospatial platforms, visual analytics, and computational & statistical models to power effective early warning for rapid response to complex humanitarian emergencies.”⁹⁰ Crisis mapping had its start in election monitoring/ natural disaster warning and relief operations, but has now been applied to socio-political contexts such as human rights violations in conflict settings.⁹¹

In stark contrast to traditional top-down, state-centric, and external perspectives of traditional conflict early warning systems, (CEWS), crowdsourcing and crisis mapping seek to source information from the bottom-up; from the very affected people themselves.⁹² In an open system, information collection and sharing happens at an extraordinary pace, which helps prevent critical data from becoming obsolete. This, for Meier, is typical of a third or fourth-generation conflict early warning system, which seeks “to empower local stakeholders directly so the latter can prevent violence and/or to get out of harm’s way.”⁹³ Called fourth generation early warning, these “4G initiatives make use of free, open-source software and mobile technology. More importantly, these initiatives are people-centered: they are not for an ‘outside’ organization but run by the community, for the community.”⁹⁴

The idea of traditional civil society organizations and private companies utilizing unique skill sets to contribute to the field of humanitarian work is not new. Take for example Télécoms sans Frontières (TSF), an organization founded in 1998 following the collapse of Yugoslavia and the aid efforts to alleviate the war-torn Balkans.⁹⁵ According to Meier and Coyle, “its emergency communications support is part of almost every humanitarian response effort after a natural disaster or conflict.”⁹⁶ The significance of this organization cannot be understated; it is the first NGO partner of OCHA and UNICEF (in 2006), and is also partnered with ECHO. Operating out of the three world-wide bases (France, Thailand, and Nicaragua), TSF is dedicated to reaching a disaster area within 48 hours of any hazard event. It seeks to provide communications to UN agencies and NGOs providing relief in a local area, and also seeks to facilitate communication to and between affected

⁸⁷ HHI “Disaster Relief 2.0,” 25.

⁸⁸ Crowdsourcing has been described as the “act of sourcing tasks traditionally performed by specific individuals to a group of people of community (crowd) through an open call,” (Wikipedia: <http://en.wikipedia.org/wiki/Crowdsourcing>, accessed November 17, 2011). Originally designed and developed to go beyond traditional outsourcing projects in the business world, crowdsourcing techniques have taken flight in the political and humanitarian community with the leveraging of mass collaboration enabled by Web 2.0 technologies (Ibid). It is usually reliant on “amateurs or volunteers working in their spare time to create content, solve problems, or even do corporate R &D...[P]eople who do not know each other work together online to create,” and participate in online projects(<http://www.crowdsourcing.org/document/crowdsourcing-definitionexamples/1363>.

⁸⁹ www.crisismappers.net; The International network of Crisis Mappers, a consortium of individual and organization members, “is the largest and most active international community of experts, practitioners, policymakers, technologists, researchers, journalists, scholars, hackers and skilled volunteers engaged at the intersection between humanitarian crises, technology and crisis mapping.” Information can be found at www.crisismappers.net. The 2011 ICCM (November) was curated by Patrick Meier, Jen Ziemke, Tom De Groeve, Daniel Stauffacher, and Barbara Weeks, and was put on by Schweizerische Eidgenossenschaft, ICT for Peace Foundation, and the European Joint Research Commission.

⁹⁰ Ibid.

⁹¹ Crisis mapping is loosely defined as “the application of geospatial and crowdsourcing tools to the analysis of humanitarian emergencies,” in HHI, “Disaster Relief 2.0”, 26.

⁹² Meier and Coyle, “New Technologies in Emergencies and Conflicts.”

⁹³ Meier, “Early Warning Systems and the Prevention of Violent Conflict,” 12.

⁹⁴ Ibid. Can also be accessed in its original source here: <https://earlywarning.wordpress.com/2009/03/06/fourth-generation-early-warning-systems/> (accessed 12 March 2012).

⁹⁵ Meier and Coyle, “New Technologies in Emergencies and Conflicts,” 27.

⁹⁶ Ibid, 27; And all of these operations are funded by only a 2 million Euro annual budget and a staff of 40.

persons. It is developing three long term projects in poverty reduction, economic development, crisis prevention, and disaster preparedness. TSF even hopes to “establish the first cyber café for refugees.”⁹⁷

What is new, according to the 2011 World Bank/GFDRR report “Volunteer Technology Communities: Open Development,” is a new form of volunteer called the “humanitarian technologist” who are often “technical professionals with deep expertise in geographic information systems, data-base management, social media and/or online campaigns.”⁹⁸ These technical experts and organizations bring to the table a unique skill that can contribute to efforts in disaster/conflict early alert, risk management, and response. For example, the Stand by Task Force (see below) utilizes quick, cost effective mobilization and produces timely crisismapping products. Other organizations such as Télécoms sans Frontières have been a trusted and reliable name in the telecommunication industry, providing communication services to UN agencies in post-crisis scenarios. And MapAction has been known to work on long term initiatives like education programs and preparedness. A few examples are worth noting below.

4.2.1 InSTEDD

Innovative Support to Emergencies, Diseases and Disasters (InSTEDD), is an organization “that seeks to leverage open source technology to improve information flow and cross-sector collaboration.”⁹⁹ According to Patrick Meier and Diane Coyle, it utilizes a platform that was originally designed to focus on public health issues, but can be applied to other types of emergencies, including using Riff (the platform) “to identify hate speech and other potential indicators of geopolitical deterioration in news reports.”¹⁰⁰ Riff is unique because it collects and extracts information from a variety of sources including SMS, RSS, emails, existing databases and online documents. Users can also collaborate to comment, tag, and rank sets of evidence.¹⁰¹

4.2.2 Ushahidi¹⁰²

“Ushahidi, meaning ‘witness’ in Swahili, is a free and open source platform that combines SMS, Twitter, and a variety of basemaps including Google Maps, OSM, Bing and Yahoo, to collect and visualize crowdsource crisis information, often using crowdsourcing, although “any number of methodologies can be used with the Ushahidi platform,” according to Patrick Meier.¹⁰³ Ushahidi was developed by Kenyan bloggers in response to the violence after the December 2007 elections...and has since been used in Afghanistan, Colombia, the Democratic Republic of Congo (DRC), Gaza, India, Lebanon,” and Mozambique.¹⁰⁴ More than 20,000 Ushahidi maps have been launched in over 140 countries since January 2008.¹⁰⁵ Initiatives have evolved over the past four years to encompass initiatives in election monitoring, disaster warning and relief efforts, and conflict early warning and human rights monitoring. “In other words, the team behind the Ushahidi initiative [now applies the] concept of crowdsourcing to the reporting and documentation of human rights abuses.”¹⁰⁶

“Compared with traditional humanitarian information management systems,” Meier says, “Ushahidi also ‘closes the feedback loop’ such that information collected can be communicated directly to those who most need to use it...Ushahidi includes a subscription option that allows individuals to subscribe to alerts in specific

⁹⁷ Ibid.

⁹⁸ Page 1, overview.

⁹⁹ Meier and Coyle, “New Technologies” 33.

¹⁰⁰ Ibid.

¹⁰¹ Ibid.

¹⁰² Ushahidi was founded by Patrick Meier, “an internationally recognized thought leader on the application of new technologies for crisis early warning, humanitarian response, human rights and civil resistance. He currently serves as Director of Crisis Mapping at Ushahidi, a non-profit technology company voted by MIT’s Technology Review as one of the 50 most innovative companies in the world alongside Facebook, Google and Twitter. He co-founded the International Network of Crisis Mappers and previously co-directed Harvard University’s Program on Crisis Mapping and Early Warning. In addition, Patrick has consulted for major international organizations including the UN, OSCE, OECD and the World Bank on numerous cutting-edge projects in Africa, Asia and Europe over the past 10 years,” www.irevolution.net.

¹⁰³ Please see: <http://irevolution.net/2010/06/28/demystifying-crowdsourcing/>

¹⁰⁴ Meier and Coyle, “New Technologies in Emergencies and Conflicts,” 23.

¹⁰⁵ Meier dissertation, 10.

¹⁰⁶ Patrick Meier, “Do Liberation Technologies Change the Balance of Power Between Repressive States and Civil Society?” (diss. Presented to the Fletcher School of Law and Diplomacy 2011) 10, accessed November 2011). <http://irevolution.files.wordpress.com/2011/11/meier-dissertation-final.pdf>.

locations. These can be communicated by email and SMS. In other words, Ushahidi's innovative approach allows for 'crowdfeeding' as well as crowdsourcing crisis information."¹⁰⁷

4.2.3 Stand by Task Force (SBTF)¹⁰⁸

According to its website, the Standby Task Force (SBTF) "rises to the challenge of turning the adhoc groups of tech-savvy mapping volunteers that emerge around crises into a flexible, trained and prepared network ready to deploy. The SBTF is a volunteer-based network that represents the first wave in Online Community Emergency Response Teams." Its main objective is "to effectively assist crisis affected communities through co-operation with local and international responders. To this effect, we aim to increase the ability and skills of SBTF volunteers through a continuous dialogue and coordination with other tech and crisis mapping volunteer efforts."¹⁰⁹ The SBTF is an informal network of volunteers that uses crowdsourcing, among other methods, and mapping technologies to indirectly assist crisis affected communities. It is not an organization, and has no permanent physical operational presence and/or personnel—it mobilizes in response to requests by humanitarian, human rights, or media organizations to disasters and complex crises as a network of technical humanitarians ready to deploy. Since 2010, the Standby Volunteer Task Force has deployed or side-deployed twenty times using its over 800 volunteers from over 80 countries world-wide to assist crisis affected communities in Columbia, Syria, India, Somalia, Madagascar and even in the US,¹¹⁰ and according to Patrick Meier has partnered with UN Office for the Coordination of Humanitarian Affairs, the World Health Organization, UNHCR, Amnesty International USA and Al-Jazeera, among others.¹¹¹

4.2.4 MapAction¹¹²

MapAction is a UK-registered charity based in Buckinghamshire, England. They have been active in both disaster and conflict-related emergency response in over thirty humanitarian crises since their start in 2004 when they responded to the 2004 Indian Ocean tsunami.¹¹³ The organization leverages technology and crowdsourcing to vital mapping information from the disaster field, which helps to coordinate response efforts. They are able to do so through the mobilization of teams from field bases (often deployed as part of a United Nations Assessment and Coordination (UNDAC) mission) that can often respond to a disaster site in a matter of hours. After collecting, analysing, and mapping data collected from the field, they distribute their maps to aid agencies throughout the operation. While a typical mission lasts around two-three weeks, MapAction is has been known to work on longer term initiatives like education and preparedness programs.

4.2.5 The Satellite Sentinel Project¹¹⁴

The Satellite Sentinel Project, the first of its kind, is illustrative of a cooperative humanitarian venture between multiple types of actors, and is illustrative of the future of humanitarian initiatives that combine the formal and informal communities. It is being funded by George Clooney's human rights organization Not On Our Watch, and is a collaboration between the Enough Project, the United Nations UNITAR Operational Satellite Applications Programme (although this collaboration formally ended with the UNMIS mandate in July), Digital Globe, the Harvard Humanitarian Initiative, Google, and internet strategy and development firm

¹⁰⁷ Ibid.

¹⁰⁸ Information acquired by SBTF website, www.blog.standbytaskforce.com. Accessed February 25, 2012.

¹⁰⁹ Ibid.

¹¹⁰ Please see "Deployments," *Standby Volunteer Task Force website*, accessed March 12, 2012

<http://blog.standbytaskforce.com/deployments/>.

¹¹¹ Email from Patrick Meier, 11 March 2012.

¹¹² Information gathered from the MapAction website, www.mapaction.com, accessed February 25, 2012.

¹¹³ ...although the report "Disaster Relief 2.0" indicates that "MapAction has been providing mapping services to OCHA since the 2003 Bam earthquake in Iran."

¹¹⁴ A political development in North Africa that has been closely monitored of a consortium of humanitarian actors and agencies has been the independence of South Sudan in July of 2011 following the January referendum that was drawn into the Comprehensive Peace Agreement (CPA). The independence of South Sudan in July of this year created the 193rd member state of the United Nations—South Sudan is the youngest country in the world. The CPA's ambiguous wording on the status of three border states—Abyei, South Kordofan, and Bile Nile—however, has put the people of these regions (primarily the Nuba) in a precarious position vis-à-vis Khartoum and the Bashir regime, and has opened the door for mass atrocities, crimes against humanity, and armed conflict that has cross-border implications. For example as refugees from South Sudan's Unity state seek shelter in the Yida camp in neighboring Ethiopia. See <http://www.bbc.co.uk/news/world-africa-15678261>.

Trellon, LLC. Human rights documentation is led by Dr. Charlie Clements, Executive Director of the Carr Center for Human Rights Policy at the Harvard Kennedy School, who brings twenty-five years of experience as a public health physician and human rights activist. By fusing ground-sourced information with satellite imagery, the team led by Nathaniel Raymond at the Harvard Humanitarian Initiative generates human security analysis and reports within hours of receiving critical imagery. Mr. Raymond is a human rights investigator with a decade of experience in documenting human rights violations.¹¹⁵

To date, SSP has produced over 20 reports that have documented the illegal build-up of military forces; the systematic targeting, displacing, and killing of populations of civilian people; and the attempted concealment of mass graves and other evidence of human rights violations and crimes against humanity. These warnings, in the form of short, visual reports, have very much adapted to the generalized conflict model discussed above on page five of this working paper, as events on the ground in Sudan have evolved. The reports are produced in such a way as to be short, visual, and viral. The concept behind this is to utilize mediums of social media (such as Facebook and Twitter) to visualize and communicate the contextual analysis of on-the-ground intelligence and satellite imagery. The near-real time production of reports and the ability of SSP to see “outside the scope” of traditional methods of intelligence gathering has changed the nature of humanitarian early warning systems and the capability of open sourced intelligence contextualization.¹¹⁶ What is also surprising is the way in which SSP’s publications have more closely combined early warning and early response than ever before, as the publications have actually served to *influence the behavior of the human rights abusers*¹¹⁷ and have provided valuable intelligence to affected populations themselves. This type of interaction was not anticipated in the outset, and is indicative of the way the organization has adapted itself over the course of just eight months.¹¹⁸

4.3 Innovative Institutional Efforts of Academic & UN Bodies with V & TCs

4.3.1 Harvard Humanitarian Initiative

HHI is a university-wide center that works with multiple entities within and beyond the Harvard community to assemble expertise in public health, medicine, social science, management, and other disciplines in order to promote evidence-based evaluations of humanitarian programs. HHI faculty and members serve on the boards of major non-governmental organizations and provide consulting, evaluation, and technical backstopping services to United Nations agencies and international and local non-governmental organizations. In implementing its work, HHI reaches across multiple schools and disciplines at Harvard University and is able to convene diverse expertise around challenges requiring multi- and inter-disciplinary approaches. HHI researchers utilize social modeling, learning theory, quantitative social science, mass communication and media analysis, geospatial analysis, and governance to establish an empirical base for understanding impact of information technology applications in the humanitarian space.¹¹⁹

Indeed, “[t]hematically, the university can support the development and implementation of research agendas uniquely suited to the interaction of ICTs and crises, doing the arduous and essential work of cutting across disciplines and topics from computer science and networking, to law and public policy, social sciences, public health, systems dynamics, organizational behavior, and much more.”¹²⁰ Dr. Michael VanRooyen and Dr. Jennifer Leaning set up the Harvard Humanitarian Initiative (HHI) in 2005 to develop a brand-new tool kit and train a new generation of humanitarian, by providing field training, university courses, and housing interdisciplinary initiatives and research.¹²¹

Among the many important areas, HHI engages in innovative initiatives in the Program on Crisis Dynamics and Crisis Mapping¹²² that examines the use of information communications technologies in conflict and

¹¹⁵ See www.satsentinel.org.

¹¹⁶ A recent Congressional Letter to President Barak Obama, signed by 62 US members of Congress, has cited the work of SSP, and is urging the President to alter foreign policy toward Sudan in light of “extra judicial killings, illegal detention, disappearances, and attacks against civilians,” in the contested areas, and in which “evidence gathered through satellite imagery by the Satellite Sentinel Project shows at least eight mass graves found...” November 21, 2011.

¹¹⁷ William Wheeler, “The Saving Game” *Boston Magazine* (January 2012), 4. Accessed 25 February 2012.

¹¹⁸ Conference at Human Rights center at UC Berkeley, CA April 21, 2011. Nathaniel Raymond, accessed November 2011.

¹¹⁹ <http://www.youtube.com/watch?v=6zkPLXV2M2g>.

¹²⁰ <http://hhi.harvard.edu/> accessed on 8 April 2011.

¹²¹ Gasser, Best, Maclay “ICTs and Crises: Linking Research and Implementation to Collectively Maximize Learning and Impact,” in *Peacebuilding*, 7.

¹²² Wheeler, “The Saving Game”, 2.

¹²³ The background about this mobile information technology devices have come to play an increasingly important role in responding to humanitarian emergencies and providing critical data to improve the understanding of the complex dynamics of

disaster settings. Its research focuses on identifying patterns in humanitarian emergencies to improve responses, and HHI examines the impact of crisis mapping, geospatial, and crowdsourcing technologies to prepare, mitigate, and respond to emergencies. Launched in 2007, HHI's Program on Crisis Dynamics/ Crisis Mapping set out to connect an active community of Crisis Mappers and to formalize the field of Crisis Mapping by analyzing trends, codifying standards and recommendations, and by bringing together traditional and non-traditional actors and thinkers.

Mobile information technology devices have come to play an increasingly important role in responding to humanitarian emergencies and providing critical data to improve the understanding of the complex dynamics of emergencies and local and international response. HHI's Crisis Mapping and Early Warning program seeks to develop an evidence base to evaluate information technologies, to convene the humanitarian and technical communities, to facilitate dialogue among humanitarian actors, and to provide new sources of data to improve understanding of conflict dynamics. Through its convening role, HHI is creating a community of practice to catalyze discussion among disparate groups of experts in a sustained forum that will refine crisis tools and promote best practices. The development of a community of practice is essential to help facilitate the integration of social media, crowd sourcing, and geospatial tools into the humanitarian response system.

Between 2007 and 2009, HHI's Program documented best practices and lessons learned through the lens of new technologies and methodologies,¹²³ which is a pioneer to lead research with modern information technology. In the process, HHI consulted and interviewed some 300 leading scholars, humanitarian practitioners, software and technology experts, and important policy makers across numerous interrelated fields. In an effort to implement its vision, the Crisis Mapping and Early Warning program is intended to operate globally, in almost real-time, and with a geo-referenced crisis monitoring platform for conflict prevention and disaster management. This public platform would integrate real-time data from mobile technologies, satellite and aerial imagery, global environmental sensors, open-source information from the internet and crowdsourced data. The platform would also leverage cutting edge technology in the field of data visualization and dynamic spatial analysis to identify patterns of crises for humanitarian response and thereby serve as a decision-support system. The ultimate purpose of crisis mapping is to provide individuals with access to information that can better inform their decisions in times of crises.

The third annual 2011 Humanitarian Action Summit (March 4th-6th, 2011) brought together over 200 strategic level leaders from NGO's, UN agencies, donor agencies and federal agencies, to discuss complex issues that face the V&TC community, as part of the agenda. The Summit built directly upon the momentum from the prior Humanitarian Health Conferences, utilized our network of humanitarian leaders, and developed an expanded agenda of critical topics facing the humanitarian health community. The 2011 Summit followed a similar work-plan from what was developed in 2009. Based on changing needs and emerging issues in the humanitarian health field, the 2011 working groups were introduced and developed to address these emerging themes. The following are key themes that were addressed in the form of working groups¹²⁴ and plenary sessions, one of which related directly to the topic of this case study, namely: Humanitarian Technologies, Crisis Mapping, and Challenges in Information Management Next steps in advancing mobile communications

emergencies and local and international response. Through its convening role, HHI is creating a community of practice to catalyze discussion among disparate groups of experts in a sustained forum that will refine crisis tools and promote best practices. The development of a community of practice is essential to help facilitate the integration of social media, crowd sourcing, and geospatial tools into the humanitarian response system. See www.hhi.harvard.edu.

¹²³ Meier and Leaning, "Applying Technology to Crisis Mapping and Early Warning in Humanitarian Settings." The authors analyze the current use, and changing role, of information communication technology (ICT) in conflict early warning, crisis mapping and humanitarian response and demonstrate that ICTs have the potential role to play an increasingly significant role in three critical ways by facilitating the communication of information in conflict zones, improving the collection of salient quantitative and qualitative conflict data, and enhancing the visualization and analysis of patterns.

¹²⁴ The Working Groups addressed the following issues, in which HHI, the chairs, and most participants had spent prior time and efforts in: Field level coordination among civilian and military humanitarian actors; Strategies for improving field dialogue; NGO security and standards in staff protection; Updates on establishing consensus on organizational security practices. Urbanization and humanitarian access; Challenges to program design in concentrated urban regions; Demographics, Mapping and Applied Technology for Humanitarian Action; Next steps in advancing mobile communications and geospatial tools; Surgical Issues in the Humanitarian Space; Improving surgical epidemiology in war and disaster; Mental Health and Psychosocial Support in Crisis and Conflict; Transitioning mental health and psychosocial programs from short term relief to community-based programs for development; Plenary Sessions and Breakout Sessions addressed "Post-conflict health systems reconstruction; Evaluating best practices for re-development of health systems in the post-crisis settings", and "Humanitarian Professionalization and educational networks: Academic engagement with humanitarian agencies, logical linkages, technical enhancements and barriers to participation". See for further details: <http://hhi.harvard.edu/events/humanitarian-action-summit>.

and geospatial tools. The research for, as well as the reports these Summits generate, represent valuable sources and references for the fields they cover and can be found on the HHI site.¹²⁵ In cooperation between the HHI, the UN Foundation, OCHA and Vodafone, Disaster Response 2.0 Report had been prepared and which was launched on 28 March 2011.¹²⁶ As the third HHI Humanitarian Action Summit was in progress in March 2011 and during the discussions of the Humanitarian Technologies, Crisis Mapping, and Challenges in Information Management—part of which is working on advancing mobile communications and geospatial tools—crisis-mappers have set up the Libya Crisis map in collaboration with UNOCHA, the Standby Task Force and UN volunteers.¹²⁷ Following the earthquake of 8.9 magnitude in Japan on 11 March 2011 activities are in high speed crisis-mappers took action and advanced their technology in order to help understand the stakes and possibilities to save lives and to mitigate human suffering there.

4.3.2 UN Office for the Coordination of Humanitarian Affairs (OCHA)

The Administrative Committee on Coordination (ACC) committee started to convene monthly meetings trying to discuss basic questions of early warning within the UN system. The resulting Inter-Agency Standing Committee (IASC)—which among others includes Food and Agriculture Organization (FAO), United Nations Development Programme (UNDP), United Nations High Commissioner for Refugees (UNHCR) and United Nations Children’s Fund (UNICEF)—“is a unique inter-agency forum for co-ordination, policy development, and decision-making involving the key UN and non- UN humanitarian partners.” (IASC is also established as a response to General Assembly Resolution 46/182, with General Assembly Resolution 48/57 affirming its role as the primary mechanism for inter-agency co-ordination of humanitarian assistance.) Under the leadership of *Early warning and early action in the UN system: UNDP and OCHA*, the Emergency Relief Coordinator—the IASC—develops humanitarian policies, agrees on a clear division of responsibility for the various aspects of humanitarian assistance, identifies and addresses gaps in response, and advocates for effective application of humanitarian principles. Together with the Executive Committee for Humanitarian Affairs (ECHA), the IASC forms the key strategic coordination mechanism among major humanitarian actors, while encouraging the use and exchange of existing data. While the meetings improve contact among the different organizations, it remains ad-hoc and operates at a personal level. A main problem is that the working group lacks any kind of decision power.¹²⁸

Activities and resources dedicated to Early Warning and Preparedness, such as the Global Preparedness Matrix and the Early Warning/Early Action report are produced three times a year by a number of organizations, and are distributed to all Resident and Humanitarian Coordinators, the Emergency Relief Coordinator, and broadly within the UN/NGO community.¹²⁹ As previously mentioned, the UN Office for the Coordination of Humanitarian Affairs (OCHA)¹³⁰ provides the lead role through the Humanitarian Early Warning System (HEWS) established by the DHA in 1995.

¹²⁵ 2006 Humanitarian Health Conference: The report from the First Annual Humanitarian Health Conference recounts the discussions of the working groups, the keynote themes, as well as the conference proceedings.

2007 Humanitarian Health Conference: This report of the 2007 Humanitarian Health Conference recounts the discussions for the working groups and the keynote themes. The proceedings are more than a record of the conference; they highlight actionable steps to move forward in each area of discussion. At the close of the 2007 conference, participants came to consensus that this forum serves a useful function within the humanitarian community and should continue on an annual basis

2009 Humanitarian Action Summit: This policy compendium is written to provide a summary of the issues discussed at the 2009 Summit and to amplify policy issues that resulted from these deliberations. This compendium is written as a companion piece to the articles published in Pre-Hospital and Disaster Medicine August, September 2009 Supplement.

¹²⁶ HHI, “Disaster Relief 2.0: The Future of Information Sharing in Humanitarian Emergencies.” This report analyzes how the humanitarian community and the emerging volunteer and technical communities worked together in the aftermath of the 2010 earthquake in Haiti, and recommends a four-part framework to improve coordination between these two groups in future emergencies. The report was researched and written by a team at HHI led by John Crowley and Jennifer Chan, in partnership with Vodafone Foundation, United Nations Foundation, and UN Office for the Coordination of Humanitarian Affairs (OCHA), available at <http://hhi.harvard.edu/publications/hhi-program-publications>.

¹²⁷ According to Patrick Meier, email 11 March 2012.

¹²⁸ Rusu and Schmeidl, “*Early warning and early action in the UN System*.” See its Appendix: Humanitarian Early Warning` in the United Nations – Key developments.

¹²⁹ “Emergency Preparedness and Response,” 140-144.

¹³⁰ The DHA information tools including HEWS, IRINs and ReliefWeb were named as the first step towards a strategic information framework which could support humanitarian action by all major actors. In the future, there will be a need for: increased and improved reciprocal communication between field and headquarters; standardized situation reporting from field offices through the use of agreed guidelines; more inter-agency information exchange agreements; and additional field-based networks. http://www.reliefweb.int/ocha_ol/pub/humrep97/info.html#ews. Accessed 23 February 2011.

The UN office of Coordination of Humanitarian Affairs (OCHA) as the coordinating body of international humanitarian assistance in complex emergencies and natural disasters, coordinating humanitarian assistance of the United Nations in a complex interaction of UN program and agencies, non-governmental organizations, the governments concerned and affected population, has developed an early warning system on emergencies. 131 OCHA took over and further developed the mission of Department of Humanitarian Affairs (DHA), which the UN set up in 1991 to "mobilize and coordinate the collective efforts of the international community, in particular those of the UN system, to meet in a coherent and timely manner the needs of those exposed to human suffering and material destruction in disasters and emergencies.

This involves reducing vulnerability, promoting solutions to root causes and facilitating the smooth transition from relief to rehabilitation and development.¹³² Three specific types of information initiatives had been developed: the Humanitarian Early Warning System (HEWS); Regional/ Country Information Networks (IRIN) ; and a global information platform it had developed called ReliefWeb, a "one-stop shopping" platform on the Internet that provided information on complex emergencies. Based on the input from the field, OCHA began to prepare early warning/early action reports to the Inter-Agency Standing Committee's Sub-Working Group on Preparedness and Contingency Planning. The Humanitarian early warning work continues as the Humanitarian Early Warning Service (HEWSweb) which is an inter-agency partnership project aims at establishing a common platform for humanitarian early warnings and forecasts for natural hazards.¹³³

4.3.3 Humanitarian Early Warning Service (HEWS)

The main objective of HEWSweb is to bring together and make accessible in a simple manner the most credible early warning information available at the global level from multiple specialized institutions. The HEWSweb concept has been initially proposed by a subsidiary body of the Inter-Agency Standing Committee (the IASC Sub-Working Group on Preparedness) and endorsed by the IASC-WG in September 2004. The service has been developed by the World Food Programme and its technical staff on behalf of the IASC, building on inputs from all IASC partners. The HEWSweb was officially set up in 2005 by the IASC (and developed by the World Food Programme) as "an inter-agency partnership project aimed at establishing a common platform for humanitarian early warnings and forecasts for natural hazards and socio-political developments worldwide. Main areas of work are:

- A first global **one-stop shop** for early warning information for all natural hazards;
- Provides **systematic, credible and real-time early warning**;
- Makes **access** to early warning information faster and easier;
- Enhances **the use** of early warning by displaying graphics, maps, and simple (non-technical) language and messages that are accessible to managers & decision-makers;
- Fosters greater links between early warning and preparedness actions and response among partners;
- 70% dynamically updated with real-time information. Minimal maintenance, cost-effective;
- Brings together key partners in the humanitarian community under one strategic EW project and initiative;
- Fosters the development of a common language in Early Warning;
- Makes available global early warning information to the wider humanitarian community;¹³⁴

Currently, it is still limited to natural disasters, but thought is being given to expanding it to include political early warnings. IASC partners include the World Food Programme (WFP), United Nations International Childrens' Emergency Fund (UNICEF), UNDP, OCHA, the International Committee of the Red Cross (ICRC), IFRC, UNHCR, the World Health Organization (WHO), United Nations Food and Agriculture Organization (FAO), the World Meteorological Organization (WMO), the International Organization for

¹³¹ See the guide to UN documentation which was created by the Dag Hammarskjöld Library at Uppsala University Library, Sweden - <http://dagdok.org/en/main-subjects/humanitarian-affairs/coordination-of-humanitarian-affairs-ocha.html>, and http://ochaonline.un.org/ocha2011/OCHA2011_jpg2000_200dpi.pdf. Visited Nov. 23, 2011.

¹³² Mission of Department of Humanitarian Affairs <http://www.un.org/depts/dha/>, Nov. 23, 2011.

¹³³ The IASC Humanitarian Early Warning Service – HEWSweb, <http://www.hewsweb.org/about/>, November 23, 2011

¹³⁴ <http://www.hewsweb.org/about/> (accessed 25 February 2012).

Migration (IOM) and the Steering Committee for Humanitarian Response (SCHR), together with selected non-UN specialized institutions. Since 10 March 2011 the new HEWSweb is online.¹³⁵

4.4 Analysis of Current Efforts

4.4.1 Challenges

4.4.1.a Disaster and Conflict Early Alert and Response

New questions are being raised in both the formal and informal humanitarian communities about how best to develop and integrate an early warning system that can efficiently and effectively warn and respond to complex crises as they escalate into widespread violence.¹³⁶ Rather than attempting to construct a model and a platform from scratch, many practitioners and academics see the value in drawing insight from disaster relief communities.¹³⁷ This is a logical undertaking for two reasons. First, as has been pointed out by numerous scholars, “risks and feedback loops associated with natural disasters, climate change, and environmental degradation” could make armed conflict more likely, and “at the same time, political crises and armed conflicts indirectly exacerbate the impact of natural disasters by exhausting coping mechanisms and response capacities.” Furthermore, “both types of disasters have commonly led to massive internal and external displacements of people,” and this migration of people can alter the ethnic composition of countries, and this fact “is one of the most widely cited conflict-generating effects of climate change in the literature.”¹³⁸ These underlying linkages make it more and more difficult to isolate and ignore the relationships between these two phenomena.

The second logical reason for the integration of these two communities is that they “share the same functional logic” vis a vis inherent goals towards affected populations: early detection and early response. “There are obvious functional parallels in risk assessments, monitoring and warning, dissemination and communication, response capability and impact evaluation. These analogous functions have real operational consequences for implementing organizations and stakeholders.¹³⁹ It is in this context that V & TCs operating in the realm of disaster response and management have—and should—a vital role to play in conflict early alert and response scenarios.¹⁴⁰

¹³⁵ As of 10 March 2011 the new HEWSweb is online and outside individuals or organizations may subscribe through by email or use <http://www.hewsweb.org/contacts>, and contacts by email with the Emergency Preparedness and Response Branch World Food Programme, in charge of running HEWS (2011).

¹³⁶ Another aspect of traditional EWS that is being challenged by members and thinkers of the so-called “fourth-generation” V & TC community is the notion of monitoring indicators of war. According to Patrick Meier, “[i]f only indicators of war and violence are monitored, that’s all that will be documented. Conflict early warning systems that focus exclusively on the ‘dynamics of war will only provide half the picture.’ It is vital that indicators of peace and cooperation also be monitored,” for by identifying positive factors, such as “cooperation indicators”, we may better understand possible entry points for intervention and begin to utilize aspects of a local society in a more effective and sustainable way (Ibid). An additional shift is occurring in early warning systems that takes lessons from the disaster management and natural hazard field to suggest that “preparedness” be an integral part in conflict early warning. It is a “cornerstone of disaster risk reduction, but it is virtually absent from the field of conflict early warning and rapid response,” see Meier, “Early Warning Systems and the Prevention of Violent Conflict,” 14.

¹³⁷ Quoted in Meier, “Networking Disaster 1430; see also Brauch 2003f; and Brauch/Oswald 2006.

¹³⁸ Ibid.

¹³⁹ Ibid

¹⁴⁰ The particular example Meier uses, in his case study of DEWS to CEWS transferability—although regional and governmental in nature—is resource management and pastoral conflict in the Horn of Africa region, and the Conflict Early Warning and Response Network (CEWARN) mechanism that the Inter-Governmental Authority of Development (IGAD) set up in 2003. It is in this context that the recommendations for information sharing and management from the “Disaster Relief 2.0” report are logically validated for the purposes of developing and expanding conflict early warning systems (CEWS) in both the formal and informal humanitarian communities. Meier claims that the success of CEWARN’s methodology comes from its integration of Incident and Situation reporting (IncRep and SitRep) to go beyond event logging. “Early warning analysis must move beyond the event-logging approach to context-based forward-looking methodologies that monitor *precursors* to peace *and* conflict,” (1432, emphasis added). “By complementing these two types of surveys, [IncReps and SitReps],” Meier notes, “CEWARN can empirically verify which precursors of pastoral conflict are most closely correlated with subsequent pastoral conflict incidence (tracked by IncReps). Furthermore, by monitoring precursors of conflict (and not just outcomes), CEWARN may be in a position to respond to an increasing frequency of precursor events *before* these translate into irreversible incidents,” (Ibid). According to the CEWARN website (<http://www.cewarn.org/>), member states include Djibouti, Eritrea, Ethiopia, Kenya, Sudan, and Somalia. “Its mandate is to prevent cross-border pastoral conflict in the Karamoja and Somali Cluster areas in the Horn of Africa. It uses Incident and Situation reporting (IncRep and SitReps) to compile event-data and baseline analysis. What is also important here is that the case of Somalia provides us with a crisis that is both political conflict *and* natural disaster in nature—in essence, a *complex* crisis.

Early Warning Systems in the context of political and violent conflict are subject to certain limitations that EWS in disaster scenarios (DEWS) do not usually have to deal with. For example, “[misinformation and propaganda are often rife during conflicts and political crises,” and so CEWS have to find ways to determine accuracy and validity of information.¹⁴¹ “Conflict early warning lags 15 years behind disaster early warning,” according to Meiers and a 2009 OECD Report. “In sum, the use of technology in conflict settings requires a different set of solutions to overcome existing challenges, and lags some years behind the evolution of natural disaster early warning systems.”¹⁴²

Nevertheless, there is value in taking best practices from DEWS and applying them to CEWS. According to Wulf and Debiel, the evolution of early warning systems came first from the military/intelligence community, was transferred to cases involving complex natural disasters, and later on was used in political/conflict scenarios. So naturally the evolution process of EWS would seem to indicate that lessons learned and best practices from the disaster relief community can and should be applied to EWS in conflict situations. But they have been—and continue to be—separate communities.

4.4.1.b Information Management and Verification

Verified, trusted, and timely information is crucial in the field of humanitarian and human rights work.¹⁴³ In fact, it can often be the difference between life and death.¹⁴⁴ According to Patrick Meier, “[o]bjective and accurate information is essential for organized communities—it is often referred to as a ‘public good’ for this reason. But particularly in times of crisis, vital information is often in short supply. New technologies and new uses of existing technology present an important opportunity for improving how people can prepare for, respond to, and recover from major disasters. At the same time, they present new risks and challenges.”¹⁴⁵ “Even when warnings are issued, they fail to reach all who need to take action, including local authorities, community based organizations, and the public at large. Often warnings issued are not properly understood or may not be taken seriously. If people receive the information, they might not trust it or know how to use it.”¹⁴⁶

Furthermore, there are some barriers that illustrate regulatory issues in using the latest technology in widespread humanitarian ventures. According Meier and Coyle, “recent experiences of disasters and conflicts have highlighted some key remaining gaps,” including incomplete standardization of communication procedures, the need to develop delivery systems and standards, and the need for priority access by emergency service personnel.¹⁴⁷

4.4.1.c Security and Safety

And there is also the issue of security and safety. Speaking at the ICCM 2011 conference in Geneva on November 15th, was HHI’s John Crowley and Sam Bendett of the National Defense University, “Operational Security for Crisis Maps: Standards & Best Practices.” According to Crowley and others, “operational security is fast becoming the greatest challenge to crowdsourced crisis response.” There have been targeted

¹⁴¹ Meier and Coyle, “New Technologies in Emergencies and Conflicts,” 14.

¹⁴² Ibid.

¹⁴³ See Patrick Meier, “Verifying Crowdsourced Social Media Reports for Live Crisis Mapping: An Introduction to Information Forensics,” posted on *iRevolution* blog here: <http://irevolution.net/2011/11/29/information-forensics-five-case-studies/> (accessed 11 March 2012).

¹⁴⁴ A conversation (2011) with Dr. Charlie Clements, Director of the Carr Center for Human Rights at Harvard University, revealed that an SMS message received from Ushahidi while in Kenya advised him to change route due to a potential threat in the area. After changing course, Dr. Clements realized his initial path would have led him to injury or even death. This timely, accurate piece of information is an example of how platforms that utilize crowdsourced information and make that information available via crisis mapping can be very helpful in times of danger.

¹⁴⁵ Meier and Coyle, “New Technologies in Emergencies and Conflicts,” 3; Information must be two-way to be effective, will not be used unless it is trusted, and will be helpful only if accurate (Meier “New Technologies,” 1). Indeed, the report goes on to say that “social context” also plays a vital role in the way information is used. Format is also important; “While the underlying communications technology may be radio, mobile, or internet, it is useful how the information is conveyed,” whether one-to-many, “one-to-one, or many-to-many, (Ibid, 6). Finally, the audience is also considered, whether it’s global or local, the aid and policy community, or if the information is geared to be disseminated toward the affected populations themselves, (Ibid). But technology alone cannot deliver the results that we need; “ICTs are only as good as those who know how to use them effectively, understand their importance, and leverage them to enhance the efficiency and effectiveness of humanitarian aid and response,” see Martti Ahtisaari, “Preface,” in *Peacebuilding in the Information Age*, 3.

¹⁴⁶ Meier and Coyle, “New Technologies in Emergencies and Conflicts,” 11.

¹⁴⁷ Ibid, 12. Patrick Meier has also stressed the need for “bounded crowdsourcing”, an approach that uses “snowball sampling” to begin a project by including a small number of trusted individuals who then vouch for additional individuals to join. This method of trust and vouching is often compared against that of “open-crowdsourcing.” See Patrick Meier, “Why Bounded Crowdsourcing is Important for Crisis Mapping and Beyond,” *iRevolution* blog, posted December 7, 2011. Accessed 11 March 2012 here: <http://irevolution.net/2011/12/07/why-bounded-crowdsourcing/>.

ensorship, false reports, harassment, and even targeting of those involved in the crisis mapping initiatives that are currently taking place in areas of political conflict. Because crowdsourcing is inherently dangerous, people like Patrick Meier have called for a “set of standards and best practices” in order to utilize new technology in a safe and secure way.¹⁴⁸

Take the use of satellite imagery to monitor movements of populations and military fortification and reinforcement. While very-high-resolution satellite imagery can act as an important early warning indicator to estimate large-scale population movements and to pinpoint particular areas of security concern, there are certain drawbacks.¹⁴⁹ The first that comes to mind is the concern of inadvertently compromising critical information at the expense of the affected people or targeted civilian. When reporting to the public on location of military personnel, the obstruction of infrastructure, or the attack radius of a helicopter, crisis mapping can inadvertently provide valuable information, for example, of the location of a target or the vulnerability of a safe haven. While the Satellite Sentinel Project for example has accounted for this¹⁵⁰ it remains to be a pressing concern.

Furthermore, in the realm of satellite imagery usage, cloud cover can be irksome in the least, and disastrous at most; visual imagery cannot pierce cloud cover, and can hide valuable geospatial information. In conflict scenarios that depend on timely, accurate information, this can be the difference between life and death. Furthermore, using satellites to observe and document phenomena on-the-ground carries with it a negative connotation.¹⁵¹ While some see the use of satellites in humanitarian operations as leveling the playing ground against, say, repressive and authoritarian regimes, others view it as an infringement of a nation’s sovereignty, and act of espionage.

Security and privacy concerns are coming from multiple different angles; it really depends on who you are talking about. This complex combination of views includes concerns for information management and computer systems being protected against hackers, but it’s also concerned with protecting the security of people at risk. There’s also a concern for timely validation of information and the willingness of affected peoples themselves to want to even contribute in the first place.¹⁵²

4.4.1.d A New Set of Global Protocols For Humanitarian Aid?

The crisis relief community, in recent years, has been suffering from “industrywide tunnel vision, demand for quick results, and lack of long-term planning”.¹⁵³ The industry operates with over 160 billion dollars a year, employs more than 240,000 humanitarians, and seems to be an attractive future for a new generation of young people that yearn to harness information technology for the betterment of affected peoples all over the world. But in a seemingly growing industry with a wealth of talent, “there is no centralized humanitarian

¹⁴⁸ ICCM 2011, Geneva Switzerland; See also Patrick Meier “Changing the World One Map at a Time,” conference in Berlin, April 14-15, 2011, accessed November 2011. http://www.youtube.com/watch?v=Hh_PiVqf8BA. Repressive regimes have been using technology to repress, and also to provide misinformation. According to Meier, a group of people loyal to Sudanese President Bashir had set up a Facebook group to entice the organization and arranged meeting of anti-Bashir nationals in the Spring of 2011. Because the Facebook group was indeed run by the Bashir government (unbeknownst to the protesters), police and armed forces were able to locate the activists and protesters just as they arrived for the organized protest, and they were subsequently arrested, detained, and beaten. This illustrates the need to be careful when sharing information on the internet, and subsequent movements have learned from this and set up security and ethics blogs to filter and help prevent these kinds of dangers.

¹⁴⁹ Meier and Coyle, “New Technologies in Emergencies and Conflicts,” 35.

¹⁵⁰ A narrative from *Boston Magazine’s* William Wheeler illustrates this particularly well:

The SSP takes pains to conceal the precise locations of troops and weapons. Otherwise, says Benjamin Davies, its operations manager, “We would basically be putting [the war] on steroids. But if we say, ‘This city is going to get hit and we’re worried they’re going to use disproportionate force,’ we are giving an all-points warning: ‘An ax murderer is on the loose in Cambridge. Beware.’ We’re not saying where yet, we’re just saying he’s out there and he’s got an ax.” In this, like in many aspects of their work, the SSP team has to write its own rules; there is no playbook.

See William Wheeler, “The Saving Game” *Boston Magazine* (January 2012) (accessed 25 February 2012).

http://www.bostonmagazine.com/articles/the_saving_game_can_michael_vanrooyen_build_an_army_of_super_humanitarians/

¹⁵¹ Meier and Coyle, “New Technologies,” 37.

¹⁵² George Chamales of “Rogue Genius” has conceptualized a graphic that depicts security challenges in a complex and interconnected ecosystem. The info-graphic can be seen here:

http://beta.roguegenius.com/wp-content/uploads/2011/11/Securing_Crisis_Maps_Infographic.pdf.

¹⁵³ Wheeler, “The Saving Game” 2.

organization, no agreed-on standards and best practices, no single entity overseeing all the programs.”¹⁵⁴ Michael VanRooyen, co-founder and Director of HHI, explains this is at the heart of the problem.

This point was echoed in our interview with Dr. VanRooyen.¹⁵⁵ He pointed out that a growing number of volunteers (relative to professionals) are increasingly able to access and impact the response efforts in disaster crises. While this has been—and continues to be—a good development under the right conditions, intentions to do good do not always mean that the results will be good. There have been situations in which the response of these volunteers has been “inappropriate”.¹⁵⁶ And in complex political and security environments, this can be all the more dangerous and counterproductive.

As Dutch journalist Linda Polman has argued in her newest book—*War Games: the Story of Aid and War in Modern Times*—aid workers can themselves inadvertently exacerbate the situation when they—while trying to maintain neutrality—“become easy pawns, ripe for manipulation by the nefarious forces that brought them there” in the first place.¹⁵⁷ This is a situation of vulnerability which creates an additional security threat. There is also the issue of external accountability when “organizations that take in hundreds of millions of dollars after a major disaster” are “only accountable to their donors.” Indeed, unlike in a traditional market system, where the consumer is able to influence and choose the quality of their product, in humanitarian work, it is the producers of the product, not the affected peoples that determine the quality of the work that is being done. This inversion of the free market system helps us understand why crisis relief has been suffering. This calls for institutionalization of standards, practices, and certification.¹⁵⁸ And in fact, his solution would be “to establish a new set of global protocols”.¹⁵⁹

Dr. VanRooyen says that this unintended response is possible because volunteers are increasingly able to physically access crisis sites. By signing up with an NGO and buying a plane ticket, a volunteer can be on the ground in a matter of hours. While this is easy to see in a case like Haiti, where access for volunteers was quite permissive, in complex security environments and armed conflict situations like Afghanistan and Somalia, wide-spread access is not always possible—a good thing, according to Dr. VanRooyen. But how is technology changing this? With the kind of surveillance technology and crowdsourcing platforms that are now being used by student interns from places like Harvard and Tufts University for example (the Satellite Sentinel Project and Stand by Task Force comes to mind here), physical access to a crisis is no longer a requisite. So in short, are technological advancements opening up accessibility to places and phenomena that were once non-permissive? Yes. But according to Michael VanRooyen, we are only beginning to see the results of this.

4.4.1.e Over-reliance on Technology?

Finally, as Jennifer Chan has pointed out in an interview with the authors, over-reliance on technology—the very same that has been so instrumental in the effectiveness of these new non-traditional collaborations—can actually be a potential source of insecurity. While the ability to produce and consume complex forms of information in the form of Third-and Fourth Generation (4G) technology (discussed above) can increase capacity for the collection, aggregation, and dissemination of data, free, open-source software and mobile technology might not always be available to affected peoples. It would be important, for example, not to forget the extraordinary power of the radio in *transmitting* an early warning or alert; not everyone, especially affected people, will have access to social media and SMS with mobile devices. For examples of this, experts—such as Imogen Wall—often look back to costly mistakes made during the response to the 2004 Indian Ocean Tsunami, where the use of “jargon” contributed to exacerbating the problem of managing expectations.¹⁶⁰ In providing a summary of Wall’s work, Meier highlights that “Low-tech solutions are almost invariably better.

¹⁵⁴ Ibid. In this recent interview with *Boston Magazine*, Dr. VanRooyen indicated that “...every humanitarian endeavor is now fraught with political, financial, and health consequences...yet there are too many schools pumping out insufficiently trained humanitarian grads....once on the ground, those same people can actually make the disaster worse.” (ibid).

¹⁵⁵ March 1, 2012.

¹⁵⁶ Michael VanRooyen, March 1, 2012 (interview).

¹⁵⁷ Quoted from Wheeler, “The Saving Game”, 2.

¹⁵⁸ Dr. VanRooyen, in an interview, March 1, 2012.

¹⁵⁹ Wheeler, “The Saving Game” 4.

¹⁶⁰ See Imogen Wall, *The Right to Know: The Challenge of Public Information and Accountability in Aceh and Sri Lanka*, Office of the UN Secretary General’s Special Envoy for Tsunami Recovery, 2006; quoted from Patrick Meier, “Haiti and the Tyranny of Technology,” *IREvolution* blog, posted 2 March 2010 here: <http://irevolution.net/2010/03/02/haiti-tyranny-technology/> (accessed 11 March 2012).

A simple bulletin board can do more to enhance transparency and accountability towards beneficiaries than any website.”¹⁶¹

4.4.2 Potentials

“My office, in collaboration with the ICT4Peace Foundation, is currently leading an initiative with our key stakeholders in the field, and at headquarters, to formulate such integrated approaches that will produce significant improvements in the overall crisis information management capabilities of the international community.”¹⁶²

These initiatives (above), according to UN Assistant Secretary-General Soon Hong, include information architecture, technology development initiatives, capacity building activities for human resources and technical development, and outreach efforts to increase public and private sector support. Indeed, “Never before has information technology been as visible and well positioned as a driver for change within this global institution [the UN]. The challenge for the UN and its stakeholders is now to find a way to harness the power of both traditional and new solutions to better serve, to better inform, and to better protect people, especially in times of crises.”¹⁶³

What this means for the UN and its efforts of integrating a comprehensive early alert system, is that current information management practices will no longer be appropriate in an age where it is no longer the sole actor. The “Disaster” report on the response in Haiti is quite sobering in this regard: “The international humanitarian system was not tooled to handle these two new information fire hoses—one from the disaster-affected community and one from a mobilized swarm of global volunteers.”¹⁶⁴ “[T]he humanitarian system had no formal protocols for communicating with these volunteer and technical communities (V&TCs)...policies and procedures were never designed to incorporate data from outside their networks.”¹⁶⁵

Patrick Meier and Jennifer Leaning have attempted to understand and conceptualize this societal change, and what this means for information management across global humanitarian systems. They adopt a framework of thinking that takes a Big World/Small World dichotomist view: “The ‘big world’ denotes a western governmental, institutional and top-down perspective while the ‘small world’ describes a Southern, local community perspective with associated capabilities and agendas.”¹⁶⁶ Six possible pathways exist for Meier and Leaning: namely, between big and small world headquarters and their offices and affected populations in the field. For Meier and Leaning, “The diffusion of ICTs coupled with new ICT-enabled participation will further expand and shift these pathways from unidirectional information flows to two-way and peer-to-peer networked modes of information exchange.”¹⁶⁷

According to Nathaniel Raymond, human rights investigator and Operations Manager at the Satellite Sentinel Project housed at the Harvard Humanitarian Initiative, “the issues of information management are exemplified in intelligence communities as well—both formal and informal/open-sourced. The most critical need in the field of mass atrocity/complex humanitarian disaster early warning systems is the establishment of consistent metrics and standards across the UN system, NGOs, and other international organizations for what indicators need to be captured and how best to capture and integrate them.”¹⁶⁸ This could potentially be achieved, according to Mr. Raymond, if the UN moved to a “fused view” intelligence paradigm which the US government focuses on achieving.¹⁶⁹

¹⁶¹ Ibid.

¹⁶² UN ASG Chio Soon-Hong, “The Role of the UN: ICTs in Crisis Response, Peacekeeping and Peacebuilding,” in *Peacebuilding in the Information Age*, 4.

¹⁶³ Dr. Chio Soon-Hong, “The Role of the UN: ICTs in Crisis Response, Peacekeeping and Peacebuilding,” in *Peacebuilding in the Information Age*, 4.

¹⁶⁴ Ibid, 9

¹⁶⁵ Ibid, 11

¹⁶⁶ Patrick Meier and Jennifer Leaning, “Applying Technology to Crisis Mapping and Early Warning in Humanitarian Settings,” (Cambridge, MA: Harvard Humanitarian Initiative Working Paper Series, September 2009), 2.

¹⁶⁷ Ibid.

¹⁶⁸ Email from Nathaniel Raymond to author, dated October 2011.

¹⁶⁹ “Fused view” exists when multiple means of intel collection on one target can occur and be aggregated together simultaneously (i.e. geospatial intelligence, sitreps, human intel, signals, open source, etc), Ibid. The major “vision challenge” for the field is to move from the posture of asking “how do we achieve effective early warning,” to the new and more radical posture of “how do we achieve rapid deterrence through our early warning systems themselves”? This pivot is based on the premise that a “fused view,” standardized, and public facing early warning system is itself an “offensive” deterrence capability of a sort. That the very act of collection, aggregation, integration, and dissemination through a rapid tempo, high credibility, and high visibility infrastructure can by itself prevent the occurrence and/or spread of potential complex humanitarian disasters.

Indeed, because reliable information is often considered a public good, governments, regulators, and international agencies have a special stake in “getting it right” for affected people.¹⁷⁰ Nobel Peace Laureate and former President of Finland, Martti Ahtisaari, has noted that since “the UN system in particular is very active in all these areas, [humanitarian response, crisis prevention, mitigation and recovery]..it makes it imperative that it takes the lead in the design and implementation of ICT solutions that strengthen timely information sharing.”¹⁷¹ Wulf and Debiel discuss four major reasons for a Warning-Response Gap: Institutional rigidity and cognitive biases, the disconnect between early warning advisors and early action decision makers, political interests (especially at the regional level), and the inefficient allocation and use of resources.¹⁷² They recommend that “the focus could be on the consolidation of advanced models, the intensified sharing of data collections (despite academic competition and political barriers) and the public provision of relevant information...instead of reinventing the wheel.”

The truth is that technology may also be the enemy of effective early warning as it is the ally. As the “Disaster Relief” report concludes, “...A partnership between the formal humanitarian community and the informal V&TCs requires an interface between the two systems—a set of protocols not only governing flows of data but also different ways of thinking about decision making, problem solving, and conflict resolution. This interface should be designed to work during a humanitarian emergency as well as during the transitions from preparation to response and response to recovery. To aid adoption, the interface must start and remain lightweight, simple, and adaptable.”¹⁷³

5. Conclusions

With no claim of attempting to be exhaustive, this paper focused on those initiatives which we dealt with directly or indirectly with UNHCR for thirty years or in our research. It referred only to a few of the increasing body of scholarly and professional work/writing in this field. Having looked back at selected initiatives in the United Nations and outside by non-governmental –academic institutions, the picture is mixed. With some exceptions, such as the Libya crisis, it seems that while early information management, coordination and action are issues, a proactive *response* still lacks political will.

With increasing technological capabilities of gathering real-time information and geographically linked data there is no information and early warning shortage. Rather, timely action is the issue. Considering that the United Nations consists of member states – and the member states are concerned with controlling sensitive information for reasons of national security—one UN coordinated early alert system seems unrealistic at present and for the time to come. Despite serious efforts, some of which led to positive results, preventive diplomacy as for example Ramcharan documented, other insights and especially from the work of Rusu/Schmeidl provide more sobering assessment.

Opening their information input into the international humanitarian system, NEW HUMANITARIAN PARTNERSHIPS WITH TECHNOLOGICAL AND VOLUNTARY COMMUNITIES will have to build and demonstrate reliable and consistent capabilities in order for traditional formal international and local humanitarian entities to be able to make the best of and adapt to those methods of work based on open standards and web services. In addition it would seem to be useful to establish agreements on functions such as to aggregate and analyze reports from individual voices that emerge from disaster affected communities, some of which have started, such as in Somalia through the SBTF in early November 2011 in initial consultations with UNHCR. As this working paper has shown, we are already witnessing this shift in paradigm across the traditional and non-traditional humanitarian communities.

It may well be also that the directly affected people and non-governmental individuals and institutions can represent the glue between those who govern and those who need help to better sound the alarm and spur action through transparent initiatives and convincing manifestations. The UN is likely to continue its early

¹⁷⁰ Meier and Coyle, “New Technologies in Emergencies and Conflicts,” 9.

¹⁷¹ Ahtisaari, “Preface,” in *Peacebuilding*, 3.

¹⁷² Wulf and Debiel, “Conflict Early Warning and Response Mechanisms,” 27-29.

¹⁷³ HHI, “Disaster Relief: 2.0,” 44. Also, according to Patrick Meier, he and Andrej Verity are starting the “first draft” of an interface as part of a project called “The Digital Humanitarian Network,” (source: email from Patrick Meier 11 March, 2012).

warning and action in specific and tailored fashions with regard to concrete situations and actors, mandates, and objectives, giving involvement of non-governmental and academic actors an opportunity to contribute, but rather with a top down approach. In the end, it will be more about the affected people themselves, in a bottom up approach, picking up after decades of paradigm shifts (root cause, quantitative models, right to protect), and with the advance of technology, breaking through traditional borders of cooperation and bringing together mandates and capacities. In places like Kenya, Egypt, Libya, Haiti, Japan, Syria, and Sudan, affected people have chosen and shown and increasingly manage to take their own future into their own hands to get out of harm . This deserves support and may well be more sustainable as a way forward.

Annex 6.1: Inventory of early warning & early alert initiatives¹⁷⁴ - Update by L. Druke – 4 March 2012

¹⁷⁴ Initial draft inventory prepared by Robert Kirkpatrick, 27 May 2010, Director of UN Global Pulse and presented here with his permission.

Name & Org.	Purpose and audience	Type (T) & Indicator (I)	Output & Link
UN Agencies			
1.Epidemic and pandemic Alert and Response (EPR) WHO	<u>Purpose:</u> Integrated global alert and response system for epidemics and other public health emergencies; tracks evolving infectious disease situation, sounds alarm when needed, shares expertise, and mounts response needed to protect populations from consequences of epidemics; <u>Audience:</u> External (Member States, health professionals); <u>Coverage:</u> Global	(T) Global alert and response system (I) Epidemics and pandemics	Global Public Health Intelligence Network (GPHIN) is a secure Internet-based early-warning tool that continuously searches global media sources such as news wires and web sites to identify information about disease outbreaks and other events of potential international public health concern www.who.int/csr/en/
2.Global Job Crisis Observatory ILO	<u>Purpose:</u> What began as a crisis in financial markets rapidly became a global jobs crisis which is now causing hardship to many working women and men, families and communities. This website (updated every week) highlights the most relevant analytical and statistical information on the impact of the crisis on the world of work, and on policy responses to the job crisis.	(T) Observatory (I) Employment indicators	www.ilo.org/public/english/support/hib/financialcrisis/
3. Global Employment Trends ILO	<u>Purpose:</u> To examine the most current information available in order to assess the impact of the financial crisis and slowdown in world economic growth on jobs and possible scenarios for the way the situation might evolve in the year ahead; <u>Audience:</u> External; <u>Coverage:</u> Global	(T) Global Alert, Labour Market Projections (I) Employment indicators: Employment, Unemployment, Working Poor, Vulnerable Employment	World and Regional Labour Market Estimates and Projections. www.ilo.org/trends
4. Development Prospects Group (DECPG) World Bank	<u>Purpose:</u> To provide information, analysis and advice on global trends in the world economy, especially on trade, financial flows, commodity prices, and remittances flows, and the impact of these trends on developing countries; <u>Audience:</u> Internal (senior management for planning, investment decisions) and external (e.g. policymakers, academia, and the private sector); <u>Coverage:</u> Global	(T) Economic forecasting/projections (I) Trade, financial flows, commodity prices, and remittances flows, and the impact of these trends on developing countries	Two annual flagship publications: Global Economic Prospects and Global Development Finance http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTDECPROSPECTS/0,,contentMDK:20267500~menuPK:476908~pagePK:64165401~piPK:64165026~theSitePK:476883,00.html
5. Crisis Stock-taking UNDP	<u>Purpose:</u> To capture country level impacts and responses in both qualitative and quantitative indicators. The wiki currently consist of three main categories: impact at the country level, governmental response and UNDP's support to this response. The main purpose is to facilitate communication and information sharing between the COs, but also between COs and HQ; <u>Audience:</u> internal; <u>Coverage:</u> Global?	Observatory Impact of the financial, economic food crises. Responses of governments and UNDP COs	Disaster preparedness, mitigation and adaptation http://wiki.ict4peace.org/w/page/17234278/Disaster%20preparedness,%20mitigation%20and%20adaptation
6. Economic Shock and Hunger Index (ESHI) WFP	<u>Purpose:</u> To identify countries affected by the financial crisis through analysis of macro-economic variable and then overlay countries that are potentially food insecure; <u>Audience:</u> Internal?; <u>Coverage:</u> Global	Index Current Account Balances as percent of GDP; Foreign Exchange Reserves in number of months of Imports; Remittance inflows as percent of GDP; Merchandise Trade as percent of GDP; Foreign Direct Investment as percent of GDP; Debt Servicing as percent of GNI;	Analysis Paper http://www.wfp.org/countries
7. Food Security Monitoring Systems WFP	<u>Purpose:</u> Monthly and quarterly food security monitoring systems to inform WFP and partner operations. <u>Audience:</u> Internal and external; <u>Coverage:</u> Focus on specific countries with WFP operations: Afghanistan, Burkina Faso, Burundi, CAR, Chad, Cote d'Ivoire, Haiti, Lesotho, Mali, Mauritania, Nepal, Niger, Rwanda, Sudan, Swaziland and Uganda	Monitoring system Food commodity and cash crop/livestock prices, terms of trade, inflation, progression of agricultural season, food consumption score, and coping strategies.	Monthly or quarterly reports http://vam.wfp.org/
8. Humanitarian Early Warning Service WFP/IASC	<u>Purpose:</u> Global one-stop shop for early warning information for all natural hazards; main objective is to bring together and make accessible in a simple manner the most credible early warning information available	One-stop shop for early warning info Four categories of indicators: hazards, vulnerability, capacity and OCHA role	Humanitarian Early Warning Service – providing up-to-the-minute information on natural hazards around the world. Graphics, maps, and simple (non-

	at the global level from multiple specialized institutions; <u>Audience:</u> External (humanitarian community); <u>Coverage:</u> Global	Early Warning Service	technical) language and messages that are accessible to managers & decision-makers http://www.hewsworld.org/hp/
9. Global Disaster Alert and Coordination System (GDACS) OCHA/EC	<u>Purpose:</u> Web-based platform that combines existing web-based disaster information management systems; provides near real-time alerts about natural disasters around the world and tools to facilitate response coordination; <u>Audience:</u> External (humanitarian community)	Alert and Coordination System Earthquakes, cyclones, floods, volcanos?	Media monitoring, map catalogues and virtual On-Site Operations Coordination Centre; access alert-notification and interactive components are restricted to disaster managers in donor countries, response organisations and disaster-prone countries. www.gdacs.org
10. Humanitarian Dashboard - Patrick Meier -blog	<u>Purpose:</u> To consolidate core and common humanitarian information on individual humanitarian crises on a real-time basis in a single-screen or page format. <u>Audience:</u> Internal <u>Coverage:</u> Global	Crisis monitoring Humanitarian crisis indicators	Topics frequently addressed on this blog include: Civil Resistance, Crisis Mapping, Crowdsourcing, Digital Activism, Early Warning, Humanitarian Tech, Satellite Imagery, Social Media http://irevolution.net/
11. Financial Tracking Service and Coordination Saving Lives OCHA	<u>Purpose:</u> To record all reported international humanitarian aid. A special focus on consolidated and flash appeals allows to track the extent to which populations in crisis receive humanitarian aid in proportion to needs. <u>Audience:</u> External (humanitarian community and general public through ReliefWeb internet site); <u>Coverage:</u> Global	Aid disbursements monitor Multilateral aid, bilateral aid, in-kind aid, and private donations. Includes NGOs and the Red Cross / Red Crescent Movement statistics.	Aid statistics organized by CAP and Flash Appeal http://ocha.unog.ch
12. Emergency Preparedness & Disaster Risk Reduction OCHA	<u>Purpose:</u> To analyze hazards, vulnerabilities and response capacity at the country level, using a range of quantitative indicators to make decisions on where OCHA should focus and put resources. <u>Audience:</u> Internal (OCHA staff); <u>Coverage:</u> Regional and Global	Model-based risk assessment Four categories of indicators: hazards, vulnerability, capacity and OCHA role	http://ochaonline.un.org/rosa/EmergencyPreparedness/tabid/4823/language/en-US/Default.aspx
13. Interagency Standing Committee Early Warning/ Early Action IASC	<u>Purpose:</u> propose every four months a status of the world's running and potential emergencies with prioritization rating; <u>Audience:</u> UN + Humanitarian NGOs	Global Early Warning and Preparedness to humanitarian response	Report produced every four months http://www.humanitarianinfo.org/iasc/
14. Humanitarian Action for Children UNICEF	<u>Purpose:</u> Analysis of threats having the potential to lead to humanitarian implications in all countries where UNICEF has a field presence and triangulation timescale / country office capacity / level of risk to generate early-warnings if needs be and to improve humanitarian preparedness; <u>Audience:</u> internal, for UNICEF Country / Regional offices and Headquarters; <u>Coverage:</u> Global	Quantitative indicators for UNICEF programmatic areas (Education, Nutrition, Water & Sanitation, Child Protection, Child health)	Maps, description of types of crises and potential humanitarian implications on women & children, preparedness priorities and activities undertaken, assessment of level of preparedness in real time of UNICEF country offices, generation of alerts http://www.unicef.org/ http://www.unicef.org/hac2011/index.html
15. Global Risk Identification Programme (GRIP) UNDP/BCPR	<u>Purpose:</u> To improve information on disaster risks and losses and facilitate the incorporation of that information into risk management decision making. GRIP is the Thematic Platform for the implementation of Priority Action 2 of the Hyogo Frame for Action: Identification, assessment and monitoring of disaster risks. The goal of GRIP is reduced natural hazard-related losses in high risk areas to promote development; <u>Audience:</u> multi-stake holders; <u>Coverage:</u> Global	Risk assessment	Website, risk assessments, reports http://www.gripweb.org

<p>16. Desert Locust Information Service (DLIS) FAO</p>	<p><u>Purpose:</u> Global monitoring of Desert Locust situation and habitat conditions in Africa, Near East and Asia on a daily basis and provision of early warning and forecasts on the timing, location and scale of potential locust breeding and migration in order to reduce the frequency of locust plagues and improve early response; <u>Audience:</u> locust-affected countries, decision makers, general public, scientists, UN, NGOs, donors, Governments</p>	<p>Global monitoring and early warning Field data collected by national survey/control teams and real-time transmission by satellite; satellite-derived estimates of rainfall and green vegetation; meteorological data; seasonal (6 month) forecasts of precipitation and temperature; locust development and trajectory models; historical data (1930 to present); information exchange agreements (i.e. International Maritime Organization and UN Military Observers)</p>	<p>Monthly bulletin that contains national level situation summary and 6-week forecasts (produced by FAO/DLIS since 1976) supplemented by warnings (by direct email to concerned officials), alerts and updates during periods of increased locust activity; colour-coded alert levels; Locust Watch web site http://www.fao.org/ag/locust</p>
<p>17. Global Information and Early Warning System on Food and Agriculture (GIEWS) FAO</p>	<p><u>Purpose:</u> Global monitoring of food demand and supply for all basic foods, and early warning alerts of imminent food crises; <u>Audience:</u> external (Governments, etc.) and internal; <u>Coverage:</u> Global</p>	<p>Global monitoring and early warning Country cereal balance sheets, agro-climatic indicators, international commodity prices and basic domestic food prices, rainfall estimates at the provincial level (Africa), Vegetation index.</p>	<p>Issue reports on the world food situation, a list of countries in crisis, early warnings and updates on specific countries, a list of global early warning indicators, a basic domestic food prices database, satellite imagery & rainfall estimates for sub-Saharan Africa, by country. Also includes reports from joint FAO/WFP Crop and Food Security Assessments. www.fao.org/GIEWS/english/index.htm In all UN languages</p>
<p>18. Turn-Key crop monitoring and forecasting tool (CM BX) FAO/EC</p>	<p><u>Purpose:</u> "CM Box" is a national turn-key crop monitoring and forecasting system; it is an automated software suite that analyses weather data to assess their impact on crop production; <u>Audience:</u> Interested countries</p>	<p>Monitoring and forecasting software This website provides access to a wealth of resources provided by the EC-FAO Programme on Linking Information and Decision Making to Improve Food Security.</p>	<p>This website provides access to a wealth of resources provided by the EC-FAO Programme on Linking Information and Decision Making to Improve Food Security. http://www.foodsec.org/web/</p>
<p>19. Programme on Risk Evaluation, Information and Early Warning (PREVIEW) UNEP</p>	<p><u>Purpose:</u> To help identifying natural hazard risks in a quantitative way; <u>Audience:</u> Global; <u>Coverage:</u> Global</p>	<p>Evaluation and early warning system Drought, earthquakes, fires, floods, landslides, tropical cyclones, tsunami and volcanoes</p>	<p>http://preview.grid.unep.ch/</p>
<p>20. Global Environment Alert Service (GEAS) - under development UNEP</p>	<p><u>Purpose:</u> Will be collecting and integrating data about environmental changes from various scientifically credible sources, making it accessible on the Internet; <u>Audience:</u> UNEP, UN, decision makers, general public, scientists, etc.; <u>Coverage:</u> Global</p>	<p>Alert system/early warning system Climate change; disaster and conflicts; ecosystem management; environmental governance; hazardous substances; resource efficiency</p>	<p>Website which will connect all the components of the GEAS system, containing data, visualizations, analysis and reports; weekly alerts that users will be able to receive by email (near real-time environmental alerts; environmental hotspots alerts; environmental science alerts). http://na.unep.net/geas/</p>
<p>21. Data and Indicators Platform - UNEP</p>	<p><u>Purpose:</u> Will be applying UNEP's science assets in ecosystem services, environmental governance, hotspot identification and early warning, and socio-economics in combination with easy-to-use-and-understand visualization and analytical tools in order to guide sound policy development; <u>Audience:</u> International; <u>Coverage:</u> Global</p>	<p>Data and indicator platform</p>	<p>http://unepdewaags.unep.org/edip/catalog/main/home.page</p>
<p>22. Integrating ecosystem and climate change factors into disaster risk assessments and associated planning processes - UNEP</p>	<p><u>Purpose:</u> To address the full magnitude of hazard risks, incorporating ecosystems and climate change. Identifying and quantifying risks + looking at ways to reduce risks; <u>Audience:</u> International; <u>Coverage:</u> Global</p>	<p>Risk assessment methodology</p>	<p>http://www.preventionweb.net/english/professional/contacts/profile.php?id=121</p>

<p>23. World Economic Situation and Prospects (WESP)</p> <p>DESA</p>	<p><u>Purpose:</u> Joint product of DESA, UNCTAD and the five U.N. regional commissions; providing an overview of recent global economic performance and short-term forecast (one year ahead) for the world economy and of some key global economic policy and development issues; and serving as a point of reference for U.N. discussions on economic, social and related issues during the year; <u>Audience:</u> U.N. agencies; <u>Coverage:</u> Global.</p>	<p>Economic forecasts/projection and policy analysis</p> <p>Growth, inflation, unemployment, trade and other annual macroeconomic indicators</p>	<p>http://www.un.org/en/development/desa/policy/wesp/index.shtml and http://un-library.tumblr.com/post/16009247932/world-economic-situation-and-prospects-2012</p>
<p>24. Monthly Briefing on World Economic Situation and Prospects</p> <p>DESA</p>	<p><u>Purpose:</u> To provide the SG, other UN senior Officials, as well as general public, with the latest development in the world economy, with a particular focus on the unfolding of the global financial crisis, its impact on the real economy and policy responses at both national and global level; <u>Audience:</u> UN and general public; <u>Coverage:</u> Global</p>	<p>Economic briefing</p> <p>Major financial market situation and macroeconomic indicators</p>	<p>Monthly (beginning of the month), through hard copies and emails</p> <p>http://www.un.org/esa/policy/index.html</p>
<p>25. UN/DESA Expert Group on the World Economy (Project LINK)</p> <p>DESA</p>	<p><u>Purpose:</u> To integrate independently developed national econometric models into a global econometric model; to provide a consistent framework for undertaking quantitative studies of the international economic transmission mechanisms and of the effects of international and national policies, developments and disturbances on the outlook for the world economy, and global economic integration in general; <u>Audience:</u> international; <u>Coverage:</u> Global.</p>	<p>Economic forecast/projection</p> <p>Country based macroeconomic indicators</p>	<p>LINK Global Economic Outlook (biannual), through website http://www.un.org/esa/policy/link/index.html</p>
<p>26. Early-Warning / Early-Action, situational reports in cooperation with IASC</p> <p>(previously Refugee Emergency Alert System (REAS))</p> <p>UNHCR</p>	<p><u>Purpose:</u> Real time up-to-date reporting and analysis of critical developments in key operations or emergency situations for purpose of developing timely and appropriate protection responses; UNHCR Global Report 2007 states that "UNHCR also boosted its cooperation with WFP, UNICEF and OCHA through the Early Warning and Early Action sub-working group of the Inter-Agency Standing Committee (IASC)." p. 42 <u>Coverage:</u> Global</p>	<p>Rapid real time information, early action/warning system and preparedness for protection response</p> <p>Categories of persons of concern (refugees, IDPs, stateless persons, returnees), protection needs; legal status; documentation; physical safety; non-refoulement; access to essential services; host governments' receptivity; access to durable solutions</p>	<p>Daily/Weekly/Monthly situation reports; UNHCR's Global Report and Global Appeal on an annual basis; State of the World Refugees</p> <p>For public information: http://www.unhcr.org/news.html</p> <p>Early warning systems and preparedness</p> <p>http://www.unhcr.org/4a2fc6a16.pdf</p>
<p>27. Environmental Scanning Alert System - UNFPA</p>	<p><u>Purpose:</u> Currently based on email communication among UNFPA offices; alert messages represent ad-hoc analysis of crucial political developments and are being captured in regional political reports in three UNFPA regions. In the future, synthesis of these messages as well as development of a Web-based dashboard for receiving and responding to alerts are envisioned. <u>Audience:</u> Internal; <u>Coverage:</u> 3 UNFPA regions</p>	<p>Alert system/early warning/risk analysis</p> <p>Political, socio-cultural, and economic developments</p>	<p>http://www.unfpa.org/worldwide/index.html</p>
<p>28. Risk Mapping Exercise - Disaster Risk Reduction and Response Planning</p> <p>UN-HABITAT</p>	<p><u>Purpose:</u> To improve capacities to predict and address future post-disaster shelter needs as well as to manage information about on-going risk after a disaster and their implications for planning; <u>Audience:</u> Local authorities, organised communities and relevant stakeholders; <u>Coverage:</u> Global</p>	<p>Risk mapping for prevention and response strategies</p>	<p>http://www.unhabitat.org/content.asp?cid=7103&catid=286&typeid=13</p>
<p>29. Disaster Assessment Portal</p> <p>UN-HABITAT</p>	<p><u>Purpose:</u> A collection of assessment tools and case studies (vulnerability, risk, capacity, needs, etc) and useful information for disaster risk assessment. <u>Audience:</u> Disaster management specialist and practitioners, local authorities; <u>Coverage:</u></p>	<p>Tools and case studies for assessments</p>	<p>Links to sites with resources and useful information for disaster risk assessment</p> <p>http://www.disasterassessment.org/</p>

<p>30. Global Urban Observatory (GUO)</p> <p>UN-HABITAT</p>	<p><u>Purpose:</u> To monitor global urban conditions and trends, focusing on trends in the world's slum population, which is generally vulnerable to forced eviction, natural and human-made disasters and water-borne diseases.</p> <p><u>Audience:</u> Central governments, local authorities, development aid organizations and non-governmental development organizations involved in urban and shelter work; <u>Coverage:</u> Global</p>	<p>Global observatory</p> <p>Number of urban slum dwellers; number of people/households without security of tenure; number of people living in non-durable housing; square metres of living space per person; percentage of people and households without access to safe drinking water; and percentage of people and households without access to safe/improved sanitation.</p>	<p>Global database (Urban Info); flagship reports (Global Report on Human Settlements and the State of the World's Cities report).</p> <p>The Global Urban Observatory (GUO) addresses the urgent need to improve the world-wide base of urban knowledge by helping Governments, local authorities and organizations of the civil society develop and apply policy-oriented urban indicators, statistics and other urban information.</p> <p>http://ww2.unhabitat.org/programmes/guo/</p>
<p>31. Manufacturing Output - Poverty Reduction through Productive Activities</p> <p>UNIDO</p>	<p><u>Purpose:</u> To generate up-to-date manufacturing output information and projections; analyze performance and trends and the effect these are having on income, employment and the well being of industry employees and their dependents.</p> <p><u>Audience:</u> Internal (all UNIDO staff) and external (e.g. Member States and their policymakers, academia, and the private sector); <u>Coverage:</u> Global</p>	<p>Global follow-up and warning system</p> <p>Industrial production and output indicators</p>	<p>http://www.disasterassessment.org/ and http://www.unido.org/index.php?id=7847</p>
<p>32. Indicators of Energy Vulnerability</p> <p>UNECE and World Energy Council (WEC)</p>	<p><u>Purpose:</u> To enhance the UNECE Energy Security Dialogue by measuring the vulnerability of national energy economies. The indicators provide a statistical basis for the dialogue to enhance the level of policy cooperation among member states based on international and time-series comparisons.</p> <p><u>Audience:</u> External (member states); <u>Coverage:</u> Global</p>	<p>Monitoring system</p> <p>Multi-dimensional indicators comprising: energy dependency, costs of energy imports, price volatility, exchange rates, technology, international relations, political and regulatory influence, energy storage and energy transport infrastructure developed by World Energy Council (WEC)</p>	<p>www.unece.org/energy www.worldenergy.org</p>
<p>33. Environmental and Security Initiative (ENVSEC)</p> <p>UNEP, UNDP, OSCE, NATO, UNECE, REC</p>	<p><u>Purpose:</u> To assess and address environmental problems, which threaten or are perceived to threaten security, societal stability and peace, human health and/or sustainable livelihoods, within and across national borders in conflict prone regions across South Eastern and Eastern Europe, Central Asia and the Caucasus. <u>Audience:</u> Decision-makers as well as general public; <u>Coverage:</u> Regional</p>	<p>Analysis and assessments</p>	<p>Website, assessments and reports with maps illustrating the linkages between environment and security and drawing attention to areas where risks are high</p> <p>http://www.envsec.org/ http://www.envsec.org/index.php?lang=en</p>
<p>34. Indicators of Sustainable Forest Management</p> <p>UNECE/FAO</p>	<p><u>Purpose:</u> To gather information indicating whether a country's forests are managed sustainably and thereby providing the basis for assessing vulnerability and possibly alerting to negative trends; <u>Audience:</u> international, <u>Coverage:</u> Regional</p>	<p>Analysis and assessments</p> <p>Forest resources and their contribution to global carbon cycles; Forest ecosystem health and vitality; Productive functions of forests; Biological diversity in forest ecosystems; Protective functions in forest management; Socioeconomic functions and conditions in the forest and timber product sector</p>	<p>http://w3.unece.org/pxweb/Dialog/ http://www.illegal-logging.info/item_single.php?it_id=6180&it=news</p>
<p>35. Community-Based Monitoring System (CBMS) network</p> <p>UNESCAP</p>	<p><u>Purpose:</u> To collect data to assess the impact of the economic crisis on poverty among households and evaluate their coping mechanisms (in selected communities in 14 project countries) with the aim of being able to help countries and the international community in efforts to mitigate the impact of the current crisis and develop social protection measures to lessen the negative effects of the crisis on the poor; <u>Audience:</u> <u>Coverage:</u> Regional</p>	<p>Monitoring system</p>	<p>http://econdb.pids.gov.ph/index.php?option=com_content&task=view&id=25&Itemid=40 http://www.unescap.org/</p>

<p>36. Gender Equality Observatory for Latin America and the Caribbean - ECLAC</p>	<p><u>Purpose:</u> To monitor gender equity in the countries of the region, including the effects of the current global crisis on the socio-economic conditions of women; <u>Audience:</u> international; <u>Coverage:</u> Regional</p>	<p>Observatory</p>	<p>http://www.eclac.org/oig/decisiones/default.asp?idioma=IN</p>
<p>37. International Strategy for Disaster Reduction Platform for the Promotion of Early Warning</p> <p>ISDR</p>	<p><u>Purpose</u> The International Strategy for Disaster Reduction (ISDR) is a strategic framework, adopted by United Nations Member States in 2000, aiming to guide and coordinate the efforts of a wide range of partners to achieve substantive reduction in disaster losses and build resilient nations and communities as an essential condition for sustainable development. The United Nations International Strategy for Disaster Reduction (UNISDR) is the secretariat of the ISDR system. The ISDR system comprises numerous organizations, States, intergovernmental and non-governmental organizations, financial institutions, technical bodies and civil society, which work together and share information to reduce disaster risk.</p>	<p>International Conference on Early Warning Bonn, Germany UNISDR serves as the focal point for the implementation of the Hyogo Framework for Action (HFA) – a ten year plan of action adopted in 2005 by 168 governments to protect lives and livelihoods against disasters.</p>	<p>http://www.unisdr.org/2006/ppew/</p>
<p>Government</p>			
<p>38 Integrated Crisis Early Warning System (ICEWS) - Pentagon/DARPA</p>	<p><u>Purpose:</u> To develop a system to monitor, assess and forecast crises throughout the world to support decisions on how to allocate resources to mitigate them; <u>Audience:</u> Internal (US government, military commanders); <u>Coverage:</u> Global</p>	<p>Computational modeling</p>	<p>http://www.federalgrants.com/Integrated-Crisis-Early-Warning-System-ICEWS-8357.html and https://fellowshipofminds.wordpress.com/tag/integrated-crisis-early-warning-system/</p>
<p>39. Global Earth Observation System of System (GEOSS) - Gvts/IOs</p>	<p><u>Purpose:</u> GEOSS will be a global and flexible network of content providers allowing decision makers to access a range of information; <u>Audience:</u> External (decision-makers, experts); <u>Coverage:</u> Global</p>	<p>Observatory Focus on natural and human-induced disasters, environmental sources of health hazards, energy resources, climate change and its impacts, water resources, weather forecasts, ecosystems, sustainable agriculture and biodiversity</p>	<p>http://www.earthobservations.org/geoss.shtml and http://www.epa.gov/geoss/</p>
<p>40. Conflict Early Warning and Response (7 IGAD Member States (Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda) CEWARN IGAD</p>	<p><u>Purpose:</u> To receive and share information concerning potentially violent conflicts as well as their outbreak and escalation in the IGAD region; <u>Audience:</u> IGAD Member States; <u>Coverage:</u> Regional</p>	<p>Early warning (sub-regional) Life stock rustling, conflict over grazing and water points, nomadic movements, smuggling and illegal trade, refugees, landmines and banditry</p>	<p>Baseline reports (every 5 yrs), country and cluster updates (updated every four months), real-time alerts http://www.cewarn.org/</p>
<p>41. Famine Early Warning Systems Network (FEWS NET) USAID</p>	<p><u>Purpose:</u> To provide timely and rigorous early warning and vulnerability information on emerging and evolving food security issues; <u>Audience:</u> Internal and external; <u>Coverage:</u> global</p>	<p>Early warning/alert Harvest, internal factors (economic, social, demographic, health, environment), external hazards (conflict, natural disasters, price shifts) and coping capacity</p>	<p>Monthly food security updates for 25 countries, regular food security outlooks, and alerts, as well as briefings and support to contingency and response planning efforts. More in-depth studies in areas such as livelihoods and markets http://www.fews.net/Pages/default.aspx</p>
<p>Universities</p>			
<p>42. Political Instability Task Force (PITF) George Mason University</p>	<p><u>Purpose:</u> To assess and explain the vulnerability of states around the world to political instability and state failure; <u>Audience:</u> Senior policy makers; <u>Coverage:</u> Global</p>	<p>Vulnerability assessment Four factors: Level of development as measured by infant mortality rate; extreme cases of economic or political discrimination against minorities; "a bad neighbourhood" (if a country has at least four neighbours that suffered violent conflicts); and regime type</p>	<p>Reports and replication data sets http://globalpolicy.gmu.edu/pitf/</p>

43. Country Indicators for Foreign Policy (CIFP) Carleton University	Purpose: Customized risk analysis; tools for monitoring, forecasting, and evaluation of failed and fragile states; methodology for evaluating individual country performance; statistical and theoretical research, regarding nature of relationship between state fragility and selected key variables; Audience: External (government, IOs, practitioners and private sector); Coverage: Global	Model based risk assessments Indicators of human security, terrorism, human rights, diversity, environment, government stability, heterogeneity, relations with neighbors, regional balance of power and other economic, political, social and cultural variables	Country ranking and reports http://www.carleton.ca/cifp/ http://www4.carleton.ca/cifp/about.htm
44. Oxford Analytica Oxford University	Purpose: Analytical overview on potential emergencies with rating system. Audience: Suscribing organisations at global or regional level; Coverage: Global	Model based risk assessment + qualitative analysis "Stress Balance", Impact	Publications at a frequency determined by subscriber + regular analytical bulletins on "hot issues" http://www.oxan.com/
45. Minorities at Risk Project (MAR) University of Maryland	Purpose: Monitors and analyzes the status and conflicts of politically-active communal groups; identification of factors that motivate some members of ethnic minorities to become radicalized; Audience: Researchers, journalists, etc.; Coverage: Regional (Middle East and North Africa) The MAR Project: The Minorities at Risk (MAR) Project is a university-based research project that monitors and analyzes the status and conflicts of politically-active communal groups in all countries with a current population of at least 500,000.	Model based risk assessment	Currently maintains data on 284 politically active ethnic groups; risk assessments that summarize whether a group is at risk of rebellion, protest, or repression http://www.cidcm.umd.edu/mar/
Foundations/NGOs			
46. Index of State Weakness in the Developing World Brookings Institution	Evaluates fragility of state function in four "baskets": economic, political, security, and social welfare	Index	Database, reports http://www.brookings.edu/reports/2008/02_weak_states_index.aspx
47. Conflict Assessment System Tool (CAST) Fund for Peace	Purpose: Methodology for early warning and assessment of internal conflicts; Audience: External; Coverage: Global	CAST software 12 indicators (economic, social and political) and 5 core state institutions	http://www.fundforpeace.org/global/
48. The Failed States Index Fund for Peace	Purpose: Focuses almost exclusively on Conflict Early Warning and Assessment	Index	Failed States Index published in Foreign Policy http://www.foreignpolicy.com/story/cms.php?story_id=4350
49. Center for Preventive Action Council on Foreign Relations (CFR)	Purpose: Interpretive analysis as basis for conflict early warning (limited to Great Lakes, Nigeria, Central Asia and Balkans); Audience: External		
50. Crisis Web International Crisis Group (ICG)	Purpose: Expert analyses and ideas to head off impending crises, drawing on in-country field assessments; Audience: External (policy community, media, business and interested general public)	Interpretive analysis In-country field assessments	CrisisWatch bulletin on all the most significant situations of conflict or potential conflict around the world www.crisisweb.org http://www.crisisgroup.org/
51. Genocide Watch The International Campaign to end Genocide	Purpose: To predict, prevent, stop, and punish genocide by seeking to raise awareness and influence public policy concerning potential and actual genocide; Audience: External; Coverage: Global	Monitoring and alert system	http://www.genocidewatch.org/
52. Global Review of Internal Displacement IDMC (NRC)	Purpose: Annual review and analysis of global internal displacement situations based on qualitative and quantitative data; Audience: experts, practitioners, general public	Informative/analytical IDPs all sectors /statistical	Publication "Internal Displacement - Overview of Trends and Developments" http://www.internal-displacement.org/
53. European Commission Humanitarian	Purpose: To capture underlying humanitarian vulnerability through a set of indicators	Index 1: General situation in the country (human development,	http://ec.europa.eu/echo/policies/strategy_en.htm

Office/Vulnerability Index ECHO	2: Uprooted people (refugees, displaced, returnees), 3: Health of children under five (malnutrition, mortality), 4: Other vulnerability factors (health care, illnesses, gender GINI)	poverty),	
Page 38			
Private Sector 54. Political Instability Index, EIU The Economist Intelligence Unit	<u>Purpose:</u> Measures vulnerability to social and political unrest	Vulnerability assessment Two component indeces: underlying vulnerability and economic distress	Reports, ranking of countries http://viewswire.eiu.com/site_info.asp?info_name=manning_the_barricades&page=noads and http://viewswire.eiu.com/site_info.asp?info_name=instability_map&page=noads
55. Country Risk Service EIU	<u>Purpose:</u> Monitors emerging and highly indebted markets, producing two-year forecasts for the economic variables that are most important for risk assessment; <u>Clients:</u> Subscribers	Risk assessment Variables include current-account balance, financing requirements, foreign reserves, short-term debt, "hot money inflows" and the vulnerability of the banking sector.	Country reports www.eiu.com/site_info.asp?info_name=ps_country_risk_service&entry1=psNav&rf=0
56. Maplecroft Private sector	<u>Purpose:</u> Source of quantitative and comprehensive "extra-financial" and global risks indices, maps and data; <u>Clients:</u> Corporate clients, IOs, NGOs	Risk assessment/forecasting Includes human rights, political risk, government risk, climate change, resource security, health and other areas of macroeconomic and societal risk.	Range of products, resources and services, including global risks analysis and forecasting, risk assessment and GIS in-country mapping as well as risk mitigation and management www.maplecroft.com/
57. CREAM (Exclusive Analysis) Private sector	<u>Purpose:</u> Online country intelligence model; <u>Clients:</u> Corporate clients, governments, NGO, media	Risk assessment The system models War, Terrorism, Civil Unrest and Political Risk in every country.	Forecasts over 30-day, one-year and three-year time periods. http://exclusive-analysis.com/
58. The Political Risk Services Group Private sector	<u>Purpose:</u> To provide a decision-focused political risk model that can be modified to meet specific needs. Contains assessments on 100 countries.	Risk model	Risk assessments, country reports http://www.prsgroup.com/
59. Global Insight Private sector	<u>Purpose:</u> To provide a menu of forecasting services, including country intelligence and reports on economic and financial outlook.	Economic & financial forecasting	Country forecasts/reports, industry forecasts/reports, global outlook http://globalinsight.com/ http://www.ihs.com/products/global-insight/index.aspx
60. Eurasia Group Private sector	<u>Purpose:</u> To monitor pol., econ, soc. & security developts. world & forecasts impact on region, companies, & fin. markets. In partnership with Citi Global Wealth Management, it produces the Global Political Risk Index (GPRI), a comparative pol. & economic index measure stability in emerging markets.	Political risk research and consulting	Forecasts/reports, Global Political Risk Index http://www.eurasiagroup.net/

<p>61. Harvard Humanitarian Initiative (HHI)</p> <p>Crisesmappers</p> <p>This public platform would integrate real-time data from mobile technologies, satellite and aerial imagery, global environmental sensors, information from the Internet and crowd-sourced data.</p>	<p><u>Purpose</u> HHI's Program on Crisis Mapping and Early Warning examines the use of information communications technologies in conflict and disaster settings. Research focuses on identifying patterns in humanitarian emergencies to improve response. HHI examines the impact of crisis mapping, geospatial and crowd sourcing technologies to prepare, mitigate, and respond to emergencies. Launched in 2007, HHI's Program on Crisis Mapping and Early Warning sets out to connect an active community of Crisis Mappers and to formalize the field of Crisis Mapping. Between 2007 and 2009, HHI's Program documented best practices and lessons learned through the lens of new technologies and methodologies. HHI consulted & interviewed leading scholars, humanitarian practitioners, software and technology experts and important policy makers across numerous fields of expertise including:</p> <ul style="list-style-type: none"> -Humanitarian Response, -Conflict and Genocide Prevention -Conflict Assessment and Risk Analysis, Public Health and Disease Surveillance, Geospatial Technologies and Satellite Imagery, Unmanned Aerial Vehicles or UAVs, Data Visualization and Serious Gaming, International Security and Human Rights, Information and Communication Technology Information, Nonviolent Action and Civilian Protection, New Media and Digital Technologies, Mobile Technology and Social Network Software <p>Cover: global, real-time and geo-referenced crisis monitoring platform for conflict prevention and disaster management. Audience: International</p>	<p>Global alert and analytical system</p> <p>The platform would also leverage the cutting edge in the field of data visualization and dynamic spatial analysis to identify patterns of crises for humanitarian response and thereby serve as a decision-support system.</p> <p>The ultimate purpose of crisis mapping is to provide individuals with access to information that can better inform their decisions in times of crises.</p>	<p>HHI publishes program-specific publications on topics like the Burden of War, Crisis Mapping & Early Warning, Gender-based Violence in Conflict, and Humanitarian Effectiveness.</p> <p>See also the HHI, UN OCHA Release New Report - Disaster Relief 2.0: The Future of Information Sharing in Humanitarian Emergencies</p> <p>http://hhi.harvard.edu/publications/hhi-program-publications</p> <p>http://hhi.harvard.edu/</p> <p>http://hhi.harvard.edu/programs-and-research/crisis-mapping-and-early-warning</p>
<p>62. Project Spotlight: The Satellite Sentinel Project analyzes satellite images</p> <p>Housed in the Harvard Humanitarian Initiative (HHI)</p>	<p>The Satellite Sentinel Project and is responsible for two of its functions: research and evaluation of the system's effectiveness and human rights documentation in HHI.</p> <p>The project, the first of its kind, is being funded by George Clooney's human rights organization Not On Our Watch, and is a collaboration between the Enough Project, the United Nations UNITAR Operational Satellite Applications Programme (UNOSAT's role concluded when the pilot phase ended on June 30, 2011.), HHI, Google, and Internet strategy and development firm Trelon, LLC.</p> <p><u>Audience: global</u></p>	<p>Not On Our Watch provided seed money to launch the Satellite Sentinel Project. The Enough Project contributes field reports and policy analysis, and, together with Not On Our Watch and our Sudan Now partners, pressures policymakers by urging the public to act.</p>	<p>DigitalGlobe provides satellite imagery and additional analysis. For example: SSP documents new SAF helicopter gunships and main battle tanks within range of Abyei - South Sudan.</p> <p>http://www.satsentinel.org/</p>

Annex 6.2 Key Developments in the United Nations in humanitarian early warning and early action

Appendix to Rusu/Schmeidle's article on *Early warning and early action in the UN system: UNDP and OCHA on : Humanitarian Early Warning` in the United Nations – Key developments*¹⁷⁵

Before 1981 early warning in the UN system was limited to the collection of information for the protection of peacekeeping operations and missions.

1. 1981: reference study by Prince Sadruddin Aga Khan, Special Rapporteur of the UN Commission on Human Rights: "Study on human rights and mass exodus: question of violation of human rights and fundamental freedoms in any part of the world, with particular reference to colonial and other dependent countries and territories", special report to the Commission on Human Rights, 38th Session, United Nations Economic and Social Council (GE.82-10252).

The focus was on understanding the pattern of refugee migration, not so much preventing it. Aga Khan's study was followed by two others: one by an Independent Commission on International Humanitarian Issues in 1983, and one by the United Nations High Commissioner for Refugees (UNHCR) in 1986. These reports shift the focus from purely political causes of refugee migration to economic underdevelopment.

2. 1987: UN Secretary-General Pérez de Cuéllar, following recommendations by the Special Rapporteur in the "Report of the Group of Governmental Experts on International Co-operation to Avert New Flows of Refugees" (A/41/324), sets up the Office for Research and the Collection of Information (ORCI). The office served as a focal point for undertaking early warning activities to avert new and massive flows of refugees, for monitoring factors related to possible flows of refugees and displaced persons and comparable emergencies, as well as for preparing plans for possible responses. After the dismantlement of ORCI in 1991, the United Nations Department of Political Affairs is now undertaking these functions.

3. 1989: Joint Inspection Unit (JIU) in Geneva initiates a study on UN capacity for the prevention of refugee movements.

4. 1991: resolution of the General Assembly (46/182) on the strengthening of humanitarian assistance lays the foundations for creation of the Department of Humanitarian Affairs (DHA) in order to strengthen the co-ordination of UN humanitarian emergency assistance. The idea of conflict prevention becomes a guiding principle in the UN. The resolution also created the Inter-Agency Standing Committee (IASC), the Consolidated Appeals Process (CAP) and the Central Emergency Revolving Fund (as key co-ordination mechanisms and tools of the Emergency Relief Coordinator (ERC) established shortly prior).

5. 1992: "An agenda for peace" lists early warning and conflict prevention as an official task of the United Nations (A/47/277 – S/2411).

6. 1992: UN Secretary-General Boutros Boutros-Ghali dissolves ORCI and formally initiates the Department of Humanitarian Affairs (DHA), which is directed by an Emergency Relief Coordinator (ERC) appointed by the Secretary-General. DHA, with funds from Japan, develops the Humanitarian Early Warning System (HEWS) based on an indicator approach. HEWS produces short- and long-term analyses and tries to issue warnings in order to identify humanitarian disasters.

7. 1992: Boutros Boutros-Ghali also establishes the Department of Political Affairs (DPA), which is headed by the Under-Secretary-General for Political Affairs. The Under-Secretary manages the department, advises the Secretary-General on matters affecting global peace and security, and provides guidance to his envoys and political missions in the field. DPA is supposed to work on conflict prevention and peacemaking and to this end is engaged in ad hoc political analysis. It also "regularly provides the Secretary-General with analytical reports and briefing notes that aim to inform his decisions and shape his continuous diplomacy with UN Member States, non-governmental organizations and others. DPA strives to help the Secretary-General to detect and respond to potential crises before they erupt."

8. 1992: the UN Administrative Committee on Coordination (ACC) convenes a (initially ad hoc) working group which holds monthly meetings. This group tries to discuss the basic question of early warning within the UN system. The resulting Inter-Agency Standing Committee (IASC), which among others includes FAO, UNDP, [UNHCR] and UNICEF, "is a unique inter-agency forum for co-ordination, policy development and decision-

¹⁷⁵ This table is adapted and updated beyond 2000 using Schmeidl, S., "The early warning of forced migration: state or human security?", pp. 130-154 in Newman, E. and van Selm, J. (eds.), *Refugees and forced displacement: international security, human vulnerability, and the state*, United Nations University Press, Tokyo, 2003, pp. 146-149.

making involving the key UN and non-UN humanitarian partners.” IASC is also established as a response to General Assembly Resolution 46/182. General Assembly Resolution 48/57 affirmed its role as the primary mechanism for inter-agency co-ordination of humanitarian assistance. Under the leadership of *Early warning and early action in the UN system: UNDP and OCHA* the Emergency Relief Coordinator, the IASC develops humanitarian policies, agrees on a clear division of responsibility for the various aspects of humanitarian assistance, identifies and addresses gaps in response, and advocates for effective application of humanitarian principles. Together with the Executive Committee for Humanitarian Affairs (ECHA), the IASC forms the key strategic coordination mechanism among major humanitarian actors. It encourages the use and exchange of existing data. While the meetings improve contact among the different organisations, it remains ad-hoc and at a personal level. A main problem is that the working group lacks any kind of decision power.

9. 1993: the Department of Peacekeeping Operations creates the Situation Centre as part of the UN Secretariat Information Management System, supporting the decision-making process and connecting civilian, military and police flows of information at the strategic level. Among other things, it focuses on information gathering and reporting, monitoring, and crisis management. “The need for the Situation Centre emerged as a result of the expansion of peacekeeping activities, and the evolution of its scope and goals. The objectives of present-day peacekeeping operations are not limited to monitoring lines of disengagement. They range from monitoring a situation to reviving civil society and re-building the infrastructure of a shattered state. The fact that peacekeeping missions have many elements – political, military, humanitarian, human rights, electoral, etc. – and involve a number of departments and agencies underscores the need for a consolidated flow of information.” For a short period in 1994, the Department of Peacekeeping Operations (DPKO) creates the Information and Research Unit within the Situation Centre, which is later on closed due to the dominance of analysts from the permanent members of the Security Council and too much “intelligence type” analysis.

10. 1995: the Secretary-General drafts a supplement to “An agenda for peace” for the 50th anniversary of the United Nations. The importance of early warning for conflict prevention is highlighted again in paragraph 26 (A/50/60 – S/1995/1).

11. 1995 DHA creates IRIN (Integrated Regional Information Network), in order to improve the information feed in the Great Lakes area of Africa. West Africa is added in 1997, and by 2000 IRIN covers all African states and has also expanded to parts of Asia, later also adding Iraq. IRIN presently has information-feeders (stringers) in 55 countries and has also begun a radio and film service. IRIN was established in response to the lack of information flow during the genocide in Rwanda. Initially linked with ReliefWeb’s website, it now has its own: www.irinnews.org.

12. 1995: two reports by the Joint Inspection Unit deal with early warning. The first one, “The involvement of the United Nations system in providing and coordinating humanitarian assistance” (JIU/REP/95/9), calls for the creation of an “Inter-Agency Early Warning Centre”, whilst the second one, “Strengthening of the United Nations system capacity for conflict prevention” (JIU/REP/95/13), proposes to move HEWS to DPA. Two years later, in 1997, the “Report of the Secretary-General on the work of the Organization”, in reference to the Joint Inspection Unit’s report “Strengthening of the United Nations system capacity for conflict prevention” (A/52/184), concludes, *inter alia*, that “the real question is not perhaps how to strengthen the already strong capacity of the United Nations system for conflict prevention, but how to put that capacity into actual and effective use”. It also recommends moving HEWS to DPA, as an “analytical support and assessment system”.

13. 1996: DHA launches ReliefWeb (which is confirmed by GA Resolution 51/194 in 1997). ReliefWeb is the first worldwide clearinghouse for timely information about humanitarian emergencies and natural disasters. In 2001 ReliefWeb expands to Asia, www.reliefweb.int.

14. 1996: parallel to DHA, UNHCR creates REF WORLD a CD-Rom representing an authoritative resource comprising all earlier electronic efforts and supplementing these with a great number of new databases and sources of information.

15. 1996: UNDP emerged following GA Resolution 2029 (XX) combining the pre-existing UN expanded programme of technical assistance (EPTA) with the Special Fund. One of nine major bureaus within the United Nations Development Programme (UNDP) is the Bureau for Crisis Prevention and Recovery (BCPR). “Consistent with UNDP’s mission to promote sustainable human development, the focus is on the development dimension of crisis situations. UNDP works to prevent armed conflicts, reduce the risk of disasters, and promote early recovery after crises have occurred.”

16. 1996: DHA/DPA/DPKO convene a meeting to share information in the area of early warning. Two years later, ECPS officially creates an Inter-Agency/Interdepartmental Framework for Coordination. Initially including 10 departments, funds, agencies and programmes, the co-ordination framework later increased to 14 entities participating in monthly meetings in order to identify crisis areas, plan the evaluation of countries and discuss preventive methods. The overall goal of the framework process is to work with member states in order to produce a swift and integrated United Nations system-wide response in the form of a comprehensive preventive action strategy. The focus is on situations where broad-based and multisectoral responses are needed. Even though this increases the contact within the UN, it has no capacity for cumulative knowledge or strategic planning. Furthermore, it has not really worked with “early warning” as such and systematic responses.

17. 1997: the Executive Committee on Peace and Security (ECPS) is created as part of the reform agenda by the UN Secretary-General Kofi Annan (see A/51/950). ECPS is tasked with improving information exchange and co-operation among departments (see A/51/829, Section A), but does not have any decision-making powers, as originally envisioned.

18. 1997 and 1999: the annual report of the Secretary-General specifically deals with crisis prevention (A/52/1 and A/54/1).

19. 1998: DHA, as part of the Secretary-General’s programme reform, is reorganised into the Office for the Coordination of Humanitarian Affairs (OCHA) with the following main tasks:

- (a) policy development and co-ordination functions in support of the Secretary-General, ensuring that all humanitarian issues, including those which fall between gaps in existing mandates of agencies, such as protection and assistance for internally displaced persons, are addressed;
- (b) advocacy of humanitarian issues with political organs, notably the Security Council; and
- (c) co-ordination of humanitarian emergency response, by ensuring that an appropriate response mechanism is established, through Inter-Agency Standing Committee (IASC) consultations, on the ground. The IASC ensures inter-agency decision making in response to complex emergencies. These responses include needs assessments, consolidated appeals, field co-ordination arrangements and the development of humanitarian policies.

20. 1998: the President of the UN Security Council re-emphasises the importance of prevention and credits early warning as a strategy to achieve this (S/PRST/1999/34).

21. 1998: the Early Warning and Preventive Measures (EWPM) project of the UN Staff College in Turin (www.unssc.org/web1/programmes/ewpm) initiates a set of pilot workshops, headquarter-focused workshops, and field based/focused workshops on early warning and conflict prevention (these are now part of the standard curriculum). EWPM develops an early warning methodology, which can serve as a common analytical language for various UN departments and agencies. The project is a response to the UN Secretary-General’s report to the General Assembly entitled: “Renewing the United Nations: a programme for reform” (A/51/950 of 14 July 1997). The United Nations Institute for Training and Research (UNITAR, www.unitar.org) parallels this effort on conflict resolution.

22. 1998-2000: the Security Council re-emphasises its commitment to the prevention of armed conflicts and recognises the role of early warning in this (S/PRST/2000/35, S/PRST/2000/34, S/PRST/2000/28, S/PRST/2000/29, S/PRST/2000/10, S/PRST/1999/34, S/PRST/1998/28, S/PRST/1998/29, and S/PRST/1998/35, and Resolutions 1196, 1197, 1208 and 1209 in 1998).

23. 2000: UN Secretary-General Kofi Annan highlights the importance of conflict prevention in several documents, including the millennium report (A/54/2000). He calls for a culture of prevention, which includes strengthening early warning and conflict prevention within the UN (see also A/55/1).

24. 2000: OCHA, under new leadership, dissolves HEWS in order to refocus on key indicators, training of UN field personnel, and to improve contact with the office of the Secretary-General. The establishment of institutional information channels is geared at bridging the warning-response gap.

25. 2000: the Brahimi report evaluating UN peacekeeping operations (A/55/305 – S/2000/809) emphasises the importance of early warning and conflict prevention. One of the main recommendations is the creation of a professional system in the Information and Strategic Analysis Secretariat (EISAS) in order to collect information, improve analysis, and develop long-term strategies. It is proposed that EISAS consolidates the various bodies that are currently responsible for policy and information analysis in the area of peace and security:

- Policy Analysis Unit and Situation Centre of the Department of Peacekeeping Operations (DPKO);

- Policy Planning Unit of the Department of Political Affairs (DPA);
- Policy Development Unit of the Department for the Coordination of Humanitarian Affairs (OCHA);
- Media Monitoring and Analysis Section of the Department of Public Information (DPI).

26. 2001: first report on the prevention of armed conflict by the Secretary-General (A/55/985 – S/2001/574 and Corr.1) to the Security Council of the General Assembly. It notes “the time has come to intensify our efforts to move from a culture of reaction to a culture of prevention”.

This is followed by a General Assembly resolution (55/281), which calls upon governments, regional and sub-regional organisations, as well as relevant civil society actors, to consider the report of the Secretary-General on the prevention of armed conflict.

27. 2003: interim report of the Secretary-General on the prevention of armed conflict. The report provides an analytical overview of UN efforts in the field of prevention (A/58/365 – S/2003/888) and reiterates the need to “move from a culture of reaction to a culture of prevention”: It concludes, among other, that:

- the key task for the UN system in the years to come is to agree on practical measures to integrate conflict prevention further into its activities, to build a more structured link between political and socioeconomic strategies and to ensure that the prevention of armed conflicts becomes a deliberate component in the planning and co-ordination arrangements of development programmes.

- an effective system-wide strategy should draw systematically on both the early warning capabilities and its extensive field based operational experience;

- while typologies of lessons learned are useful in building a more systematic capacity for conflict prevention, the United Nations system must appreciate that each case presents unique, specific features that will need to be analysed and acted on in their own right.

28. 2003: OCHA’s Early Warning Unit (EWU) finally adopts an indicator driven early warning system. This develops into assessments based on guiding within six information clusters. Using a standard template, field offices are tasked to complete the questions to provide risk assessments. Based on the input from the field, OCHA begins to prepare early warning-early action reports to the Inter-Agency Standing Committee’s Sub-Working Group on Preparedness and Contingency Planning. The problem is that the risk assessment (and ranking) mixes political and other humanitarian threats (famine, drought, etc.).

29. 2003: the High-Level Panel on Threats, Challenges and Change (created after an appeal of Kofi Annan at the 2003 General Assembly meeting) writes the “A more secure world: our shared responsibility” report (A/59/565) which calls for better information and analysis since “prevention requires early warning and analysis that is based on objective and impartial research” (p. 36). It further recommends “greater interaction by United Nations political, peacekeeping and humanitarian departments with outside sources of early-warning information and of local knowledge of conflicts [as this] would enhance United Nations conflict management” (p. 37).

30. 2003: UNIFEM’s Peace and Security Programme adopts gendersensitive early warning and tests their approach in the pilot region, Melanesia – Fiji, Papua New Guinea, Solomon Islands and Vanuatu. The idea is “to increase and strengthen women’s participation in national and regional activities for the protection and assistance of women and families affected by conflict, to mainstream a gender perspective in humanitarian response, and to support women’s role in conflict prevention, resolution and post conflict peace-building.” The main focus is to “improve the availability of data and analysis on the root causes of conflicts, the impact on women and their role in conflict prevention, early warning, conflict resolution and post conflict peace building and will organize trainings for women on negotiation and mediation of conflict resolution.”

31. 2004: the Inter-Agency Standing Committee (IASC) Sub-Working Group on Preparedness and Contingency Planning (co-chaired by WFP and UNICEF) proposes HEWSweb (Humanitarian Early Warning Service), which is later endorsed by the IASC-WG.

32. 2005: HEWSweb is officially set up by the IASC (and developed by the World Food Programme) as “an inter-agency partnership project aimed at establishing a common platform for humanitarian early warnings and forecasts for natural hazards and socio-political developments worldwide. The main objective of HEWSweb is to bring together and make accessible in a simple manner the most credible early warning information available at the global level from multiple specialized institutions.” The idea is to be a “one-stop” job and provide “real-time” early warning. Currently, it is still limited to natural disasters, but thought is being given to expanding it to include political early warnings. IASC partners include WFP, UNICEF,

UNDP, OCHA, ICRC, IFRC, **UNHCR**, WHO, FAO, WMO, IOM and SCHR, together with selected non-UN specialised institutions.

33. 2005: a report of the Secretary-General, "In larger freedom: towards development, security and human rights for all" (A/59/2005), speaks of the importance of conflict prevention and resolution, but does no longer list early warning as an imperative feature for it. Focus is more on mediation, sanctions, peacekeeping, peacebuilding, and even the potential use of force to deepen peace and security. The report also includes terrorism and organised crime as a threat (impact of 9/11). The report also recommends a peacebuilding commission.

34. 2005: a resolution adopted by the General Assembly without reference to a main committee (A/60/L.40) established the Peacebuilding Commission (A/RES/60/180). "The Commission will bring together the UN's broad capacities and experience in conflict prevention, mediation, peacekeeping, respect for human rights, the rule of law, humanitarian assistance, reconstruction and long-term development."

35. 2005: in response to the 2001 Kofi Annan report on the prevention of armed conflict on civil society involvement in conflict prevention, the worldwide conflict prevention community joined together to form the Global Partnership for the Prevention of Armed Conflict, and to hold a Global Conference on the Role of Civil Society in the Prevention of Armed Conflict, at UN Headquarters in New York, 19-21 July 2005. The initial proposal for the formation of a global partnership came from the European Centre for Conflict Prevention (ECCP), whose plan for an integrated global programme of research, consultation and discussion was fully supported by Kofi Annan (www.peoplebuildingpeace.org/index.html).

36. 2005: The Peacebuilding Commission is established (A/RES/60/180).

37. 2006: Security Council Resolution 1674 on the Protection of Civilians in Armed Conflict contains the historic first official Security Council reference to the Responsibility to Protect linking up to the 2001 Report of the International Commission on Intervention and State Sovereignty: "The Responsibility to Protect" (S/RES/1674). Both mention early warning as an important part of protection.

Annex 6.3 UNHCR's Refugee Emergency Alert System (REAS)

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NOTE FOR THE FILE

Subject: Early warning system

1. In November 1983 the Secretary-General of the United Nations sent a letter to UN agencies, including UNHCR, requesting to be informed on an urgent basis of any situation which could give rise to a major humanitarian crisis. The Secretary-General pointed out that there was a need to render the UN system more effective in anticipating major humanitarian problems, particularly those which could lead to mass displacements of populations, in order that the UN would be able to react more adequately and speedily in cases of emergency.

2. The need for preventive action has been discussed within the UN system, notably in the General Assembly and the Human Rights Commission. Increasing emphasis has been placed on the importance of early warning and timely action to deal with incipient situations of mass movements of population both by these bodies and the Secretary-General. Recently the Centre for Human Rights was designated by the Secretary-General as focal point within the Secretariat for monitoring and following up contacts with UN organs, specialized agencies and other international organizations with regard to working out procedures in communicating and receiving information of incipient situations of mass movements of populations. In a letter of 28 June 1985, the Assistant-Secretary General for Human Rights, Mr. Kurt Herndl, proposed procedural arrangements for monitoring and taking action.

These proposed arrangements are as follows:

- (a) In principle, the agencies concerned would draw the attention of the Secretary-General to any situation which, in their view, might lead to a mass movement of population;
- (b) At the beginning of each quarter, the Centre for Human Rights would envisage dispatching to the agencies directly concerned a telegramme inviting them to indicate whether there is any incipient situation(s) of mass movement of population which they would like brought to the attention of the Secretary-General. In the light of experience the periodicity of these telegrammes could be reduced if this were felt necessary;
- (c) In their reply the responding agencies would indicate whether in their view there was any such situation(s) and, in the affirmative, indicate briefly for the Secretary-General (i) the factual aspects of such situations, (ii) the reasons why it was believed that a mass movement of population might develop, (iii) any action that had already been taken, such as inter alia, alerting other agencies, and (iv) possible courses of action;

- (d) Information received under (ii) above would be immediately transmitted to the Secretary-General with possible recommendations for action. Any information already available within the Centre for Human Rights would also be included; and
- (e) The Centre for Human Rights would inform the alerting agency, as appropriate, of action, if any, taken by the Secretary-General.

3. In a further letter dated 10 September 1985 Mr. Herndl referred to his earlier letter of 28 June - but did not refer to Mr. Martling's reply of 23 July - and informed him that he had received substantial replies from several agencies and was currently, in consultation with Headquarters in New York, giving careful consideration to the suggestions and comments offered. He reiterated the request of the Secretary-General contained in his letter of 23 November 1983. Our reply of 25 October is attached. On 20 January 1986 Mr. Herndl approached again the Office drawing the attention of the new High Commissioner to this whole matter evidently in the hope to obtain a more positive reply from UNHCR. A reply to this letter is therefore expected.

UNHCR's position so far

4. The High Commissioner's reply of 23 July 1985 reflects the rather careful and cautious attitude the Office has so far taken in this matter. This position was based on the fact that, due to its humanitarian and non-political mandate, the Office has traditionally not pronounced itself on the conditions in countries of origin. However, the Office has consistently welcomed action by the United Nations systems, eg. the Centre for Human Rights, to address the root causes of population movements.

5. The Office has already in the past been in contact with the Secretary-General with regard to certain mass movements. Because we have Branch Offices in some ninety countries we are sometimes in the position to foresee the possibility that a movement will take place. Moreover, on the strength of our planned emergency preparedness improvements we should be in a better position to take appropriate anticipatory measures without, necessarily, creating a pull factor for people to move across national boundaries.

6. As regards the quarterly reporting system proposed by the Centre, certain questions have been raised. It is not clear whether the reports submitted to the Centre for Human Rights would be incorporated as such in official UN documents or treated on a confidential basis. The character of the reports will certainly have a bearing on the type of information the Office is able to provide, as we will have to continue to be on guard in order that our statements may not be interpreted as criticism against governments or as involvement in matters which are essentially of a political nature and/or within the competence of other UN bodies. Moreover, it may be questioned whether it is advisable for UNHCR to agree to participate in what might develop in yet another heavy bureaucratic reporting system within the UN.

Considerations

7. In seeking to render the UN system more effective in anticipating major humanitarian crises, in particular those which could lead to mass movements of people, the Secretary-General is clearly responding to the concern widely held about the scale and frequency of such crises and is exercising his responsibilities under the United Nations Charter (viz. Article 99) as well as implementing directives of the General Assembly.

8. As a consequence, it can be said that in this matter it is incumbent upon every UN body to the fullest extent possible consistent with its statutory responsibilities to assist the Secretary-General, who is designated by the Charter as the Chief Administrative Officer of the United Nations organization (Article 97).

9. It is clear that the Secretary-General needs information concerning incipient humanitarian crises not only to perform his Charter responsibilities, whether they relate to his good offices function or to his duty to alert Member States of the United Nations of the emergence of such crises, but also to ensure that the entire UN system responds to the problem of crises in a co-ordinated and efficient manner.

10. On the other hand it should be stated that the General Assembly has entrusted UNHCR with the specific competence to provide protection and assistance to refugees and displaced persons and to find permanent solutions for their problems. In so doing, UNHCR does not report to the Secretary-General but to the General Assembly. It is clear however that the solution of refugee situations or their prevention requires within the UN system a close coordination of efforts between the humanitarian organ of the General Assembly (UNHCR) and its political organs. And it is evident that we must know what the causes of a refugee problem are before we can seek a solution to it; even the determination of the solution in the light of the knowledge of the causes affects the form of the protection and assistance required.

1. On the basis of the above brief comments, it is recommended that a reply to Mr Herndl's letter of 20 January 1986 would

- reiterate the fact that we welcome all measures that might render the UN system more effective in anticipating major humanitarian problems, particularly those which could lead to mass movements of populations,
- reiterate the humanitarian and non-political mandate of the Office;
- indicate that we will inform the Secretary-General, either directly or through the Centre for Human Rights as appropriate, of situations which might indicate that our Office's involvement will be called for as well as on action we are purporting to take. Similarly, we could in appropriate cases provide information on our assessment as to whether our Office's involvement could be avoided through action by other UN bodies. The Centre would, of course, always be kept fully informed of our action;

reiterate that the humanitarian and non-political character of the Office would make it difficult for us to provide the Centre with general assessments on the situation in refugee-producing countries, especially if such information would be included in official UN documents. Therefore, we would favour an informal and confidential information-sharing system. For this purpose the already-existing regular contacts with the Centre would be enhanced:

- indicate that we would be prepared also to share with the Centre information on relevant reports and studies prepared by other bodies available to us. The Centre could, if they so wish, be included in our distribution list of such documents;

12. As an illustration of the type of information we have recently been asked to provide to the Centre of Human Rights, please find attached a letter from Mr. Herndl of 31 December 1985 on the situation in Pakistan affecting members of the Ahmadi community and our proposed reply which has been coordinated with the Bureau concerned.

13. In view of these recommendations, it would also seem desirable, if these recommendations are deemed acceptable, to consider at some appropriate stage whether certain arrangements should now be made to strengthen the early warning aspect generally of the Office's work. The early warning work is relevant not only for the Secretary-General's purposes but also for those of the Office, particularly in regard to contingency planning and emergency preparedness. It seems that any consideration of arrangements would have to include the questions of the role of regional or field offices in the functioning of an early warning system as well as the role of Headquarters. It may also have to include the question of which part of the Office should be designated as having responsibility for early warning action.

Geneva, 4 February 1986

Michel Moussalli

17/02/86

*agreed by HC that
info would be provided
on informal verbal only
basis.*

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POUR LES RÉFUGIÉS**



**UNITED NATIONS
HIGH COMMISSIONER
FOR REFUGEES**

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Télégrammes : HICOMREF
Télex : 415740 UNHCR CH
Téléphone : 739 81 11
Téléfax : 731 95 46

Case postale 2500
CH-1211 Genève 2 Dépôt

TSS/0084/90

Memorandum

To: MM Barnes, Molander, Johannsson, Sargisson, Walzer, Heads of Services

From: *pp R. Molander*
O. Bakhet, Head, Technical Support Services

118.3/ 118.GEN

31 January 1990

Subject: UNHCR's Refugee Emergency Alert System (REAS)

1. As you know, Mrs. L. Druke has been coordinating the preparations for a draft on the HEAS in consultation with the UNHCR Working Group on Early Warning, which was established late last year at Headquarters with colleagues of the Division of Refugee law and Doctrine and the Emergency Unit of TSS. A number of UNHCR Headquarters and field staff have already provided insightful ideas and contributions, which are reflected in this draft.

2. We would appreciate it if you would share your comments and/or suggestions on this draft, of which a copy is enclosed, with L. Druke by 15 February 1990, following which we will prepare a final draft for testing in selected field locations and subsequent integration into UNHCR's work procedures.

3. We look forward to also receiving your valuable input. Thank you.

cc: DHC, Arnaout, Ashe, Bakhet, Barbeau, Bari, Carroll, Dakin, Druke, _ Jessen-Petersen, Kilde, McNamara, Noel, Ouanes, Perkins, Pollock, Thiadens, Thoolen, van Giessen, White, TSS Chron, Registry.

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UNITED NATIONS
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Télégrammes : HICOMREF
Télex : 413740 UNHCR CH
Téléphone : 739 81 11
Téléfax : 731 95 46

Case postale 2500
CH-1271 Genève 2 Départ

Memorandum

To: MM da Cunha, Bwakira, Morris, Bayandor, Sampatkumar, Lavanchy, Prim
Deputy Heads of the Regional Bureaux

From: R. White, Chief Emergency Unit, TSS

113.3/ 118.GEN

Robert F. White

31 January 1990

Subject: UNHCR Refugee Emergency Alert System (REAS)

1. As you know, Mrs. L. Druke has been coordinating the preparation of a draft on the REAS in consultation with the UNHCR Working Group on Early Warning, which was established late last year at Headquarters with colleagues of the Division of Refugee Law and Doctrine and the Emergency Unit of TSS. A number of UNHCR Headquarters and field staff have already provided insightful ideas and contributions, which are reflected in this draft.
2. We would appreciate it if you would share your comments and/or suggestions with L. Druke by 15 February 1990, following which we will prepare a final draft for testing in selected field locations and subsequent integration into UNHCR's work procedures.
3. We look forward to also receiving your valuable input. Thank you.

cc: DHC, Arnaut, Bakhet, Barbeau, Bari, Barnes, Carroll, Dakin, Druke, Feller, Jessen-Petersen, Johannson, Kilde, McNamara, Molander, Noel, Ouanes, Perkins, Pollock, Sargisson, Thiadens, Thoolen, Van Giessen, Walzer, White, TSS Chron, Registry.

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FOR REFUGEES**

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Case postale 2500
CH-1211 Genève 2 Dépôt

Memorandum

TSS/0335/90

To: MM/MS Bakhet, Bari, Jessen-Petersen, McNamara

From: UNHCR Early Warning Working Group

1 March 1990 Ref.:

118.GEN, 118.3

Subject: Future directions for the UNHCR Early Warning Working Group

1. The Early Warning Working Group believes there would be value in discussing future directions of its work. This is to confirm that accordingly a meeting is taking place for this purpose in Mr. McNamara's office, Rm. 3146 on Tuesday 6 March 1990 from 10.15 to 11.00.
2. The following information is enclosed for background:
 - a) Memorandum on "Early Warning and ORCI" by Mr. McNamara of 31/3/1989;
 - b) Mission Report "Early Warning and Conflict Resolution", PRIO/Alert Seminar, Oslo 24-25 April 1989, by Mr. H. Thoolen of 29/5/1989;
 - c) Memorandum on "UNHCR Early Warning Activities" by Mr. O. Bakhet of 6/6/89;
 - d) Memorandum "UNHCR Early Warning Activities for Emergency Preparedness" by Mr. G. Amaout of 1/11/1989;
 - e) Memoranda on the "UNHCR.Refugee Alert System" (REAS) by MM. White and Bakhet of 31/1/1990 (for comments/suggestions by Heads of Services and "Deputy Heads of Regional Bureaux prior to finalization of draft, field testing and integration the of REAS into UNHCR's work).
3. If required, a provisional interim report of the work and some suggestions for future tasks of this Working Group can be made available for discussion at the meeting.

cc. MM/MS Arnaout, Carroll, Druke, Feller, Lombardo, Thoolon, White, TSS chron, Registry (2).

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MEMORANDUM

(F) Feller

A_TO: E. Feller, Special Adviser to the Director, DIP H. Toolen, Chief, CDR

DE -FROM: R.White, Chief,

EPTS

Robert F. White

NOTRE-OUR REF: 118 10

VOTRE-YOUR REF:

DATE: 4 June 1991

OBJET-SUBJECT: Refugee, Emergency Alert System - revised questionnaire

1. Please find attached a revised questionnaire for the Refugee Emergency Alert System, and supporting documentation.
2. The general trend of comments made by BO/Malawi and OCM/Sierra Leone, where field testing of the system took place, was that the two forms (questionnaire and "topical list") were too complex and repetitive. I have therefore eliminated the "topical list" and retained only the questionnaire. Some of the questions have been simplified, others deleted entirely. As it stands now, I feel the questionnaire, though still a bit long, will provide essential information on the situation in the country of origin (regarding food, transport, health care, shelter, socio-demographic characteristics, agriculture, livestock, income-generation, and protection), as well as the present condition of the refugees. It should thus be a useful tool for assessment and prediction, which is the purpose of the system.
3. The Refugee Emergency Alert System will become part of a chapter on emergency preparedness in the revised UNHCR Handbook for Emergencies. I would be grateful if you, as the key members of the previous Early Warning Working Group, would review the revised questionnaire and provide comments by June 14. I believe that we are fast approaching the "now or never" point regarding REAS; either we move forward with it and work to incorporate it into our emergency preparedness activities, or we drop the concept. My hope is for its incorporation. Your comments will help to assess the direction in which we should move.

cc. Blaeser, Carroll, Paul, E. Morris, Walzer, White, Registry, Chron

UNHCR/ICM/70
UNHCR/FOM/58

OFFICE OF THE UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES

GENEVA

7

Inter-Office Memorandum No 70/90
Field-Office Memorandum No 58/90

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To: All UNHCR Representatives, Correspondents and Chargés de Mission;
Directors/Heads of Divisions, Bureaux, Services, Sections and Units at Headquarters;

From: *[Signature]*
The High Commissioner

Ref: 118.GEN
21 June 1990

Subject: Establishment of a Working Group on Early Warning

1. Within the United Nations there is a growing awareness that early warning of possible refugee flows would enhance the international capacity to prevent these flows from occurring or, if that is not feasible, to mitigate the consequences and be better prepared for emergency response. The General Assembly and Commission on Human Rights have urged, in several resolutions, the Secretary-General to enhance and consolidate early warning activities, including in the humanitarian area, and to strengthen coordination among relevant parts of the UN-system, "especially the Office for Research and the Collection of Information (ORCI), UNHCR, the Centre for Human Rights and the relevant specialized agencies". A report by the Joint Inspection Unit on "Coordination of Activities Related to Early Warning of Possible Refugee Flows" is in preparation and has been submitted to UNHCR for comments. In addition, the Secretary General has requested UNHCR to cooperate in working out modalities for interagency cooperation and information exchange with regard to early warning. Finally, there has been a parallel surge of interest in these issues in the non-governmental research community.

2. In the light of these developments and after consultation in the Senior Management Committee, I have decided to establish a Working Group on Early Warning with the following terms of reference:

- a) to prepare and follow up UNHCR's response to the Joint Inspection Unit report on early warning and any other official communications on this subject;
- b) to develop and recommend a policy framework for UNHCR's involvement in early warning activities and, in this context, study the practical implications, at Headquarters as well as at field level, of its recommendations, identify obstacles and propose solutions;
- c) to serve generally as UNHCR's coordinating body for all other

- 2 -

3. The composition of the Working Group is as follows:

Mr. K. Doherty (Regional Bureau for Africa)
Mr. G. Everts (Regional Bureau for South West Asia, North Africa and
the Middle East)
Ms. E. Feller (Division of International Protection - GLA)
Mr. H. Matsumoto (High Commissioner's Office)
Ms. M. Morales-O'Donnell (Regional Bureau for Latin America and the
Caribbean)
Mr. T. Ouanes (Interorganization Cooperation)
Mr. H. Thoolen (Division of International Protection - CDR)
Mr. R. White (Preparedness and Response Unit)

4. Ms. E. Feller and Mr. H. Thoolen will be the co-chairpersons of the Working Group

Ms. Luise Druke, recently transferred to R.O. Brussels, will continue to be a resource person for the Working Group.

5. Given the importance which I attach to the question of early warning and convinced that UNHCR should be actively involved in efforts to improve coordination in this regard, I hope that all staff members will share with the members of the Working Group their experience and expertise.

The Revised UNHCR Handbook on Emergencies contained the reference to the Refugee Emergency Alert System (REAS) in Chapter 2, p. 17

Chapter 2

What follows is not intended as an exhaustive description of technical aspects of emergency assistance. It describes the three essential stages. The examples given are selected at random to help you imagine real-life situations.

**Stage 1 —
Emergency
preparedness**

There are three essential components of the first stage: refugee emergency alert systems, contingency planning, and emergency management preparedness training.

Refugee Emergency Alert System

In country "A" persons have begun to sell their cattle and move towards the border shared by country "B". It is the middle of the dry season. In previous years the Government has conducted military offensives against the rebels. At this time of year, some military activity has been seen. An increase of asylum-seekers has been observed in country "B". What might one discern from these developments?

These are "emergency alert" signs of a possible refugee influx. Emergency alert includes *the identification, recognition, and interpretation of events that would indicate a potential emergency*. In past years, emergency alert (previously called early warning) was not considered to be one of UNHCR's traditional functions. In practice, however, it has become an essential element of emergency preparedness.

A checklist can be obtained from Headquarters (TSS) which will help you identify and recognize an impending influx.

Contingency planning

At some time or another, we have all listened, dismayed, to international broadcasts of new large-scale influx of refugees into a given country, where no one was ready for the emergency. There was no stockpile system or inventory of available resources, no prior coordination among agencies, and no plan agreed or even discussed on how to respond.

*The Refugee
Contingency Plan*

A Refugee Contingency Plan will help avoid this dilemma. All Field Offices must have one. Contingency planning is *goal-setting, managerial and technical actions taken to prepare for an impending emergency*

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