Economic and Social Commission for Western Asia (ESCWA)

Early Warning Systems as a Conflict Prevention Tool: Recommendations for the Arab Region

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**United Nations
Beirut, 2017**

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17-00339

I.   ABSTRACT

The Arab region is confronted with multiple intertwined crises involving conflict, displacement, persistent poverty and resource scarcity. These crises have expanded beyond Arab borders, becoming increasingly complex to analyze and even more challenging to resolve. Despite compelling evidence of the potential of prevention and early action and repeated calls[1] for strengthening national and regional capacities to this end, the international community seems to still be caught off guard at the escalation/ relapse into conflict. This study looks at the efficiency of early warning systems as a conflict prevention tool. Conflict Early Warning Systems (EWS) encompass the systematic collection and analysis of information to support the identification and assessment of risks for violent conflict and the development of strategic responses to these risks. Drawing on interviews with EWS scholars and practitioners, this paper takes stock of the emerging normative and policy frameworks for the evolution of conflict early warning and critically analyzes the most advanced existing mechanisms, with a focus on regional organizations. While a rich body of theoretical literature exists to guide decision makers on the utility and efficiency of conflict early warning, very little is actually known about how early warning takes place, and the methodology with which a state/ organization decides upon signaling a warning.   The paper presents a systematic categorization of EWS based on their achievements and limitations. The assumption motivating this study is that the early warning practice can still improve from past experiences and increase its efficiency, both at the level of analysis (data collection and risk assessments) and ensuing action (response). The study's focus lies on the application of early warning models against the whole conflict cycle, meaning a) outbreak of violence b) de-escalation c) relapse. Finally, the study concludes by charting recommendations for the design of an early warning mechanism in the Arab context. To this end, it proposes parameters in terms of timeframe, structure, sources of information and analysis, as well as common risks and response areas, for the consideration of ESCWA member states.

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[1] See UN Report of the SG to the General Assembly A/64/864 (2010). See also, *inter alia*, Resolutions 1366 (2001), 1625 (2005), 1653 (2006), 1809 (2008), 2150 (2014), and 2171 (2014).

II.   **Key Findings**

A Conflict Early Warning System is designed to scan for conflict risks, and requires a clear understanding of **what the potential risks are and whom are affected in other words who is warning whom and for what purpose.** Its efficiency relies on good forecasting of the probability and severity of a potential conflict escalating into violence. This includes a comprehensive tool for identifying risks, reducing their impact and coping with the residual effects. Several Early Warning Analysts consulted for this study indicated that interventions following the warning signs of crises are often late, and funding is focused on response. The analysis of early warning systems in this study testified to inconsistencies in the identification and analysis of risks even within the same organization. At the core of a well-functioning system is a common understanding and agreement on identifying, analyzing and evaluating risks, with an indication of the significance and effect of the risk for the affected population in its realm of economic, social, political and cultural life. Its ultimate goal is anticipation and thereby mitigation.

A point of departure in the design of an Early Warning System is that the methodology is relevant for the whole conflict cycle (pre, during and post conflict). EWS are not only relevant before violence erupts as it is widely misbelieved. In line with SCR 2282[2] this paper examines conflict mitigation and accordingly EWS efficiency in regards to the "the outbreak, escalation, recurrence or continuation of violent conflict". Irrespective of the stage in the conflict cycle, early warning analysts are tasked to examine available data against the actors and dynamics of the conflict and propose some evolutionary paths for the way forward.

National institutions need to exercise strong ownership of the risk assessment and identification steps of the system. There is no single off the shelf early warning system; instead a variety of practices make the EWS design, diverse and context-specific. International organizations, strengthening local capacities to this end, can only have a complementary role by means of promoting national ownership and strengthening national capacities for early warning and conflict prevention. International/ regional organizations, involved in conflict mitigation, should also align their programming with national risk management and resilience objectives, through joint planning, analysis and funding.

Prediction will always be difficult to attain. While conflict risk can be comprehensively studied through underlying factors/ root or structural causes, and despite methodological advancements of early warning methodologies the timing and the manner in which violent conflict erupts in a country cannot be forecasted. Conflicts do not occur following a statistical probability and certainty over the exact trigger for the eruption or relapse into violence will always be difficult to pin down. While forecasters are engaged in identifying statistically verifiable causes of conflict and long term trends the trigger of what precipitates a conflict may be a sudden event or accident. [3]Three decades of early warning practice has solicited events such as divisive elections or sudden death of a charismatic or authoritarian leader as having high chance of engendering instability. [4] Early warning models value added rests on establishing the appropriate

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[2] UN Resolution 2282 on Post-conflict peacebuilding (2016).
[3] International Crisis Group (2016).
[4] *Ibid*.

indicators/ variables that should be monitored to detect and anticipate risk, rather than predicting the exact moment of a violent conflict. As prediction will never be certain the aim of EWS is rather to obtain a forward looking, evidence based prioritization of risks which can strengthen monitoring capacity of analysts and assist them in timely identifying early signs of a crisis. [5] Early warning signals are thus employed for a) preventing existing problems from escalating and b) serving as confidence building measure to discern and support existing mechanisms for preventive purposes.

Lack of political commitments and risk aversion is a common weakness cited around failures in early warning. There are a number of complex organizational, hierarchical, political and economic factors that can sustain this. Research into early warning decision-making has revealed a number of challenges, such as message resonance, communication of warnings, source credibility, cognitive biases and institutional incentives[6] to act, which are important reading for those embarking on the development of an EW mechanism. Furthermore, an EWS needs predictable and consistent decision-making steps that are well-defined, clearly visible and adhered to the widest range of Early Warning stakeholders. [7] This in itself creates incentives for follow-up action, as successes or failures to follow-up on warnings are more transparent and, therefore, more accountable. Discussions with practitioners and EW experts, interviewed for this study highlighted that contexts conducive to the development of EWS tend to be characterized by participatory and accountable institutions, able to accommodate vested interests and promote incentives for cooperation among their citizenry. An enabling political environment should be marked by a degree of transparency and accountability in responsiveness to emerging trends and risks by information sharing, and willingness to act timely. In the Arab region several states have repeatedly stated their commitment in strengthening their preventive capacities through the use of Early Warning Systems. The League of Arab States in particular has embarked on work to this end and established a Crisis Monitoring Center. While the operation of the Center faces several challenges, these should not overshadow the commitments made at regional level in regards to strengthening capacities for conflict prevention/ relapse and an integrated Continental Early Warning System (CEWS).

Innovations in Data Collection and Analysis: Analysis has to be the backbone of EW in order to pinpoint specific regional and local factors that might mobilise people or groups to engage in violence. This should enable all stakeholders in an EW process to agree about which events or developments could increase tensions in this context, e.g. changes in provision of services / volatile prices / incitements to violence by influential actors/the electoral cycle / announcements of major policy initiatives. Even though information becomes increasingly available, sheer quantity does not imply quality. Rather, the challenge is how to 'filter the signal through the noise'. [8] Quantitative and qualitative data collection methods used in early warning are still evolving and there are significant gaps in conflict databases in terms of coverage, definitions of what consists conflict/ violent incidence etc. often compromising the accuracy and validity of results. Methods to drive greater innovation in this area with investments for example in events monitoring databases, satellite images and geospatial data analysis could pay high dividends. ESCWA has

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[5] Yiu, C. and Mabey, N. (2005).
[6] Brante, J. & de Franco, C. & Meyer, C. & Otto, F. (2011).
[7] Interview with Early Warning researcher, December 2016.
[8] Gaub, F. (2014). In Pawlak, P. & Ricci, A. (Ed.) (2014). p.81.

long experience in the use of key conflict databases for the analysis of the root causes and impact of conflict and has widely employed them to underline neglected trends and overlooked factors beyond the obvious for the Arab region. ESCWA is thus well versed to support member states to a)identify prevailing trends through the use and improvement of conflict databases and b)respond cooperatively rather than competitively through a regional risk assessment mechanism.

III. Introduction

a. Changing Conflict Landscape

2016 was an ever less peaceful year for millions of people across the globe, confirming a decade long trend of protracted conflict and violence. Conflicts have increased in intensity, are more intractable, more internationalized and less conducive to be resolved through traditional peace agreements. They have increased in intensity in terms of battle and non-battle related deaths, displaced thousands of people, put livelihoods under stress, placed strains in the already meager resources of affected countries and further eroded social cohesion. They have become internationalized and intractable in the sense that one or more states not parties to the conflict intervene on behalf of states in conflict. [9] All active intrastate conflicts in the Arab region are witnessing the involvement of external actors. [10]They have also became protracted with significant socio-economic spillover effects, and an ever increasing risk of expanding the 'borders' of fighting to global proportions. Amidst an increasing complex global security landscape, we continue to spend considerably more in responding and resolving crises than preventing them. While it is hard to argue against the principle of prevention, getting preventive action right seems a daunting task.[11]Preparedness and prevention funding for example was less than 0.5 per cent of all international aid over the past 20 years. [12]

Looking back at conflict incidences across the globe we see that often decision makers were surprised and inadequately prepared, responding with a series of reactive actions. In an effort to address gaps in the anticipation and mitigation of conflicts, regional organizations have delved into the development of early warning models and considerably advanced their methodologies.

This study sets out to review the state of evidence on origins and evolution of early warning models, define what the backbone of an EWS is and how it differs from national security intelligence analysis. Its purpose is to stimulate discussions among policy makers, practitioners and researchers on the current state of knowledge, policy implications of existing practices and direct attention in areas in need of further research.

The paper critically discusses quantitative and qualitative methodologies widely employed by contemporary EWS, assesses their potential and presents their shortcomings. It continues by reflecting

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[9] UN Report of the SG for the World Humanitarian Summit A/70/709 (2016). pp. 6-9.
[10] Cockayne, J. & O'Neil, S. (2015). p.19.
[11] UNDPA (2016). p. 15.
[12] OCHA (2014). *op. cit*.

on four key EWS developed by regional organizations, the European Union, African Union, Organization for the Security Cooperation of Europe and Organization of American States. The study concludes by considering opportunities for early warning action as a conflict prevention/mitigation tool and putting forward recommendations for the development of an EWS in the Arab region.

The study was primarily desk based and included a rather extensive literature review from programmatic and academic literature on the subject. Theoretical work was combined with thorough consultations with practitioners and EW analysts/ officers. Thirty two semi structured interviews with officials from regional and international organizations, EW researchers and practitioners were conducted for the purpose of the analysis as well as a field visit to the African Union, in Addis Ababa, Ethiopia.

b.   Origins of Early Warning Systems

While origins of early warning rest in the fields of disaster preparedness and humanitarian emergencies, its use in anticipating and mitigating conflict has been recognized only in the late 1980s.

Its roots are founded on two main fields; firstly, disaster preparedness where the detailed and longitudinal collection of data is expected to inform decision making on the causes and thereby prediction of natural calamities and secondly military intelligence which dates as back in the past as war itself. On disaster preparedness, a traditional early warning framework would mainly consist of three phases: monitoring of precursors, forecasting a probable event, and finally the notification of a warning or an alert should an event take place. The forth step is situated within national emergency agencies and risk management institutions and it includes the onset of emergency response activities once the warning has been signaled. [13] In military intelligence, early warning is connected with the anticipation of surprise attacks and military accidents. Computerized systems linked to satellites were meant to give timely information of the launching of nuclear weapons for example. [14]

Around 1950s an initial distinction was made in government agencies between efforts to collect information with the purpose of predicting environmental disasters and attempts to anticipate threats at the sociopolitical level. The application of early warning in the anticipation of violent conflicts appeared as a distinct field in early 1980s with the use of forecasting techniques to violent conflict risks and genocide prevention. [15] Indeed, in 1987, the UN established the Office for the Research and Collection of Information (ORCI), tasked to devise an early warning system for assessing and anticipating global trends. Early application of conflict early warning came from international humanitarian agencies monitoring population movements and refugee flows to enable effective contingency planning (UNHCR, UNDHA). [16]

In the following decades the field of early warning witnessed greater attention translated by large government budgets accompanied by investments in information technology and faith in the objectivity of statistical analysis and its impartial capacity to predict violent conflicts. These large scale projects, founded primarily on the processing of information from open sources and events monitoring soon

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[13] Villagran de Leon, J. C. & Bogardi, J. J. & Dannenmann, S. & Basher, R. (2006).
[14] Rupesinghe, K. (1993); Rupesinghe, K. (1994); and Rupesinghe, K. & Kuroda, M. (Ed.) (1992).
[15] Charny, I. W. (1982), Rupesinghe, K. (1989), and Singer, J. D. & Wallace, M. D. (1979).
[16] OECD (2009).

proved inadequate to capture the complex and deeply rooted conflicts where publicly available information was not available or inadequate. Processing of data would usually be limited to desk research in headquarters of international organizations or ministries far away from the location of conflict and with often limited ability to analyze the specific conflict dynamics (see section on evolution of early warning systems below). Meanwhile, a discourse found its way to political leaderships across the globe on the critical need to effectively connect early warning with response and develop methodological frameworks which would de-politisize the decision making process. The need to link analysis with action and response enunciated in the development of early warning models with a distinct scenario building and response component.

IV. Definition

EWS are recognized as an invaluable tool within a wide spectrum of actions for conflict prevention, mitigation and peacebuilding. In its contemporary form, conflict early warning supports the evidence base of conflict anticipation and prevention decision-making. It represents a risk management tool that monitors, and assesses structural variables and events to help forecast situations at risk and provide policy makers with evidence to undertake preventive actions. It is a process and a strategic tool which at minimum nurtures a common understanding of emerging trends in violent conflict situations and clusters potential conflict risks in an easy to assess way. This study is looking at conflict risks in three ways a) risk of outbreak of violent conflict, b) risk of already erupted conflict escalating in widespread violence and c) risk of conflict relapse once the conflict has ended. As a strategic tool it stimulates updated, at short notice, relevant and coherent responses to better manage the emergence, escalation or relapse into violence by offering an informed analysis of the situation.

Formally, early warning has been defined as "the systematic collection and analyses of information coming from areas of crisis 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 purpose of decision-making". [17]

There are several definitions among different organizations. [18] However they all concur on the basics of the process as follows[19]:

EARLY	a signal is issued timely providing decision makers sufficient time for prevention measures to be activated and eruption/escalation avoided.
WARNING	Concise and evidence based information is signaled by the system in order to anticipate a crisis situation, prevent their outbreak and mitigate their impact. An effective signal is one that gives due

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[17] FEWER (1997). p. 24.

[18] A more recent definition, recognizing the application of EWS throughout the conflict cycle is the 2009 OECD/DAC one "Early Warning is a process that (a) alerts decision makers to the potential outbreak, escalation and resurgence of violent conflict and (b) promotes an understanding among decision makers of the nature and impact of violent conflict."

[19] Adapted and modified from OAS and UNDP (2016). p. 12.

	consideration on how the warning is presented, is easily understood and meets the needs of intended recipients.
(EARLY) RESPONSE	Includes a. facilitative measures: high-level preventive diplomacy, mediation and confidence building measures, b. coercive: diplomatic penalties, sanctions, threats of international justice and ultimately use of force and c. incentives such as security guarantees and institutional support for new power and resource sharing arrangements.
SYSTEM	a process of sequential steps (which differs for each system) with distinct and complementary utility, contributing to the system's goal: anticipation of conflict.

The ultimate goal of conflict early warning is not prediction as it is commonly criticized for.[20] An early warning system's main purpose is anticipation. While conflict risk can be comprehensively studied through underlying factors/ root or structural causes, the timing and manner violent conflict erupts in a country cannot be forecasted. Conflicts do not occur following a statistical probability and certainty over the exact trigger for the eruption or relapse into violence will always be difficult to attain. The aim is rather to obtain a robust, forward looking, evidence based prioritization of risks which can strengthen monitoring capacity of analysts and assist them in timely spotting the emergence of a crisis. [21] The assumption here is that certain structural factors and indicators in combination with high risk triggers often correlate with conflict risk and that the EWS could assist to mitigate.

c. **Early Warning System Steps**

Early Warning systems can differ substantially methodologically. A variety of theoretical and practical approaches have been devised for EWS serving diverse purposes ranging from population movements, public speech monitoring, human rights violations, food security (Table One, Annex). There is however a consensus that in its contemporary form a conflict early warning system should include five core steps:

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[20] OECD (2009). *op*. *cit*.
[21] Yiu, C. and Mabey, N. (2005).

A. **Data collection for Understanding Risks**: the first stage is responsible for identifying relevant data sources and providing inputs on structural/ long term and/or short term risks. Data collection can be carried out with quantitative, qualitative, semi-intuitive expert analysis on conflict dynamics, or ideally both.

B. **Risk Assessment:** Decoding information in context specific way and prioritize risks for impeding conflict.

C. **Transmission of Alert:** communication of imminent risk/s to those with capacity to act upon it. At issue is message resonance, meaning whether and how risks were translated into international communicative acts of warnings the way target recipient understands them. As Matveeva[1] highlights "*outbreaks of war generally reflect discontinuities to established patterns, to warn is hence often the process of challenging the customers' prevailing assumptions*".

D. **Recommendations for (Early) Response:** the process of using alerts to design responses to anticipated escalation of violent conflict and the presentation of options/ scenarios to critical actors (national, regional, and international) for the purposes of decision-making and preventive action[1]. This step is as much technical as it is political. No regional organization can react to all alerts.

E. **Monitoring and Evaluation of (Early) Response:** includes monitoring of identified proposals for (early) response and their impact. Interventions for early action are reassessed and where action was not taken, further analysis and reasoning feeds in to planning and lessons learnt for future action.

    d. Early Warning for Conflict Prevention:

Early Warning Mechanisms are one among many tools for conflict prevention.[22] Where EWS are concerned there are three distinct ways to understand conflict prevention[23] according to the scope of their focus:

a. Operational/ direct prevention[24]: providing immediate solution to a pervasive threat; preventive efforts have a rather short term perspective in a critical phase of violent crisis escalation, intensification or diffusion. Examples include fact finding missions, mediation, confidence building. EWS here are useful in monitoring specific events and proposing actions for early action in the short term.

b. Structural/ deep/ direct prevention: long term prevention whereby interventions are devised to provide an enabling environment through developmental or economic tools to address the root

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[22] For a detailed overview on conflict prevention, please look at: Wallensteen, P. (2002).
[23] Wallestein, P. and Miller, F. (2004).
[24] Melander, E. & Pigache, C. (2006). In Ramsbotham, O. & Woodhouse, T. & Miall, H (2005).

causes of conflict. Here we are looking at a larger scope of targets not confined in reducing violence but rather promoting human rights, justice, well-being.

c. <u>Systemic prevention</u>: is the broadest and has a global scale; It was introduced by Kofi Annan as "*measures to address global risk of conflict that transcend particular states*". [25] It looks at conflict prevention measures more collectively from an international point of view through global partnerships and promotion of preventive diplomacy at the global level.

EWS can be applied in all three forms but methodological considerations in their development differ[26]. In more direct forms of conflict prevention we would look at an EWS with a distinct event monitoring tool feeding live information and analysis geared into giving an immediate answer and thus guiding early action within a short time span. In the structural and systemic form of prevention we are looking into developing a system able to process larger volumes of data over a longer time span and evaluate them against events/ realities on the ground, thereby prioritizing preventive action. The EWS would try to propose preventive measures well in advance, in anticipation of a risk resulting into a conflict, its root causes and the conditions *that gave birth to it*[27].

There has been a lot documented about EWS and they have often been criticized for functions, beyond their scope of operation, leading to misconceptions. In our attempt to discuss the evolution and effectiveness of conflict early warning systems it is important to also underscore that EWS are sometimes assessed for something that they are not.

The term conflict early warning has been used for conflict risk databases and statistical data analysis, advocacy, media and speech monitoring, conflict analysis, risk assessments, to name a few. These are all somewhat related to early warning but do not in isolation represent an early warning system per se. Furthermore, a conflict early warning system is substantially different from traditional intelligence tools servicing security purposes. Intelligence systems have a strictly defined national security premise and thereby use mainly secret sources. Conflict early warning systems on the other hand, rely on open source information and networks as well as cooperation working on the premise of shared regional interests. A contributing element to their success is timely information sharing, transparent methods and analysis, unlike intelligence systems. The transparent nature of EWS also offers *a check and balance on the orientation of the analysis* (unlike in intelligence systems where *intelligence and operations are compartmentalized*). [28]

An EWS is also different from a political reading of certain violent incidence. What distinguishes early warning from sociopolitical analysis of a conflict episode is that it is guided by certain structural information against which data is collected and involves a detailed system of information validation and

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[25] UN Reports of the SG to the General Assembly A/55/985-S/2001/574 (2001) and A/60/891 (2006).
[26] Wulf, H. & Debiel, T. (2009).
[27] Wallenstein, P. (2000). *op. cit.*
[28] Cilliers, J. (2005).

quality control. Early Warning users will have to bring into the table predefined questions, which often they themselves may try to avoid.[29]

Moreover, an EWS is not monitoring actions at individual level and is not meant to substitute for the wide spectrum of conflict prevention activities such as mediation, reconciliation, negotiation etc. It is also not automatically responsible for the response. Some EWS have a distinct response component as a final step but others end with the submission of the Early Warning Signal/ Conflict Prevention Report. While its objective is to inform and instigate a well informed response, the responsibility to take action remains largely confined within respective institutions/ leadership. The link between early warning and early action is indeed a critical one for the effectiveness of the system. This study howerer focuses only on the methodology and applicability of existing warning systems and tries to chart recommendations for policy makers while developing a system. The rationale is that response as it will be demonstrated by the analysis is negotiated at the political level. For example, a high risk was identified in a specific country by a European donor,[30] yet it was not within the priority countries and no action was taken. Conflict escalated in the specific country and lasted for nearly two years, resulting in loss of hundreds of lives and displacement of far more. Likewise, in Mozambique despite the abundance of information and analysis in the spring of 2013, indicating possible unrest in the country, decision makers failed to act and violence erupted. This was partially due to the fact that the country was not in the "fragile" watchlist and it was thus anticipated that state institutions would be able to absorb/ resolve tensions. [31]

e. Evolution of Early Warning Systems

The evolution of EWS in conflict prevention literature has been broadly categorized in three generations[32] depending on a) the way information is collected and processed (sources and methodological quantitative/ qualitative tools and b) who collects and analyzes the information. [33]

First Generation Systems: were highly centralized, and were focused on generating evidence for decision making and crisis anticipation servicing an internal client base.[34] They were primarily quantitative in nature, based on desk research from secondary sources and developed with blind confidence that prediction is possible from a statistical analysis of conflict risks. The entire early warning mechanism (including conflict monitoring) was processed at HQ levels of international organizations and donor countries, outside of the conflict region. They had no mechanism embedded for sharing information with affected communities at risk. They were developed to "wire" the warning internally so the respective organization takes action, changes priorities, alters programmatic activities etc. [35]

Second Generation Systems: following limited effectiveness of initial systems, organizations started prioritizing information gathering at the local level and used field monitors to process primary event data.

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[29] Matveeva, A. (2006).
[30] Interview with high level Official in the Risk Management Unit of a European Donor Country (September 2016).
[31] Interview with EW NGO Practitioner, October 2016.
[32] Nyheim, D. (2014). p. 23.
[33] Gordenker, L. (1992). In Rupesinghe, K. & Kuroda, M. (Ed.) (1992).
[34] Rupesinghe, K. (1992). In Rupesinghe, K. & Kuroda, M. (Ed.) (1992).
[35] Barrs. C. (2006).

They broadened up their methodological scope and were founding their analysis at mixed methods (quantitative, qualitative, GIS applications). They were also developed with a clear institutional link to response, including division of labor and assigned responsibilities. The final assessment and decision making continued to take place outside the conflict zones/ regions/ countries and did not include local actors in the response phase.

Third Generation Systems: represent the most contemporary methods of EWS within conflict prevention. They have a distinct response system embedded within the methodology involving at risk communities. They use information analysis and communication technologies, open source data and media monitoring. They employ collaborative mechanisms for gaining information through mobile data or automated analysis of large volumes of data. Information is validated by qualitative assessment and is usually complemented by a conflict prevention/ emerging crises profile for the specific country, scenarios and response options. Third generation systems are principally confined to relatively small thematical or geographical areas.

First and second generation systems were not able to establish a warning-response link. While data information and analysis may lead to decision making instruments within the organization, decisions are not operationally acted upon[36], as the process of response is a politically negotiated one, where information and analysis do not necessarily play a key role. Third generation systems on the contrary overpass this weakness as they merge the processes of information collection and response *and operate on the principle of subsidiary*[37] *that is the response is escalated only if lower levels are not able to process the response.*

f. United Nations Mandate for Conflict Early Warning

While interest in the field of conflict early warning was growing from the end of the Cold War it wasn't until the aftermath of the Rwanda genocide that international organizations including the UN demonstrated clear commitment and resources in advancing their early warning capacities. [38] Findings of the hard lessons of the 90's including Rwanda (S/1999/1257) and Srebrenica (A/54/549), Liberia, Sierra Leone among others, testify to "not sufficient focus or institutional resources for early warning and risk analysis" at headquarters and "an institutional weakness in the analytical capacity of the United Nations" to predict and prevent war crimes of such scale. The Steering Committee of the Joint Evaluation of Emergency Assistance to Rwanda[39] highlighted that there was enough information available to allow "policy-makers to draw the conclusion that both political assassinations and genocide might occur". The catastrophic loss of life resulting from these conflicts, served as a proof for policy makers that it was time to invest more in prevention than the much higher costs of conflict management and resolution. [40]

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[36] Nyheim, D. (2015). p.17.

[37] *Ibid*.

[38] For a detailed discussion on international organization responses following the Rwanda genocide, please look: OECD (2009). *op. cit*. pp. 26-29.

[39] Eriksson, J. (1996). p. 2. This Committee was composed of representatives from 19 OECD–member bilateral donor agencies, plus the European Union and the Development Assistance Committee (DAC) secretariat of the OECD; 9 multilateral agencies and UN units; the two components of the International Red Cross and Red Crescent Movements.

[40] Noyes, A. & Yarwood, J. (2013).

Grounded on the proposition that the Rwandan genocide was preventable the UN reiterated its commitment to strengthen internal early warning capacities and support member states to this end. Milestones include the June 1992 report to the Security Council "An Agenda for Peace, Preventive Diplomacy, Peacemaking, and Peacekeeping"[41] which mandates member states, UN Agencies and regional organizations to enhance early warning capacities, collection of information and analysis:

"Encourages the Secretary-General to set up an adequate early-warning mechanism for situations which are likely to endanger the maintenance of international peace and security, in close cooperation with Member States and United Nations agencies, as well as regional arrangements and organizations, as appropriate, making use of the information available to these organizations and/or received from Member States, and to keep Member States informed of the mechanism established;"

An improvement of UN capacities on early warning and assessment of possible genocide, war crimes, ethnic cleansing and crimes against humanity is stipulated in the 2005 World Summit Outcome (paragraphs 138, 139, 140) as well as the "Brahimi Report", [42] stressing that without early warning capacities the Secretariat will remain a reactive institution, unable to get ahead of daily events…"

Since violent conflict in the Balkans and Rwanda in the 1990s erupted, international, regional, national and subnational capabilities for early warning have substantially advanced; methodological toolkits and funding have evolved accordingly, and an abundance of actors with distinct objectives, organizational mandates, tasks and remits are aiming for the same goal: preventing conflict. It is difficult to imagine anyone voting against policies for the prevention of violent conflict. However, it should be noted that at times the proliferation of actors and mandates under the broader umbrella of conflict early warning has also led to greater confusion. [43]

V.   Conceptual Considerations: Quantitative Vs Qualitative methodologies

A Conflict Early Warning System is designed to scan for conflict risks and needs a clear understanding of a **risk of what and for whom**. Previous sections have discussed the liberty with which early warning has been used to present different things. In terms of theoretical background, useful methodological tools on conflict early warning must depart from a solid understanding on the root causes and dynamics of conflict. An EWS's efficiency relies on good forecasting of the probability and severity of a potential conflict escalating into violence. Key defining factor is agreement and common definition of the problem to be solved. Each model needs a clear idea of where to put the threshold when a phenomenon, in our case conflict, becomes a risk and once defined, who exactly is exposed to a potential risk by this conflict. Its achievement is also judged by timeliness and reaching the objective within preset time requirements.

Stakeholders need to adhere to the purpose of the early warning, i.e. proactive rather than reactive response to prevent violence; this can affect the relevance and focus of the analysis. A policy analysis of the EU's previous early warning capacity noted a lack of consensus on definitions of conflict prevention

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[41] UN Report of the SG to the General Assembly A/47/277 (1992).
[42] UN Report of the SG to the General Assembly A/55/305-S/2000/809 (2000).
[43] Gaub, F. (2014). *op. cit*.

resulted in multiple actors claiming a preventive effect for an ad-hoc range of engagements. [44] All stakeholders should understand the full range of possibilities for preventive responses, i.e. options beyond only security responses or civil protection, firstly to ensure that all opportunities for prevention may be grasped and secondly, to understand who would be responsible for a decision to initiate a particular type of response. It is very difficult to form an opinion of how a conflict can be prevented or halted without a clear understanding and agreement among decision makers on how it started. Moreover, even at the initial stages of analysis, decision-makers should begin to consider which actors are best-placed to respond with positive measures to de-escalate tensions / risks and employ them with necessary tools – "*a process that involves grinding analytical work, political risk-taking and yet uncertain success*". [45]

This section aims to provide a theoretical background on quantitative and qualitative methodologies, employed by early warning systems. It will outline the state-of-the-art in the field of early warning from systems reviewed under table 2 and critically review their ability. [46]

Table Two: List of Risk Assessment Models included in the review

Title	Institute	Sector
Conflict Barometer	Heidelberg University	Research/ University
CIFP risk index	Carleton University, Canada	Research/ University
World Preparation Index	World Bank	Multilateral Organization
Global Peace Index	Institute of Economics and Peace	Research
FAST	Swisspeace	Research Foundation
The State Fragility Index	Center for Systemic Peace	Research Foundation
Global Conflict Risk Scan	European Union	Multilateral Organization
Continental Early Warning System	African Union	Multilateral Organization
ECOWARN	ECOWAS	Regional Organization
Conflict Prevention Centre	OSCE	Regional Security Organization
Early Warning Center	League of Arab States	Regional Organization
Global Risks Perceptions Survey	World Economic Forum	International Organization
Instability Risk Index	United Kingdom, Cabinet Office	Government
Risk Assessment Tool	OECD	Multilateral Organization
Risk Assessment Indicators	UN OCHA	UN Agency
EIU	Economic Intelligence Unit[47]	Private Sector
Eurasia Group	Eurasia Group	Private Sector
CEWARN	Conflict Early Warning Response Mechanism in the Horn of Africa	Regional Organization

Source: Author (2014), Swisspeace, Peacebuilding Analysis and Impact Program

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[44] Beswick, T. (2012).
[45] ICG (2016). *op. cit*.
[46] Part of the analysis on EWS was developed by the author in 2014 for a Swisspeace Study on Risk Assessments and Early Warning Systems, Working Document, Peacebuilding Analysis and Impact Program, August 2014.
[47] NN. (2001). In Howell, L. D. (Ed.) (2001).

There is no best method to design an early warning system. The diversity of methods only speaks to the evolution and maturity of the field. Quantitative modelling, structured qualitative analysis all have a role to play. The objective is not to unify methodology and be prescriptive rather build theoretical guidelines from empirical practice. Key characteristics of a robust EWS are: clarity of assumptions and limitations of data sources; comprehensive use of a holistic range of sources and approaches: contestable approach using a structured process and assessments; and comparable assessments between different countries and regions.

a. Quantitative assessments

Quantitative systems attempt to ascertain the preceding contextual structures (structural indicators), events and processes that caused the outbreak of violence. Quantitative approaches are grounded on statistical examination of the relationship between risk factors and conflict outcomes. They can be mainly categorized into two types[48] according to the type of independent variables used to forecast risk: a) approaches using structural indicators as independent variables to analyze/predict conflict events and b) methods that use past conflict events to analyse/predict current risks.

Statistical modelling is effectively used for structural risks. It is useful for long term risks and indicators that are predictable (stable) across a wide range of contexts (countries) and over time. Broad trends like GDP growth, homicide number, and number of natural disasters can be easily analysed through such measures. The majority of EWS look at structural risks to solidify individual country profiles. Solid, repeatable relations, however, will most likely not exist for more "difficult to measure" factors such as trust in public institutions, level of social cohesion etc., thus necessitating supplementation by qualitative tools.

Within quantitative systems we have a variety of methodologies varying from regression analysis, clustering approaches and index based risk assessments. In regression analysis, datasets are established to analyze causal relations between structural indicators (independent variables or factors) and the risk of conflict (dependent variable or response). The overall objective is to discern a relation between the risk of conflict and a given set of indicators, developed to describe one particular theme (social, political, economic, and environmental). Usual explanatory variables include economic indicators used by the regional systems examined in this study (GDP, GDP growth, exports and imports), demographic and societal indicators (total population, age distribution, population density, life expectancy, infant mortality, school enrolment, and social fractionalization), political indicators, security and environmental variables.

Another tool used for the initial conflict risk scanning are index-based methods.[49] A common characteristic for all relevant methodologies is the use of input variables for processing into a composite indicator that

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[48] Austin, A. (2004) referring to Gurr, T.'s typology (1998). In Austin, A. & Martina, F. & Ropers, N. (2004).
[49] See CIFP risk index, Index of Risk Preparation developed for the 2014 World Development Report, Global Peace Index (GPI) by the Institute of Economics and Peace, Failed States Index (FSI), produced by the Fund for Peace, The State Fragility Index designed by the Center for Systemic Peace, Global Conflict Risk Scan, European Union (explained in detail below).

presents an informed picture of conflict risk. Variables, the themes each actor wants to focus on, and the weight each theme is given for the respective analysis varies substantively in each model. Some indices are using solely quantitative data (with some cases of pre-existing databases or already available indices) and weights of each derived from expert analysis, some qualitative and some both. Most index-based methods generate a snapshot of the relative risk of violent conflict. Risk is usually examined relatively to other countries contained in the sample, or to a baseline scenario. The potential to draw causal inferences will reflect the method chosen to select and process indicators. Recognizing such challenges, many private sector but also multilateral risk indices are validated by detailed country narratives of the particular country/ region.

The majority of quantitative studies examining the onset, duration, persistence and forecasting of violent conflicts[50] make use of three major databases: the Armed Conflict Dataset (ACD) by the Peace Research Institute in Oslo and the Uppsala Conflict Data Program (UCPD/PRIO) and the Correlates of War (COW) project by the University of Michigan[51]. As per the UCPD/PRIO Database an armed conflict is defined as a 'contested incompatibility that concerns government of a state, results in at least 25 battle related deaths and make use of two or three intensity levels. The definition, threshold and geographical focus of what consists an armed conflict poses severe limitations for early warning purposes, even at the initial conflict risk stage. Firstly, it omits all conflicts between two or more ethnic or religious groups, in addition to violent events among and between criminal organizations and rebel groups.[52] Secondly, several incidences of violence, critical for early warning purposes, are also overlooked by these databases. [53] These incidences represent forms of civil/political unrest, riots, social movements, demonstrations even if these forms of violence[54] triggered the majority of present conflicts in the Arab region. At last, mostly conflict databases use a three level categorization of conflict intensity low, middle; valuable information is overlooked concerning the scope of violence and potential escalation or de-escalation over time.[55]

Differences in the definition of conflict, threshold and geographic coverage between conflicts datasets is illustrated in their very different results even in the number of conflicts.[56] The differences are not due to insufficient data or inaccurate parameters, it is primarily conceptual. Austin argues that unless these issues are addressed, there is little utility in concentrating on their refinement for their applicability in EWS. While we recognize limitations it is important for Early Warning practitioners to be clear on the focus and the assumptions when using conflict datasets and filter the assumptions they draw on grievances and perceived risk of violent conflict. In other words, warning signals are not issued *"about the outbreak of*

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[50] Goldstone, J. A. et al. (2010), Hegre, H. et al (2011).
[51] Additional databases include the Armed Conflict Location and Event Data Project (http://www.acleddata.com/), the Minorities at Risk Project (MAR) (http://www.mar.umd.edu/), etc.
[52] EU (2014), Global Conflict Risk Index (GCRI), JRC Scientific and Policy Reports, p.15.
[53] Pettersson, T. & Wallensteen, P. (2016). The review of the political economy entailed in the study highlights that most conflicts do not entirely fit the categories of intra and inter-state wars, due to the complex nature of their violence.
[54] EU GCRI, op.cit, suggests that these forms of violence should be subsumed as civil violence.
[55] EU GCRI, OP.cit p. 14.
[56] See Austin, p. 16. Austin, A. (2003), Early Warning and the Field: A Cargo Cult Science? Berghof Research Center for Constructive Conflict Management.

conflict but the perception of outbreak". Responding to the growing need for reliable perception data in addition to mistrust in causal linkages in forecasting conflict, perception surveys are increasingly being used for the design of EWS.

Quantitative data is often highly valued as the most 'neutral' form of input. Decisions on categories of data to collect are not neutral, e.g. collecting data according to ethnic divides will deliver input that links risks to ethnic divides, regardless of whether this is the most defining factor of difference. Among the practical reservations for the use of quantitative methodologies for early warning purposes, practitioners and policy makers raised concerns over: difficulties in raising funds for primary data collection and analysis; "Throughout our decade long experience with operating an EWS (at national level), we have not managed to mobilize funds for primary data collection". [57] The establishment of an "optimal" conflict database, addressing limitations raised above is labor intensive, time consuming and too comprehensive to be operational for early warning purposes. As an OSCE Official stated "..it is of little use to build an extremely sophisticated EWS….it has to remain simple and in line with existing resources". Simplicity and effectiveness were among the most critical elements identified by several practitioners. In other words, *sophistication of the methodology should be balanced against efficiency*. [58]

Lastly, data availability per se may lead into biases for the analysis and thereafter the assessment. Data is also not often disaggregated for different segments of the population and geographical breakdowns necessary to monitor progress for vulnerable groups such as migrants, refugees and IDPs. [59] In addition, several researchers stressed that usually more information will be available from the government side than from the opposition side. [60] Availability of data in fragile or conflict-affected contexts is often poor, e.g. out-of-date, incomplete, skewed in favour of areas where data collection is easier. It should therefore be anticipated that identical conflict indicators can have conflicting meanings in different contexts. In a global risk assessment tool a protest would be an expected form of sociopolitical expression in one context and a clear indication of high likelihood of violence in another. [61]

b. Qualitative methodologies

Qualitative analysis enables early warning decision-makers to consider not only a risk hypothesis based on global theories of conflict and conflict risk, but more specifically the protagonists, events (at multiple levels) and possible scenarios. However, qualitative analysis raises the issue of trust between those producing the analysis and the 'customers' of the analysis, which can impact on the degree to which the evidence is 'taken-up'. Expert qualitative assessments are almost always used at a varying degree in most early warning systems. Often, quantitative and qualitative tools are cited as mutually exclusive forms of analysis. However, this is hardly the case for early warning systems. Econometric/ statistical methodologies are necessary for examining levels of structural risks, whereby proximate variables are usually of more qualitative nature.

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[57] Interview with High Level Official, Multilateral Security Organization, September 2016.
[58] Matveeva, A. (2006). *op. cit*.
[59] UN (2016).
[60] Matveeva, A. (2006). *op. cit*. p. 14.
[61] *Ibid*.

Here, we relate expert assessments with any form of qualitative analysis leading to prioritization of risks and propositions for scenario building and action. The rationale behind this approach is that assessments by specialists on the specific country and topic have the potential to critically analyze and assess validity of findings in quantitative analysis.

Expert judgement approaches are more flexible in nature and can be built by theme or critical conflict risk events and vice versa. By framing a structured discussion/ methodology with which public officials/experts analyse a specific theme, the approach can be repeated across countries. Among the concerns raised for the use of qualitative analysis was the difficulty to ensure consistency between countries, themes, and over time. Without a degree of consistency, assessments remain highly context-specific and thus difficult to compare, limiting their use as inputs to a prioritization of threats. In addition, experts have the same types of biases as a random sample of people in regards to perception of risk, especially when forced to go beyond the limits of their observable expertise[62].

VI. Regional Models

Regional and sub-regional organizations have taken an active role in conflict prevention and increasingly been involved in the development of early warning systems. Among the organizations with the longer experience are the European Union, African Union, Organization for the Security Cooperation of Europe and Organization of American States. Regional actors enjoy clear advantages not only of legitimacy in their respective regions, presence on the ground, well established local networks but also incentives to act, contain and resolve the problem within their territories. The analysis of this section stems from interviews conducted with officials at the Early Warning and Conflict Prevention Units of the institutions, field work and secondary literature review.

Selection of case studies was made after reviewing several regional models. The four EWS analyzed in this study were selected as they satisfied the following criteria: a) they have a regional and not subregional/ national focus b) they all exhibit political commitment, distinct mandate on conflict prevention/ resolution and frameworks explicitly addressing the need for conflict early warning[63], c) the aim of their EWS is anticipation, d) they are not restricted to one type of conflict; they have a rather generic approach and e) have several years of operations thus allowing us to generate some analysis and recommendations. Attention was paid in including models which develop risks scans for their own programmatic engagement with other countries (such as the EU) as well as regional entities that utilize early warning information for the assessment of conflict trends for their own representatives/ member states.

a. European Union

Conflict prevention is stated to be among European Union's key foreign policy goals. [64] Since the launch of the Gothenburg programme in 2001, the EU had reiterated its commitment to conflict prevention,

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[62] Skjong, R. and Wentworth, B. H. (2001).

[63] Organizations such as the Association of South East Asian Nations (ASEAN), Pacific Island Forum (PIF) were also considered as they do have systems in place for forecasting risks. However their approach towards conflict prevention is more on the preventive diplomacy side and regional coordination is focused on other issues such as economic cooperation etc. See more at Sridharan, K. (2008).

[64] Article 21(2)(c) of the Treaty on European Union.

highlighting it as a benchmark of its strategy for international security and conflict. The development of a Common Foreign and Security Policy (CFSP), the EU Programme for Conflict Prevention,[65] the Lisbon Treaty and other external action-related policy frameworks constitute the EU's formal roles and responsibilities to prevent and respond to conflict.[66] A request to take bolder steps towards an integrated institutional approach to early warning and action followed an evaluation, taking stock of foreign policy successes and lessons learnt.   The evaluation highlighted areas of improvement related to the Commission's approach to conflict analysis, response capacity, and conflict sensitivity. Among the conclusions were that a) actions taken by the Commission were conducted on an ad hoc basis, b) the Commission did indeed "*react quickly to conflicts that had broken out, but shortcomings remained in terms of the transition to long term prevention"[67] and c) Conceptual orientations at policy level have generally not been appropriated at operational level and were not always univocal and shared at strategic level. This concerned key concepts, such as conflict prevention, peace building, root causes, etc.*

An Early Warning System was established following Council conclusions of June 2011 on conflict prevention reaffirming EU's mandate to engage timely and strengthen its internal capacities through conflict early warning systems. [68] In their efforts to provide a robust foundation for conflict risk analysis, an EWS methodology was developed to draw on input from member states, maximize the potential of field based information through EU Delegations and civil society actors.

The procedures and methodology of the system were developed and tested for two years. It was initially rolled out as pilot in eight countries in the wider Sahel region (2013) and five in Central Asia (2014) and a global roll-out was carried out in 2014 and 2015. The system was designed to engage multiple institutional actors across EU, including Member States. Up till now, the EWS continues to be rolled-out and refined. As such, this overview represents a snapshot of the system at this moment in time.

The approach was based on the premise that because we know that there are certain factors and indicators that frequently correlate with risks for violent conflict, we can - through a detailed risk assessment - pinpoint the most relevant indicators and trends in the context in order to pursue early preventive actions, before situations escalate into (further) violence. The EU's EWS was primarily designed to focus on long-term, structural risks of conflict in order to identify problematic trends or positive trajectories for peacebuilding opportunities.

The early warning system is developed in four consecutive steps[69]:

    i.   Step One: The Global Conflict Risk Scan

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[65] EU Council (2002).
[66] Brante, J. & de Franco, C. & Meyer, C. & Otto, F. (2011).
[67] PARTICIP et al. (2011).
[68] Montarano, L. & Schunemann, J. (2011). p.12.
[69] The labels for the steps visualised in the EU External Action Early Warning System Factsheet from September 2014 differ slightly from those presented in the EU Commission Joint Staff Working document of January 2016.

This process serves as the preparatory, risk scanning component to facilitate prioritization.[70] The scanning is based on a combination of different inputs, starting with the quantitative risk index - the GCRI- which is then "brought together with the latest qualitative situation analysis available from open sources and compared with assessments from previous EWS cycles."[71]

The GCRI dataset addresses three different dimensions of conflicts, allowing users to analyze a country's individual risk for conflicts over national power, on a subnational level, and in the international sphere). Risk of conflict is defined as *a situation in which a population's security is threatened or other state functions and/or conventions of the international system are endangered, with the prospect of escalating into massive violence and destruction*". The GCRI model additionally presents data on the character of conflict as well as its principal actors and location. The identified structural indicators (see table two) are selected to showcase the country's exposure to risk in several dimensions.

Twenty two political, security, socio-economic, environmental and structural, relatively time-invariant indicators compile the methodology of the conflict risk. Grouped in five pillars, they combine quantitative research with expert opinions in a statistical model to forecast the likely intensity of the conflict over the next four years. The pillars include political cohesiveness, international integration, socio-economic development, geographical factors and security. Risk trajectory is determined by contrasting today's intensity with the likely future intensity generates, i.e. a higher future intensity forecast equals more risk, and vice versa. In line with the focus of the EW EWS, the GCRI focuses on more structural and long term risks using relatively time-invariant indicators, while others focus on a short term risk that describes the probability of a conflict occurring within a short period of time.

The outcome is an estimate of countries at risk for highly violent conflicts. This includes countries experiencing existing conflicts as future intensity forecast (and therefore the risk) is simply measuring likelihood of (de-)escalation based on updated structural metrics. The GCRIs geared towards understanding and identifying those countries that are in a higher risk situation. The questions it aims to answer are:

- What are the underlying factors increasing risk?
- Which countries show the highest risk for violent internal or interstate conflict?
- Which countries or regions are more prone to a certain kind of conflict?
- How does a country's risk change with time?

It offers an open source, quantitative, statistical method for identifying countries at risk of violent conflict globally and serves as a robust starting point for the subsequent qualitative triangulation that takes place in the scanning phase of the EU EWS. This is necessary as the GCRI model's results are purely data driven

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[70] In the January 2016 Joint Staff Working Document, the scanning phase is categorised as the 'Preparatory Component', and Step One is listed as 'Prioritisation'. See footnote 69, above.
[71] EU Commission (2016).

and can therefore only serve as a starting point a discussion of risk among qualitative analysts and respective country experts.

Table Two: Risk Indicators

Risk Area	Concept	Indicator
Political	Regime Type	Regime Type
		Lack of Democracy
	Regime Performance	Government Effectiveness
		Level of Repression
		Empowerment Rights
Social Cohesion and Public Security	Ethnic Compilation	Ethnic Power Status (National Power)
		Ethnic Diversity (Subnational)
		Transnational Ethnic Bonds
	Public Security and Health	Corruption
		Homicide Rate
		Infant Mortality
Conflict Prevalence	Current Conflict Situation	Recent Internal Conflict
		Neighbors with High Violent Conflict
	History of Conflict	Years since last highly violent conflict
		Trends from last year
Geography and Environment	Geographic challenge	Water stress
		Oil producer
		Structural Constraints
	Demographics	Population Size
		Youth Bulge
Economy	Development and Distribution	GDP per capita Openness
		Income inequality
	Provisions and Employment	Food Insecurity
		Unemployment Rate

The combined, triangulated output of the risk scan shared with responsible units within the EU (Management and staff of EEAS and Commission Services, including in Delegations, Political and Security Committee (PSC) every six months.

ii.   Step Two: Identifying Priorities/ "At Risk" Countries

Having established where risks may arise globally, the EU EWS embarks on a prioritisation process to identify "where there is value in reviewing, enhancing or expanding EU engagement to increase prevention / peacebuilding impact", [72] updated twice a year. The priorities for early prevention or peacebuilding are intended to lead to "senior management requests [to] their staff to launch coordination work on further analysis and/or preventive action involving EU Delegations, field missions and EU staff in

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[72] *Ibid*.

headquarters".[73] The main stakeholders in this process include EU Delegations, ECHO field offices, EU Common Security and Defence Policy (CSDP) Missions in-country, EU Special Representatives (EUSR), Member States' Embassies in third countries, EEAS and Commission services' headquarters geographic and thematic staff, Council Working Groups and PSC.

iii.   Step Three: Shared Analysis and Early Action

The process is constructed in two phases a) EU multistakeholder field assessment of key risks and opportunities for action b) a summary conflict prevention report with proposals for action for senior EU decision-makers and Member States.

The analysis has been facilitated by the Conflict Prevention, Peacebuiliding and Mediation Division of the EEAS through an in-country discussion around key risks and trends. These assessment discussions are intended to assist the EU in evaluating its existing programmatic and policy objectives against their impact on conflict/risks. Preventive action can include activities covering a wide range of EU engagements on external action, including the Member States. The in-country assessments are structured around ten risk areas that are commonly associated with violent conflict and risk of violent conflict, which are assigned the following values: low, moderate, high or substantial risks with information on the trend / trajectory of risk (improved, deteriorated, or stayed the same). It also encourages some guidance on how to address them or enhance resilience. The risk areas include: legitimacy, rule of law, security, inter-group relations, human rights, civil society & media, society, climate change and disasters, economic performance and regional stability.

Based on the in-country, EU multi-stakeholder assessments, conflict prevention reports are drafted and consulted among EU stakeholders at headquarters to consolidate policy recommendations for early action. The output is presented in a form of a one-page conflict prevention report which includes a) a risk estimate with possible options as worsening, no change, improving, b) a short term outlook, c) options for action. The relevant stakeholders for action are then responsible for follow-up, as directed by senior management.

iv.   Monitoring / Reporting

The system was designed to include a step for monitoring / reporting on early action. There is not much detailed information available on this process other than to note that EU "services report on progress with regard to options and recommendations identified in conflict prevention reports (to EEAS and Commission senior management and to the PSC) on cases prioritised up to one year before".[74] Options for early action are reassessed and where action was not taken, reasoning is requested.

b. African Union

Protracted instability, mass attrocities and conflict in Africa have instigated political commitments towards a stronger regional approach to effectively prevent and manage conflicts. An important security

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[73] *Ibid*.
[74] *Ibid*.

initiative to this end was the transformation of the Organization of African Unity (OAU) into the African Union (AU), marked by renewed interest and resolve to convene African solutions to African problems, promote peace, security and stability in the continent, promote rule of law and human rights, good governance and intervene only under exceptional circumstances putting at risk the continent in overall.

The African Union's, Peace and Security decision making organ is the AU Peace and Security Council (PSC), comprised by fifteen rotating members with a comprehensive geographic coverage of Africa. PSC has several responsibilities including preventive diplomacy, promoting peace and security, preventing human rights violations etc. The Constitutive Act of the AU and PSC Protocol specify the purposes the PSC should serve including:

1. Promoting Peace and Security in order to guarantee the well-being of African citizens

2. Anticipation and prevention of conflicts

3. Promoting and implementing peace building and post reconstruction activities to consolidate peace and the resurgence of violence

4. Promoting democratic principles, rule of low, protection of human rights and fundamental freedoms, respect for the sanctity of human life and international humanitarian law, as part of efforts to preventing conflicts.

PSC is structured to serve as a 'collective security and early warning arrangement to facilitate timely and efficient response to conflict and crisis situations in Africa'[75]. Its main activities include:

- A Continental Early Warning System and its sub-regional systems (CEWS). [76] CEWS is mandated with providing the Chairperson of the AU Commission with early warning information so that the PSC can act upon 'potential conflicts and threats to peace and security in Africa and recommend the best course of action'.
- The Military Staff Committee under whose guidance five brigades of the African Standby Force (ASF) are established: ECOBRIG (West Africa); SADCBRIG (Southern Africa); EASBRIG (East Africa); North African Brigade and Central African Brigade. The ASF consist of military, police and civil capabilities;
- The Panel of the Wise, an external mediation and advisory body of five members, one from each region of the ASF;
- The African Peace Facility Fund, a special financial fund jointly financed by the African Union and the EU.[77]

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[75] AU (2002).

[76] Namely, the Conflict Early Warning and Response Mechanism (CEWARN) of the Intergovernmental Authority on Development (IGAD) and the Economic Community of West African States (ECOWAS) Early Warning and Response Network (ECOWARN), Common Market for Easter and Economic Community of Central African States (ECCAS) Central African Early Warning System (MARAC).

[77] The African Union's PSC assesses potential crisis situations and sends fact-finding missions to trouble spots (Murithi, 2008). The PSC has the power to suggest an AU intervention in internal crisis situations. Two-thirds of the

The AU CEWS, established in 2002[78] is mandated to propose 'early responses to contain crisis situations so as to prevent them from developing into full-blown conflicts' (African Union 2002). The CEWS as stipulated by article 12 (2) of the Protocol, consists of;

a) an observation and monitoring centre, "the Situation Room'', within the Conflict Management Division of the African Union, responsible for data collection and analysis;
b) the observation and monitoring units of the Regional Mechanisms for Conflict Prevention, Management and Resolution, linked directly to the Situation Room responsible for collecting and processing data at their respective cover areas and transmit them to the Situation Room.

CEWS is developed to deliver timely early warning reports for the Peace and Security Council decisions[79] and is housed in the Conflict Management Division of the AU. The structure and operations of the CEWS allow for the coordination and harmonization of information between the AU and Regional Commissions. The AU recognizes eight RCs[80] all of which have their own EWS with different methodologies and varied resources which are supposed to feed in to the Continental EWS.

Based on structural, dynamic and actor data collection and analysis, the analysts produce a number of reports including: daily news highlight, a daily field report which includes data from the regional reporting, a weekly update and flash reports, drafted to draw immediate attention to emerging crisis.

While CEWS is developed to provide recommendations and scenario building it does not have a response component per re as the decision making on the response is confined within the mandate of the PSC. There is no standardized report structure as the early warning information presentation varies according to requests by PSC[81]; Early Warning information can be both reactive to PSC requests and proactive resulting from monitoring on potential threats. CEWS is also established to look at the entire conflict cycle, through anticipating potential risks for the emergence, ending or relapse of violent conflict by analysing structural factors, live events monitoring and scenario building for PSC's consideration.

CEWS methodology, laid out in its 2008 *Handbook[82] pp.10*, consists of three sequential steps:

Assembly of the Heads of State and Government of the AU can authorise such an intervention; peace enforcement interventions require a mandate of the UN Security Council (Krohn, A. (2008)).
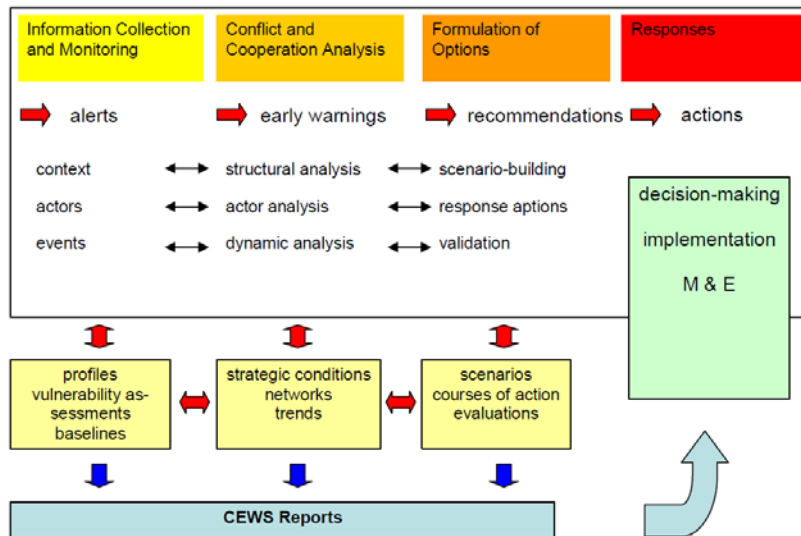
[78] For an overview of regional and national Early Warning Systems in Africa, see: see Cilliers, J. (2005). *op. cit.*; and Affa'a- Mindzie, M. (2012).

[79] Cilliers, J. (2005). *op. cit*.

[80] Namely the East African Community (EAC), the Common Market for Eastern and Southern African States (ECCAS), the Economic Community of West African States (ECOWAS), the Inter- Governmental Authority on Development (IGAD), the Southern Africa Development Community (SADC), AND THE North Africa Regional Capability (NARC).

[81] Interview with AU CEWS Official, Addis Ababa, August 2016.

[82] AU (2008). p. 10.

Information Collection and Monitoring | Conflict and Cooperation Analysis | Formulation of Options | Responses

alerts → early warnings → recommendations → actions

context ↔ structural analysis ↔ scenario-building
actors ↔ actor analysis ↔ response options
events ↔ dynamic analysis ↔ validation

decision-making

implementation

M & E

profiles vulnerability as-sessments baselines ↔ strategic conditions networks trends ↔ scenarios courses of action evaluations

CEWS Reports

Source: CEWS Handbook (2008)

i. Step ONE: Information Collection and Monitoring

During the first phase, data collection is grounded on structural (countries and actors) and dynamic (events) indicators.

Country profiles are developed from structural indicators grouped along political, economic, social, military and humanitarian thematic pillars. The coverage varies from pastoral conflict to the media, state collapse, elections, forced migration, human rights and judicial reform, small arms proliferation and environmental degradation. Dynamic indicators relate to the occurrence of time specific events that could have a critical role for a conflict situation (f.ex: hate speech, arms or resource acquisitions)[83]. For event monitoring and dynamic data analysis the CEWS uses predominantly three tools: the Africa Media Monitor (AMM), the Africa Reporter and Live-Mon. The AMM processes data in real time in all four AU official languages and produces alerts via text messages. Live-Mon is a geo-coded informational tool that simultaneously illustrates news event on the map in the Situation Room as they happen. Lastly, the African Reporter is summarizing analysis in predefined templates of situation reporting, stemming from AU Liaison Offices develop risks scores on conflict situations.

Analysts in the Situation Room are generating news bulletins on a daily basis along six categories: conflict situations, crisis situations, human rights situations, post conflict situations, humanitarian situations arising from conflict, and political developments[84]. CEWS produces several templated reports including daily highlights, field reports from the RCs and AU Liaison Offices, weekly updates, flash reports following an immediate event as well as forecasts on emerging trends and potential conflict situations.

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[83] Sources of information for dynamic indicators include the Africa Media Monitor, the Africa Reporter and Live-Mon.
[84] Interview with Situation Room Analyst, Addis Ababa, August 2016.

Unfortunately, due to lack of resources, the Situation Room remains largely under-stuffed. Interviews conducted with AU officials testified to severe gaps as at the time of the visit (August 2016) the Situation Center was operated by three staff. Human resources challenges were identified among the key concerns alongside specialized and country specific knowledge, limiting EWS capacities towards a nuanced regional early warning system. Throughout its 15 years operation and long experience, CEWS has struggled to deliver timely reports information needed, due to human resources limitations and non-predictable funding. [85]

ii.   Step TWO: Conflict and Cooperation Analysis

'Conflict and cooperation analysis', within the CEWS refers to a detailed assessment of structures, actors and dynamics.

Structures relate to deeply rooted issues that underlie dynamics of conflict. Understanding conflict dynamics and the interrelation of key drivers supports the identification of trends and patterns in the conflict. At this initial stage, the focus is on the big picture, forming the key elements characterizing the context and flags issues that warrant further study. It is the foundation on which further analysis will be conducted. At this stage they system is looking at key factors, deeply rooted issues that underlie the dynamics of conflict as well as identify latent conflict or manifestations of conflict, often in the form of violence. Identifying and understanding the drivers of conflict as well as attributing a decree of impact and pervasion is integral for formulating a nuanced understanding of the situation. Identifying key issues of conflict and being able to prescribe a level of influence assist in avoiding long lists of political, social, historical, economic etc. factors of conflict. For structural information, CEWS mainly relies on the Indicators and Profiles Module and Africa Prospects. The Indicators and Profiles Module is a database organized into country profiles and briefings allowing the development of risk assessments. Africa Prospects is a tool designed to identify risk propensity or vulnerability assessments based on various demographic and economic indicators.

Actors relate to the main "main protagonists that influence or are influenced by the situation". [86] In this phase analyses seek to identify and anlyse the key actors active in a given context, unlock relationships between them and elucidate how they interrelate with the context. This stage includes the analysis of actors (individuals, groups, communities) that are engaged in or being affected by the conflict. Individuals are central in analyzing how groups become polarized among key issues as well as what the motivation of those is, in promoting violent conflict.[87] The objective of this step of risk assessment is complementary of the study of key and proximate drivers in a given transition, as an actor based assessment. A key actor would be an individual/ group without which the current situation would not exist or it would be significantly different. Interested in the potential of actors for conflict or cooperation, CEWS analysts use conflict mapping to produce geographical representations according to stated or apparent interests. Actors are identified at local, sub-national, national, regional or international levels. Outlining patterns of

[72] Williams, P. D. (2011). p. 10.
[86] AU (2008). *op. cit*. p. 56.
[87] *Ibid*. pp. 58-59.

power, alliances and neutral third parties, conflict mapping allows the identification of potential partners for cooperation and pressure points, already moving towards a logic of policy recommendations.

Finally, **dynamic analysis** looks at the dynamics of conflict along two dimensions: aggravating factors and conflict triggers. Conflict dynamics are analyzed by looking at the previous steps and identifying how they interrelate with each other. It assists identifying the relationship between positive and negative elements that could instigate positive change or cause relapse into instability. The focus rests on the dynamics of the situation, i.e. the forces that create certain processes, or can lead to a certain course of action. Aggravating factors are understood as "factors likely to contribute to a climate conducive to conflict" and can be political (political transitions, increasingly exclusionary ideologies, growing inter-group competition, etc.), security (unstable states, changing intra-state military balance, etc.), socio-economic (mounting economic problems, growing economic inequalities, changing demographic patterns, etc.) and cultural/perceptual (intensifying cultural discrimination, hate-speech, etc.). [88] Conflict triggers are understood as "single acts, events or their anticipation that may set off or escalate violent conflict and include coup attempts, sudden changes or government, forthcoming elections, assassinations, sudden movements of large numbers of people, spill-over effects from neighbouring countries, the discovery of new mineral resources, etc.

iii.   Step THREE: Policy and Response Formulation

'Policy and response formulation' is conducted as a response to the continuous processes of information gathering and analysis. It starts with the development of three scenarios: the *status quo*, which consists of the conditions outlined by conflict and cooperation analysis; a potential worse, which represents a deterioration of the *status quo* and that is to be avoided; and a potential best, which represents a desired and attainable situation. Once scenarios are spelt out, CEWS analysts conduct a process of reverse engineering, working backward from the best and worse scenarios and identifying along the way the critical moments that connect those scenarios to the *status quo*.

c.   **OSCE**

Early Warning has been an integral part of OSCE's Conflict Prevention Strategy since early 1990s. Discussions of contemporary OSCE's early warning mechanism, conflict prevention and crisis management were initiated in the aftermath of the 2007 missile incident in Georgia, near the Georgian-Ossetian conflict zone, amidst a climate of growing mistrust among OSCE member states and proposals to its Permanent Council (PC) to adopt a more forward looking approach towards future efforts in crisis prevention.[89] In 2011, through the Ministerial Council Decision No. 3/11 on Elements of the Conflict Cycle, the organization committed to "strengthen OSCE capabilities in early warning, early action, dialogue facilitation, mediation support and post-conflict rehabilitation on an operational level". [90] The Ministerial Decision provided the Secretary General with the explicit mandate to offer "early warning to the participating states by bringing

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[88] *Ibid*. p. 59.
[89] Address to the Permanent Council (PC) on 6 September by the Personal Representative of the Chairman-in-Office, Miomir Žužul.
[90] OSCE Ministerial Council (2011).

to the attention of the Permanent Council any situation of emerging tensions or conflicts in the OSCE area". [91]

In the 'Internal OSCE Early Warning Guidelines', an internal reference document aimed at facilitating a structured and systematic approach to early warning by the OSCE's executive structures, early warning is defined as "the collection, collation, analysis, assessment, and communication of information to appropriate policy makers, all with the purpose of facilitating a response to developments which, if not appropriately addressed in a timely and effective manner, are likely to lead to an inter-State and/or intra-State conflict or the escalation thereof."

In the framework of its conceptual work on developing and strengthening the Organization's conflict cycle toolbox, the OSCE Conflict Prevention Centre uses a tiered approach to prevention, consisting of three interrelated phases with distinct programmatic implications, which are closely interrelated:

1. Primary prevention relates to the phase before the violent escalation of a conflict into a crisis situation. It also refers to the application of early warning and early action instrument to prevent violent escalations and resolve conflict peacefully as soon as they arise.
2. Secondary prevention refers to crisis response and crisis management in case a conflict has already escalated into a violent crisis. The most important objective of secondary is to contain violent conflicts in terms of their intensity and geographical impact, bringing them back to a non-violent level and, if possible, resolving them.
3. Tertiary prevention means post-conflict rehabilitation and peacebuilding aimed at preventing the reoccurrence of violent conflicts and crisis situations. Accordingly, tertiary prevention leads straight back to primary prevention. [92]

Table three: Early Warning Reporting Cycle

Source: "Conflict Prevention and Early Warning: the OSCE's Toolbox", presentation shared by OSCE Conflict Prevention Center Official, July 2016.

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[91] *Ibid*.
[92] OSCE. "Conflict Prevention and Early Warning: the OSCE's Toolbox".

The OSCE has established a Network of Early Warning Focal Points in its executive structures (to include thematic units of the Secretariat, the autonomous institutions and the Organization's field operations. The Network's activities are co-ordinated by the Conflict Prevention Centre, which serves as the OSCE-wide Early Warning Focal Point. Annual and regional meetings of the Network are used for information-sharing and capacity-building, in particular related to conflict analysis and early warning skills. The Conflict Prevention Centre's Situation Room monitors 24/7 open-sources reporting on relevant developments throughout the OSCE area, informing the Secretary General and senior managers in the Secretariat and thereby fulfilling an important early warning function. The SitRoom also serves as an Emergency Point of Contact for OSCE field operations.

The Conflict Prevention Centre keeps track of selected conflict settings all over the OSCE area. This includes a mapping exercise carried out on a regular basis. An 'Open-Ended List of Early Warning Indicators' serves as another internal reference document and is used as a stepping stone for the development of more detailed lists of indicators, as required by an given conflict setting. The list comprises eight main, cross dimensional categories with (generic) subcategories and individual indicators (both qualitative and quantitative) and is consulted for the purpose of conflict analysis and early warning reports. The indicators refer to the following categories: political system, military and security structures, internal security setting, socio-economic development, environment, ethnic and religious minority groups, justice and human rights law, and geopolitical situation. [93] Following the identification of risk areas, analysts produce preliminary reports. Situation awareness is complemented by analyzing a) whether and how other actors are involved in addressing the specific conflict risk/ threat and b) whether windows of opportunity for conflict resolution exist.

At the level of the Secretariat, formal and informal early warning reporting takes place from the Conflict Prevention Centre to the Secretary General and, if needed, the annually-rotating OSCE Chairmanship. A formal early warning reporting template, the Situation Update, is in place, including the following sections[94]:

- **Introduction** – What has happened? What type of situation are we dealing with? In how far does the situation deviate from the normal state of affairs?
- **Analysis**
  Conflict Environment: What has caused/is causing the situation? Who are the key actor involved?
  Expected Future Developments: Which scenarios are possible/plausible/probable?
  Responses: Which actions have been taken/are being taken by the OSCE or other external actors?
  Indicators: Identify key indicators that need to be monitored in terms of conflict tracking?
- **Assessment** - Should a formal early warning be given by the Secretary General to participating States in the Permanent Council? Which response options should be taken into consideration?

OSCE's Early Warning System has made considerable advances throughout the past decade regarding its capacity to monitor and analyze information and provide warning of imminent and escalating conflict risk

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[93] *Ibid*.
[94] OSCE, Interview with High Level Official, July 2016.

areas for its member states. [95] Among the key challenges identified was the fact that action on early response is partly motivated by political will which in a multilateral organization setting, such as the OSCE, with the need for consensus in terms of political decision-making in the Permanent Council, is difficult to attain.

d. Organization of American States

The Organization of American States (OAS) was established in 1948 right after the Second World War, primarily as a regional mechanism to promote security of its member states against the perceived external military threat of international communism. One of the oldest inter-governmental organizations in the world, bringing together the states of the Western Hemisphere, OAS has focused since its creation on inter-american relations. The Organization's affairs are governed by the Rio Treaty or "Pact of Bogotá", and the OAS Charter. The OAS General Assembly, its Permanent Council, as well as Council of Ministers provide the institutional space to discuss controversies and encourage member states to engage in a peaceful dialogue. In terms of conflict prevention capacities the organization's focus is primarily associated with its role in the promotion and defense of representative democracy in the hemisphere. This is upheld by the founding Charter (see below), complemented by several juridical, institutional and political instruments, reflecting the Member States' "*commitment to act collectively in the furtherance of democracy*".

The Rio Treaty or InterAmerican Treaty of Reciprocal Assistance (IATRA), carried over principles developed within the Inter-American system including condemning the use of force against other sovereign states, non- intervention and regional solidarity. The Charter of the OAS, singed in Bogota 1948 and coming into force in December 1951[96], seeks to promote among member states – as stipulated in Article 1 of the Charter – "*an order of peace and justice, promote their solidarity and strengthen their collaboration, and defend their sovereignty, their territorial integrity and their independence".* The objectives of the organization as set up by the charter focus on promoting the peaceful settlement[97] of disputes, provide for collective security and promote cooperation in economic, social, and cultural matters. Among the principles enunciated in the charter are non-intervention, juridical equality creating an enabling environment for dialogue, investigation and conciliation, good offices, arbitration, and judicial recourse to the International Court of Justice of The Hague. However today the "Pact of Bogotá", in terms of its

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[95] The Organisation's early warning of the crisis in the former Yugoslav Republic of Macedonia in the early 2000s is one of the most often cited success story in the history of conflict early warning. Similarly, the OSCE successfully prevented the escalation of tensions in Nagorno-Karabakh in 2012, based on information provided by the CPC95.

[96] It was subsequently amended by the Protocol of Buenos Aires, signed in 1967, which entered into force in February 1970; by the Protocol of Cartagena de Indias, signed in 1985, which entered into force in November 1988; by the Protocol of Managua, signed in 1993, which entered into force in January 1996; and by the Protocol of Washington, signed in 1992, which entered into force in September 1997.

[97] Chapter V (Articles 24-27) of the OAS Charter deals specifically with the peaceful settlement of disputes. Article 24 provides that international disputes between American states shall be submitted to the peaceful procedures, which are the following in accordance with Article 25: direct negotiation, good offices, mediation, investigation and conciliation, judicial settlement, arbitration, and those which the parties to the dispute may especially agree upon at any time.

normative implications for conflict resolution, remains a symbolic document: by 14 American states, but it has never been applied [13], while the IATRA has been "frozen". [98]

In terms of conflict prevention and the use of early warning systems the organization is focusing on four main aspects:

- providing technical cooperation and advisory services in the prevention, management and resolution of social conflicts;
- strengthening the capacity of member states for conflict analysis, consensus building and the design and implementation of dialogue, mediation and negotiation processes;
- facilitating the institutionalization of mechanisms and tools that seek to address social conflicts, and the development of medium- to long-term strategies to prevent and manage such conflicts;
- systematizing and sharing methodologies, learning materials and lessons learned based on the OAS experience in the prevention, management and resolution of conflicts and peacebuilding.

Established in 2006, OAS has two assessment units within its Secretariat of Political Affairs, in the Department for Sustainable Democracy and Special Missions who carry out information gathering for emerging crises and early warning purposes. The Political Analysis and Scenario Section exists to assure that the OAS has the necessary resources and capacities at its disposal to anticipate and mitigate conflict risks and thereby prevent them from escalating into crises. They focus on intrastate warning for countries at risk of political crisis.

Information collection is materialized from internet sources on a shortlist of political, social and economic indicators, analyzed as "accelerators". The indicators are customized according to the context of the country being assessment. OAS does have a regional wide assessment system as scenario building and risk assessments are only conducted at an ad-hoc bases upon request from management. Principle sources for data collection and analysis used to include: traditional media and social networks, mapping of actors and analysis of public opinion polls. However, due to resource constraints the breadth of information and data collection stage of the EWS had to be downsized. Information is also triangulated by expert group discussions in the respective countries with a multidisciplinary group of academics, experts, practitioners, civil society and media. The second unit focuses on interstate conflicts. Early warning assessments from the units are shared confidentially with Secretariat of Political Affairs and the SG. OAS has also recently strengthened its early warning capacities through a partnership with the EU on a use of a software tool to monitor social/ political conflict risks.

Despite early warning capacity and data collection being improved through specialized OAS divisions, there is a lack of an explicit mandate, coupled by a limited number of established legal and procedural criteria that would allow a more proactive reaction. Absence of political will, consensus among member states and the lack of an institutional preventive framework to address the early stages of conflict,

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[98] Also, El Salvador denounced the Pact in 1973, and Colombia – in 2012.

encourages a reactive system of response. Decision to act upon an early warning signal is also hindered by the lack of an institutional procedure with established criteria, benchmarks and timelines.

The OAS has a tradition of prioritizing collective security and peaceful hemispheric relations within its mandate, and the peaceful settlement of disputes among Member States. Although there have been attempts to develop mechanisms and promote its role in peaceful resolution of inter-state disputes, there have been limitations to the full development of those mechanisms, primarily associated with the principle of non-interference. Alternative options to overcome such challenges is to explore quiet preventive diplomacy which would allow the discrete facilitation of dialogue would allow the engagement of different actors and provide space for constructive dialogue.

In addition, in terms of scope of engagement the security landscape of the continent has markedly changed since the organization's establishment and is no longer defined by external threats on territorial integrity. Hemispheric security must be seen in a much broader sense, defined as the sum total of the region's efforts to guarantee security for all of its nations, the security of each State being achieved due to the collective efforts of the States. It should also discuss and administer solutions on the most present security threats such as cross border illicit trade, drug, human trafficking, all posing great risks.

The organization's history in promoting peace and security and preventive capacities through mediation of intra-state disputes and has faced both successes and challenges. OAS has been instrumental in facilitating and negotiating settlement in critical political deadlocks over border disputes, such as in Venezuela (2002), Nicaragua (2005), Ecuador (2005 and 2010), Bolivia (2008), Honduras (2009) and Paraguay (2012). OAS has also gained great experience in post conflict reconstruction and reconciliation[99] in activities ranging from traditional peacekeeping to DDR and human rights monitoring. All activities and missions employed were of primarily civilian nature, were well received by local communities and proved effective even in high risk environments vis-a vis militarized approached of other international organizations, including the UN at the time. In Guatemala for example, OAS assisted government to repatriate displaced populations, in Colombia it supported processes to protect and promote rights of indigenous people, in Nicaragua it was involved in training monitors of Local Peace Commissions and in Haiti it was constructively engaged in conflict resolution at the grassroots level.[100]

The inability of the OAS on the other hand to improve negotiations on the US-Cuba relations remains among its main weakness. Looking back however at over 60 years of history the organization is teared by economic and political power asymmetry between its member states despite the fact that the organization is governed by the principle of juridical equality, translating into one vote per member state and no veto power. Diversity of socioeconomic and political interest, alliances, economic trajectories, geographic position and international affiliations pose severe challenges in bridging consensus over peace

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[99] Relevant OAS initiatives include among others: the Culture of Dialogue: Developing Resources for Peacebuilidng, OAS/PROPAZ, Guatemala, the International Commission for Support and Verification (OAS-CIAV) in Nicaragua, the Samore project in Colombia.
[100] Soto, Y. A. (2016). p. 234.

and security issues or cultivating a genuine hemispherical unity or "reasonable balance of states" national interests.

<p style="text-align:center">VII.   Conclusions and Policy Recommendations for the Development of an Early Warning System</p>

Regional organizations have grown considerably better at detecting warning signs of imminent crises over the last two decades. It is difficult to imagine anyone arguing against the principle of conflict prevention and early action, yet for various reasons challenges remain in developing the right approach to risk identification and action. Reflecting on experiences of Early Warning System's practice over the last two decades the following section presents some key recommendations for the development of an EWS, centered around **timeframe**, **purpose**, structure and **decision-making**, sources of **information and analysis, stakeholders** and common **risk & response areas.**

The design of Early Warning cannot exist in a vacuum. Simply speaking of early warning without being specific about what the system aims to identify and prevent can lead to confusion later down the line in design and implementation. There are very different needs and applications within the EW field, e.g. EW for consular support would prioritize high frequency alerts with short timeframes to address immediate violence that poses a threat to foreign nationals.[101] Developing an EW process *for violence prevention* already shapes the design brief as it implies a system capable of supporting not just analysis, but also the development of responses whose primary function is to prevent the outbreak or escalation of violence. Increasingly, there is also a recognition that EW should be equally applied as a tool to identify peacebuilding opportunities, rather than being limited to tracking negative indicators associated with prevention.[102]

a. Timeframe
Approaches to an EW timeframe range from two ends of a spectrum: long-term structural conflict prevention, which tackles the underlying societal structures or governance arrangements that contribute to sustained conflict, to short-term preventive interventions to halt imminent escalation or outbreak of violence.

The choice of EW timeframe will influence both the types of indicators and the type of prevention response that can be undertaken. Early warning can focus on imminent risks (within days), short-term (within weeks / month), medium term (months / year) or the longer-term (years). The GSDRC HelpDesk Report of 2011[103] discusses how time-frame can have an impact on the type of indicators that would be monitored in an EW system: "'whereas military/political conditions serve as triggers for the outbreak of violent conflict, economic and social indicators are important for the structural background conditions within societies".[104]

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[101] Interview with EU Official, November 2016.
[102] Nyheim, D. (2015).
[103] Walton, O. (2011).
[104] Conflict Management Program of the Paul H. Nitze School of Advanced International Studies (SAIS-CM) Toolkit, cited in Walton, O. (2011). *op. cit.*, p. 5.

In regions where root causes and structural risks of conflict are well-known, the focus could be on more dynamic indicators. Nonetheless, even with a focus on tracking dynamics and events, a choice of what to track should be informed by which risk factors are most significant in that specific context and how events or developments might interact and exacerbate underlying risks factors. For example, in East Africa, the Intergovernmental Authority on Development (IGAD)'s Conflict Early Warning and Response Mechanism (CEWARN)[105] uses multiple frequencies to capture short and longer-term risk *varying* from immediate, quarterly and annual intervals.[106]

RECOMMENDATION: An anticipation approach to early warning blends baseline analysis with more regularly-updated and tailored news updates to connect short- and longer-term approaches. Good baseline analysis for specific states and regions on factors that have the potential to mobilise people or groups to engage in violence would help to increase the relevance and accuracy of 'warnings'.

b. Purpose

As mentioned earlier, it is fundamental to have clarity and agreement among stakeholders on exactly what the early warning is for, what the system is aiming to deliver on. Interviews with researchers working on developing EW systems noted that differing or unclear interpretations of the purpose can have very practical consequences on the effectiveness and credibility of the early warning system.[107] For example, if decision-makers are expecting threat-focused intelligence on security situations and instead receive EW analysis covering economic volatility, deteriorating access to local services and rising community tensions, there is a mismatch of expectations. Likewise, to be accurate and effective, EW measurements have to be precise about what they are seeking to measure; risk indicators that might be effective predictors of rising discontent with state services may not be the same as indicators that can effectively anticipate re-emergence of inter-communal tensions.

RECOMMENDATION: EW analysis should prioritize the core risks that are most relevant for violence prevention in that specific context and to track the corresponding types of dynamic events / developments that are most likely to heighten risks of violence emerging in the short term. Comprehensive, multi-sectoral EW analysis has the added-value of facilitating decisions beyond the security sector, to include more strategic policy in multiple sectors, for example reviewing access to basic services in certain localities, enhancing state-citizen feedback / complaints mechanisms, prioritising private sector development / entrepreneurship initiatives, establishing platforms for exchange / dialogue between different population groups at community level.

c. Structure and Decision-Making

EW mechanisms invariably have a central office and in order to facilitate decision-making that goes from warning to response. However, most systems recognise the need to have a strong bottom-up, decentralised component, for example the shift in CEWARN from highly centralised to national Conflict Early Warning and Response Units (CEWARUs), which are themselves intended to be fed by local input. Similarly, in Kyrgyzstan, the state agency for local self-governance and inter-ethnic relations (GAMSUMO)

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[105] For more information on CEWARN, see http://www.igadregion.org/cewarn/.
[106] IGAD. "The Conflict Early Warning and Response Mechanism for the IGAD Region".
[107] Interview with Early Warning Researcher, December 2016.

and the National Institute for Strategic Studies have collaborated to establish a network of field monitors located within public reception centres that serve a dual function of creating a mechanism to capture and respond to concerns from local communities, whilst also feeding a central monitoring centre that can analyse local reports in aggregate to identify trends that may support policy responses.[108]

It is also useful to build in some form of 'stock-taking' moment within the early warning process, particularly to gather feedback on whether or how responses might need to be revisited and adjusted.

RECOMMENDATION: Given the wide ranging issues that are linked to conflict, cross-sector cooperation is usually the ideal. For example, through an EW task force from across relevant ministries / portfolios, and including sub-national administrations as relevant. This cross-sector approach aims to enhance the exchange of analysis and coordinated response planning. Here, it is useful to make use of advice and lessons learning from comparative EW development exercises to take into consideration some of the challenges of internal communication, seeking buy-in across policy sectors.

d. Sources of Information and Analysis

Violence prevention and peacebuilding requires sources of information and analysis beyond traditional socioeconomic reporting. "Mobile phones, social media, crowd-sourcing, crisis mapping, blogging, and big data analytics are increasingly being used in early warning and early response."[109] This means that analysts and decision-makers participating in an EW process are also familiar and skilled in assessing and handling qualitative, external, and non-governmental inputs.

One concrete example of non-traditional data input is the use of perception-based data, alongside so-called 'objective' data. Saferworld's (2013) Briefing[110] makes a strong case for perception-based indicators, and a good example of its validity comes from considering the case of objective versus perception data related to economic condition. For example, unrest or tensions often emerge due to people's direct experiences of their deteriorating economic conditions. This has been practically applied in the research manual of the European Commission's Joint Research Centre for their Global Conflict Risk Index, which measures "public perception of government representatives' use of their office for personal gain" as its corruption indicator.[111]

Data is usually collected using standardised formats / templates that make it easier to track trends. However, the purpose of standardisation is not comparison. In fact, risk indicators should ideally be tailored to the dynamics / events that are relevant for the escalation / emergence of violence in each specific (sub-national) context. Aside from the local, it is also important to identify indicators to be tracked at other levels so as not to miss trends and dynamics at national and international levels that could heighten tensions or escalate situations inside or across borders.

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[108] Interview with Early Warning Specialist, UNDP, September 2016.
[109] Mancini, F. (2013). Cited in Rohwerder, B. (2015). p. 3.
[110] Saferworld (2013).
[111] Smidt, M. & Vernaccini, L. & Hachemer, P. & De Groeve, T. (2016).

<u>RECOMMENDATION (A):</u> Accuracy is best served by consulting with local-to-international stakeholders on the relevant indicators. In addition, incorporating qualitative inputs from civil society or media monitoring initiatives, including perception surveys and this can also serve as an important way to build trust and legitimacy, which in itself can be useful to ease tensions or prevent escalation into violence.

<u>RECOMMENDATION (B):</u> EW information and analysis capabilities should generally seek to make use of existing capacities, infrastructure, hardware and logistics within government administrations and by external stakeholders. Not only does this make EW processes much quicker to launch, in organisational terms, it also increases the likelihood that stakeholders in the system will embrace rather than resist the new initiative.

Below is a short typology of sources of information and analysis:

Internal - Governmental Data & Analysis: Existing internal data collection, statistics and analysis and internal analysis across departments and administrations can be a rich source of input for EW systems; ranging from economic, service-related, population-related. Integrating existing data sources at the organizational level can serve to triangulate external data sources as well as highlighting disparities between official and unofficial data, which may, in itself, represent a risk as administrations may be unaware and therefore unable to respond changing situations.[112] As noted above, the use of existing data can also reduce organisational resistance from inside administrations by recognising the value of internally-produced data or analysis.

External - Sub-National & Local Actors: "Using local knowledge is crucial for early warning and response to be successful at the community level".[113] Inclusion of local actors (governmental and non-governmental) should be viewed as a matter of effectiveness and not simply as an 'add-on' component to demonstrate openness or satisfy donors.[114] Local actors are likely to be much better equipped to identify events or developments that could escalate tensions or trigger violence in their own local context. An NGO in Timor-Leste relies on a network of trained local monitors who gather data and information across all districts of Timor-Leste to feed into central analysis whilst the organisation also has the expertise to respond to risks through its experience with conflict management tools, such as land dispute resolution, mediation, and community policing.[115] FAST

External - Civil Society Organisations: CSOs often have access to communities that are hard to reach for governmental actors, which therefore enables them to access early warning data that would otherwise be invisible. IGAD and ECOWARN are both high-profile examples of systems that incorporate civil society in early warning. Moreover, CSO participation also enhances the response capacity as they are also often

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[112] Interview with Early Warning researcher, Brussels, December 2016.
[113] Rohwerder, B. (2015). *op*. *cit*.
[114] Interview with European NGO representative, November 2016.
[115] For more information on the system, see EWER (Belun) at http://www.belun.tl/en/early-warning-and-early-response-ewer/.

able to act more immediately to mitigate risks of escalation, as was the case in the Kenyan Uwiano platform, which also trained peace advocates to provide immediate responses.[116]

External - Media: Media monitoring is popular in many early warning systems as a way to source timely input on relating to conflict indicators. For example, the AU CEWS uses Oxford Analytica and BBC Monitoring, the Africa Media Monitor, and a news geo-locator tool: Live-Mon in support of the CEWS.[117] However, it is worth noting that media monitoring can only produce a complete and accurate picture in environments where there is consistent availability of media reporting and where there are no obstacles to reporting that might skew the overall picture of risk, because of over- / under-representation of reporting from one geographic area, community, or topic.[118]

e. Stakeholders

The current overall trend is for EW mechanisms to involve local capacities and communities from development, establishment of indicators, to analysis and response.[119] National EW mechanisms to prevent the emergence or escalation of violence also need to take account of the local, to be able to provide the information that will be most appropriate for tracking for emerging risks of violence. Here, broad inclusivity (women, youth and marginalized groups) is key as minority or otherwise marginalised groups are often more sensitive to social and economic shifts and therefore enable EW stakeholders to anticipate when those shifts or changes might lead to increased risk of violence emerging.[120]

RECOMMENDATION: Local stakeholders as well as (sub-national) administrative bodies need to play a role in responses due to the nature of the risks for violence which emerge quickly and can, to some extent, be addressed directly at local level. Engaging local-level stakeholders in regular moments of 'feedback' is also important in order to build trust (between communities, but also toward authorities). NGOs, local CSOs may also be wary of sharing information in a one-way channel without some transparency of how it is used and some opportunity for feedback.

RECOMMENDATION (B): Coercion in communication of the early warning signal**.** Technical needs and procedures must be in place that promote cooperation or information- and analysis-sharing between departments to promote the quality of analysis and the comprehensiveness of the response options. Logistics and coordination can make or break an EW process and so the importance of planning, well-defined and user-friendly internal communication tools and maintaining engagement through consultation with the different EW stakeholders cannot be overstated.[121] Managing the communication between different levels and types of stakeholders in an EW system is often overlooked, and yet without effective lines of communication for local-to-central-to-local analysis or notification of decisions or outcomes, interest and motivation to participate in EW can discredit or weaken the system as a whole.

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[116] Rohwerder, B. (2015). *op. cit.*
[117] AU CEWS web presentation at http://www.peaceau.org/en/page/28-continental-early-warning-system-cews.
[118] Interview with European NGO representative, Brussels, December 2016.
[119] Nyheim, D. (2015). *op. cit.*
[120] Haider, H. (2014). Cited in Rohwerder, B. (2015). *op. cit.* p. 3.
[121] Interview with EU official, November 2016. See also EU External Action & EU Commission (2013).

Variety of Response Possibilities

The first generations of early warning capacities tended towards imminent crisis response and a focus on deployment of civil or security resources. However, taking violence prevention as the starting point widens the possibilities for responses as well as the number and type of stakeholders that can support prevention. Prevention and peacebuilding can encompass actions that cover; "the economy, governance, diplomacy, the military, human rights, agriculture, health, education and journalism."[122] Moreover, not all preventive responses require financial resources and less resource-intensive responses can be equally effective, and sometimes preferable, e.g. public statements, dialogue and mediation, goodwill gestures, visits by high-level individuals / organizations.

RECOMMENDATION (A): In looking at potential responses within an EW system, system developers should aim for report formats or decision-making processes that are guided by who is best placed to have a positive impact on a particular dynamic, whether local / governmental / individual or otherwise. This ensures that whatever the response, it is based not only on what is theoretically possible, but also on what is most likely to be effective, given the timing, dynamics, and varying degrees of added-value and influence of the different actors or tools in the context.[123]

RECOMMENDATION (B): In all cases, conflict-sensitivity, from the most local to the most senior level is vital to ensure that carefully crafted response packages, as described above, are not neutralised or undermined by other actions taking place simultaneously in different ministries, departments, or by other EW stakeholders at local or international level. However, there is a limit to how much control EW decision-makers and responders have over the actions of others, which is why the (regular) moment of 'stock-taking' is noted earlier as an important component within the early warning process.[124] These moments of evaluation, in whatever form, should allow both decision-makers and responders to gather feedback on if and how responses might need adjusting.

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[122] Rohwerder, B. (2015). *op*. *cit*.
[123] Interview with Early Warning researcher, Brussels, December 2016.
[124] See Section II.iii on Structure and Decision-Making.

VIII.   Annex

Table One: Repository of EWS by theme:

Famine and Food Security	**International Food Policy Research Institute Global Food Security Portal**, **UNFAO Global Information and Early Warning System on Food and Agriculture (GIEWS)**, **WFP Food Security Monitoring System (FSMS)**, **UNFAO World Food situation**, **Agricultural Market Information System (AMIS)**, **UNFAO Food Insecurity and Vulnerability Information and Mapping Systems (FIVIMS)**, **UNFAO Locust Watch Desert**, **UNFAO Locust Watch CCA**, **UNFAO Rice Market Monitor (RMM)**, **EU Monitoring Agriculture ResourceS (MARS)**, **USDA International Food Security Assessment** , **USDS Office of Global Food Security**, **Regional Centre for Mapping of Resources for Development (RCMRD)**, **ASEAN Asian Food Security Information System (AFSIS)**, **Southern African Development Community (SADC)**, **Global Monitoring for Food Security (GMFS)**, **Integrated Food Security Phase Classification (IPC)**, **USAID Famine Early Warning System Network (FEWS NET)**, **NGOs with food security EWSs[125]: CARE International**, **Africare**, **Catholic Relief Services**, **Food for the Hungry (Community Early Warning System)**, **World Vision**
Genocide	UN Office of the Special Advisor on the Prevention of Genocide (OSAPG), Genocide Watch, Enough Project, Life Integrity Violations Approach (LIVA), US Holocaust Memorial Museum – Early Warning Project, Accelerators of Genocide Project (US Naval College)
Conflict Early Warning Systems	EU Watch List, UNDP, UNDPA Prevention Team, AU Continental Early Warning System (CEWS), ECCAS Central African Early Warning Mechanism (MARAC), ECOWAS Warning and Response Network (ECOWARN), West Africa Early Warning and Response Network (WARN), IGAD Conflict Early Warning and Response Mechanism (CEWARN), OSCE Conflict Prevention Centre, NATO Airborne Early Warning and Control Force (NAEWCF), NATO Intelligence Warning System (NIWS), USAID Measuring State Fragility, USAID Fragile State Indicators, USDoD-commissioned World-Wide Integrated Conflict Early Warning System (ICEWS), US

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[125] See Mathys, E. (2007).

	CIA-commissioned Political Instability Task Force, USNIC Internal Instability Watch List, France SGDSN Systeme d'Alerte Precoce (SAP), Germany BMZ Crisis Early Warning System, UK Conflict Prevention Pool (CPP), SwissPeace's Early Recognition of Tensions and Fact-Finding (FAST), Forum on Early Warning and Early Response (FEWER), ICG CrisisWatch, Global Partnership for the Prevention of Armed Conflict (GPPAC), Institute for Security Studies, West Africa Network for Peace (WANEP), Caucasian Institute for Peace, Democracy and Development (CIPDD), Network for Ethnological Monitoring and Early Warning (EAWARN), DRC Ituri Watch, Sri Lanka Forum for Peaceful Coexistence, Kyrgyzstan Foundation for Tolerance International, Timor-Leste Belun EWER, Afghanistan Tribal Liaison Office, Kenya Ushahidi, World Event Interaction Survey (WEIS), Conflict and Peace Data Bank (COPDAB), Uppsala Conflict Data Program (UCDP), Stockholm International Peace Research Institute (SIPRI), Correlates of War, Issue Correlates of War (ICOW), Global Database of Events, Language and Tone (GDELT), International Crisis Behavior Project (ICBP), Computational Event Data System (CEDS), Conflict and Mediation Event Observations (CAMEO), Integrated Data for Event Analysis (IDEA), Conflict Information and Analysis System (CONIAS), Protocol for the Analysis and Nonviolent Direct Action (PANDA), Minorities at Risk (MAR), Ethnic Conflict Research Project (ECOR), Working Group on Conflict Causes Research (AKUF), Terrorism in Western Europe: Events Data (TWEED), Country Indicators for Foreign Policy (CIFP), Peace and Conflict Impact Assessment (PCIA), Fund for Peace Fragile State Index, Economist Intelligence Unit Democracy Index, Institute for Economics and Peace Global Peace Index, Peace and Conflict Instability Ledger
Human Rights Violations	UN Human Rights up Front Initiative (HRuF), Human Rights Watch, Human Rights Campaign, Amnesty International, Federation Internationale des ligues des Droits de l'Homme (FIDH), WITNESS, Not On Our Watch, Satellite Sentinel Project (SSP) in Sudan, Human Rights Information and Documentation System (HURIDOCS), Interdisciplinary Research Programme on Root Causes of Human Rights Violations (PIOOM)
Humanitarian Action	Global Index for Risk Management (INFORM), UNOCHA Early Warning and Contingency Planning Section, UNOCHA Global Focus Model, UN Operational Satellite Applications Programme, ECHO Global Vulnerability and Crisis Assessment (GVCA) and Forgotten Crisis Assessment (FCA), Information Technology for Humanitarian Assistance, Cooperation and Action (ITHACA), International Organization for Migration (IOM), Harvard Humanitarian Initiative (HHI)
Health	FAO-OIE-WHO Global Early Warning System for health threats (GLEWS), WHO Early Warning and Response System (EWARS), WHO Strategic Health Operations Centre, WHO Global Outbreak Alert and Response Network (GOARN), Health Canada Global Public Health Intelligence Network (GPHIN), WHO Early Warning and Response Network in Southern Sudan (EWARN), Iraq Communicable Disease Control Center (with assistance of WHO), Serbia Republican Institute of Public Health (with assistance of

	WHO), Morocco Directorate of Epidemology and Disease Control (with assistance of WHO), China Center for Disease Control and Prevention (CDC), India National Center for Disease Control, France Agence nationale de santé publique (InVS), Canada Center for Emergency Preparedness and Response (CEPR), US Centers for Disease Control and Prevention (CDC), US BioWatch (bioterrorism)
Natural Disasters	UN EarthWatch, UNOCHA Global Disaster Alert and Coordination System (GDACS), Environmental Emergency Risk Index (EERI), World Risk Index, Global Risk Data Platform, UN Indian Ocean Tsunami Warning System (IOTWS), WB Natural Hazard Apparent Vulnerability Indicator (NHAVI), WB Global Facility for Disaster Reduction and Recovery (GFDRR), WB Disaster Risk Management (DRM), WFP Humanitarian Early Warning Service (HEWS), Global Disaster Information Network (GDIN), UNDP country-level EWS, Early Warning Network (EWN), Dartmouth Flood Observatory (DFO), GEOFON Global Seismic Network, Pacific Tsunami Warning Center (PTWC), IGAD Climate Prediction and Applications Centre (ICPAC), Regional Integrated Multi-Hazard Early Warning System (RIMES), Asian Disaster Preparedness Center (ADPC), Pacific Disaster Center (PDC), DisasterAWARE, ASEAN Disaster Monitoring and Response System (DMRS), Caribbean Disaster Emergency Response Agency (CDERA), Australia Bureau of Meteorology, Bangladesh Red Crescent Society Cyclone Preparedness Program (CPP), China Shanghai Multi-Hazard Early Warning System, Cuba Tropical Cyclone Early Warning System, Fiji Meteorological Service, France Vigilance System, HK Tropical Cyclone Warning, Japan Meteorological Agency, Japan Earthquake Early Warning System (EEWS), UK DFID Weather and climate Information and SERvices (WISER), US Multi-Hazard Early Warning System, US Emergency Managers Weather Information Service (EmWIN), US Tsunami Warning Centers (TWC), US National Hurricane Center, US Navy Joint Typhoon Warning Center (JTWC), ShakeAlert
Financial	Financial Stability Board Standing Committee on Assessment of Vulnerabilities (FSB-SCAV), EU Systemic Risk Board (ESRB), IMF-FSB Early Warning Exercise (EWE), US Financial Stability Oversight Council (FSOC) IMF papers by Kaminsky, Lizondo and Reinhart (1998) and Berg and Pattillo (1999); ECB paper by Bussiere and Fratzscher (2006); US Federal Reserve papers by Kamin and Babson (1999) and Kamin, Schindler and Samuel (2001); Bundesbank paper by Schnatz (1998, 1999)

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