**CROWDSOURCING FOR COLLABORATIVE PREVENTION[[1]](#footnote-2)**

**Strengthening the 4th Generation Conflict Early Warning for**

**Multi-stakeholder Response**

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**INTRODUCTION**

A new generation of information sharing has emerged, one that gives greater power and opportunity for people to monitor and share real-time information around conflict, crisis and peace initiatives. In 2011 alone, the impact of social media in political transition processes has been evident, the latest developments in the Arab World and in many African countries testament to this proliferation and impact. The voice of the people is increasingly communicated through newer media channels such as Facebook, Twitter, blogs, and text messages rather than merely transferred and controlled through traditional media and elected politicians. As one activist “tweeted” during the February 2011 protests in Cairo: “We use Facebook to schedule protests, Twitter to coordinate and YouTube to tell the world.”[[2]](#footnote-3)

Grasping and making effective and constructive use of newer technology tools provides a crucial opportunity to strengthen broader participation and inclusion in political transformation processes and conflict prevention. Information plays a central role in the field of conflict prevention and peace building. If accessed on time and shared to the right stakeholders, it has the potential to shape the actions while also guiding the interventions of those seeking to contribute to positive change in conflict and conflict prone contexts. The use of available technology can localize the warning and response mechanisms aimed at preventing violent conflict and hence give more ownership and responsibility to the people impacted.

Crowd sourcing (CS) is a methodology for gathering and sharing information generated voluntarily and potentially anonymously. Pioneered by the works of Ushahidi and others in the field of crisis mapping, CS has more recently played a central role in digital activism, crisis awareness and mapping in addition to elections monitoring. While CS has played a central role in the field of humanitarian assistance, there is need to explore further how the technique can strengthen efforts for conflict prevention and peacebuilding by engaging people locally in collaborative efforts for warning and response.

The challenge is not just how to establish credible systems using crowd sourcing to bridge the gap between early warning and response[[3]](#footnote-4), but more so how to mobilize multiple stakeholder action(s) – at national, regional but also local levels - before conflicts transform into violence.

Over the past few years, crowd sourced information, thanks to the extensively expanding access to mobile devices and social media throughout all corners of the world, has emerged as a complementary tool for early warning. Technology offers the potential to rapidly grasp and react to proximate information - given the right response system is in place - especially around rapidly changing situations like those related to elections and political transitions. However, in these situations technology also offers the potential to share information by the crowd for the crowd – so called crowd feeding[[4]](#footnote-5) - via horizontal communication. Crowd feeding can be used to involve and mobilize communities of action to respond to signs of early warning locally or rapidly share the information to the appropriate response mechanism(s).

Crowd sourcing can be used to enhance capacities to respond in an informed, timely and coordinated manner.[[5]](#footnote-6) However, crowd sourcing is only a complementary tool, and does not replace established methods of conflict analysis and early warning systems. The challenge then remains as to how these innovative social media tools and user-generated information can be utilized for and translated into localized and participatory preventive multi-stakeholder action in potential conflict situations.

This report seeks to provide an overview of components of crowd sourcing and as well as the lessons learned for using crowdsourcing for conflict prevention. Highlighting the considerations needed for practical engagement and programming in this field, the report discusses the strengths and limitations of crowd sourcing for prevention. The main example until now of how crowd sourcing has been successfully used for conflict preventive measures is the Uwiano Platform in Kenya, established in relation to the Referendum in 2010. The report will use the Uwiano Platform as an example of a system for early warning and response for conflict prevention.

The report is the result of a close collaboration between GPPAC, ACCORD, the National Steering Committee on Peace Building and Conflict Management in Kenya and UNDP’s Bureau for Crisis Prevention and Recovery. This collaboration reflects the necessity for strengthened partnerships between the various actors in the field to ensure that the new possibilities for information sharing and inclusivity are met with a coordinated and efficient response from civil society, governments and the international community.

1. **EARLY WARNING, CROWD SOURCING & VIOLENCE PREVENTION**

The purpose of Conflict Early Warning Systems (CEWS) is to alert potential responders and decision makers about impending outbreaks of violent conflict, and guide and mobilize appropriate response in order to prevent the occurrence of conflict. A new approach to early warning and early response (EWER) is making effective use of the latest technology as an efficient way of bridging the gap between those warning and those responding and mobilizing collaborative, localized responses to violent conflict. This section briefly introduces the evolution of early warning systems with a strong focus on the so-called “4th generation of early warning” in which crowd sourcing serves as a methodology for generating and sharing conflict information for warning and response.[[6]](#footnote-7)

* 1. **Four Generations of Conflict Early Warning Systems**

Early warning systems have advanced concomitantly over time as the knowledge and understanding of conflict and prevention has evolved and new quantitative and qualitative tools have become available. Four generations of early warning systems have been identified and show the evolution of CEWS:[[7]](#footnote-8)

*The first generation* of early warning systems, including conflict event logging and monitoring, were located outside of the actual conflict region and the risk assessments relied on quantitative data.[[8]](#footnote-9)[[9]](#footnote-10) *The second generation* implemented a closer approach to the conflict by placing the monitoring in the conflict zones by using field monitors to gather information whilst the analysis of the data was conducted outside of the conflict area. Examples of such systems include: tools developed by the International Crisis Group (ICG)[[10]](#footnote-11), FAST[[11]](#footnote-12) and EAWARN[[12]](#footnote-13).

Like the second generation, *the third generation* early warning systems’ monitoring and analysis are located entirely in the conflict regions attempting to simultaneously integrate early warning and early response.[[13]](#footnote-14) The Foundation for-Co-Existence’s (FCE) Programme on Human Security and Co-existence[[14]](#footnote-15) in the Eastern Province of Sri Lanka, CEWARN[[15]](#footnote-16), FEWER[[16]](#footnote-17) and ECOWARN all fall in this category.

While the first three generations of early warning contributed to the efforts of conflict prevention, they came under heavy criticisms for failing to generate the much-needed response to violent conflicts. The fourth generation seeks to address this gap by linking warners and responders. *A fourth generation* of early warning, coined by Patrick Meier in 2007, is focusing on direct, first-responder intervention.[[17]](#footnote-18) While the former generations define early warning as “the systematic collection and analysis of information,” fourth generation initiatives draw on the [UN-ISDR](http://www.unisdr.org/)‘s people-centered definition[[18]](#footnote-19) of early warning and response:

“Empower individuals and communities threatened by hazards to act in sufficient time and in an appropriate manner so as to reduce the possibility of personal injury, loss of life, damage to property and the environment, and loss of livelihoods”.[[19]](#footnote-20)

The fourth generation approach aims to localize the warning and response mechanisms, hence give more ownership and responsibility to the people impacted. This evolving generation of early warning initiatives draws on crowd sourcing as a methodology to rapidly connecting warners and responders by facilitating a quick transfer of information and thus mobilizing a rapid response.

This report seeks to create an overview of how crowd sourcing can be effectively applied in conflict prevention efforts with a strong emphasis on conflict preparedness and collaborative preventive action planning and implementation. This is based on the premise that peacebuilding and conflict prevention is about supporting mechanisms that empower citizens to play a central role in preventing and responding to violence in a proactive way.

Further explanation of crowdsourcing is outlined below. This includes the components of crowd sourcing, in addition to strengths and challenges of using crowd sourced data for early warning and response are outlined below highlighting how crowd sourcing can be applied for conflict prevention as an integrated part of a given country’s infrastructure for peace.

**Crowd Sourcing**

The term “crowd sourcing” was coined by Howe in 2006, as the act of outsourcing tasks, traditionally performed by an employee to a large group of people or community (a crowd), through an open call for action. Howe explained that because technical advances have allowed for cheap consumer electronics, the gap between professionals and amateurs has been diminished.[[20]](#footnote-21) In crowd sourcing, the participation is voluntary and the contribution of a wide network of people is required for the initiative to reach a substantial scale.[[21]](#footnote-22)

Crowd sourcing has been used for rapid information exchange in various fields, including humanitarian assistance and crisis management in Haiti, Myanmar, and Japan. In crisis situations and for conflict preventive purposes, crowd sourcing as a methodology has several advantages[[22]](#footnote-23):

* Provides crucial and rapid information sharing during a crisis or for early warning purposes;
* Affected communities and or targeted audiences in a crisis or potential crisis can inform and be informed rapidly and in real-time of the situation on the ground;
* Affords alternative sources of information adding value or contesting formal news sources: drawing upon more sources, providing more information available for analysis;
* Actively engaging the affected population(s) in the process because they have an interest in the outcome;
* Adds value and faster mechanisms for response to traditional systems of early warning;
* Crowd sourcing allows for triangulation of information permitting verification and accountability.

As it will be discussed in further detail in this paper, there is need for caution and proper reflection when seeking to apply crowd sourcing within the field of violence prevention and peacebuilding where information can be both sensitive and do harm if mismanaged. As it will be discussed, the use of crowd sourcing for early warning and collaborative response prompts a number of questions to consider, including: What kind of response the warning should and could trigger and who is/should be involved? And how then is the warning system composed to ensure it feeds into this response system?

* 1. **Components of a Crowd Sourcing System for Early Warning** 
     1. *The Call, the Crowd, the Tools*

There are three main components in any CS system: the issue being broadcasted (the call), the target audience (the crowd), and the methods (the tools) used to send and receive information to and from the crowd. The **call** is a way to get a particular audience involved in sharing information. The message to the **crowd** can be communicated through many different technology related **tools**. The call has to be concise and specific and the crowd has to be informed about the means to report and the reason why they should share information. It is important to clearly specify who is running the service, how people should report, what they should report and how the information will be processed, utilized and responded to.[[23]](#footnote-24) The call should prompt a response from the targeted audience expecting either information about specific needs or about a particular situation.[[24]](#footnote-25) Included in this information should always be a location – a way to link the information with a geographic area for response, tracking and validation purposes.

Whether it is an identified crowd (bounded crowd) –consisting of a group such as appointed field monitors –or an open crowd (unbounded crowd) – such as a community in a given location, sufficient crowd participation is an imperative for the success of a crowd sourcing initiative.[[25]](#footnote-26)

Crowd sourcing methodology, for generating conflict information for violence prevention, relies on the recent advancement in technology and is thriving on the influx of free software available for crowd sourcing. Most crowd sourcing initiatives are either mobile or web based, but this then requires that the technology infrastructure in a country has reached a certain level and the crowd has reliable and cheap access to the internet, mobile phones or land line telephones. When selecting tools for crowd sourcing and conflict prevention it is crucial to leverage one’s knowledge of the context and scale of the system and then select tools that are appropriate and practical for timely response to emerging conflict at different levels in a country.[[26]](#footnote-27)

The use of mobile phones in developing countries have been found to be the best option (as opposed to internet based tools like emails, online submissions, or blogging) if mobile network coverage is spread through the country. In some developing countries internet coverage is only available in urban centers and not in rural areas, yet, mobile network coverage is increasing throughout most developing countries, including rural areas.

**Tools for crowd sourcing**

The value of crowdsourcing tools for conflict prevention is defined by the operational level of the users. At the local level, village or district leaders might only need a system that can easily send short messages to constituents, while a regional organization may want mapping capacity to help them predict where tension could build within a polity.

**FrontlineSMS** comes to the fore at the local level due to relatively high penetration rates of mobile telephony, and the fact that it does not require an internet connection to work. FrontlineSMS can stand in for an email list by providing a platform for a user to organize groups by phone number and keyword, and be able to send bulk SMS messages the way an email listserv can send bulk email messages. **FrontlineSMS:Radio** takes this tool a step farther by allowing radio stations to harness the FrontlineSMS organizational tools to create dynamic two-way communication systems for radio stations. Since radio is still the primary medium for information sharing in rural and developing countries, combining increasingly ubiquitous SMS messaging with radio broadcasting can create a very robust communication system for local leaders to use for conflict management and prevention.

Scaling up to the regional level, we can expand beyond basic SMS and radio to include mapping software such as **Ushahidi**. Ushahidi was developed in Kenya in 2007 as a means for publicly sharing information about the type and location of violence by mapping events during the disputed presidential elections. Since then, Ushahidi has been deployed in the Gaza Strip, and most notably in Haiti after the earthquake in 2010. Uwiano was launched during the August 2010 Constitutional referendum in Kenya using the same principle as Ushahidi, but with the express purpose of gathering crowdsourced information on a mapping platform in order to respond to building tension or violence. These platforms take the basic FrontlineSMS organizational tool up a notch, by adding a “swiftcode” (a short number that links directly to the platform) and bringing in volunteers to code and map the incoming SMS messages. Due to increased human resources and internet requirements, these tools are more practically deployed by larger organizations that are tasked with larger scale responsibilities.

Expanding crowdsourcing to the national level requires appropriate resources that will facilitate more complex information gathering and coding. While the mapping platforms such as Ushahidi are the same, the sources of information can be more diverse. At the national level, platforms such as **Twitter** can be used to gather information on events in the field. Using “hashtags”, which act as thematic identification for tweets, a crowdsourcing team could track messages that are related to an event. In combination with a swiftcode for SMS messages, the amount of potential real-time information coming into a conflict prevention program, even at the national level, could be overwhelming. This is where tools like **Swiftriver**, a software platform that is designed to automatically code and organize incoming information, can be useful. Swiftriver receives information, identifies it, and moves it to pre-defined datasets or disks on a computer automatically, allowing an organization’s data analysts to focus on less defined but potentially valuable information coming from the general public. This level of data management is likely to only be practical at the national level. Swiftriver requires some programming savvy since it is still being developed, and managing data streams from social media such as Twitter as well as public SMS messages requires a great deal of human resource investment.

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If illiteracy rates are high the best means might be for people to leave a message via voice mail (toll-free numbers can be setup since the cost of the call should be considered a barrier). The distribution of mobile phones to a local peace council or appointed field monitors, for example, can be one way of dealing with challenges regarding accessibility and to lower the costs related to reporting. Additionally, training or assistance might be required to the persons who wish to use the technology but lack the skills to do so .For instance Ushahidi in Liberia found that SMS usage was low, upon further investigation they found that those using basic cell phones could not figure out how to turn off the predictive text feature – which is normally not in the local language – this caused messaging to be difficult and frustrating, resulting in fewer SMS’ sent.

**Box**: **Ushahidi**

Ushahidi is a non-profit tech company that specializes in developing free and open source software for information collection, visualization and interactive mapping.

Ushahidi (Swahili for “testimony”) was originally a website developed to map reports of violence and peace efforts in Kenya after the post-election fallout in 2008. Citizens submitted reports from their communities via the web and mobile phones, and soon the site had 45,000 users in Kenya alone. Based on the first website, the Ushahidi team developed a platform that could be used by others around the world to map information during a crisis. While the Ushahidi platform is often used to collect crowdsourced information, various information collection methodologies are compatible and may be used with the platform.

The Ushahidi platform has now been used about 20.000 times in over 140 countries for a variety of purposes such as coordinating humanitarian emergencies, tracking electoral processes, mapping disease outbreaks and incidents of gender-based violence. The prevalence of mobile phones and widespread use of SMS around the world make it possible for information to be shared rapidly with the online platform, and its flexible design allows for quick deployments or customized instances for long-term use.

Unlike first, second and third generation early warning systems that monitor and analyze conflict (in many cases from a distance) utilizing a proprietary system, the Ushahidi platform belongs to what is called the fourth generation, wherein monitoring and analysis are conducted in the conflict region by local networks with little to no divide between warners and responders. The Ushahidi platform is also composed of free and open source technology, unlike the proprietary software used by other generations.

One example of the platform as a fourth generation system is the Ushahidi instance used for tracking conflict in Eastern DRC since 2008. A collection of non-profits, academics, students and Congolese citizens are able to interact via the platform and contribute timely reports of conflict for responders and the public at-large to access. Another example is the recent Waspada deployment in Indonesia, where local crime is mapped and a community forum on the instance provides an interactive space for tracking stolen items. Currently in Liberia, more than a dozen local and international organizations are contributing to an Ushahidi instance designed specifically for multiple stakeholders’ co-ownership; the instance is dedicated to crowdseeded reports (reports coming from trusted sources) about conflict and peacebuilding efforts throughout Liberia.

**Source**: Ushahidi Liberia

* + 1. *Analysis & Credibility*

Information credibility is a central prerequisite if prevention of violence is to be achieved. Within the context of conflict prevention and peacebuilding, credible information (in this case information that is verifiable, analysed and trust-worthy) becomes a core aspect of prevention. This is information that can be acted upon and that can lead to prevention rather than exacerbating conflict and violence. Effort and planning must ensure that credibility of process and information collection is a core outcome of the early warning and prevention effort.

The use of modern technologies should not be seen to replace traditional information generation approaches like conflict analysis. On the contrary, technology plays a more complementary role, working to strengthen existing mechanisms. In some cases, for example the ECOWAS conflict early warning network (ECOWARN) in West Africa and Kenya’s Conflict Early Warning System, a hybrid system is adopted where traditional conflict analysis methods are intertwined with crowd sourced information.

A hybrid method of using a targeted call to a bounded crowd is an important part of accessing and verifying credible information at the local level, and one that is important in creating a functioning EWER system. Irrespective of their title, field monitors, peace or conflict monitors play a central role in ensuring that the information generated is reliable and credible. In most cases the field monitors are locally embedded, meaning that they belong and in some cases reside, in those specific conflict contexts. In this sense they bring a local perspective to an early warning system while also ensuring legitimacy to the information collection process. These field monitors can also be trained in the use of the crowd sourcing systems in addition to conflict preventive actions.

Efficient and credible monitoring systems would therefore rely heavily upon dependable field monitors. These monitors provide a dual role: they link the conflict early warning system to the people at the local level, while also being responsible for the information that is relayed to key decision makers.

When incorporating data gathered through a call from crowdsourcing, especially from an unbounded crowd – like the population of Kenya –the need for a reliable system to analyse and assess the validity of information rapidly is required. More information, often from unspecified sources, does not ease the analysis but rather increase the complexity of analysis. A credible system, therefore, requires the triangulation of information to ensure, to the extent possible, that the information is reliable.

The process of verifying social media data largely requires a two-step process: the authentication of the source as reliable and the triangulation of the content as valid.[[27]](#footnote-28) The underlying assumption in this case is that if we can authenticate the source and find it trustworthy, it may be sufficient to trust the content.

Triangulation of information sources becomes a key basis for enhancing information quality. As in any information generation process, it helps to employ various methods in order to test the reliability of the data. For example, it might be helpful not only to rely on field monitors, but also check with reliable media houses, civil society groups working in respective conflict areas, and rapid assessments generated by other actors. This information can also be triangulated and verified by primary information collected by reliable conflict/peace monitors (the bounded crowd). In addition, verification can be crowd sourced by using such technology as OpenStreet Map, Ushahidi and new systems such as Swift River, tools that have been developed to triangulate information and create reliability scores (***see text box on tools***).

* 1. **Components of a Crowd Sourcing system for Early Response**

What makes crowd sourcing for conflict prevention different than other systems is the response aspect. As practitioners and policy makers place emphasis on primary prevention of violence, there is now growing demand to strengthen and more concretely link early response to that of early warning. To do so, early warning mechanisms ought to be designed with an aim of generating response for prevention of violent conflict embedded in and building on existing infrastructures for peace - an aspect that remains elusive in practice.

When using crowd sourcing it is crucial to have clarity on what kind of action/response the crowd can expect. It has been stated that once you do crowd sourcing you are taking the responsibility to act on the information you collect. In turn, any inaction needs to be clearly explained the people from which information is being sought.[[28]](#footnote-29)

* + 1. *The Role of the Crowd*

As mentioned above, fourth generation early warning/early response approaches aim to localize the warning and response mechanisms giving more ownership and responsibility to the people impacted – one aspect of this is through crowd feeding. Crowd feeding is to early response what crowdsourcing is to early warning.[[29]](#footnote-30) It involves using the same technologies that are used to gather data and information from the crowd to feed that data and information back to the crowd. This is based on the assumption that information sharing is the basis for a coordinated meaningful response and that since local populations are the first responders on the ground, the more they know the better they respond. Local populations normally know what to do and have local coping mechanisms.[[30]](#footnote-31)

The question is then how to adapt appropriate technologies to facilitate the kind of communication with the crowd and/or responder that would (i) help organizations involved in early response deliver messages of peace/information or intervention to prevent violence to the crowd and (ii) allow the crowd to self-organize grassroots responses. In many ways, (i) is much easier. It is a communication strategy that could be employed by an organization doing early response (together with other strategies). This could be done by training organizations to use new technologies to deliver messages of peace in parallel to other activities (peace festivals, community visits, etc.). Option (ii) is more complicated and is closer to activism or non-violent civilian response than it is to early response.

Much like crowd sourcing cannot be controlled, there is an element of crowd feeding that cannot be controlled. One of the best current examples of how technology for crowd feeding has been used for activism is a technology tool called Sukey[[31]](#footnote-32) which uses a set of applications designed to keep demonstrators protected and informed during protests.

* + 1. *The Role of Multiple Stakeholders*

Another aspect of developing a reliable CS system for EWER is to understand the constraints and boundaries of response: who can do what, and how much can they do to prevent or stop conflict? A core characteristic of response however, is the role of multiple stakeholders in mobilizing response and forging action based on the various types of warnings generated through crowd sourced information.

It is plausible to argue that preventive action is a sum total (or collaborative system) of activities, interventions and responses by various stakeholders/actors within a given context. The prevention of violence therefore becomes a collaborative process between local (grassroots), district (regional), national and international actors in identifying and ensuring the preparedness of established response mechanism as part of the given country’s existing infrastructures of peace. These infrastructures include local peace councils and actors supporting local conflict prevention and response efforts and include local communities in the shaping and implementation of response mechanisms.

To highlight the various stakeholders involved in a CS system it is understood that, there is a very specific role to be played by civil society organizations, the UN, government, media, and regional bodies, and others. This implies that these stakeholders/actors each have a central role to play in the generation of conflict information, verification, analysis and response.

Civil society groups might play a key role in generating “grassroots” information depending on their outreach and area of cover and assistance, in the aspect of crowd feeding mentioned above, mobilize “grassroots” responses to conflict. On the other hand, government institutions such as provincial administration, intelligence services or the Ministry of Interior, might have the legitimacy and ability to respond and be more effective in stopping conflict through the use of police and other interventions. Engaging these government institutions in a collaborative manner to mobilize information provides the much-needed legitimacy to the process as well as empowering legitimate institutions the space for response to the warnings.

* + 1. *Multiple levels of response*

More than just needing the multiple stakeholders involved to ensure response, it is necessary to acknowledge that the impact of conflict cannot be analysed from a single level perspective. Conflicts are dynamic and manifest with impacts at different levels of society. Their impacts cannot necessarily be constrained or bounded within a given level, meaning that a conflict in a specific village might have far reaching impacts at district, provincial, national and sometimes regional levels. All these factors play a central role and conflict early warning systems ought to be designed with these complexities in mind.

As already mentioned, conflicts and their impact are not location-specific. For instance, the impact of the post election violence in Kenya for example was felt at the national level and to some extent at regional levels, despite the violence being restricted to specific localized contexts. Response mechanisms should therefore reflect this multilevel approach. Conflict early warning mechanisms should be designed in such a manner that response initiatives for prevention adopt a multi-level approach. For example, while response can be situated within national mechanisms through the government agencies, it might be vital also to have response mechanisms at the local, district and provincial levels depending on the administrative units. However, this is difficult to achieve if existing infrastructures for peace are not strengthened to ensure response. It is also worth noting, as we saw in the previous section, that different stakeholders have varying capacities to influence response at different levels.

* + 1. *Context Specific Response*

The responsible stakeholders within any CS system for conflict prevention hold a very powerful tool for conflict prevention if implemented correctly. However, they also hold vital information. This, in turn, requires the development of clear accountability structures and response mechanisms. The viability to apply these discussions based upon the specific domestic country context remains crucial. In some countries, CSOs and the public enjoy a relatively good relationship with governments, while in others, CSOs have limited space to engage. In these cases, if government were to initiate or even be involved in the CS process, how would they be deemed credible by the public and international community?

The following chapter seeks to dive deeper into the issue of how the available technology and “bottom-bottom”, “citizen-based” 4th generation conflict early warning systems[[32]](#footnote-33) can be used as a means to strengthen collaborative response mechanisms for conflict prevention. The chapter will use the Uwiano Platform in Kenya as a case study due to its success in applying crowd sourcing of information for conflict preventive efforts in relation to the elections in 2010.

**CHAPTER 2:** CROWDSOURCING FOR VIOLENCE: The Case of the Uwiano Platform in Kenya

In Kenya an early warning and response system – the Uwiano Platform – was setup prior to the 2010 referendum. The system used crowd sourcing to collect crucial information from local areas via text-messaging and trained “peace monitors” to engage with the information received to ensure preventive and conflict mitigating action. The text messages shared information about incidences regarded as being a threat to a peaceful referendum process – such as the location of hate speech, disputes, or local violent conflicts. In total, the platform received around 20,000 text messages, many of which came on 4 August 2010, the day of the Referendum. Prior to and during the 2010 referendum, it has been estimated that the Uwiano Platform tracked and stopped 122 potential incidents of violence that could have escalated into violent conflict.

This effort marked the most coordinated collaboration between civil society and uniformed services in Kenya to date. The peaceful referendum stands in stark contrast to the violent presidential elections in December 2007, which plunged the country into its gravest political crisis since independence, and to previous electoral and political disputes related to elections in 1992, 1997, and 2002. There were signs of potential violence leading up to the 2010 poll, but multi-stakeholder processes involving state agencies, UNDP, civil society organizations and traditional structures collaborated to ensure that conflicts were peacefully resolved.

This section will use the case of the Uwiano Platform in Kenya to exemplify how crowd sourcing has been employed in the Kenyan conflict early warning system and the opportunities that this has created for timely multi-stakeholder responses to violence.[[33]](#footnote-34)

**Objectives of the UWIANO Platform for Peace**

The aim of the Uwiano Platform – *Uwiano* is Kiswahili for cohesion – was to establish a system that could map early signs of potential violent tensions and hence improve timely generation and relay of conflict warnings, as well as facilitate rapid mobilization of multi-stakeholder and multi-level preventive efforts. The platform was, as mentioned in the previous chapter, powered by the free software Ushahidi.[[34]](#footnote-35) Uwiano was a joint initiative of the Kenyan government, civil society, and UNDP and was implemented under structures of the National Steering Committee (NSC)[[35]](#footnote-36), which has traditionally been responsible for Early Warning and Response in Kenya.

The specific objectives of the Uwiano Platform were:

* To build partnerships amongst national actors;
* To strengthen conflict early warning and early response;
* To establish a solid foundation for national cohesion and integration for a peaceful and prosperous Kenya.

**The Key Elements of the Uwiano Platform**

The UWIANO initiative had a Messaging Platform that involved free text messaging for the public to ensure fast flow of conflict information and guarantee broad participation of EW. Through the short code number **6397**, the public could send a text message with information on peace and conflict status across the country. The information shared by the public included indications of inflammatory statements by politicians, language perceived as hate speech, and local disputes.

The Platform recruited and trained 23 Peace Monitors that worked relentlessly in information collection and dissemination with regard to peace and conflict status around the country. Situation reports and incident reports were shared among various stakeholders on a daily basis. This worked to ensure that there was consistent and constant flow of multi layers of information filtering into the platform to provide triangulation of information. In addition, Uwiano trained 12 data clerks and data analysts to improve information collection, analysis and dissemination for response by various stakeholders to avert or prevent conflict.

The Platform was based on the premise that rapid response is an important ingredient in effective conflict prevention and management. This component relied on collaborative processes between civil society organizations, local authorities (district peace committees, NSC Field monitors), government agencies (police, national intelligence, provincial administration) and UNDP. In this regard, the Platform developed and implemented a Rapid Response Facility (RRF). The RRF is a ‘basket fund’ made available by UNDP Kenya and which is accessed upon request from district peace committees and other local actors for emergency response to issues identified as threats to peace. The idea is that this fund should be accessed in 48 hours as a justification for the need for rapid response within conflict prevention work. Some of the responses mobilized within the RRF included community reconciliation dialogue forums, conducting mediation and negotiation sessions between conflicting communities, as well as convening confidence-building visits by influential peace actors in conflict hotspots. These served to calm tempers and address the anxiety and tension, thereby promoting interaction among communities.

The Platform adopted the Caravan model[[36]](#footnote-37) in reaching out to wider audiences and appealing to the public to maintain peace, tolerance and cohesion. Peace caravans were conducted across the country. On the eve of the constitution referendum day, for example, the countrywide peace initiatives culminated in a Peace Vigil at Kenya International Conference Centre. The vigil theme was a peaceful referendum. It brought together District Peace Committees from the 9 districts of Nairobi, civil society organizations, community based organizations and government agencies involved in promoting peace. The vigil was preceded by a march from Uhuru Park led by a band from the Office of the President. At 6.59 pm a moment of peace was observed and televised on national television, and all Kenyans were encouraged to switch off the lights, light a candle and observe silence for one minute. The caravans exhibited strengthened partnership and collaboration among partners and also served to appeal to the hearts and minds of the population on the need to embrace peace.

The platform also included a component of media sourcing, where information was not only gathered from media sources, but was also relayed through the same information channels. This included development, production and transmission of peace messages – through print, broadcast and electronic media – with an overriding theme: “I Choose Kenya, I Choose Peace” (“Chagua Kenya, Chagua Amani”). Regular consultations were also held with various media houses targeting the policy and decision-makers together with news editors and news anchors with a view to ensure conflict sensitive reporting. Training of the media personnel was also conducted and this worked in maintaining a good grip of the news reporting throughout the campaign period, the voting and announcement of results. This led to broader awareness raising and public outreach while also having a deterrence effect on any spoilers within the polling process.

The Uwiano Platform also brought together partners with competencies in different areas including local level mobilization, policy level leverage, early warning and early response networks, and resource mobilization. The timely response in times of potential violence was due to improved working relationships between CSOs and District Peace Committees, Government and Civil society among others. Of great importance and warranting special mention is the fact that Uwiano provided a platform for coordination and information sharing among the security and law enforcement agencies, Interim Electoral Commission of Kenya (IIEC), human rights organizations, the Kenya Humanitarian Forum, the Donor Working Group on Conflict Prevention, among others. These partnerships currently form the response infrastructure upon which current conflicts are being prevented.

**UWIANO’s Success Story and Lessons Learned in Kenya**

The Uwiano case provides many important lessons from both its success and challenges. One of the primary lessons is that *early warning systems must be grounded within existing peace structures.* The Kenyan example demonstrates that an early warning system, however elaborate, is meaningless if it does not lead to the prevention of violence. Kenya’s conflict early warning system has benefited from the structures of the NSC which not only has state agencies in its membership, but also CSOs, donors and local peace structures. An early warning system designed with directed linkages to such structures increases the chances for rapid response with appropriate measures.

The Platform also demonstrates the vital role of *collaborative efforts* in the prevention of violence. With efforts from the NSC, the Uwiano platform conducted seven regional/cluster meetings that brought together over 500 stakeholders who provided conflict analysis, developed conflict prevention strategies and facilitated dialogue and awareness raising processes toward a peaceful referendum. As a result of the inter-agency nature of the NSC and its internal structures that bring together local, national and some international actors, the crowd sourcing component of the Kenya EWER as well as the traditional warning system defined by the NSC structures created the appropriate ingredients for multi-stakeholder collaboration in the prevention of violence.

Another important lesson that can be drawn from the Uwiano experience is the role that crowd sourcing plays in empowering citizens and stakeholders. *This technology opens up the path for inclusive citizen and stakeholder participation in the peace process.* As citizens are engaged in warning, they become aware of the threats to violence. Crowd sourcing therefore becomes a mechanism to engage and connect multiple stakeholders in a joint assessment of the early warning and response needs and capacities. The process of early warning and response therefore becomes a collaborative process and not restricted to a single stakeholder.

Drawing on the earlier discussion around crowd sourcing for prevention, the UWIANO case is a viable demonstration of how a system can be designed with a specific goal and embedded within the rightful context to contribute to violence prevention. Ultimately, the referendum process was free of violence and the New Constitution promulgated on 27th August 2010. An elaborate National Conflict Early Warning and Early Response System, dubbed *amanikenya@108* has since been developed with a situation room where conflict warnings are analysed and relayed to various stakeholders for response.

**CHAPTER 3:** LESSONS LEARNT AND KEY RECOMMENDATIONS

In this brief outline, some of the key considerations and conditions under which crowd sourcing can play a role in violence prevention have been outlined. Generating information using crowd sourcing tools is indeed just one aspect of violence prevention, though potentially an important and increasingly vital one. In this chapter, the main opportunities and challenges that crowd sourcing brings to the field of EWER identified in the paper will be highlighted and finally some recommendations for programming will be provided.

**Advantages of Integrating Crowd Sourcing in EWER System**

1. *Rapid Information Flow:* A crucial aspect in conflict prevention is the speed in which conflict warnings are generated and relayed to responsible stakeholders for response. Crowd sourcing serves to complement existing efforts in this regard, providing crucial and rapid information sharing during a crisis for early warning purposes. Affected communities and/or targeted audiences in a crisis or potential crisis can inform and be informed rapidly and in real-time of the situation on the ground as it develops.
2. *Crowd sourcing provides a platform for affected communities to participate in EWER:* The advantage of crowd sourcing in EWER is that it creates spaces for affected communities or the public as a whole to participate in the process of prevention. This is important as affected populations have an interest in the outcome of the prevention efforts and would therefore be more willing to make the investment in providing information.
3. *Crowd sourcing strengthens early warning and violence prevention efforts: CS* adds value and faster mechanisms for response to traditional systems of early warning. A key observation from the Kenyan example is that opening up EWER systems to the public through opportunities for crowd sourcing strengthens existing warning mechanisms, while also increasing prospects for rapid response.
4. *Crowd sourcing provides a platform for collaborative prevention of violence:* A core principle of crowd sourcing is opening the spaces for the public and other stakeholders to participate in mapping and relaying conflict warnings for response. This process has the potential of fostering collaboration between different stakeholders as compared to instances where peacebuilding and conflict prevention is the reserve of ‘experts’.
5. *Crowd sourcing provides space for information triangulation:* Crowd sourcing affords alternative sources of information adding value or contesting formal news sources. In this case, more sources result in more information available for analysis. This plays a central role in ensuring that responses are organized on the basis of credible and accountable information.

**Key Challenges**

1. *Response:* Without response, early warning really is of no use. The response depends on the given country’s infrastructures for peace, and can range from the deployment of trained community members for initial conflict resolution, a funding mechanism like the one in Kenya to be used for dialogue meetings, peace initiatives such as peace caravans, cross-community activities etc., the mobilization of local (alternative) dispute resolution mechanisms, or the deployment of law enforcing agencies. An organization conducting conflict early warning should be able to respond to conflicts brought to its attention. However, the response is determined by a number of issues, not least the strength and nature of inter linkages with other stakeholders. There are various cases that call for government intervention, others the local community, while in other contexts civil society is more suited to respond.
2. *Timeliness / Early Warning:* The time within which the information is disseminated, analyzed and responded to determines the success of the response initiative. In some cases an alert could take even less than hour to turn into full blown violence. Some of the factors that affect timely warning include poor communication infrastructures in some contexts, hostile terrains (violence) and lack of adequate capacity to conduct analysis.
3. *Technology:* While technology has improved the efficiency of communication it also presents challenges, especially in developing countries. For instance, should the system or internet connectivity fail or be intentionally shut down then information and the ability to respond will be lost. Also, not every one is technologically savvy thus requiring training. Furthermore, there are constraints regarding the availability of technological facilities, including internet service and mobile telephone coverage, throughout many developing countries. Urban areas tend to enjoy better access to technology, as opposed to rural areas where historical conflicts are often prevalent and limited infrastructure available.
4. *Conflicting interests between key stakeholders:* In most of the conflict-risk countries, provision of security remains a domain of the state. Efforts have to be made to include respective state agencies not just in the reponse, but also in warning, otherwise some state agencies, for example, may feel isolated or their role undermined. This presents a possible accountability issue to be dealt with when planning for such a system and again highlights the importance of considering the local and national context during the design phase.

**Recommendations for Programming**

1. *Response:* If the system is not directly linked to response, then it is meaningless. While crowd sourcing supports existing prevention efforts, there is need to put in place a response facility to support local level mitigation and prevention activities complementing existing infrastructures for peace and conflict mitigating initiatives. The Kenyan example demonstrates one structured way of doing this through the establishment of a rapid response facility capable of low cost engagements at local level dependent on mapping conflict warnings.
2. *Mapping of Existing Peacebuilding and Conflict Prevention Structures:* The example from Kenya demonstrates that a functional crowd sourcing EWER system is one that is embedded in existing peace infrastructures. For programming, it is important that these structures are mapped and assessed, and their individual roles understood. These structures will then play a central role in the establishment and implementation of the EWER system if included in the process of establishing the early warning system.
3. *Assessment of technology infrastructure within a targeted context:* As mentioned in various sections of this document, crowd sourcing as a methodology has benefited from the growth in technology (both in terms of soft and hard ware). This however varies from country to country and also from location to location. Operationalizing crowd sourcing also needs access to key information architecture like free short codes for SMS communication, which depends on political will and government support. This is not always guaranteed in some conflict contexts. Mapping the technology space therefore provides a rich understanding of what is possible and which partnerships need / ought to be established in any given context.
4. *Value and need for training:* Like any other field, engaging in crowd sourcing for violence prevention requires basic skills: how does one initiate an open call, identifying an appropriate call, the principles of conflict early warning, developing indicators, data entry and analysis among others. Special training is also needed for field monitors who will also engage in crowd sourcing conflict warnings. These skills are crucial for the efficient implementation of the system.
5. *Credibility and accountability*: to the extent possible, the credibility and accountability of information sharing and distribution needs to be ensured, especially with regards to securing the informant and to triangulate the information received prior to mobilizing a response.

1. This background document has been drafted by William Tsuma (GPPAC), Christy McConnell (ACCORD), Peter Mwamachi (NSC) and Anne Kahl (UNDP-BCPR). [↑](#footnote-ref-2)
2. <http://www.un.org/en/events/pressfreedomday/pdf/SpecRapporteur_WPFD_2011.pdf> [↑](#footnote-ref-3)
3. Cite the work of Patrick Meier amongst others [↑](#footnote-ref-4)
4. PM and others [↑](#footnote-ref-5)
5. When used in a general manner throughout this report crowd sourcing is a word that encompasses not only gathering information from a crowd but also empowering the crowd (or crowd feeding) with information. [↑](#footnote-ref-6)
6. <http://earlywarning.wordpress.com/2009/03/06/fourth-generation-early-warning-systems> [↑](#footnote-ref-7)
7. Patrick Meier [↑](#footnote-ref-8)
8. Kumar Rupesinghe, ‘A New Generation of Conflict Prevention: Early Warning, Early Action and Human Security’, paper presented at the Global Conference on the ‘Role of Civil Society in the Prevention of Armed Conflict and Peacebuilding’, New York, July 2005. [↑](#footnote-ref-9)
9. Examples of these conflict-event logging systems include: the Conflict and Peace Data Bank (COPDAB), a longitudinal computer-based library of daily international and domestic events or interactions recorded from 1948-1978. The event records in this file describe the actions of approximately 135 countries in the world, both toward one another and within their domestic environments, and The Protocol for the Assessment of Nonviolent Direct Action (PANDA) which is a data development tool developed in the early 1990s, created to track the emergence and to assess the dynamics of collective action and protest politics around the world. The ultimate aim was to improve the understanding of the potential and limits of nonviolent direct action or nonviolent struggle as a functional substitute for the violent prosecution of conflict.  [↑](#footnote-ref-10)
10. ICG’s Crisis Watch Database, starting from September 2003, provides succinct month-by-month updates on the state of play in all the most significant situations of conflict or potential conflict around the world. [↑](#footnote-ref-11)
11. Swisspeace - FAST enhances political decision makers' ability to identify critical developments in order to formulate coherent political strategies to either prevent or limit violent conflict, or recognise chances for peace building. [↑](#footnote-ref-12)
12. EAWARN was created in 1993 in cooperation with [Institute of Ethnology and Anthropology](http://www.iea.ras.ru/)of the Russian Academy of Sciences (IEA RAS). In 1999, EAWARN was registered by the Russian Federation Justice Ministry as the “Cooperation in Running Ethnological Monitoring and Early Warning” Regional Non-Government Organization. [↑](#footnote-ref-13)
13. Kumar Rupesinghe, ‘A New Generation of Conflict Prevention: Early Warning, Early Action and Human Security’, paper presented at the Global Conference on the ‘Role of Civil Society in the Prevention of Armed Conflict and Peacebuilding’, New York, July 2005. [↑](#footnote-ref-14)
14. A local NGO of Sri Lanka, [the Foundation for Co-Existence (FCE)](http://www.fce.lk/) began to work in 2003. It came together with the goal of developing an effective early warning and early response mechanism for the Eastern Province of Sri Lanka (Later it and expanded it to the district of Mannar, Nuwara Eliya and Colombo slum dwellings also). FCE’s approach to early warning was an experimental effort to integrate early warning and early response into a common framework. <http://www.ml4d.org/kb/DNs/sri-lanka-ews> [↑](#footnote-ref-15)
15. <http://www.cewarn.org/index.php?option=com_content&view=article&id=60&Itemid=85> [↑](#footnote-ref-16)
16. <http://www.fewer-international.org/pages/africa/projects_14.html> [↑](#footnote-ref-17)
17. Meier 2007 <http://earlywarning.wordpress.com/2009/03/06/fourth-generation-early-warning-systems> [↑](#footnote-ref-18)
18. The [UN-ISDR](http://www.unisdr.org/)‘s definition of early warning and response was crafted at the Third International Conference on Early Warning ([EWC3](http://www.ewc3.org/)) [↑](#footnote-ref-19)
19. Patrick Meier, http://earlywarning.wordpress.com/2009/03/06/fourth-generation-early-warning-systems/ [↑](#footnote-ref-20)
20. Howe, J. (2008). *Crowdsourcing: Why the power of the crowd is driving the future of business.* New York: Crown Business. [↑](#footnote-ref-21)
21. Lohr, S. (2009, July 18). *Crowdsourcing works, when it is focused*. Retrieved from New York Times: http://www.nytimes.com/2009/07/19/technology/internet/19unboxed.html [↑](#footnote-ref-22)
22. Inspired by Anahi Ayala Iacucci: PPT [↑](#footnote-ref-23)
23. Anahi [↑](#footnote-ref-24)
24. Anahi [↑](#footnote-ref-25)
25. (Ankit, LES, p. 8) [↑](#footnote-ref-26)
26. TechChange: The Institute for Technology and Social Change

    [↑](#footnote-ref-27)
27. Patrick Meier: reference [↑](#footnote-ref-28)
28. Anati [↑](#footnote-ref-29)
29. Helena Puig [↑](#footnote-ref-30)
30. Anahi [↑](#footnote-ref-31)
31. [www.sukey.org](http://www.sukey.org) [↑](#footnote-ref-32)
32. <http://earlywarning.wordpress.com/2009/03/06/fourth-generation-early-warning-systems/>

    [↑](#footnote-ref-33)
33. The content of this section is derived from consultations with the NSC and UNDP [↑](#footnote-ref-34)
34. <http://www.ushahidi.com/> [↑](#footnote-ref-35)
35. The National Steering Committee on Peace Building and Conflict Management (NSC) is an interagency committee that was established in 2001 under the Ministry of State for Provincial Administration and Internal Security. As an interagency committee, the NSC brings together civil society organizations, government (state) agencies, donors, UN agencies and local peacebuilding institutions / structures in a bid to coordinate and consolidate efforts geared towards peacebuilding and conflict management in Kenya. [↑](#footnote-ref-36)
36. The Caravan model is a reconciliation and peacebuilding approach that involves tours by reputable peace builders who visit conflict prone areas to preaching messages of peace and seek consensus on potential threats to peace. Peace caravans were convened in Kenya after the post election violence [↑](#footnote-ref-37)