



ICTs for the prevention of mass atrocity crimes

What is being done to support the prevention of mass atrocity crimes as well as reconciliation, healing and justice with a particular emphasis on the use of Information and Communications Technologies (ICTs)?

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As the scope for the use of Information and Communications Technologies (ICTs) for peace broadens, the issues ICTs can serve to address will be considerably more complex in nature. Many countries have consistently failed to take early action to protect against, prevent or mitigate violence in cases where large numbers of civilian lives are to be in jeopardy. Examples from the past decade are the cases of Rwanda, Cambodia, Bosnia and Burundi, and there are also cases from Afghanistan, the DRC, Pakistan and Sri Lanka, where towards the end of war, there was a high incidence of collateral damage and many civilian lives lost. Emerging technological innovations such as advanced satellite imagery and computer-aided analysis, advancements in forensic science combined with existing legal frameworks to bring human rights abusers to justice can be leveraged to address these atrocities. This brief report will outline how ICTs can help in preventing and mitigating genocidal violence and mass atrocity crimes, not only in the time leading up to such brutalities, but also in environments that have recently experienced such tragic violence.

Though this report will not go into it, we acutely recognise that the use of ICTs to *engender* genocide is the flip side of an increasing proliferation of new technologies and media. As with *Radio Télévision Libre des Mille Collines* in Rwanda, media plays a significant role in shaping public opinion that can normalise violence against certain identity groups. By extension, new media, it can be argued, gives even more pervasive and persuasive tools for misinformation, disinformation, partisan propaganda and hate speech. Ultimately, the successful use of ICTs for the prevention of mass atrocity crimes rests on the courage of individuals and groups to stand up against violence, the communication of early warning indicators in a timely, comprehensive manner to key local and international authorities and the domestic and international political will required to act upon this information. There is no technocratic solution to what is, and will always be, an intensely challenging and complex process to prevent mass atrocities and also help peoples recover from such tragic violence.

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ICTs in the prevention of mass atrocity crimes: Challenges and opportunities

Chief Executive of International Crisis Group (ICG), Gareth Evans, argues that preventing genocide should be the primary focus of current practices of the Responsibility to Protect (R2P), a set of principles focusing on the our global humanitarian responsibilities. “R2P is about protecting vulnerable populations from “genocide, war crimes, ethnic cleansing and crimes against humanity in ways that we have all too miserably often failed to do in the past.”³ Further on, scholar George Bowers examines the efficiency of the early-warning mechanisms of the United Nations, making the following conclusion:

“The UN cannot effectively monitor regional stability or provide advance notification of impending conflict or crisis. To do this, there must be an early warning mechanism to provide advance notice. For the most part, this involves a capability to acquire, analyse and distribute the type of information, which can trigger concurrent activities such as decision-making at the political and strategic levels, contingency planning, and the implementation process. The UN’s problem is not the absence of information. Rather, it is the absence of an organization to manage the information flow, linking early warning to the other processes crucial to rapid reaction. To be effective, this early warning mechanism must be linked to individuals and organizations capable of acting on such information.”⁴

Despite the criticism, the UN deserves credit for the 2005 acknowledgement of the significance of ICTs for peace and conflict management following the Millennium Declaration, and independently to this with the approval of Paragraph 36 of the World Summit on the Information Society Tunis Commitment that highlights the potential of ICTs to promote peace and prevent conflict.⁵ Although the UN recognizes pre- and post-genocide⁶, the system as a whole can work more progressively to integrate the use of ICTs in genocide-related programmes, as well as addressing the political and emotional components of post-genocide societies—both official and perceived.

It is to this end that the crisis information strategy (CiM) strategy⁷, championed by the UN Chief Information Technology Officer and supported by the ICT4Peace Foundation since 2008, is based on the recognition that the UN – its member states and constituent agencies – have significant experience in the identification, prevention, mitigation, response and recovery of all types of crises, natural as well as man-made. Echoing the problems within the UN system enumerated above, it suggests that crises today – that include dealing with the prevention of and fall-out of mass atrocity crimes – requires information to be shared within and between agencies of the UN and its partners, and that interoperability of CiM systems is critical in this regard. This involves the timely sharing of early warning information from the UN system’s established early warning mechanisms as well as reaching out to and connecting with the emergent expertise in crisis-mapping communities, including tapping into digitised information, often in the vernacular and sometimes in oral form, generated by communities at risk as well as victims.

It is important to note that in addition to preventing mass atrocity crimes, efforts must be made to ensure that if it tragically does occur, it must never occur again – and those responsible for it held accountable for their actions. Embedding ICTs in reconciliation, transitional justice initiatives, truth-seeking and accountability mechanisms as well as alternative dispute resolution mechanisms post-war / post-genocide can strengthen these often-fragile initiatives, encourage greater civil society participation and importantly strengthen community-level resilience and healing. A good example is the Soweto ’76 archives in South Africa, which is currently building a community-based, multi-media digital archive for addressing gender-roles in the struggle against apartheid, as an effort to document and preserve long silenced voices as well as strengthen social justice in marginalized communities.⁸ This initiative is suggestive of the emancipatory potential of ICTs. Furthermore, it is pivotal to recognise that even though genocide cannot be easily proved under international law, the perception amongst peoples (especially those at risk or survivors of sustained attacks) that genocidal violence has taken place must be taken into

³ Evans, statement from www.genocideintervention.net

⁴ Bowers, in abstract

⁵ Tunis Commitment §36, World Summit on the Information Society. Also see ICT4Peace Foundation: Report on Information and Communications Technology for Peace, <http://ict4peace.org/publications/ict4peace-ebook>

⁶ See in particular the [UN General Assembly Report ‘Early Warning, Assessment and the Responsibility to Protect](#), and the [UN Secretary-General ‘Peacebuilding in the Immediate Aftermath of Conflict’](#)

⁷ <http://ict4peace.org/whatwedo/the-crisis-information-management-strategy>

⁸ Soweto ’76 Initiative

consideration in policies and practices dealing with regimes and States with poor democratic credentials, human rights abuse and a known record of systemic communal oppression. Increasingly, the legal requirement for evidence-based investigations of genocide – which takes time, often years and even decades – is being contested by victim narratives and eyewitness accounts made possible by the proliferation and use of ICTs.

Totten (2006) argues that “no single early warning system has been established whose express purpose is tracking each and every conflict simmering across the globe in order to detect the earliest signs of genocide in the making”⁹, and stresses that even though it existed, the need for the political will to address the crisis from spiralling into a genocidal conflict is paramount. As a recent OECD report warns, “*The humanitarian community is no better positioned today to prevent another Rwandan genocide than we were in 1994, (...) in sum, the use of technology in conflict settings requires a different set of solutions to overcome existing challenges, and lags some years behind the evolution of natural disaster early warning systems.*”¹⁰ The report also notices that the field of conflict early warning is witnessing a shift away from state-centric, top-down approaches to more decentralized, people-centred initiatives, a shift which is further accentuated by the availability of digital technology and new media, which is more decentralized and distributed than traditional technologies. Here arises the challenge of leveraging these new technologies to empower individuals affected by conflicts.

Here too lies great potential for the work of the Office of the UN Special Adviser on the Prevention of Genocide¹¹, the Special Adviser on the Prevention of Genocide, Mr. Francis Deng¹² and the related work of the Special Adviser who focuses on the responsibility to protect, Mr. Edward Luck¹³. Meetings the ICT4Peace Foundation held New York over 2010 with both Mr. Deng and Mr. Luck confirmed the multifaceted challenges they face in establishing a more robust system able to prevent mass atrocity crimes. At the same time, they recognise the potential of new technologies to, *inter alia*, bring perpetrators to justice, complement UN alerts and early warning, focus, over the long-term, scrutiny on precarious communities, report on ground conditions, help in confidential information generation, strengthen the protection of those who bear witness and disseminate their own critical output to the international community and member states.

⁹Totten, 2006, p 27

¹⁰Coyle and Meier, 2009, p 14

¹¹<http://www.un.org/preventgenocide/adviser/index.shtml>

¹²<http://www.un.org/preventgenocide/adviser/sa.shtml>

¹³http://en.wikipedia.org/wiki/Edward_Luck

Key examples of ICTs

On assessing the usefulness of ICTs for countering genocide and as the webpages of the Early Warning for Protection Conference to be held this month clearly elaborates: "*Brilliant early warning mechanisms are of no assistance in the prevention of atrocity crimes if there is no clear understanding of what can be done when warning is sounded. We need to focus on what civil society can do, actively, to prevent, or mitigate the effect of atrocity crimes and violence. This may involve preparing at-risk communities for the inevitability of violence, or it may involve effective advocacy, communication and influencing decision-makers.*"¹⁴ The political context of the specific countries is also an issue that is often overlooked.

With growing access to new technologies and channels of communication, such as new media and mobile phones, an increasing number of hitherto marginalized, compelling accounts of violence are being recorded for posterity. These accounts can contribute to increased awareness on genocide and crimes against humanity. Crawford & Cole (2007) argue that ICTs can be used to build lasting peace through: providing information, helping people access information, improving decision making, reducing scarcity, supporting relationships and helping people understand each other.¹⁵ ICTs can aid these tactics in many ways – high quality citizen journalism and low-cost technologies have helped in processes of transitional justice, accountability, truth seeking and reconciliation alongside other initiatives, including those by government.

Civil society is becoming increasingly involved in the search and design of digital innovations for addressing the challenges of genocide. A recent example is Project 10[^]100, a competition hosted by Google, where the idea of creating a genocide monitoring and alert system was one of the sixteen finalists. The ideas included reducing crimes against humanity by aggregating data, including pertinent statistics, the history and geography of specific conflicts, local cultures, geostrategic interests, by using e.g. updated dynamic web maps and hand-held GPS devices.¹⁶ Another example is found a scientific in a recent report Amnesty International entitled 'Geospatial Technologies', where technologies such as satellite images, GPS, virtual globes and infrared/multispectral sensing are assigned the purpose of assisting, monitoring and advocating the protection of populations at risk and advanced warning of crises.¹⁷ Done well and over the long-term, initiatives like these can prevent recurrence of genocide and mass atrocity crimes.

When mapping the initiatives and warning systems that are currently active, it is useful to distinguish between mechanisms designed and used for the sole purpose of preventing genocide, and mechanisms, tools and platforms that, if leveraged correctly, can strengthen early warning. However, ICT by itself is not a panacea. A crucial factor to the success of these initiatives depends on political will – engineering it in time and sustaining it over the long-term, both extremely challenging constructs in many contexts. As noted by Payan Akhawan at the Global Symposium+5 of Humanitarian Action, organised by the Office for the Coordination of Humanitarian Affairs (OCHA), "*Genocide and crimes against humanity are above all a political choice. They are instruments by which ruthless leaders wield power. And as such, genocide can be predicted and therefore prevented.*"¹⁸

To conclude, ICTs are today important in both preventing and recovering from genocide. The following mapping underscores the point that much of the required technology, data-gathering methods and analytical frameworks currently exist to prevent and in the worse case scenario, recover from genocide. What remains to be done is their more robust application. The following list of initiatives is divided into ICTs for Early Warning and the Prevention of Mass Atrocity Crimes and ICTs for Accountability, Justice and Reconciliation.

¹⁴ Conference on 'Early Warning for Protection', 2010

¹⁵ Crawford & Cole, 2007

¹⁶ Google's Project 10[^]100, Finalists

¹⁷ Amnesty International, Geo-Spatial Toolkit

¹⁸ Akhawan, 2007, p. 46

ICTs for Early Warning and the Prevention of Mass Atrocity Crimes

Initiative	About	Website
CEWARN	Sub-regional mechanism that undertakes conflict early warning and response, fostering cooperation among relevant stakeholders so as to respond to potential and actual violent conflicts in the IGAD region and contributing to the peaceful settlement of disputes in the sub region.	http://www.cewarn.org
Crisis Mappers	Leveraging mobile platforms, computational linguistics, geospatial technologies, and visual analytics to power effective early warning for rapid response to complex humanitarian emergencies.	http://www.crisismappers.net
Eyes on Darfur	Leverages the power of high-resolution satellite imagery to provide unimpeachable evidence of the atrocities being committed in Darfur --- enabling action by private citizens, policy makers and international courts. Eyes On Darfur also breaks new ground in protecting human rights by allowing people around the world to literally "watch over" and protect twelve intact, but highly vulnerable, villages using commercially available satellite imagery.	http://www.eyesondarfur.org
FrontlineSMS	FrontlineSMS is the first text messaging system created exclusively to address communication barriers for grassroots non-governmental organizations (NGOs) working in developing countries. By leveraging basic tools already available to most NGOs (computers and mobile phones) FrontlineSMS enables instantaneous two-way communication on a large scale.	http://www.frontlinesms.com
Global Disaster Alert and Coordination System	Provides near real-time alerts about natural disasters around the world and tools to facilitate response coordination, including media monitoring, map catalogues and Virtual On-Site Operations Coordination Centre. Can work as a model for preventing genocide.	http://www.gdacs.org
Humanitarian Sensor Web (HSW)	Platform that enables humanitarians in the field to map humanitarian infrastructure and events of interest in real time to improve situational awareness. Also a data collection platform that builds global datasets of critical information before and during crisis- but especially before.	None, see http://wn.com/ICCM_2009_The_Humanitarian_Sensor_Web
SwiftRiver	Open source platform that helps users manage real-time data. Enables the filtering and verification of real-time data from channels such as Twitter, SMS, Email and RSS feeds. Useful for organizations who need to sort their data by authority and accuracy, as opposed to popularity. Organizations include the media, emergency response groups, election monitors and more.	http://swift.ushahidi.com
INSTEDD RIFF	Riff helps your team monitor, curate, analyse and visualize multiple incoming streams of information from news, twitter, bulletins, etc. RIFF can detect emerging critical events sooner and enable humanitarian agencies to take the right action earlier.	http://www.instedd.org/our-work/technologies/riff

Ushahidi	Information collection, visualization and interactive mapping. A project that builds tools for democratizing information, increasing transparency and lowering the barriers for individuals to share their stories.	http://www.ushahidi.com/ and http://earlywarning.wordpress.com/2009/06/21/ushahidi-early-warning
Ushahidi Crowd Map	Allows you to collect information from cellphones, the news and the web, aggregate the information into a single platform and visualize it on a map or a timeline. Can be used to e.g. monitor elections, to map crisis information and curate local resources.	http://crowdmap.com
UN Global Pulse	Monitoring system to better track the impact of compound crises on vulnerable populations.	http://www.unglobalpulse.org/about
West African Network for Peacebuilding: Early Warning and Early Response and WARN	Observation and monitoring tool for conflict prevention and decision-making.	http://www.wanep.org/wanep/ecowarn.html
WITNESS	Video project that bears witness to genocide and related crimes against humanity around the world. Online updates from the field, eyewitness testimony, photographs, interactive maps and more.	http://www.witness.org

ICT based examples of accountability, justice and reconciliation processes

Initiative	About	Website
Documentation Centre of Cambodia (DCC)	Non-profit international NGO that aims to record and preserve the history of the Khmer Rouge regime and to collect data that may serve as evidence in any future tribunals, through online databases and submission of testimonies. ICTs include online photographic and geographic databases, and post-genocide family tracing.	http://www.dccam.org
Hyperspectral Imaging	Cutting-edge technology for locating deceased, i.e. post-genocide, by using special cameras that measure changes in the light from soil and plants. The research could help police solve missing persons cases or reveal new mass graves from hundreds, if not thousands, of years ago.	See http://news.discovery.com/tech/hyperspectral-imaging-dead-bodies.html
Groundviews	A Sri Lankan citizen journalism initiative aiming to feature an unparalleled range of ideas, opinions and analyses on humanitarian issues, media freedom, human rights, peace, democratic governance and constitutional reform. The site bears witness to human rights abuses and the on-going State sanctioned reconciliation process.	http://www.groundviews.org
GlobalVoices	Online community of more than 300 bloggers and translators around the world who work together to bring you reports from blogs and citizen media everywhere, with emphasis on voices that are not ordinarily heard in international mainstream media.	http://globalvoicesonline.org/
Radio All For Peace	A joint Israeli-Palestinian radio station, helping to bridge the divide between Palestinian and Israeli society through stories of interest to both.	http://www.allforpeace.org/
Radio la Benevolencija	La Benevolencija runs prototype large scale broadcast campaigns in Rwanda, DRC and Burundi in support of reconciliation and justice processes in the Great Lakes region, coordinated into a common strategy under the name Great Lakes Reconciliation Media (GLRM)	http://www.labenevolencija.org/en/home.html
Radio for Peacebuilding Africa	Aims to develop, spread and encourage the use of radio broadcasting techniques and content for peacebuilding.	http://www.radiopeaceafrica.org/
Videoletters	Uses video to capture messages from former neighbours and friends looking to reconnect with friends lost in the wars in the Former Yugoslavia and Rwanda, or reconcile with others.	http://www.videoletters.org

Resources and further reading

Initiative	About	Website
Conflict Early Warning and Early Response	Patrick Meier's blog on the theory and practice of conflict early warning and response. Seeks to forecast the outbreak of armed conflict, or, at minimum, to detect the early escalation of violence, with the objective of preventing the outbreak or the further escalation of violence in order to save lives.	http://earlywarning.wordpress.com
Harvard Humanitarian Initiative: Crisis mapping and early warning	Aims to connect an active community of Crisis Mappers and to formalize the field of Crisis Mapping.	http://hhi.harvard.edu/programs-and-research/crisis-mapping-and-early-warning
UN Seminar for Preventing Genocide	Examination and online database of how the international community can best prevent genocide.	http://www.unitar.org/ny/international-law-and-policy/peace-and-security-series/preventing-genocide
Meier, Patrick (2008), 'Upgrading the Role of ICT in Conflict Early Warning/Response'	Explaining how ICTs can play an effective and tactical role in bridging conflict early warning with early response.	http://www.allacademic.com/meta/p254277_index.html
Woocher, L. (2007), 'Early Warning for the Prevention of Genocide and Mass Atrocities'	After sketching a basic conceptual framework for early warning, this paper discusses significant limitations of a leading genocide risk assessment model. The analysis suggests that the field may be further than is commonly acknowledged from developing effective early warning methods and mechanisms for the prevention of genocide and mass atrocities.	http://www.allacademic.com/meta/p_mla_apa_research_citation/1/7/8/8/6/p178866_index.html

References

- Amnesty International, Geo-Spatial Toolkit, accessed at <http://www.amnestyusa.org/shr/geospatial-toolkit.pdf>
- Andersen, D. and Moden, A. (2000), 'Technology and the Prevention of Genocide' in Rotblat, J. (ed.) (2000), *48th Pugwash Conference on Science & World Affairs: The Long Roads to Peace*, World Scientific Publishing Company
- Akhawan, P. (2007), Keynote #5, Global Symposium +5 on Information for Humanitarian Action Final Report, 22 --- 26 October, Palais des Nations, Geneva
- Bower, G. (1997), 'The United Nations: Enhancing its Early Warning Mechanism', accessed at <http://oai.dtic.mil/oai/oai?verb=getRecord&metadataPrefix=html&identifier=ADA326601>
- Cole, R. S. and Crawford, T., (2007), 'Building peace through information and communication technology, accessed at [http://www.idealware.org/articles/peace through ICTs.php](http://www.idealware.org/articles/peace_through ICTs.php)
- 'Early Warning for Protection: Technologies and Practice for the Prevention of Mass Atrocity Crimes', Convention to be held 3rd-4th November 2010, accessed at <http://www.oxfam.org.au/act/events/early-warning-for-protection/>
- 'Early Warning, Assessment and the Responsibility to Protect, General Assembly Report (GA/A/64/864), August 9th, 2010, accessed at <http://responsibilitytoprotect.org/GCR2P%20Report%20 Informal%20Interactive%20Dailogue%20 2010.pdf>
- Google's Project 10[^]100, accessed at <http://www.project10tothe100.com/ideas.html>
- Coyle, D. and Meier, P. (2009), 'New Technologies in Emergencies and Conflict' accessed at http://www.globalproblems-globalsolutions-files.org/pdf/UNF_tech/emergency_tech_report2009/Tech_EmergencyTechReport_full.pdf
- Evans, G. on the Responsibility to Protect (R2P), accessed at http://www.genocideintervention.net/stay_informed/responsibility_protect
- Meier, P. and Leaning, J., (2009) 'Applied Technology to Crisis Mapping and Early Warning in Humanitarian Settings', accessed at http://hhi.harvard.edu/images/resources/reports/whitepapers_f_11.pdf
- 'Peacebuilding in the Immediate Aftermath of Conflict', Secretary-General Report (SG-A/63/881), May 20th, 2008, accessed at http://www.reliefweb.int/rw/rwb.nsf/retrieveattachments?openagent&shortid=EGUA-7TJRHA&file=Full_Report.pdf
- Totten, S. (2006), *The Prevention and Intervention of Genocide: An Annotated Bibliography*, Routledge
- Tunis Declaration, World Summit on the Information Society, 2005, accessed at http://www.worldsummit2005.de/download_en/WSIS-CS-summit-statement-rev1-23-12-2005-en.pdf

ICT4Peace Foundation

The ICT4Peace Foundation was established in 2005 to raise awareness specifically about Paragraph 36 of the WSIS Tunis Commitment and promote its practical realisation in all stages of crisis management. Paragraph 36 notes,

“We value the potential of ICTs to promote peace and to prevent conflict which, inter alia, negatively affects achieving development goals. ICTs can be used for identifying conflict situations through early-warning systems preventing conflicts, promoting their peaceful resolution, supporting humanitarian action, including protection of civilians in armed conflicts, facilitating peacekeeping missions, and assisting post conflict peace-building and reconstruction.”

Accordingly, the Foundation looks at the role of ICT covering aspects of early warning and conflict prevention, peace mediation, peacekeeping, peacebuilding as well as disaster management and humanitarian operations of the international community.

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