Disaster Response 2.0

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The traditional disaster response community is only now beginning to assimilate the vast changes that new technologies could bring for information management in their field.

The use of new communications tools and platforms can be woven in with traditional sources of information and while new tools such as crisis mapping and crowdsourcing have yet to be used to their full potential in emergency scenarios, inroads are being made.

Sound Information Management (IM) practices form the foundation for decision-making and coordination processes when the international community engages in disaster relief. In 2007, the original Humanitarian Reform framework was expanded to include IM, with the issuance by the Inter-Agency Standing Committee of the 'Operational Guidelines on Information Management Responsibilities between OCHA and the Clusters'.[1] OCHA usually establishes an Information Management Working Group (IMWG) following the onset of a new emergency. Typical IM products include maps, a 'Who does What Where' (3W) database, contact lists, agendas and 'gaps analysis', and the success of any such inter-cluster information system depends on prior agreement among members of the group, with the designation of dedicated IM focal points per Cluster to ensure the participation of all members of the humanitarian community.

A complex emergency scenario for disaster relief is among the most challenging for IM professionals, presenting physical dangers for information providers and demanding active management of information. Reports on casualties, the presence of unexploded ordnance, instances of gender-based violence and recruitment of minors, and other infractions of International Humanitarian Law require specific documentation for the purpose of providing reports to the UN Security Council and to guide response.

The principles which guide all humanitarian action require that humanitarian responders take no part in the hostilities under any circumstances. In practice, this means that the use of new communication technologies in emergencies – and their uses in new ways – must specifically avoid crossing the line from monitoring the humanitarian consequences of conflict-related events to entering into what could be perceived as military reconnaissance. While it is very important, for example, to monitor attacks on a hospital or medical mission, it is unacceptable to monitor the troop movements of any participant in the conflict, even if these participants are alleged to have committed IHL infractions. IM tasks to document violations of human rights similarly must be divorced from humanitarian response.

Even taking all this into account, there is still a huge amount of information potentially available which has the potential to save lives when placed in the hands of the humanitarian community. Both mass media and social media often provide actionable information on conflict-related events, giving an overview of threats to the protection of civilians. Twitter in particular is enabling direct contacts with remote areas to communicate the development of events which merit humanitarian action and reporting to the UN Security Council. Such media allow the attribution and verification of information – something that a single agency, such as OCHA, or even a coalition of actors through the IMWG, would find difficult to do.

Security challenges

In a complex emergency there are security challenges for both traditional responders and the affected people who may have access to social media to report their situation and their needs. Communications monitoring by one or more of the belligerents in the conflict is a potential threat; even when the principles of neutrality and impartiality may be being respected, a person in a conflict zone may nonetheless be viewed with suspicion if it becomes known that he or she is actively reporting the local situation to the international community.

Humanitarian responders – viewed as foreign elements and relatively easy targets – have increasingly become targets of belligerents. The already active use of radio, email and even texting in some cases means that the use of such platforms represents little additional risk to responders but the construction of a system that allows anonymity for information contributors would substantially increase the safety and reliability of information sources. This requires the careful documentation of Twitter 'handles' (usernames) and other identifiers from persons on the ground but not their inclusion in the on-line platform. As for deliberate misinformation, it is not necessary to know the exact name of anyone within the network to build a clear profile of the quality of information that an information source is providing, and it can be surprisingly easy to isolate and exclude them over a period of time should they submit verifiably false information.

Filling the information gap

Recent emergencies have seen the involvement of a large number of information managers who are relatively new to the field of disaster response yet whose goodwill and technical know-how offer an opportunity to harvest a host of information sources never before available. The publication of the *Disaster Relief 2.0* study in 2011[2] – focusing on the response to the Haiti earthquake – marks an important attempt to take advantage of this opportunity.

Disaster Relief 2.0 analysed the potential of new technologies to improve decision making, providing recommendations for the more systematic incorporation of these tools into OCHA's process of information management – for use within the wider UN system, as well as among national and

The earthquake that struck Haiti in January 2010 "created a chasm between what the international community knew about Haiti prior to the quake and the reality that faced them in the quake's aftermath. The race to fill this information gap – to assess the damage and plan a response – is a dynamic familiar to seasoned responders to major sudden onset emergencies. ...For the first time, members of the community affected by the disaster issued pleas for help using social media and mobile technologies. Around the world, thousands of ordinary citizens mobilised to aggregate, translate and plot these pleas on maps and to organise technical efforts to support the disaster response."
Disaster Relief 2.0[2]

international NGOs. Its findings and recommendations have been taken on board in a several recent initiatives which in turn offer lessons for future application.

Case Study 1: Cesar Department in Colombia

In November 2009, officials in the department of Cesar in Colombia asked UNDP to provide technical assistance in building an information system for the Governor's Peace Advisor's Office. Through its new information system (designed by OCHA), the department of Cesar sought to stimulate the contribution of protection information, with a focus on infractions of IHL, for use by the National Commission for Reconciliation and Reparation, the Ombudsman's Office, the Peace Advisor's Office, the Catholic Church and the UN system.

Information contributors required anonymity, and the system design specifically avoided any inclusion of personal identifying information. In order to reduce the likelihood of having messages geo-located (a very real concern), SIM cards had to be purchased and assigned to various community organisations. Messages had to be composed by the sender prior to inserting the SIM card; the message was sent as soon as the cell phone was activated and then the SIM card was removed. While this did not ensure anonymity or guarantee that messages could not be traced, it did reduce the risk. In cases such as communications regarding death threats, forced displacement, massacres or the forcible recruitment of minors, being identified as an informant can make the communicator a target. Once received, the information was channelled to an Ushahidi platform on a server in Bogotá.[3]

This system allowed confidence to build regarding information being sent, as action was seen to be taken towards protecting the community affected by the events while preserving the anonymity of individual contributors. However, difficulties in contracting a suitable administrator responsible for information processing and presentation meant that it was impossible to create an effective network engaging the disaster-affected communities – indispensable for the long-term success of such a system. The absence of these important elements, plus the recent introduction of laws in Colombia forbidding the anonymity of cell-phone communication, led to the eventual demise of the Cesar information system.
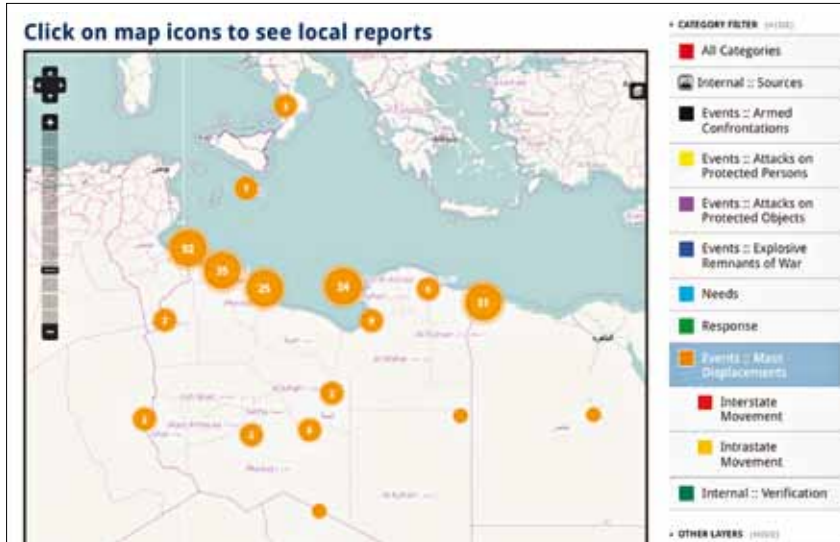
Case Study 2: Libya Crisis Map

Libya Crisis Map (LCM) was the first crisis-mapping exercise specifically requested by the international humanitarian community of the crisis mapping community, and as such is an important source of lessons for both groups of actors.

OCHA Geneva made the initial request in February 2011 when it became clear that the situation in Libya was likely to demand a humanitarian response, directing its request to the Stand-by Task Force (SBTF), a volunteer group focused on crisis mapping.[4] What

was particular about the dynamics of the humanitarian response to the Libyan situation was that the humanitarian community was forced to work from the borders for several months; in cases such as Haiti and Chile, humanitarian action had begun immediately following the event. This lack of humanitarian access to the areas of crisis makes it more likely that non-traditional sources must be engaged in order to build an initial overview of the humanitarian situation.

Utilising a validation system developed in a recent earthquake simulation, about 70 on-line volunteers were grouped into teams to gather, validate, geo-reference and eventually analyse information, to be presented in reports to decision makers. The level of productivity of this all-volunteer effort was truly impressive. LCM gathered and processed a huge volume of information on the Libya crisis, allowing the construction of trends and a better understanding of the dynamics of the conflict and the emergency. However, the challenges faced by LCM were also multiple.

With changes of management of LCM as the crisis became prolonged, it was important to provide continuity in the on-line volunteer group, while at the same time directly engaging staff of the now growing OCHA Libya operation arriving on the ground and producing the standard set of IM products. Information categorisation was adjusted in order not only to classify events in connection with IHL infractions and violations of UN resolutions but also to allow visualisation of event information alongside standardised needs evaluations and 3W (Who does What Where) information – with the end-goal being to facilitate on-line and real-time humanitarian gaps analysis. However, the initial classification system may have been intuitive for information providers but it proved less useful for decision makers. Changing this system proved terribly difficult, due to the costs in terms of re-classifying earlier entered information and to the rapid adoption by volunteers of the earlier classification system. Given the rigours of the classification process, it may be advisable to assign

Click on map icons to see local reports

▸ CATEGORY FILTER (HIDE)

- All Categories
- Internal :: Sources
- Events :: Armed Confrontations
- Events :: Attacks on Protected Persons
- Events :: Attacks on Protected Objects
- Events :: Explosive Remnants of War
- Needs
- Response
- Events :: Mass Displacements
- Interstate Movement
- Intrastate Movement
- Internal :: Verification

▸ OTHER LAYERS (HIDE)

Libya Crisis Map (http://libyacrisismap.net/), indicating mass displacement events.

an expert to this particular task, in lieu of depending on volunteers.

Engagement with the Information Management Working Group – clearly vital to the platform's success – was not nearly as frequent as was needed, and updates to 3W and other important information were often delayed. While there were important successes in delivering useful bulletins to OCHA New York and the inclusion of context information in OCHA Libya situation reports, and actors in the field such as WFP provided

positive feedback, in general the information produced by the platform did not reach the full array of humanitarian actors positioning themselves to enter Libya. Therein lies the full breadth of challenges to LCM and probably all potential Disaster Response 2.0 IM responses in the future: the need to bridge a divide not only between one actor and another but also between the virtual world – which holds untold potential in IM support – and actors in the field who frequently have their attention focused anywhere but on the internet.

Conclusion

Disaster Relief 2.0 represents a new vision for IM and improving decision making. Given the varied challenges presented by different disaster scenarios, the strategy for each should be carefully planned in order to take advantage of the opportunities that new technologies and a relatively untapped worldwide IM community present for traditional disaster responders. Security concerns must be resolved, with a common understanding of what the expectations on the part of victims should be, as well as the potential risks of reporting on humanitarian situations. A well-implemented Disaster Relief 2.0 response has the potential to save many lives, mobilise international interest and resources, and improve the effective allocation of limited resources.

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1. http://tinyurl.com/IASC-IMguidance2007

2. *Disaster Relief 2.0: The Future of Information Sharing in Humanitarian Emergencies*, commissioned by the UN Foundation & Vodafone Foundation Partnership with OCHA, and with the authorship of Harvard Humanitarian Initiative www.unfoundation.org/assets/ pdf/disaster-relief-20-report.pdf

3. See article by Galya Ruffer pp20-21.

4. Established at the International Crisis Mappers Conference, November 2010 http://crisismappers.net/