Office of the CITO
United Nations Secretariat

ICT for peace foundation

Crisis Information Management Advisory Group (CiMAG) Retreat

2 – 3 May 2013

Glen Cove, New York

Report

Led by the UN's Office of Information and Communications Technology (OICT) and organised by the ICT4Peace Foundation, the 2013 Crisis Information Management Advisory Group (CiMAG) meeting was held on 2nd and 3rd May in Glen Cove, New York. Representatives from UNOCC, UNITAR, UNDP BCPR, UNICEF, OHCHR, OICT, OCHA, DFS/DPKO, UNHCR and WFP participated along with, on the second day, representatives from Google Crisis Response, Human Rights Watch, Sahana Software Foundation, Standby Volunteer Task Force, World Bank OpenDRI. Representatives from the New Media Task Force were invited but due to unavoidable circumstances, could not attend. The agenda and list of participants are attached to the end of this report.

Overall observations

1. It was the best-attended CiMAG retreat thus far, with over 30 participants from the UN and the crisismapping community participating over the two days. The retreat also had the most substantive discussions around information sharing as well as data architecture, a key component of the Crisis Information Management (CiM) strategy of any CiMAG retreat held to date.
2. A substantial interest in, enthusiasm for and commitment to CiMS and the CiMAG process by its members.
3. The expansion of CiMAG to include new UN agencies, like the UN High Commissioner for Human Rights (UNHCHR) and the Peacebuilding Support Office (PBSO).
4. CiMAG members agreed that an annual retreat was insufficient to implement CiMS, collectively address critical issues and move the process forward. Perhaps a bi-annual meeting is required, but more importantly a small secretariat, ideally located at the OICT/CITO's office to manage the CiM process and facilitate problem solving processes, provide a market place for ideas and solutions, provide strategic input and guidance for members of CiMAG in relation to crisis information management, arrange meetings with interested CiMAG members, including and as required with technology providers.
5. The newly established UNOCC and its mandate *vis-à-vis* the Secretary General on one hand and CiMAG members on the other was considered an excellent driver for implementing CiMS both at HQ and field level. UNOCC agreed to play a catalytic role ("somewhere to put on the hat"), but considers responsibility for CiMS remains with CiMAG members and support role of the CITO/OICT.
6. The Humanitarian Exchange Language (HXL), proposed by OCHA, was considered an excellent driver for CiMS, both on the data and technology side.
7. Considering the four pillars of CiMS: (1) data architecture work will continue with the building of a COD/FOD/HXL Data Service (with support for OCHA, *inter alia*, from ICT4Peace and Switzerland's ETH); (2) Technology Development with inter alia HXL (OCHA with UNHCR and support of ICT4Peace); (3) Stake-holder Management with COI and DHN Summit with support of ICT4Peace; (4) Capacity Building: Curricula Development and courses by OCHA, UNHCR, UNICEF and ICT4Peace respectively, and/or in collaboration.
8. DPKO/DFS, a founding member of CiMAG and contributor to CiMS stocktaking report of 2009, highlighted again the high value of COD/FOD/HXL Data Service also for situational awareness creation in peacekeeping and peacebuilding respectively, as well as well peacekeeping cum humanitarian missions. They offered valuable support to its implementation and utilisation. In particular DFS offered to provide to the HXL development: (1) Infrastructure support from Brindisi and/or Valencia; (2) Make available support of in-house developers; (3) Provide GIS capabilities; (4) Contribute financially to establishment of CiMAG Secretariat in CITO office (in collaboration and consultation with Salem Avan).
9. ICT4Peace was invited to assist in the establishment of the CiMAG Secretariat in developing TOR for Secretariat and staff, looking for candidates, the development of a tentative work plan from 2013 to 2016 in cooperation with Salem Avan, Susanna Shanahan, Rudy Sanchez and other members of CiMAG.
10. ICT4Peace was invited to make a joint field visit in June 2013 with DFS of a peacekeeping mission (MONUSCO) to observe its CiM capabilities and practices from a CiMS perspective, including in its relation with HQ and OCC.

Day 1 (2 May 2013) notes

UNDP BCPR in particular reiterated the need for a comprehensive table or map of the CiM platforms, apps and solutions within the UN family, based upon which CiMAG members could respectively learn of and learn from each other's institutional investments in CiM and experiences.

Some participants averred that the focus should be on the key questions around CiM (what was needed, how and when, where is the information, what are the governance mechanisms etc.) instead of just platform development.

Several participants noted that there needed to be a Secretariat to take forward the CiM process, since everyone around the table, once the CiMAG retreat ended, were inundated with other work. Others countered by saying that CiMAG members needed to take the responsibility for taking forward the CiM process.

There was broad agreement that the CiM process needed a "light governance model", that it has reached a stage of maturity when the question was no longer if UN agencies and departments needed to share information, but how. Given significant technological developments like HXL, the issue was also no longer technical impediments to information sharing, but the political and senior leadership buy in and governance models around information sharing that needed to respectively strengthened and created.

The presentations by the UN family on the first day of apps, platforms and various systems around CiM demonstrated how much, in just over the past year, progress had been made on opening up datasets, creating machine readable data from what were closed systems, advances in data presentation and visualisation, and underlying all this, the changes in the mindsets of senior leadership at the UN to support CiM initiatives. Examples around Cyclone Pablo, Sandy and the work of FEMA in particular demonstrated the ability of the UN family to call upon and work with the crisis mapping community, which has also matured since last year (with the creation of the Digital Humanitarian Network).

CiMAG members around the table talked of surge capacity – of development capacities within the UN family itself that could be leveraged to support inter-agency needs during a crisis.

Participants referred to the Conclusions of the Twenty-fifth Session of the High Level Committee on Management as another vital institutional anchor that supported the CiM process, and in particular the discussions therein on information sharing, big data and data architecture. In line with this, there was discussion around a humanitarian data model, that also embraced a rights based perspective (including information from stakeholders like UNHCHR), to aid information sharing during emergencies and disasters.

Participants agreed that the UN's new Unite platform could be leveraged, in addition to other measures taken to strengthen the CiM process, to share information amongst the CiMAG.

Amongst the other platforms showcased, UNHCR noted the following as those developed over the past year as pertinent to CiMAG,

- Refugee data from 1960 to the present, http://buzzchart.net/viz/
- UNHCR's Emergency Management Tool Kit, http://imtlkt.parkdatabase.org/
- Operational Data Portal for Horn of Africa, http://data.unhcr.org/horn-of-africa/regional.php
- Liberia Situation, http://data.unhcr.org/liberia/regional.php, Mali Situation, http://data.unhcr.org/MaliSituation/regional.php and Syria http://data.unhcr.org/syrianrefugees/regional.php

Day 2 (3 May 2013) notes

Participants noted that the CiM process, to succeed, needed shared goals, shared standards and shared situational awareness. Several noted the importance of more rigorously looking at how information is archived.

With compelling new mapping platforms from the crisismapping community as well as private enterprise, in conjunction with a number of new apps, data transport tools, platforms and services that can aid information sharing, it was noted that in the future there would be increasingly less patience with a UN architecture and family that didn't embrace these developments to strengthen the efficiency and effectiveness of aid, relief as well as protection, crisis prevention and recovery efforts. The potential for embarrassment over non-delivery, inefficiencies and archaic systems, it was noted, was growing.

Some participants referred to the 'Internet of Things' and noted that data gathered from remote sensing and sentient data, around for example climate change, could lead to more effective systems around crisis prevention, and also spoke to the need for existing CiM platforms to embrace and connect to this kind of information.

There were concerns around the governance of 'Big Data' produced by communities – and whether increasingly large datasets were only generated for, owned, controlled and analysed by large humanitarian institutions. There were concerns that open data didn't necessarily mean open standards, and that more data didn't also mean more open data.

Security around the governance of data as well as in data collection was also discussed.

Imagery to the Crowd (beta) was demonstrated as an example of how even the US State Department was embracing the crisismapping community, and in particular, the crowd sourcing of mapping around relief and aid requirements.

Some participants called on the group to stop using the term 'Big Data', instead saying that 'Data Science' was more appropriate, given that what is perceived as Big Data today, would just become integral to and part of relief and aid systems several years hence.

Participants noted several mantras in the crisismapping community in particular that could aid CiM, notably that institutions needed to only retain what they needed and that any information used needed to be pushed back into the public domain in better condition that when it was discovered ("optimise for reuse").

Many agreed that the UNOCC's operations and mandate could be a new institutional interface for the crisismapping to leverage when dealing with the UN. Several ideas around how the UNOCC's reach-out to the crisismapping community could be improved were mooted, including the use of Twitter for informal meet-ups in and around New York, Skype groups, Unite connections and the importance of a neutral ("safe") space, where anyone could participate.

Some noted caution that the UNOCC wasn't set up to be the kind of responsive and agile entity envisioned by the crisismapping community, but was in fact presently more a consumer of information than a generator or curator. This in turn led to discussions about how the technical resources at UNOCC could be strengthened in pursuit of its mandate. The question was posed to the CiMAG group as to how UNOCC could help in the CiM process, and what capacities the group felt it needed in order to better serve the community.

In response some said that it was important that UNOCC had the convening ability to get resources (human and technical) around a certain need, challenge or crisis, and not just focus on infrastructure development (serve as a "greenhouse environment"). Others again cautioned that given the current institutional resources, UNOCC could not immediately change to embrace these suggestions, even though their validity was beyond question.

Some noted that HXL development capabilities could be shared across the CiMAG group and in particular at DFS/DPKO. Others noted that the GIS capabilities promised by DPKO/DFS could augment platforms like OCHA's COD/FOD platform, soon to be served via ETOS.

It was reemphasised that no matter how good, stakeholders would always use in times of crisis and emergencies the tools, platforms and apps they were used to, and not anything new introduced during the crisis.

Working groups (Day 2, 3 May)

After consultations with the group, four working groups were created, one on data science, one around the use of HXL, another around the crisis in Syria and finally, one on the verification of crowd sourced information and 'Big Data'.

The working group on Syria was anchored to the question "What can we do to support current and emerging crisis in Syria? The scope of the discussion was informed by what IM is being done now, what more can be done and what can we do to set up an architecture for future expansion.

- Link up of CODs and FODs with other data
- HOTs as an open source that could be used to map current and build basis for future
- Social media analysis
- Localised sentiment analysis
- Reach-out through media to identify key needs in areas
- Electrical mapping
- Road mapping (through usage)
- Cellular mapping
- Noted the perishability of data, but any base is better than none. It will be a gradual and incremental process
- The need to avoid the duplication of activities

WFP agreed to provide feedback to the Syria IATF and then establish contact with members of the CIMAG to take these discussions forward.

The working group on data science emphasised the need to look at remote sensing data more, and research around proxy indicators. There was discussion on how to get senior leadership to take more interest in and

place more emphasis on data driven indicators and decisions, which included the need to produce and map data around programmatic activities and initiatives.

So called dirty data was identified by the group as adequate today to shape initial responses to on the ground needs and challenges, since there was so much of information around. Whilst data verification was needed with more complex political emergencies and around specific foci and events, in the main, participants noted that Big Data now provides enough information to base institutional responses. However many noted that the lack of or inadequate data governance standards still hindered analysis and timely, effective sharing.

Some were worried that with the increasing digitisation of data, the possibility of data leaks also increased. This had implications around data collection processes, data retention policies, fair and ethical use policies, governance around who had access to data, for how long and why, plus greater emphasis on data security architectures.

There was also concern that in an era of Big Data, what was ironically lost was a real understanding over what was really going on, and how to make sense of it. Some in the room said that for example, the use of COD/FOD data was difficult for those outside the UN because there was simply no governance around the datasets. Others noted that studies around good practices and use cases were needed.

Others reiterated the need for End of Mission reflections on data use practices, especially around DPKO peacekeeping missions.

A participant made the interesting point that with more misuse of Big Data (e.g. with actions based on public domain information leading to the harassment or discrimination of individuals and communities), the production of information that fed into the public domain could in the future be hampered and diminished.

As in previous CiMAG retreats, many emphasised the importance of coherent, resilient mechanisms for the UN to work together with private enterprise, who today were custodians of data around crises and disasters of vital importance to the UN.

Participants also noted the challenges around, yet importance of mining public data (OSINT) as well as the need to focus attention on conflict early warning and prevention as well.

The data verification group's discussions focussed on trust issues within the crisismapping community as well as between the crisismapping community and other actors. There was also discussion around managing expectations – that the crisismapping community was not a panacea, and that how they could help needed to be carefully managed.

The HXL's group's discussion was reported back the plenary using a flip chart, reproduced below. The discussions, at the working groups and over two days, focussed on how HXL could help information flows between the CiMAG members and the larger UN system, governance around HXL, development capacities, agency buy-in, development of resources to explain HXL to a wider community and fleshing out the relevant standards. CJ Hendrix from UN OCHA, who led the breakout group to discuss HXL on the second day of the CiMAG retreat provided the following overview of the discussions.

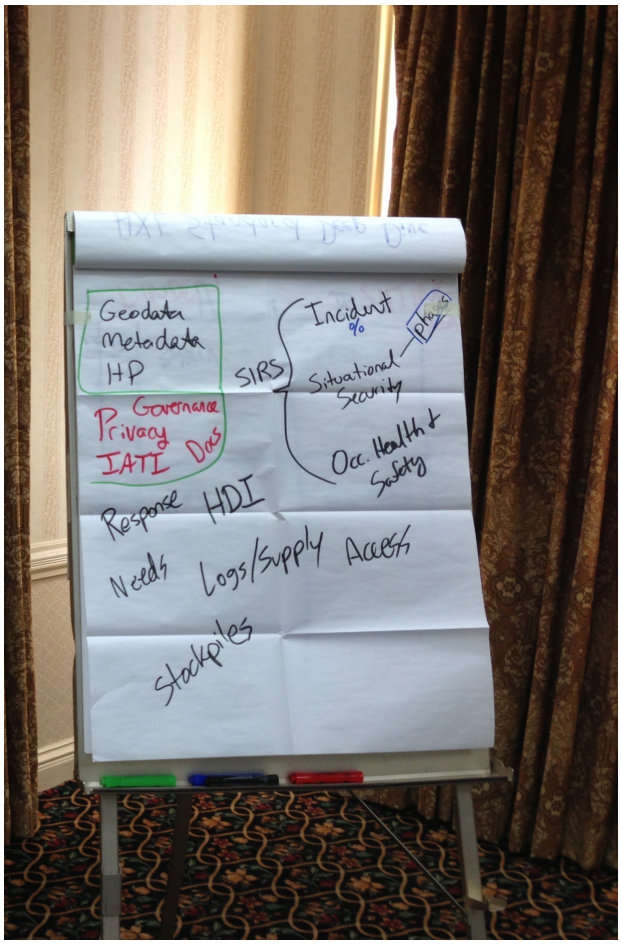
The group's task in general was to brainstorm on other datasets/data models that could be added to the existing data model. The existing data model was generally defined as containing elements describing location information, metadata (date/time, provenance, etc), and the IASC's humanitarian profile data model. This latter element was built for the proof-of-concept phase and provides a data model for describing affected populations (refugees, IDPs, dead, missing, injured, etc.).

The SIRS dataset (an on-going work within DFS/DPKO) was identified as a likely candidate for addition into the HXL data model. This would define elements for incident, situational security (security phases), and occupational health and safety data. Another key element of interest to the CiMAG group was logistics and supply, and it was noted that the US military has expressed interest (through HHI) in building out such a component. This would need to be aligned with previous logistics modelling done by WFP. The related stockpiles data was also mentioned as well as access data. It was noted that OCHA is working on an Access monitoring module for HumanitarianResponse.info which could form the basis of such a data model.

In the course of discussions, several overarching issues were brought up. Participants questioned the kind of governance that will be needed, the need for being able to control what data is released where, if and how documents should be shared through HXL, and links to the IATI initiative.

The follow up action was to identify how each stakeholder could contribute moving forward. Those ideas are captured below. Note that CJ Hendrix is the focal point on the OCHA side, however he is not yet fully assigned to HXL. Follow-up will be somewhat limited over the next two months.

- DFS: provision of server space, conversion of SIRS data model to HXL
- HHI: linkages with US Mil on development of HXL logistics data model
- OCHA: TORs and technical requirements for HXL developers and server space
- Organizational and technical (ETH) feasibility review (in collaboration with and facilitated by ICT4Peace Foundation)
- Explore and develop Governance Model (in collaboration with and facilitated by ICT4Peace Foundation)



Sanjana Hattotuwa, ICT4Peace

Daniel Stauffacher, ICT4Peace

16 May 2013

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2 – 3 May 2013

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Agenda

1st May, Wednesday

17.30	Departure from UN HQ, Visitors Entrance
19.00	Welcome dinner, Glen Cove

2nd May, Thursday

07.30 – 08.30	Breakfast
08.30 – 08.45	Welcome and comments by Mr. Eduardo Blinder, OIC, UN Office of Information and Communications Technology
08.45 – 09.00	Welcome and comments by Mr. Daniel Stauffacher, Chairman, ICT4Peace Foundation
09.00 – 10.30	Ten-minute presentations on progress around the CiM strategy and framework over 2012 by, 1. UNOCC 2. UNDP 3. UNICEF 4. OHCHR 5. OICT (Focus on UNOCC support, knowledge discovery and visualisation, 'Unite Connections' platform) 6. OCHA (Focus on HXL development and CODs) 7. DPKO 8. UNHCR (Focus on, *inter alia*, FOD's) 9. UNOSAT
10.30 – 10.45	Coffee break
11.00 – 12.00	Comments and outcome oriented responses to presentations and updates by CiMAG members, including specific issues and projects not covered in presentations. Focus on UNOCC operations support. (Moderated by Sanjana Hattotuwa, ICT4Peace Foundation)
12.00 – 13.00	Lunch break
13.30 – 14.30	Discussion around Hurricane Sandy and Typhoon Pablo (Philippines, November 2012) preparation, response and recovery. Participants will discuss if and how technology and platform developments since Haiti's earthquake in 2010 contributed to different outcomes in coordination, collaboration and information sharing. What are enduring challenges and needs? (Discussion led by OCHA)
15.00 – 15.15	Coffee break
15:15 – 17.00	What's on the horizon? Commitments and tangible outcomes to push forward CIM strategy, anchored to, *inter alia*, UNOCC's work, Open Data, digital humanitarians/V&TC community engagement, mapping and verification. (Moderated by OICT)

17.00 – 17:15 Concluding remarks by OICT & ICT4Peace Foundation

18.30 Cocktail for all participants (including those attending 3 May sessions)

19.30 Dinner for all participants

3rd May, Friday

07.30 – 08.30 Breakfast

08.30 – 08.45 Welcome and comments by Amb. Daniel Stauffacher, ICT4Peace Foundation

08.45 – 09.15 Welcome and comments by Sanjana Hattotuwa, ICT4Peace Foundation followed by topline presentation of first day's discussions and challenges

09.15 – 10.30 10 – 12 minute presentations on on key private sector platforms focussing on their use and potential for humanitarian response and aid,

1. Google Crisis Response
2. Human Rights Watch
3. Sahana Software Foundation
4. Standby Volunteer Task Force
5. World Bank OpenDRI

10.30 – 10.45 Coffee break

10.45 – 12.00 Comments and responses to presentations and updates by UN CiMAG members, (Moderated by ICT4Peace)

12.00 – 13.30 Lunch break

13.30 – 15.00 Parallel breakout group discussions on,

1. Big Data and Humanitarian Response: Challenges and Opportunities *(discussion on privacy, ethics, machine readability, fair use, governance, applicability, evolving a rights based discourse around big data in aid and relief work, applications of do no harm principle, what are clear examples of big data use, if any, that have helped aid work and how they can be strengthened etc)*

   Led by Google Crisis Response

2. CiM's evolution: Concretising ICTs in aid and relief work *(How to source and sustain FODs, how to leverage crowdsourcing models more cohesively, how to support greater collaboration between UN actors and V&TCs, how to ensure standards etc)*

   Led by SBTF

3. Verification of crowd-sourced information: Trust beyond the known *(emergent real time verification platforms, tools, methodologies, apps, conceptual design and thinking, interfacing with UN system, lessons learnt from Typhoon Pablo, Libya Crisis Map, strengthening models of cooperation and collaboration in out-sourced verification models and actors etc)*

   Led by Ushahidi SwiftRiver

Coffee will be served in working groups

15.00 – 16.00 Reporting back to plenary and discussion

16.00 – 16.15 Concluding remarks by UN OICT and ICT4Peace Foundation

16.00 Departure to UN in New York (Visitors Entrance)

Participants at CiMAG retreat

Name	UN Agency/Department / Group Affiliation
Rudy Sanchez	DFS
Vyacheslav Gnezdilov	DFS
Suzanne Shanahan	DFS
Christina Goodness	DFS
Nigel Snoad	Google
Enrique Piracés	Human Rights Watch
Simone Eymann	ICT4Peace Foundation
Daniel Stauffacher	ICT4Peace Foundation
Sanjana Hattotuwa	ICT4Peace Foundation
Chad Hendrix	OCHA
David Saunders	OCHA
Sonia Muller-Rappard	OHCHR
Eduardo Blinder	OICT
Gudrun Fosse	OICT
Salem Avan	OICT
Edzel Crispino	OICT
Enrique Sanchez	Peacebuilding Support Office
Mark Prutsalis	Sahana Software Foundation
Sara Farmer	Standby Volunteer Task Force (SBTF)
Alex Shoebridge	UNDP
Tala Hussein	UNDP
Cesar Silang-Cruz	UNDP
Kimberly Roberson	UNHCR
Christian Larsson	UNICEF
Francesco Pisano	UNITAR/UNOSAT
Ian Sinclair	UNOCC
Rajkumar Cheney Krishnan	UNOCC
Paula Simas-Magalhaes	UNOCC

James Staples	WFP
John Crowley	World Bank (Consultant)