

DHN Activation: Cyclone Pam (Vanuatu)

After Action Review

Mar / Apr 2015

Summary:

The report contains lots of useful feedback. My highlights would be:

1. The importance of the creation, monitoring and documenting (e.g. daily summaries) of Skype groups.
2. The importance of bridging the in-country/remote divide, and providing a cohesive summary of all remote efforts to the in-country teams.
3. The importance of demonstrating tools in simulations rather than trying to introduce them in emergencies, and of having consistent products delivered in each emergency, so that they can be relied upon.

Cyclone Pam Activation Request:

OCHA ROP made the following request on 15 March:

1. Get locations of injured people, infrastructure damage, interrupted water supply, damaged health facilities etc. (data and crisis map).
2. Search for tweets about the storm, identify pictures and videos of damage and flooding, locate, verify and categorise the content.
3. Collect operational information into a Google Doc that captures information such as Assessments, relevant documents, relevant maps, response activities, funding info, etc.

In addition, a few organisations had self-activated -e.g. HOT, SBTF and HR.

Catalogue of products delivered:

1. **Creating digital basemaps for use by rapid responders and other organizations:** the Humanitarian OpenStreetMap Team (HOT) responded by accessing imagery and adding to the basemap data of Vanuatu through digitisation from this imagery. This included adding / revising the data to include the airports, the road network, the settlements and individual buildings. Information available from the Vanuatu government and participation of people with knowledge of Vanuatu (e.g. from SBTF and PeaceGeeks) helped revise the basemap for the major infrastructures. The basemap also helps to identify emergency shelters, helicopter landing areas, and pre-disaster building footprints. More information can be found at [2015 03 Vanuatu Pam Cyclone Response](#).
2. **Social media early indications map:** This was a live map produced by a partnership between Humanity Road (analysing social media), and GISCorps/PeaceGeeks (Online mapping). It contains both a high level indication of potential areas (islands) impacted,

and also allows interactive zooming with pop-ups containing summaries of impacts based on whether reports had been received indicating deaths, disease, injuries, food/water needs, and then an overall 'Status' as to whether the area was therefore impacted.

- a. The first version was delivered on 22 March. This fit well with UNDAC and government ground assessments, and the maps produced appeared to be very similar, indicating that remote social media assessments may be able to provide reasonably accurate initial assessment information.
3. **Identifying pictures and videos of damage and flooding:** this was led by SBTF and information is available via three maps at:
 - a. Map showing locations of [photos classified as showing Mild or Severe damage](#)
 - b. [Story map](#)
 - c. [Island-based photo map](#)
4. **3W and Assessment data visualisations:** Simon Johnson worked with Humanity Road (3W) and SBTF (Assessments) to visualise their data from reports/spreadsheets:
 - a. [3W data \(HR\)](#)
 - b. [Assessments data \(SBTF\)](#)
5. **[Collecting operational information into a Google Doc](#):** this was led by SBTF. It contains Operational situational awareness that captures information such as Assessments, relevant documents for response, maps that have been created for the response by participating organisations, response activities, funding info, logistics for responders, meetings in country, etc.

Coordination:

DHN activities facilitated the following:

1. Jus Mackinnon (SBTF and DHN Coordinator) established the collaborative Skype group that now has 53 members including people based in Vanuatu and remotely.
2. Through the Skype group, a number of activities were facilitated by the DHN in relation to 3W work:
 - a. Linking MapAction and the British Red Cross to facilitate production of the [3W dashboard](#) by Simon Johnson
 - b. Establishing a sub-Skype-group for 3W work: this resulted in the conversion of the 3W work done by HR and the Assessments work done by SBTF into the dashboards mentioned above. It also resulted in conversations with other partners (e.g. OCHA and Nethope) on how to better share 3W data for this, and for future emergency response.
3. A request for damage assessment information from imagery for the islands of Tongeriki, Tongoa, Emae, and Makuru was relayed between MapAction and UNOSAT, resulting in the following data being produced:
<http://unosat-maps.web.cern.ch/unosat-maps/VU/TC20150313VUT/TC20150313VUT.gdb.zip> and

<http://unosat-maps.web.cern.ch/unosat-maps/VU/TC20150313VUT/TC20150313VUT.shp.zip>

Challenges:

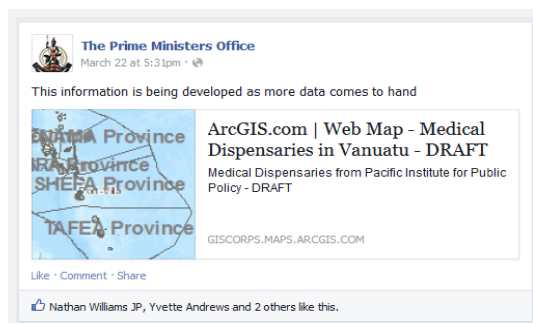
The biggest challenges for the DHN in this were:

1. **Availability of p-coded data:** In order to be able to map and share data collated by DHN, it is necessary to have p-coded administrative data available in advance of the response
2. **Sharing of 3W data:** There needs to be a standard place for sharing 3W data (e.g. HDX) agreed within the first few days of a response, so that DHN and other remote responders can serve the needs of the wider community in a proactive way.

Feedback:

Products

1. **Digital mapping:**
 - a. **Creating digital base maps:** this is a core task for DHN/ HOT that should continue particularly when there isn't access to base map data already. There is need for clarity when good data does exist about which is the best source. For example, Vanuatu did have a very good Geonode instance running already - <http://pcrafi.sopac.org/> with good data on it. A lot of this data was direct from various Vanuatu government departments (Geohazards, Land Survey, NSO).
 - i. Need to make sure that things like 'helicopter landing areas' are called "Potential Helicopter Landing Area" until they have been verified in-country.
 - b. **Damaged Buildings:** Collaboration between MapAction (who were able to provide priority areas for use by the government) and HOT/UNOSAT worked well. Specifically for planning where the UAVs would be used. Within the first few weeks of an emergency, perhaps mapping the overall extent would be more useful than the individual building detail. The detailed data is more useful for longer term planning and rebuilding. Need to be clearer about priorities in different phases of the emergency.
2. **Social media early indications map:**



'The Islands Impacts map based on social media is interesting, and is quite representative of the affected areas'

The Prime Minister of Vanuatu posted a map on his Facebook page that contained layers populated from the DHN activation.

3. **Identifying pictures and videos of damage and flooding:**
 - a. The SBTF map of [photo location classifying Mild/Severe damage](#) was used to some extent by the clusters to complement the initial assessment reports from the UNDAC team (OCHA).
 - b. These maps/tools need more information about the methodology and verification in order to be more useful for in-country teams. Also best to remove tweets that don't come from within the country and are not directly relevant to field response so as to focus attention.
4. **The 3W dashboards** produced by Simon Johnson were extremely useful and very welcomed by the team, and embedded into HR.info which generated further engagement by partners in the 3W process (OCHA).
5. **Collecting operational information into a Google Doc:** The Operational Information Google Doc (Product 5) assisted in cross-checking the assessment registry on HR.info which was quite useful in the early days as we were busy determining where assessments were conducted and by whom (OCHA). The overall purpose of this needs to be made clearer, along with information on how it links to information on HR info. Particularly there needs to be more clarity on where people are meant to be reporting, between OCHA and remote teams.

Coordination feedback

1. **Skype groups:** Once again just reiterating how VALUABLE this is as a collaborative open conversation; preventing duplication and connecting people who would otherwise not know where to turn. The Skype group is the first step and also a long term key product/output of the DHN collaborative efforts. Thank you! (British Red Cross)

Lessons for future activations:

1. **Create a standard checklist of questions/hashtags etc** based on emergency type and using basic initial rapid assessment principles, so that DHN can hit the ground running without having to get guidance from field teams in the first hours or days. Make this into a catalogue that can be used to show field teams what the DHN can do to answer their priority questions.
2. **Rationalising the number of products generated by the DHN:** The wealth of products generated were at-times a little overwhelming. Therefore DHN need to be clearer about what they are doing, and which products should be used (when, and for what). There are often a lot of web-maps produced, with no clear guidelines on how they differ/compare etc.
 - a. At the start of a DHN activation, the requested tasks and outputs should be shared with field teams; communicate clearly what the purpose of the task is, and what value added it gives to the decision makers and response. Some basic promotional material to distribute at the onset of a disaster would be great!
3. **Mobile phone internet penetration rates:** It could be useful to have a better understanding of mobile phone internet penetration rates in countries prior to the

activation of the DHN. In addition to the disruption to the power supply and communications for the better part of the first week, the amount (or absence) of tweets or other online information originating from the provinces, is directly related to the penetration rate. This could also help those in the field to decide whether to activate the DHN or not.

4. **Developing a DHN reporting framework:** A reporting framework whereby key findings by the DHN are summarised in hardcopy to complement the initial rapid assessment report/s would be welcomed.
5. **Data sharing:** There were several new health facility and schools datasets and maps that were published and did not add any new information, when the government datasets already existed on the <http://pcrafi.sopac.org/> website. There needs to be a better way of sharing data and metadata, so that everyone knows which the master datasets are.
 - a. When sharing datasets about the status (open, closed, etc) of buildings such as schools, health facilities, etc that have been created remotely, there needs to be clear metadata stating that it has not been field verified, and then there need to be ways developed to ensure in-country capacity to verify these datasets.
6. **Better connecting the in-country and remote teams:** This was pulled from various Skype groups:
 - a. Often those on the ground don't necessarily USE what is being produced as much as those producing it might think. This is because field teams are SOOOO overworked and have SOOOO little spare cycles that we can barely get done what we're up to.... I found the daily reports that NetHope created were very useful because it gave me something to download while eating breakfast and read on the drive to the NDMO. As soon as they embedded links, the information on the other end of that link became lost because by the time I was reading the report, I no longer had connectivity to click on that link. So the challenge is to put into a one-two page document all the relevant info that might be useful or might cause us to alter our plans for the day (i.e.: readily actionable info). Anything else at the end of a link...probably never got seen.
 - b. It seems to me that to make progress we should strive to have the DH send someone out to major disasters to be a liaison between the on-ground forces and the DH.....a coordinator of DH products. Compiling a fine daily succinct compilation of just the most important info.
7. **Training and capacity building:** Operations are not the time to introduce new ideas or technology. We should be creating an environment for trials, simulations and subsequent training.
8. **Information/knowledge walls:** In Vanuatu, the CIO office staff (mostly expats) used sheets of paper and yellow sticky notes on the walls to put small bits of information to share (no technology at all). What they really needed was the tech community to find out what they REALLY needed and to get THAT on the wall in some format better than pieces of paper and yellow sticky notes. This would have drastically improved common situational awareness.

- a. The wall could be virtualized and at the same time locally staffed. The virtualization bit would allow the tech community to push results of their work into the venue and the local staff (or virtual via Skype / hangouts) could convert the post-it notes and paper on the "wall" into a digital format. They can also help facilitate the questions and answers so they are relevant and timely. It could even have a "Headline News" component where at regular intervals sitreps are broadcast live and recorded for on-demand streaming.
9. **Low bandwidth easy access for field practitioners:** Remote tech work needs to be delivered in a(n):
- a. easy-to-access way (low bandwidth)
 - b. manner that can be printed out
 - c. way that can be projected
 - d. consolidated format that makes it clear to the response community what tools/information are available to them, and for what specific purposes/users