Minutes: IWG-SEM Fall Physical Meeting

@UN-SPIDER Offices, Beijing, China

26/10/2018 - 05:45 -14:00 UTC

Participants:

Name	Initial	Organization	
Stephen Clandillon (Chair)	(SC)	SERTIT	
Stéphanie Battiston	(SB)	SERTIT	On-Line
Claire Huber	(CB)	SERTIT	On-Line
Marco Broglia	(MB)	JRC	On-Line
Tom Harmatha	(TH)	JRC	On-Line
Annett Wania	(AW)	JRC	On-Line
Janine	(J)	DLR	On-Line
Talbot Brooks	(TB)	Delta State University	
Suju Li	(SL)	NDRCC	
Shirishkumar Ravan	(SR)	UN-SPIDER	
Shiro Ochi ochi@ait.asia	(SO)	Asian Institute of Technology	

Meet & Greet plus Welcome

The Chair (SC) thanked UN-SPIDER and the NDRCC as the hosts of the meeting and welcomed those on-line and in the room to the IWG-SEM Fall Physical Meeting. Then, SC went briefly through the agenda.

Emergency Mapping Guidelines

➢ **Early Warning Systems (EWS)**

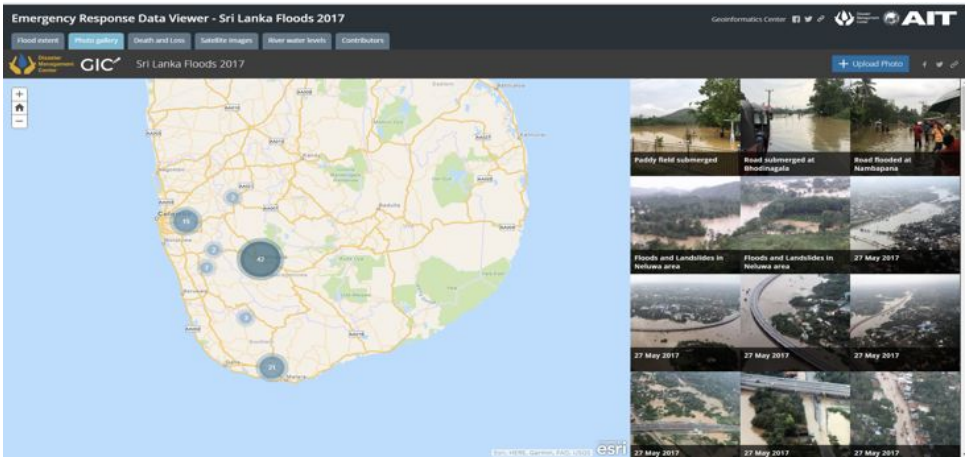
Lead	Contributors/Reviewers	Deadline
SC	AW, SO	end November

- AW said that as a first shot it is OK, but should be more complete for the next version.
- SC thought that adding more of the conclusion and adding an illustration would be good.
- SO will have a look through the text too.
- AW said that Copernicus EMS EWS Satellite data provision part will integrate ESA/GDACS for EWS with a set of satellites next year

➢ **Social Media**

Lead	Contributors/Reviewers	Deadline
e-GEOS	SERTIT, TB, JRC	end November

- A really interesting conversation was had on what social media can bring to rapid mapping.
- In China there is an NGO which provides information coming from the field including social media to Chinese organisations involved in a disaster. This organisation which is itself a crowd pre-filters the information.
- To introduce the subject and stimulate discussion SC presented the European Commission H2020 E2mC Social & Crowd project which is led by e-GEOS.
- WFP also works on that topic to obtain a very quick map, at the administrative level, concerning information on the relative impact (damage levels) of an event search for the occurrence of key words in areas.
- Social Media sources have their advantages and disadvantages one of the major issues is to filter the data to improve the quality and pertinence of the data. The idea is to establish a level of trust in them.
- TB gave the position in the US on how emergency responders use social media. TB brought up the major issue concerning the quality of the source data.
- TB says that US Emergency Responders do not use general social media as they are too noisy.
- TH concurs on this concerning Facebook and Tweeter. They tend to request organised crowds to filter social media to extract interesting geotagged information.
- At the moment FEMA is working with crowd organisations to trawl social media for this kind of information.
- Also they are working on the establishment of dedicated APPs for the population to download in general. These Apps are setup to help gather high quality, oriented information using the right hashtags that push used to take geotagged photos.
- SC wondered whether it would be good to promote the use of geotagging and the right hashtags through the media. Hence, the population would help in generating higher quality and more easily filtered information.
- *SO said that there AIT had developed a systems using ArcGIS-Online for the flood in Sril Lanka to generate maps like the figure below:*



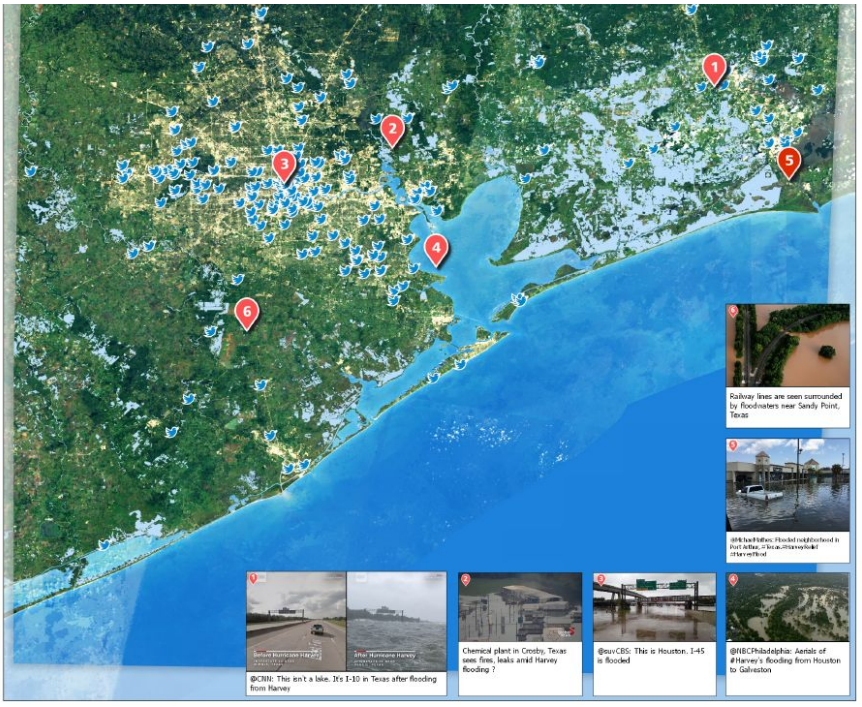


Illustration of disaster impact located from social media items, source EC H2020 E2mC project

IWG-SEM Webpage

- The IWG-SEM Webpage was presented, section by section, to all including the people in the room who were mostly new-comers to the IWG-SEM.
- AW and SC stated that the idea behind the site is to share best practices with professionals, inform users, and to promote working together during (mega) disasters.
- A discussion ensued concerning how to host it in the future given that the domain name has been booked since 2013.
- There was also an interesting conversation on whether IWG-SEM could/should have a legal identity.
- This is all linked as the site would have to have a named person responsible for it.
- It all gets very complicated if we establish a legal entity in a given country (paperwork, legal responsibilities, and financial aspects) and an idea was to associate the IWG-SEM with an international first responders or crisis mapping entity (TB).
- Perhaps we should look into this.
- The problem with a separate legal entity is under which law, the paper work and who is responsible.
- The financial aspects are considered to be the least of our worries.
- The idea is interesting (separate identity, association with other entities) as it would allow the IWG-SEM to receive funding.
- SC stated that the IWG-SEM needs more global actors to participate and that is the reason we explored the idea of having an Asian Chair.
- TB is going to look into how the webpage may be hosted and should put a Google tracking code on the page to ascertain what the traffic is.

Drones

- A topic was added to the agenda.

- The interesting topic of drones was added, a topic that does impact every so often on rapid mapping. Copernicus EMS Rapid Mapping has already used drone video coverage to produce damage assessment mapping.
- Videos can be sourced from social media.
- High quality products need to be elaborated by specific drone operators.
- The hard thing is to geo-locate them. They can give a very good detailed view of the type, extent and intensity of damage over small areas.
- There are major drawbacks and that is electricity supplies, batteries, legal measures, and getting the video coverage and information onto the web after a major event.
- TB says emergency responders in the US consider drones to be potential life safety hazards especially if their use is uncontrolled and in the hands of amateurs.
- There are many legal limitations for their use.
- When they are used they can provide extremely precise information concerning disasters, can fly below clouds, and can automate DEM extraction but data volumes are enormous to transfer.
- SC related the thinking in EC H2020 project Heimdall of putting drones on the back of fire trucks so they can be launched very close to the fire.
- In Heimdall the idea would be that the field position command posts would receive video images and not data to visualise a fire when needed.
- SO says that one needs to have drone metadata to synchronise information with satellite acquisitions.
- SC said that drone imagery can be used to validate satellite imagery.
- AW said that drones are complementary to satellites for providing specific information and there is an advantage in having it even if data volumes are high and that the data take a while to process.

Alerting mechanisms and protocols

Lead	Contributors/Reviewers	Deadline
TH	FS*, SERTIT	end November

*Fabian Selg

- TH was designated volunteer to write the text for the Guidelines.
- Other contributors are welcome.
- The GeoRSS system was new to many and an eye opener with a number of compliments to the JRC/IWG-SEM for putting the system in place.
- TH says that the Copernicus EMS system that is mirrored on the IWG-SEM site could be used as a model. With that TH presented the GeoRSS aggregator.
- The present aggregator is only open to IWG-SEM members to feed into the GeoRSS aggregator.
- TH could open it to other but GeoRSS quality must be maintained.
- TB would like to feed into the aggregator.
- SC said it would be good to have American and Chinese input into this.
- TH is open to implement this.
- The input should be automatic from an emergency management system to guarantee GeoRSS quality.
- AW indicated that it would be good to have the information quickly after activation triggering to ensure information exchange and a better chance of cooperation/collaboration.
- TH said the Chair and the IWG-SEM should push this more to implement kind of system elsewhere.

Validation

Lead	Contributors/Reviewers	Deadline
MB	SERTIT, others…	end November

- It is proposed by FV to include a short description of the principals of validation, its phases and aims.
- The Chair is suggesting that the JRC creates a first edition for other members to comment/modify. Thankfully Marco Broglia (MB) has volunteered to do this job.
- The Chair requested the JRC who is very experienced in the domain to outline what validation is.
- AW summarised the different aspects:
    - ➢ Formal/formatting validation (that the crisis and reference layers are in order with their metadata and that the maps are as specified). The VA applies Quality Check procedures before publication. Then an outside body (here the JRC) analyses the products to request version 2's if metadata are not right.
    - ➢ End user validation (whether the end users are satisfied with the service (access, dealings with the service entities, quality of products, use of the products, comments on products). After the end of an activation the users are requested to give feedback on how they felt the activation went and where could it improve.
    - ➢ Technical validation (the quality of the crisis and eventually reference layer extraction). The same of better data are sourced and the crisis layers are extracted in a non-rush mode. The results are operator validated before a comparison is made with the SEM results. Quality statistics and error analysis is given.

- AW says we need to communicate the advantages and limits of the system and how to obtain the best results from the SEM system.
- Sometimes the technical validation is a little late for optimal use but useful (SC).
- TB indicates that no validation is carried out in the US. The main users understand the limits of the system. There is dialogue with the users.
- In Sentinel Asia (SO) the maps are provided to the user. If approved they are uploaded onto a portal.
- AW says that in Copernicus EMS the users are generally happy but are a bit late for the field user. The users are not looking into data accuracy.

Established collaborations

Lead	Contributors/Reviewers	Deadline
SC	SERTIT, JRC/EC, TB, SL	end November

- Going through the existing text that was discussed SC stated that the International Charter and Copernicus EMs had signed a formal agreement on how to collaborate.

- The implementation of the agreement has led to the Charter providing satellite data and Copernicus EMS (CEMS) providing value adding at the request of one or other of the institutions.
- CEMS can request Charter data for mapping and the Charter can request rapid mapping production. Both sets of users are provided for.
- SC wondered whether TB could provide a text concerning how the US interacts with the Charter (who does what especially concerning the SEM).
- How does the US collaborate with other countries/institutions. It would be good to have the FEMA perspective on the US – CEMS collaboration which goes through the European External Action Service (EEAS).
- The same kind of input would be great from China.
- SC said it would be good to obtain some text from UNOOSA and UNOSAT and other organisations linked to for example Sentinel Asia describing how and what mechanism they trigger, for what entities and within what collaborative framework if any.
- AW will ask Françoise Villette (FV) or directly DG-ECHO about links to other mechanisms, especially outside Europe.
- It would be interesting to obtain information, perhaps through UN-SPIDER, on other mechanisms and how they collaborate.

Flood Chapter

Lead	Contributors/Reviewers	Deadline
FGT?	SC, GAF, others	end November

- The flood chapter was presented and reviewed.
- It is quite complete (thankfully).
- First comments:
    - It would be good to add a table/tables to describe what radar and optical data bring to flood analysis, their usage depending on events and the scale of events.
    - In this it would perhaps be good to take data resolution into account.

Handover of the Chair

- SC summarises a pretty busy year with publications, presentations and updates to the webpage.
- He thanked the CNES (French Space Agency) for providing support so the job could be done and UN-SPIDER and the NDRCC for facilitating the holding of the Fall Meeting and the passage of the Chair.
- He said he hoped the year had been appreciated by the membership.
- SC also outlined potential work to do. He encouraged the next Chair to try to have more frequent telcos and assured SO of the former Chairs' support in the coming year.
- With that Stephen Clandillon (ICube-SERTIT) handed over the Chair to Shiro Ochi(AIT/JAXA).