

Minutes for 2nd Global Tsunami Model Meeting

Date/Time: 13th December 2015 10:00 – 16:00

Location of Meeting: Oakland

Members Present: S. Lorito (INGV), R. Basili (INGV), S. Murphy (INGV), F. Romano (INGV), A. Armigliato (U. Bologna), P. Cummins (Geoscience Australia), S. Allgayer (ANU), E. Geist (USGS), A. Gailler (CEA), M. Miranda (IPMA), M. A. Baptista (DPMA), A. C. Yalciner (METU), U. Kanoglu (METU), K. Berryman (GNS Science), J. M. Gonzalez (UMA), T. Parson (USGS), C. B. Harbitz (NGI), F. Løvholt (NGI), H. K. Thio (AECOM), R. LeVeque (UW), L. Adams (UW)

Remotely: W. Power (GNS), C. Mueller (GNS), D. Burbidge (GNS), Y. Wei (NOAA)

Members Apologies:

10:00 H. Thio welcomed everyone to the 2nd GTM meeting and F. Løvholt thanked H. Thio for hosting the meeting and outlined the agenda for the day.

10:15 Short presentations were provided by:

- F. Løvholt and C. Harbitz: Recap on the last meeting
- K. Berryman: Overview of GEM
- C. Harbitz: Topics for workgroups
- F. Løvholt: Possible Funding sources
- S. Lorito: Possible initial activities
- R. Basili: Overview of TSUMAPS-NEAM project

Coffee Break

11:50 Discussion #1: GTM Management

Moderator: P. Cummins

Key Decisions:

1. GTM would adopt an informal governance structure initially. This could be changed at a later date if required.
2. 3 workgroups would be set up initially, these being:
 - a. Organisation
 - b. Stakeholders and External Funding
 - c. Methods

General points made during discussion:

- There was a discussion on GEM (i.e. formal, large structure) and GVM (i.e. a smaller, more informal) governance models. K. Berryman discussed the GEM model stating that it was set up in Italian law and required treaties that were just below national level. He stated that such a structure required a large amount of capital due to administration requirements given the very formal structure. He cautioned against using the GEM model unless there was a requirement for it. P. Cummins pointed out that the consortium should be ready with a large-scale governance model should a stakeholder / stakeholders offer a large sum of money.

There was a general agreement that a lightweight informal governance model should be used initially with the possibility of a larger, more formal structure researched at the same time. C. Harbitz suggested that one institution could act as the administrator / host the secretariat in the start-up phase.

- K. Berryman suggested that the consortium needed to think about engagement for covering all regions of the globe. There was general agreement to this with the general view that GTM should seek to engage with institutes in developing countries (e.g. South America, South East Asia).
- T. Parsons pointed out that goals would vary a lot at a global level with different time and spatial scales required. A menu of what GTM should address may be required. S. Lorito stated, that initially, the focus should be spatially coarse and on long time scales.
- F. Løvholt noted that the U.N uses CAPRA for its risk framework and that using such a multi-risk framework could be useful in engaging with the re-insurance community.

Discussion #2: Main aims of Organisation Workgroup

Moderator: P. Cummins

Main aims of this WG are:

1. Set up secretariat and identify a host organisation for the secretariat
2. Coordinate the production of white paper which would detail the 'What, Why, How' of Global Tsunami Model project and identify needs of project
3. To determine commitments structure for membership of GTM by studying acceptable internal financial and/or in-kind contributions. Collect letters of interest and memorandum of understanding for membership for GTM. The WG will also conduct a study on formal/legal structures for GTM for the long term.

General Points made during discussion:

- External independent reviewers should be placed on the management board.
- K. Berryman stated that the GEM found endorsement of the white paper by an external body (i.e. OECD) useful as it makes the consortium more appealing. OCED and UN-ISDR were suggested as possible external bodies that could be targeted however it was noted that UN agencies generally do not like to endorse papers/consortiums.
- R. Basili stressed the need for a time-frame for when structures should be put in place and active. He stated an achievable goal would be for a light organisation to be up and working within a year with the white paper produced, the website up, a meeting of the stakeholders with reporting from all WG at AGU Fall Meeting in December 2016. There was general agreement to get the workgroups up and running in a one-year timeframe.

Break for Lunch

13:50 Discussion #3: Main aims of Stakeholders and External Funding Workgroup

Moderator: A. Yalciner

Main aims for WG:

1. Contribute to goals and objectives of white paper
2. Collect information on national/regional initiatives
3. Identify stakeholders / sponsors along with their needs and funding opportunities.
4. Study issues with proprietorial data / software
5. Contact agencies working in developing world.
6. Present at meetings where possible stakeholders are present. Proposed meetings include:

- a. Poster presentation at ISDR meeting (Jan 2016)
- b. Talk at CAT Risk Management Meeting (Feb 2016)
- c. World Bank Meeting (16th – 20th May 2016)
- d. TOWS (22nd – 26th Feb 2016)
- e. Possible workshop with OASIS and 3rd parties

General Points made during discussion:

- T. Parsons queried how proprietorial ownership of products would be dealt with. K. Berryman outlined how GEM has a 18 month to 2 year lead time for software developed where companies are involved in particular projects. It was agreed that proprietorial ownership should be investigated by the workgroup.
- P. Cummins pointed out that dissemination should wait until the production of the white paper. There was general agreement to this statement with suggestions that priority would be the production of the white paper, exceptions to this situation would be the ISDR and CAT Risk Management meetings. C. Harbitz and F. Løvholt suggested that work on dissemination could start in 6 months time and H. K. Thio suggested that the World Bank Meeting from the 16th – 20th May 2016 could be target for the white paper, there was general agreement to this suggestion.
- P. Cummins stated that association with organisations in developing countries should be sought in order to show that the consortium is serious about engaging with developing countries. L. Adams proposed that educational component could be part the engagement mechanisms with such countries.

14:40 Discussion #4: Main aims of Methods WG

Moderator: H. K. Thio

Main aims for WG:

1. Summarise the different methodological portfolios and identify gaps in the following areas: source modelling, tsunami modelling, probability framework, hazard, risk, vulnerability.
2. Identify overlap with external consortiums (such as GEM, GVM, CSDMS)
3. Identify topics for pilot projects
4. Study interoperability on methodological framework and basic model interface.
5. Determine scope of software development.
6. Identify means for test, validation and benchmarking of methods
7. Investigate means of reproductively of open source versus proprietary codes for internal exchange.
8. Review of possible hosting platforms (e.g. SCEC, GEM, OASIS, etc)
9. Contribute to technical part of white paper
10. Accommodate technical discussion forums.
11. Investigate whether software engineer support would be required
12. Report on the feasibility of archiving data (e.g. topography, bathymetry, census data, etc.) and interfacing with external databases as well as the accessing of quality with the view to data harmonization.

General Points made during discussion:

- K. Berryman stated that the experience of GEM is that user support can require a lot of resources and that this should be considered (e.g. investigating whether a software engineer is required).
- H. K. Thio suggested looking at SCEC and other hosting platforms to see if GTM can learn from such consortiums. R. Basili noted that joint products could be produced between GTM and other external consortiums (e.g. GEM). K. Berryman emphasised the need for multi-hazard assessment (e.g. ground

motion can make a building more vulnerable to tsunami or may have already destroyed it).

- C. Harbitz highlighted the need for geo-ethics to be investigated in a workgroup. R. Basili stated that such a topic may be better suited for the Stakeholders and External Funding WG. No final decision on the topic was made and was deferred for discussion at a future date.

15:20 Discussion #1: Composition of working groups (NB – lists updated after the meeting)

Moderator: F. Løvholt (?)

The following people agreed to sit on the Organisation WG:

| | |
|--------|---------------------------|
| NGI: | C. B. Harbitz |
| IPMA: | M. A. Baptista |
| G.A: | P. Cummins |
| NOAA: | V. Titov |
| INGV: | R. Basili |
| UNIBO: | A. Armigliato or S. Tinti |

The following people agreed to sit on the Stakeholders and External WG:

| | |
|---------------|------------------------|
| IRIDES: | A. Suppasri |
| NGI: | F. Løvholt |
| INGV: | S. Lorito |
| METU: | A. Yalciner |
| CIMNE/UNISDR: | M. Salgado-Galvez |
| SQU: | I. El-Hussain |
| GA: | Person to be announced |

The following people agreed to sit on the Methods WG (in principle, most of the groups participating were interested in participating here.):

| | |
|-----------------|--|
| GNS: | W. Power |
| UHam: | J. Behrens |
| UC: | M. Gonzalez, I. A. Ayerbe, P. Gonzalez-Riancho |
| GFZ: | A. Babeyko |
| UMA: | J. Macias or J.M. Gonzalez-Vida |
| METU: | U. Kanoglu |
| AECOM: | H. K. Thio |
| Uni Washington: | R. Leveque |
| INGV: | R. Basili, S. Lorito, J. Selva |
| IPMA: | R. Omira |
| UniBo: | A. Armigliato |
| NOAA: | Y. Wei |
| CEA: | A. Gailler |
| USGS: | Uncertain at present |

General Points made during discussion:

- S. Lorito stated that none-attendees of the meeting can also be involved in the workgroups.
- P. Cummins will approach someone from his organization to sit on the Stakeholders and External WG
- M. A. Baptista stressed the need for global representation on the workgroups. She has contacted Issah El Hussain for representatives in the Middle East, F.

Løvholt have approached Christa Andrade about possible contacts for Central and South America and will follow up

- For the Methods WG S. Lorito suggested a few chairs were required, F. Løvholt stated that if the WG did not split up one chair would be required. H. K. Thio agreed to be chair for the Methods WG.
- E. Geist stated that USGS involvement in the Methods WG is uncertain at present.
- S. Lorito stated the requirement for a stable mailing list. F. Løvholt offers to circulate latest e-mailing list as well as workgroup presentations. A google group will be set up.
- H. K. Thio suggests that the separate workgroups should try and meet up this week given the large number of people present for the AGU Fall Meeting. There is general agreement to this. H. K. Thio offers to send around a doodle poll to organise a meeting date and time for the Methods WG. F. Løvholt suggests that the Organisation and Stakeholder and External Funding WG should have a joint informal meeting during the week and offers to circulate an e-mail to organise this meeting.
- R. Basili suggests that the next meeting of the core group of interested parties should occur around large international conferences such as EGU as there is currently no funding available. M. A. Batista states that rooms for splinter meetings can be booked at EGU. R. Basili notes that the deadline for booking such rooms is the 13th January. F. Løvholt offers to look into booking a room at EGU

Action points following the meeting:

| Action Item | Who |
|---|---------------------------|
| Find someone from GA to sit on Stakeholders and External WG | P. Cummins |
| Find someone from INGV to sit on WG1 & 2 | S. Lorito |
| Update mailing list | F. Løvholt |
| Contact Christa Andrade about possible contacts for Central and South America and add to mailing list | S. Lorito / F. Løvholt |
| Circulate stable mailing list and presentations produced during meeting | F. Løvholt |
| Booking room at EGU for splinter meeting (next GTM meeting) | F. Løvholt / Ines Martins |
| White paper start-up | C.B. Harbitz |
| GTM poster for UN-ISDR science conference (due 10 January) | F. Løvholt |
| GTM follow up towards OASIS for possible presentation at CAT Risk Management conference | F. Løvholt |
| Register participants for GTM google groups | H.K. Thio |
| Initiate regular phone meetings on science group | H.K. Thio |
| Register participants for GTM GIT Hub | R. Leveque |
| Investigate possibilities for organizing GTM under existing IUGG structure | V. Titov |

Milestones in 2016

January 10 – Poster for UN-ISDR Science and Technology conference

April 17-22 – GTM third meeting at EGU 2016 Vienna

May 16 – GTM White paper finalized before GFDRR Understanding Risk Forum

December – Overall organisational structure finalized.

Next Meeting:

Workgroups will meet during AGU Fall Meeting 2015

General meeting at EGU General Assembly 2016