***17th Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-eastern Atlantic, the Mediterranean and Connected Seas (ICG/NEAMTWS-XVII)***

*24 - 26 November 2021, Paris, France*

***Report on Intersessional Activities of Working Group 1  
Hazard Assessment and Modelling***

The action plan for Working Group 1 (WG1) as agreed at the 16th Session of the ICG NEAMTWS is given in the attachment. WG1 members met virtually during the intersessional period in an internal meeting on June 4, 2021, with A. Amato from WG4. Communication also took place between members of the working group by mail and during seminars and conferences.

Work on the **ToR** was discussed during the internal meeting.Tsunami risk is not included actually as a concrete task of WG1, contrary to tsunami hazard and floodings.Open questions were addressed to identify necessities we have in WG1, such as how hazard should be propagated to risk, risk assessment for what (deterministic, probabilistic).Risk indicators/maps could be derived from modeling and given map standards but societal components cannot be covered by WG1 and cannot come with WG1 risk maps. To include risk in general way, the idea would be to start from application guidelines from PTHA maps.

How to use the **PTHA** products to inform the civil authorities was also discussed. A recognition of what has been done in each country in term of PTHA studies needs to be addressed, to compare and make general guidelines to use one or other methodology. PTHA analysis are mostly upstream studies, not yet correlated with the top-down alert (except for INGV). A document evaluating if PTHA methodologies developed by NEAM institutes can be applied easily to perform PTHA analysis on broader sites is planned. Estimating the part of deterministic/probabilistic to include in the information to provide and how would also be valuable, as well as proposition of standards to elaborate flooding maps for evacuation maps.

The work item – **provision of data for benchmarking** – was addressed during the intersessional period too, as a way to contribute to hazard assessment and modeling. Data for the 2003 Algerian event toward Sète harbor (France) were provided recently (3 nested bathy grids (250m, 50m and 9m resolution), seismic source from Semmane et al. (2005), Sète tide gage record, and some modeling), to be integrated to the <https://edanya.uma.es/neambp> web site. Several coastal spanish sites could then be added depending on fine bathy/topo data availibility. Field data for the 2020 Samos tsunami (Greece) were also provided, to fill the NEAM benchmarking project. Building a benchmark on the 2017 Bodrum event was discussed during the internal meeting, where the source, tide gage data and field data would be provided by European colleagues and bathy/topo on Kos and Bodrum could be provided by CEA. Depending on how many participants would test their codes on these benchmarks, a report comparing results and performances could be planned.

No work has been conducted on **cancellation policies**.

Plan of Action WG1 (agreed at ICG/NEAMTWS-XVI)

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| ***Task/Action*** | ***Timeline*** | ***Responsibility*** | ***Required Budget*** | ***Status1*** | ***Priority*** |
| Update of WG1 TOR for a future Hazards and Risk WG | NEAMTWS-XVII | WG Chairs/ SC |  | O | high |
| Elaborate on Cancellation policies and local vs. remote tsunami SOPs | NEAMTWS-XVII | WG1+TT OP + WG4 |  | O | medium |
| *Review of Basin Definition Document* | *NEAMTWS-XVI* | *All WG Participants* |  | *Closed?* | *high* |
| Review on gaps for hazard and risk assessment | NEAMTWS-XVII | WG1 Chairs + Cost Action |  | N | medium |
| Classical numerical benchmarking for the NEAM region (1969 Atlantic event and 2003 Algerian event) | NEAMTWS-XVII/XVIII | WG1 Participants + Cost Action |  | N | medium |
| PTHA components benchmarking (comparison of results provided by different rapid forecasting approaches based on empirical amplification laws) | ? | WG 1 Participants + Cost Action |  | N | low |
| Provision of data for benchmarking (seismic parameters, topo-bathymetry, sea level data, run-up....) of the Greece 1956 event | ? | Greece ? |  | O | medium |

1 Notes: – Status: N – New, O – Ongoing