On the 5th of November, on occasion of the World Tsunami Awareness Day organized by UNDRR, we will conduct a table-top exercise in which we will replay the destructive event which occurred almost one year ago from today: the 2020 Mw 7 Samos earthquake which caused building collapses and about 100 victims at Izmir, and a moderate tsunami which hit the close by island of Samos to the South and the coast of Turkey to the North, causing one victim.

The Tsunami Service Providers (TSPs) of the NEAMTWS that issued alert messages for this tsunami in 2020 will participate and replay their operations during the exercise.

The exercise is promoted by the ChEESE Project (https://cheese-coe.eu/) to show the potentiality of Urgent Computing for Rapid Post Event Assessment. Then, it mostly targets ARISTOTLE/ERCC purposes.

The Urgent Computing will be performed live by INGV researchers on the CINECA Marconi100 supercomputer. An ensemble of tsunami simulations will be run to evaluate the Probabilistic Tsunami Forecasting (PTF, https://www.nature.com/articles/s41467-021-25815-w).

The potentiality and applicability of the PTF for early warning operations will be also discussed among the NEAMTWS TSPs.

The exercise will be conducted in several steps between 9-13:30 h. The preliminary agenda is as follows.

Exercise promoted by the ChEESE Project (https://cheese-coe.eu/) to show the potentiality of Urgent Computing for Rapid Post Event Assessment: the 2020 Mw 7 Samos earthquake With the participation of the NEAMTWS Tsunami Service Providers NOA, KOERI, CAT-INGV With the participation of the ARISTOTLE Tsunami Hazard Group	

9:00	Introduction
	   1) Welcome and Exercise agenda (INGV)
	   2) The ChEESE project (BSC)
	   3) The ChEESE PD8, Probabilistic Tsunami Forecast (PTF) for early warning and rapid post event assessment (INGV)
	   4) HPC resources (CINECA)

9:30	Simulation of the Event:
	   1) Earthquake detected (9:33)
	   2) Alarm sounds - First Earthquake parameters (9:33-9:35)
	   3) Tsunami Alert produced with DM (9:40-9:41) by NOA, KOERI, and INGV
	   4) PTF Early Warning mode - Run (based on pre-calculated scenarios)
	   5) PTF in Urgent Computing Mode: submission of massive simulations to the Marconi100 supercomputer @CINECA

9:45	Tsunami Warning Messages by NEAMTWS TSPs (CAT-INGV, NOA, KOERI), based on Decision Matrix, short presentations by
	   1) NOA (upgraded operations: updated DM, enhanced mapping product, use of Mw, national messages)
	   2) KOERI (enhanced products, potential use of numerical simulations)
	   3) INGV (decision matrix and preliminary enhanced products)

10:15	Tsunami description (NOA, KOERI/GTU): Marigrams, Ongoing Messages, eye-witness and footages during the tsunami

10:35	PTF Results - comparison with other methods and data (INGV)
	   1) Early warning mode
	   2) Urgent Computing mode
	   3) Comparison of DM and PTF - role of the thresholds / conservatism
	   4) Comparison of the different forecasts (decision matrix, single simulations, PTF ensemble in early warning and in urgent computing mode) with observations, including run-ups

11:20	Discussion (Chair NOA)
11:50	Added Value by Urgent Computing to ARISTOTLE Emergency Reporting (ARISTOTLE Tsunami Hazard Group deputy chair)

12:10	Other applications and Future developments:
	   1) Earthquake-tsunami coupled simulation by LMU/TUM (ChEESE PD4) (LMU)
	   2) ChEESE Workflow management system (HLRS)
	   3) ChEESE PD7 (NGI)

13:10	Closing remarks - End of the exercise