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Improving Tsunami Resilience in Europe

ASTARTE aims:

Assessment of generation mechanisms, evaluation of uncertainties, development of new numerical and experimental techniques for propagation, coastal amplification and inundation, networking in detection and warning, and building structural and social resilience against tsunamis by 26 partners from 16 countries.

World Tsunami Day activities of ASTARTE partners

**WORLD
TSUNAMI
AWARENESS
DAY**
5 NOVEMBER
2016



Tsunamis know no borders, making international cooperation key for deeper political and public understanding of risk reduction measures. As a result, the United Nations (UN) General Assembly has made 5 November into [World Tsunami Awareness Day](#), with the first edition being held this year. The aim of World Tsunami Day is to raise awareness on threats posed by tsunamis around

the world. To mark this day there was a press conference organized at KOERI, ASTARTE partner from Istanbul, Turkey. The [press conference](#) focused on KOERI's accreditation, how the tsunami early warning system works, the UNESCO Tsunami Program, Japan's Contribution on Disaster Mitigation Programs in Turkey and "Earthquake and Tsunami Disaster Mitigation in the Marmara Region and Disaster Education in Turkey (MarDiM) Project" as a joint effort of KOERI and JICA. A short article, with contributions from ASTARTE contributors INGV and NGI, entitled "[Global Tsunami Model network team: How models can contribute to tsunami awareness](#)" was published on the UNISDR blog to promote Global Tsunami Model (GTM) and its role on raising tsunami awareness.



ASTARTE - PEARL - TANDEM Joint Summer School in Crete, Greece

ASTARTE, PEARL & TANDEM Joint Summer School was held at the Technical University of Crete in Chania, Greece between 3-7 June, 2016 with participation of 28 undergraduate or graduate students and 17 lecturers. The summer school contributed to the participants' knowledge on coastal hazards, both theoretically and methodologically, with emphasis on coastal disaster resilience. The programme covered subjects from different areas of expertise, thus introducing and exploring the diversity of natural hazards linked to coastal flooding. The conceptual structures were taught in the theoretical lessons and also hands-on, game-like activities, where students were challenged to use their problem solving capabilities. Two field trips took place to provide evidence of recent events. During the workshop session, it was the participants' turn to lead the discussion on the involvement of stakeholders in natural hazards management, and come up with their own ideas in groups to solve given questions. Many ASTARTE's researchers were involved in organizing and lecturing in the Summer School, namely Costas Synolakis and Lemonia Ragia (TUC); Ahmet Cevdet Yalciner, Utku Kanoglu, Nuray Karanci (and her research assistant Canay Dogulu) and Nilay Dogulu (METU); Gerassimos Papadopoulos (NOA); Maria Ana Baptista and Martin Wronna (IPMA); François Schindelé and Audrey Gailler (CEA). ASTARTE also invited Hermann Fritz (Georgia Tech) to give a lecture on tsunami aftermath field surveys and a lecture on large scale laboratory experiments. PEARL project researchers Zoran Vojinovic (UNESCO-IHE); Pritha Hariram (IWA); Christos Makropoulos; and Vicky Tsoukala (NTUA) gave lectures on flood risk management. The summer school was overall a great success for both the participants as well as the lecturers.



ASTARTE featured in Horizon Magazine

The European Union's Research and Innovation Magazine, Horizon, published the article "[Scientists investigate how to defend Europe against tsunamis](#)" which features work on the project ASTARTE written in collaboration with ASTARTE researchers.

ASTARTE Stakeholders Meeting for Gulluk Test Site in Bodrum, Turkey

ASTARTE Stakeholders Meeting for Gulluk Test Site took place on 24 May 2016 in Bodrum/Muğla, Turkey. Organized by the ASTARTE partner Middle East Technical University in cooperation with the Chamber of Civil Engineers Bodrum Office, the meeting was attended by the deputy governor of Muğla (Fikret Çavuş), the deputy mayor of Bodrum Municipality (Taner Uslu), the Muğla provincial director of Disaster & Emergency Management (Temel Kışlalı), and representatives of the Bodrum Chamber of Commerce (BODTO) and other non-governmental organizations as well as press members. The programme of the meeting included talks and presentations by Prof. Dr. Ahmet Cevdet Yalçınar (METU), Assist. Prof. Dr. Ersen Aksoy (Muğla



Sıtkı Koçman University), Dr. Öcal Necmioğlu (KOERI), Dilek Özgül (Muğla Provincial Directorate of Disaster & Emergency Management), Nasuh Mahruki (head of the Search and Rescue Association of Turkey), Dr. Jülide Ergin (general director of the AKUT Foundation), Tarık Eray Çakır and Siret Bali (representatives of Chamber of Civil Engineers Bodrum Office) and Nilay Dogulu (METU). Among the topics of these talks and presentations were coastal disasters and tsunamis in Southern Aegean region, disaster management and NGO relations, preparedness and awareness activities in Gulluk Bay, tsunami early warning systems. This one day meeting was concluded with a discussion session where participants had the opportunity to ask their questions and share their ideas. The meeting was covered in local media channels: [link1](#), [link2](#).



ASTARTE's FIND platform tested in Crete

ASTARTE's FIND platform, which is available on Android's PlayStore, was successfully tested during this field trip. The platform transmits auto-generated and user-generated messages without a network infrastructure. Auto-generated messages contain data collected from the available device sensors (e.g. location, luminosity, movement, screen touches). Users could rely on the application to post messages, send photos and voice recordings through the network. We presented the FIND platform during the course on the fifth of June and sent out an email to all participants to download and install the FIND platform applications. On the sixth of June we performed a two hour simulation from 12:00 to 14:00 during the field trip to Rethymno in ASTARTE-PEARL-TANDEM Joint Summer School. During the simulation participants became part of the FIND established network, automatically transmitting sensor data, while also enabling users to send photos and post messages.

ICCE 2016

35th International Conference on Coastal Engineering (ICCE 2016) was held successfully in Antalya, Turkey on 17-20 November, 2016. <http://icce2016.com/en/>



Course in Rio de Janeiro



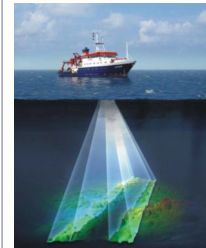
ASTARTE PI Prof. Maria Ana Baptista and Dr. Rachid Omira taught a course on Numerical Simulation of Tsunamis at the Universidade Estadual do Rio de Janeiro on 17-19 October 2016 in Rio de Janeiro, Brasil. This three days lecture series covered theoretical lessons and hands-on exercises in class.

Tsunami awareness event in Athens



On 30 Sept. 2016 the Hellenic National Tsunami Warning Center of NOA (Athens) organized a Tsunami Awareness Event during the EU-initiative "Researcher's Night". Hundreds of people visited the stand and attended an introductory talk by G.A. Papadopoulos, experienced the "tsunami tank", played the "tsunami information quiz" game and got other information from a various videos, pamphlets and interaction with NOA's scientists.

Crete Marine Survey



Swath and Seismic Survey in Cretan Basin -Crete & Kasos -SE of Karpathos island has been performed on 15-24 October 2016 by oceanographic vessel R/V Med Surveyor which is fully equipped with all necessary survey and laboratory instruments.

Announcements

ASTARTE's final meeting will be hosted by the University of Barcelona (UB) and will take place in the Balears Island on 6-8 April, 2017. The meeting will consist of a scientific workshop, with presentations from ASTARTE researchers, advisors and guests. For more information: <http://www.astarte-project.eu/index.php/news/astarte-final-meeting.html>



TSUMAPS-NEAM Technical Review Meeting in Athens, Greece and Dissemination Meeting in Oslo, Norway



The first Technical Review Meeting of the project was held successfully at the Cultural Center of the Athens Municipality in Athens, Greece on 29 June – 01 July, 2016. The meeting was well attended by the Project coordinator, Project partners, Scientists in Tasks, Internal and External reviewers, and EC Officer. Organized by Gerassimos Papadopoulos, Stefano Lorito and Beatriz Brizuela, the meeting addressed the practical plan for the hazard assessment. Accordingly all the work performed so far was reviewed and questions on data and methodology were discussed; and steps to proceed toward the realization of the first version of hazard model were identified. The meeting was also an opportunity to interact with the panel of invited experts. While some of these experts took part in the elicitation process, the others were responsible for the internal review of the project. There was also the Dissemination Meeting in Oslo, Norway between 01–02 September, 2016 where different aspects of the product to deliver and disseminate to DG–ECHO were discussed as well a dissemination strategy was planned. For more information please visit the [project website](#).



Tsunami drill in Israel



Israel's first tsunami wave simulation to raise public awareness and practice appropriate and effective responses in the event that a tsunami hits Israel's Mediterranean coastline was performed on April 04, 2016. The tsunami drill, code-named Blue Tidal Wave, was jointly conducted by the National Emergency Defense Ministry and Israeli police, in cooperation with the Home Front Command, local authorities and emergency agencies. First responders practiced evacuating residents from the beachfront cities of Ashkelon and Ashdod to secure areas. New tsunami warning signs were placed at the beaches of Ashkelon, including basic guidelines such as tsunami hazard zone and tsunami evacuation route. For local media news please visit [here](#).

ASTARTE's researcher won EGU's Outstanding Student Poster and PICO (OSPP) Awards 2016

ASTARTE researcher Martin Wronna won the Outstanding Student Poster and PICO (OSPP) Award at the 2016 European Geosciences Union (EGU) General Assembly for his presentation "On the use of Paleo DEMS for Simulation of historical Tsunami Events" (Martin Wronna, Maria Ana Baptista, Joachim Götz). You can read more about the award from [here](#) and the abstract of his work [here](#).



TROYO Youth training summer school in Marmaris, Turkey

As part of the Erasmus+ project TROYO (Training Of Youth for Preparedness Against Marine Induced Hazards) a summer school organized in Marmaris, Turkey with the name COASTBUSTERS'16 between 24 August–3 September, 2016. The training course aimed at enhancing the young participants' awareness on marine hazards to endeavor a better understanding of marine hazards and their effects on human life and manmade coastal structures and discover tools for safety and preparedness. During the course participants had the opportunity to be trained by experts and professionals of coastal engineering. Such training enabled them to acquire new methods of preparedness against marine hazards and transfer this knowledge directly to younger people through training activities. COASTBUSTERS'16 was organized in collaboration with the local Board of European Students of Technology (BEST) group in Ankara. For more photos please see the [project website](#).



What is going on?

- Sep 20-23, 2016 *Community Model Interface for Tsunami (ComMIT) Training Workshop in Mayaguez, United States ([Link](#))*
- Sep 26-28, 2016 *13th 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-XIII) in Bucharest, Romania ([Link](#))*
- Oct 16-21, 2016 *9th Conference on Coastal and Port Engineering in Developing Countries (COPEDEC) in Rio de Janeiro, Brasil (<http://www.pianc-copedec2016.com.br/>)*
- Oct 17-21, 2016 *3rd European Conference on Flood Risk Management in Lyon, France (<http://floodrisk2016.net/>)*
- Nov 2-5, 2016 *Asian Ministerial Conference on Disaster Risk Reduction 2016 in New Delhi, India (<https://www.unisdr.org/we/inform/events/46721>)*
- Nov 17-20, 2016 *35th International Conference on Coastal Engineering (ICCE 2016) in Antalya, Turkey (<http://www.icce2016.com/en/>)*
- Nov 22-24, 2016 *10th Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery in Banda Aceh, Indonesia (<https://www.unisdr.org/we/inform/events/48573>)*

Upcoming Events

- Dec 12-16, 2016 *American Geosciences Union Fall Meeting, in San Francisco, USA (<http://fallmeeting.agu.org/2016/>)*
- March 17-21, 2017 *CARIBE WAVE 17 Exercise Caribe Wave (http://ioc-unesco.org/index.php?option=com_oe&task=viewEventRecord&eventID=1912)*
- April 22-28, 2017 *European Geosciences Union (EGU) General Assembly 2017, in Vienna, Austria (<http://www.egu2017.eu/>)*
- April 27-28, 2017 *3rd International Conference on Geographical Information Systems Theory, Applications and Management (GISTAM 2017 in Porto Portugal (<http://www.gistam.org/>)*
- Sept 4-8, 2017 *5th International Tsunami Field Symposium in Lisbon, Portugal (<http://itfs.campus.ciencias.ulisboa.pt/node/11>)*

Project deliverables

Deliverable No	Deliverable title	WP	Delivery date	Partner in charge
D2.43	New results of the offshore record of tsunami deposits and MTDs in the NEAM region	2	Month 42	UB
D2.44	Georeferenced database of tsunami deposits and MTDs in the NEAM region	2	Month 36	INGV
D3.40	Guidelines for harmonization of source scenarios for use in tsunami hazard and risk assessment, validation of source design concepts for well-documented destructive tsunami event(s), and suggestions	3	Month 35	NGI
D4.45	Instant computing framework	4	Month 36	UHAM
D7.38	Standard specifications and new decisions matrices for NEAM	7	Month 33	GFZ
D7.46	Interaction with ICG NEAMTWS. Governance of TWS	7	Month 36	NOA
D8.39	Quantifying and managing uncertainty in tsunami risk assessment methods: application to the ASTARTE test sites	8	Month 38	INGV
D8.41	Pilot Assessment Support Platform	8	Month 41	INGV
D8.42	GIS Data Base of ASTARTE tsunami risk products	8	Month 42	UNIBO
D9.36	Large scale accessibility mapping and evacuation simulations using GIS tools and Multi-Agent Systems	9	Month 32	CNRS
D9.37	Awareness and preparedness movie and leaflets dedicated to the tsunami threat in the Mediterranean	9	Month 32	CNRS
D9.49	Tsunami Risk, mitigation and strategies for Europe	9	Month 36	METU
D9.50	Recommendations to guide and engineering codes	9	Month 36	METU
D10.34	ASTARTE Newsletter	10	Every 6 months	METU

Publications

- Aytore, B., Yalciner, A. C., Zaytsev, A., Cankaya, Z. C., Suzen, M. L. (2016) "Assessment of tsunami resilience of Haydarpaşa Port in the Sea of Marmara by high-resolution numerical modeling". *Earth, Planets and Space*, 68(1), 139, DOI:10.1186/s40623-016-0508-z.
- Baptista, M. A., Miranda, J. M., Batlló, J., Lisboa, F., Luis, J., Maciá, R. (2016) "New study on the 1941 Gloria Fault earthquake and tsunami". *Nat. Hazards Earth Syst. Sci.*, 16, 1967-1977, DOI:10.5194/nhess-16-1967-2016, 2016.
- Bayraktar, D., Ahmad, J., Larsen, B. E., Carstensen, S., Fuhrman, D. R. (2016) "Experimental and numerical study of wave-induced backfilling beneath submarine pipelines". *Coastal Engineering*, 118, 63-75, DOI:10.1016/j.coastaleng.2016.08.010.
- Cankaya, Z. C., Suzen, M. L., Yalciner, A. C., Kolat, C., Zaytsev, A., Aytore, B. (2016) "A new GIS-based tsunami risk evaluation: MeTHuVA (METU tsunami human vulnerability assessment) at Yenikapı, Istanbul". *Earth, Planets and Space*, 68(1), 133, DOI:10.1186/s40623-016-0507-0.
- Kian, R., Velioglu, D., Yalciner, A. C., Zaytsev, A. (2016) "Effects of Harbor Shape on the Induced Sedimentation; L-Type Basin". *Journal of Marine Science and Engineering*, 4(3), 55, DOI:10.3390/jmse4030055.
- Murphy, S., Scala, A., Herrero, A., Lorito, S., Festa, G., Trasatti, E., Tonini, R., Romano, F., Molinari, I., Nielsen, S. (2016) "Shallow slip amplification and enhanced tsunami hazard unravelled by dynamic simulations of mega-thrust earthquakes". *Scientific Reports*, 6, 35007. DOI:10.1038/srep35007.
- Omira, R., Ramalho, I., Terrinha, P., Baptista, M. A., Batista, L., Zitellini, N. (2016) "Deep-water seamounts, a potential source of tsunami generated by landslides? The Hirondele Seamount, NE Atlantic". *Marine Geology*, 379, 267-280, DOI:10.1016/j.margeo.2016.06.010.
- Reis, C., Omira, R., Matias, L., & Baptista, M. A. (2016) "On the source of the 8 May 1939 Azores earthquake-tsunami observations and numerical modelling". *Geomatics, Natural Hazards and Risk*, 1-20, DOI:10.1080/19475705.2016.1218944.
- Titov, V., Kanoğlu, U., Synolakis, C. (2016) "Development of MOST for Real-Time Tsunami Forecasting". *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 142(6), 03116004, DOI:10.1061/(ASCE)WW.1943-5460.0000357.
- Zaytsev, A., Kostenko, I., Kurkin, A., Pelinovsky, E., & Yalciner, A. C. (2016) "The depth effect of earthquakes on tsunami heights in the Sea of Okhotsk". *Turkish Journal of Earth Sciences*, 25, DOI:10.3906/yer-1509-6.

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"Judging someone without knowing anything about the person is like predicting a tsunami in the Sahara desert."
— Anonymous