



## THE TSUNAMI READY PROGRAM AS A TSUNAMI RISK REDUCTION STRATEGY AND ITS POTENTIAL IMPLEMENTATION IN TWO TEST SITES OF GREECE (RHODES AND KOS ISLAND)

**Arete Plessa**<sup>1</sup>, Gerassimos A. Papadopoulos<sup>2</sup>, George Kaviris<sup>3</sup>, Efthymios Lekkas<sup>4</sup>, Marzia Santini<sup>5</sup>

<sup>1</sup> *Institute of Geodynamics, National Observatory of Athens (Greece).*

*(E-mail: [a.plessa@noa.gr](mailto:a.plessa@noa.gr))*

<sup>2</sup> *Chair, North East Atlantic & Mediterranean Tsunami Warning System, IOC/UNESCO*

*(E-mail: [gerassimospapadopoulos2@gmail.com](mailto:gerassimospapadopoulos2@gmail.com))*

<sup>3</sup> *Department of Geophysics and Geothermy, National and Kapodistrian University of Athens (Greece).*

*(E-mail: [gkaviris@geol.uoa.gr](mailto:gkaviris@geol.uoa.gr))*

<sup>4</sup> *Dynamic Tectonic Applied Geology & Disaster Management Department, National and Kapodistrian University of Athens (Greece).*

*(E-mail: [elekkas@geol.uoa.gr](mailto:elekkas@geol.uoa.gr))*

<sup>5</sup> *Italian Civil Protection Department of the Presidency of Council of Ministers*

*(E-mail: [Marzia.Santini@protezionecivile.it](mailto:Marzia.Santini@protezionecivile.it))*

### ABSTRACT

The aim of the Tsunami Ready initiative is to promote the resilience of coastal communities exposed to tsunami risk through better planning and education. It was introduced in the US in 2001 as a voluntary community recognition program for the evaluation of coastal communities recognised as "TsunamiReady®". The evaluation is based on specific guidelines regarding preparedness, mitigation and response to tsunami risk. Specifically, communities need to have a plan for tsunami risk, to have hazard and evacuation maps, to provide tsunami signage in the area indicating safe areas that can be reached through the appropriate escape routes, to carry out systematic training activities and drills and to have developed early warning systems. "TsunamiReady®" provided the basis for "International Tsunami Ready", implemented in other tsunami prone areas worldwide, with the support of UNESCO.

Although catastrophic tsunamis in Greece are rare, historical records and geological surveys have shown that tsunami risk is significant in several coastal areas. Thus, the cities of Rhodes and Kos were chosen as areas where the implementation of Tsunami Ready could be investigated, because of the high seismicity in the region that in some cases lead to a tsunami generation, and in addition, due to several tsunami mitigation activities that are ongoing. Evaluation of the current situation according to the "International Tsunami Ready" guidelines shows that neither of the two regions meets all the requirements. However, specific objectives for a successful integrated risk management operation have been identified. Finally, starting from a bottom-up approach it is possible to identify the needs and objectives to be set for emergency planning at national level, as planning for a risk is a matter of national policy.

**Keywords:** Tsunami Ready, tsunami risk mitigation, tsunami hazard, Rhodes Island, Kos Island