

Tsunami – A Southeast Australian Focus

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The Indian Ocean tsunami of 26 December 2004 was a wakeup call for Australia and the other Indian Ocean nations. Considerable work since that time has seen the establishment of new international arrangements for tsunami warnings in that region and the development of the Australian Tsunami Warning System (ATWS), which was established last year by the Bureau of Meteorology (BoM), Geoscience Australia (GA) and Emergency Management Australia (EMA), in consultation with the States and Territories. Whilst additional work is expected to take place over the remaining two years of the ATWS project, the States and Territories have been undertaking various projects to better understand the risks, enhance tsunami warning arrangements and planning at the community level, and roll out a number of tsunami awareness programs in cooperation with BoM, GA and EMA.

Interestingly, amidst the recent hype of developing appropriate and consistent warning systems and awareness material, and particularly after the 2 April 2007 Solomon Island tsunami alert, emergency managers have been asking a number of questions, all with a common theme. In particular, what is the actual level of risk to our communities from tsunamis? This is an important question because the answer will inform the level of investment the jurisdictions put into risk treatment and planning, the level and type of community awareness necessary, and the level of resources developed to deal with the potential consequences. And what are the consequences? If we get a tsunami warning, what parts of our communities are at risk, what areas need to be evacuated, and what information do we provide the public?

Unlike Western Australia, the southeast Australian coast lacks the same level of recent evidence of significant tsunami events for the risk managers and researchers to assess. This would explain the initial focus on tsunami risk work and awareness in WA, headed largely by FESA. However, deep water maximum credible tsunami wave modelling of Puysegur Trench eruptions, south of New Zealand, reveals the potential for a very significant tsunami hazard for the southeast coast of Australia, particularly Tasmania. This prompted a Tasmanian palaeotsunami and inundation modelling project, which was completed in June 2007. This project has helped emergency managers to better understand the risk and will be the main focus of this paper.

The project is expected to inform all jurisdictions on any related risk management work they intend to implement and the results should provide a measure of reassurance that the risk for the southeast Australian coastline is not as bad as the initial deep water modelling may have indicated. Certainly, it helps to dispel the myth, previously held by elements of the community and the media, that tsunami consequences on southeast Australian shores (caused by erupting subduction fault lines) will be anything like those experienced in the Indian Ocean in December 2004. Nonetheless, there is still a risk that will need to be treated, but the results of the project will help emergency managers to build a better understanding of the related risks and to do what is necessary and appropriate to protect coastal communities.

(the project report will be available after June 2007 at which time this abstract will be modified and resubmitted with a summary of its conclusions).