

## **Written records of Historical Tsunamis in the Northeastern South China Sea – Challenges Associated with Developing a New Database**

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Comprehensive analysis of 15 previously published regional databases incorporating more than 100 sources leads to a newly revised historical tsunami database for the NE region of the South China Sea including Taiwan. The validity of each reported historical tsunami event is assessed by comparing and contrasting the information and descriptions provided in the other databases. All earlier databases suffer from errors associated with inaccuracies in translation between different languages, calendars and location names.

The new database contains 204 records of ‘events’ reported to have occurred between AD1076 and 2009. Fifty-eight possibly tsunami events have been identified and investigated. The validity of each event is based on the number of individual records for that event and their consistency and accuracy. Of the 58 events, 23 are regarded as ‘valid’ (confirmed) events, four ‘probable’ events and six ‘possible’. Eighteen events were considered ‘doubtful’ and seven events ‘invalid’. The most destructive tsunami of the 23 valid events occurred in 1867 and affected Keelung at northern Taiwan, killing at least 100 people.

Inaccuracies in the historical record aside, this new database high-lights the occurrence and geographical extent of several large tsunamis in the NE South China Sea region. This work indicates the need for further research using coastal stratigraphy and inundation modeling to help validate some of the historical accounts of tsunamis as well as adequately evaluate the recurrence intervals of tsunamis along the now heavily developed coastlines of the region.

Keywords: Tsunami; Historical records; China; Taiwan; South China Sea.