

Seafloor mapping of the 1998 Papua New Guinea earthquake and tsunami source area

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The 1998 Papua New Guinea earthquake and tsunami occurred on 17 July 1998 off the northern coast of the New Guinea Island. The maximum wave height of 15m was recorded near Sissano Lagoon near the town of Aitape. After the hazardous tsunami JAMSTEC dispatched DOLPHIN-3K (ROV) and SHINKAI2000 (manned submersible) in 1999 and 2001 and total 13 dives were carried out to figure out the large-scale slump in the source area. Since an over-all seafloor geological route map of the source area has not been made so far, the author compiled all the visual observation through all the 13 dives together with other results of the offshore geophysical survey and made the final version of the seafloor geological survey route map. The result shows that a slump which might generate the hazardous tsunami is located 10km off the northern coast along the amphitheatre. The total volume of the collapsed area at the slump is estimated to be about 5.4km³.