

# 6th International Symposium on Submarine Mass Movements and Their Consequences

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## The tsunami generation potential of Shovel and Bulli Slides in the continental margin SE Australia

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### **Content :**

High-resolution bathymetric maps from offshore SE Australia have shown that the continental margin is characterised by numerous landslides of all sizes and shapes. We have studied two of the larger slides, Shovel Slide and Bulli Slide, located in the upper to mid continental margin offshore New South Wales (NSW), in detail. Morphometric analyses suggest that the slides had the potential to create tsunamis. We have calculated the initial wavelength and maximum amplitudes of those hypothetical tsunamis using the equations of Watts et al. (2003). The calculated initial wave heights above the mass centroid are in the same range of magnitude on the order of 10 to 25 m for both slides. The initial wavelengths vary between 75 and 104 km. If, on the other hand, the slides represent multiple (e.g. retrogressive) events, the tsunamigenic potentials were lower. Sizes, shapes, frequencies and the tsunami potentials of the submarine landslides from offshore NSW suggest that submarine landslides may well provide sources for local tsunamis. Precise dating of the landslide events and modelling of the calculated tsunami run up along the coast are yet to be performed.

**Primary authors :** Dr. TALUKDER, Asrar (CSIRO)

**Co-authors :** Dr. VÖLKER, David (GEOMAR)

**Presenter :** Dr. TALUKDER, Asrar (CSIRO)

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