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### **Deformation patterns and seismic hazard along the eastern Sunda margin**

The eastern Sunda margin offshore Java, Bali, Lombok and Sumba is the site of oceanic subduction of the Indo-Australian plate underneath the Indonesian archipelago. Data from a suite of geophysical experiments conducted between 1997-2006 using RV SONNE as platform include seismic and seismological studies, potential field measurements and high-resolution seafloor bathymetry mapping. Tomographic inversions provide an image of the ongoing deformation of the forearc and the deep subsurface. We investigate the role of various key mechanisms that shape the first-order features characterizing the present margin architecture. Our contribution evaluates the differences in architecture and evolution along the Java forearc from a marine perspective to better understand the variation in tectonic styles and segmentation of the convergent margin, including its seismic risk potential.

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