INDONESIAN SEAS PALEOCEANOGRAPHY

The Indonesian Maritime Continent has been identified as an area of major climatic importance both locally and globally. The region, along with equatorial Africa and South America, is recognized as a primary energy source for the entire global circulation system. Several complex and interplay climate systems such as the Indonesian-Australian monsoon, ENSO, and IOD are strongly affecting the socio-economic condition in the region.

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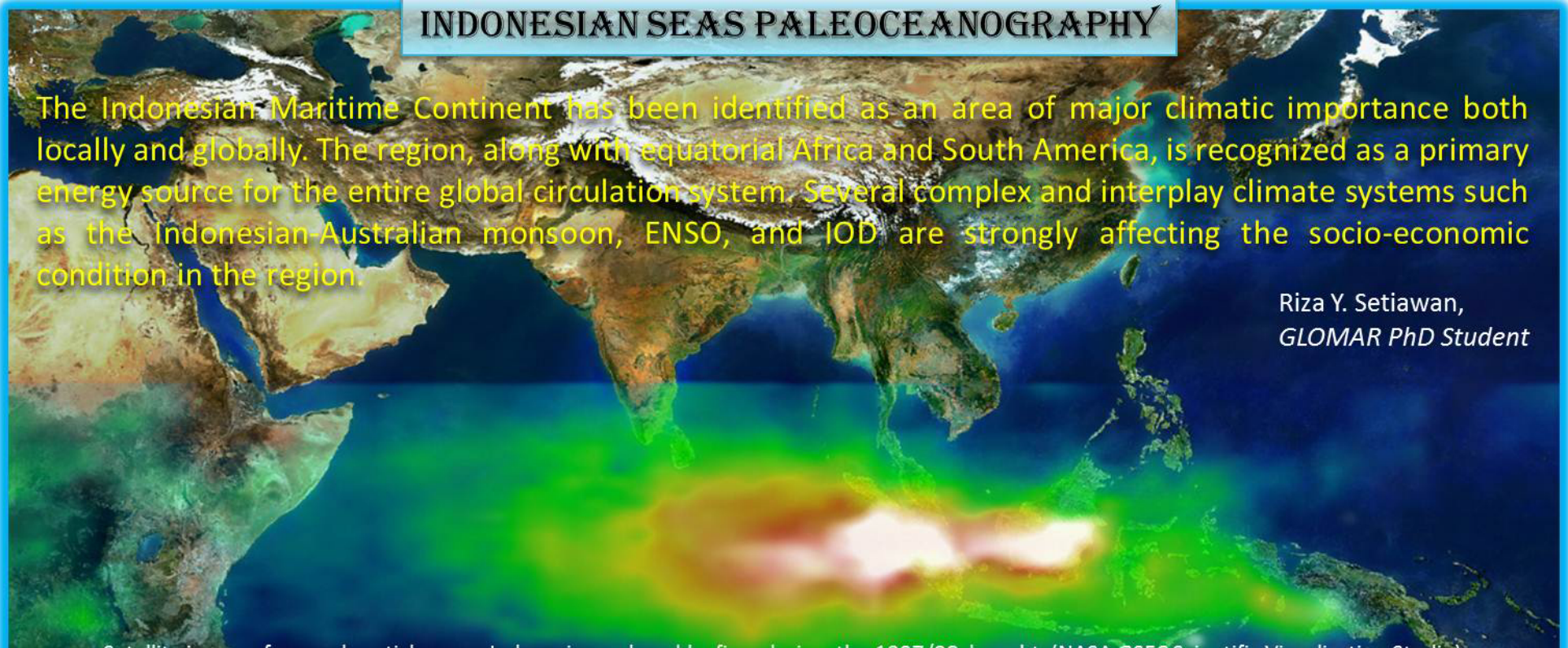

Satellite image of aerosol particles over Indonesia produced by fires during the 1997/98 drought. (NASA GSFC Scientific Visualization Studio)

Climate leaves an imprint on the planet– in the chemical and physical structure of its oceans, life and land. Marine sediment provides a unique opportunity to reconstruct both oceanic and environmental changes in the past. In my PhD project, I will investigate the variations of the Indonesian climate systems over the last 15000 years by analyzing two high-resolution sediment cores (GeoB 10042-1 and GeoB 10043-3) drilled from southwest Indonesia. Of particular interest is the investigation of the opening of the Sunda Strait (~9 ka) and its effects on the regional and global climate and ocean dynamics. In this study, *G. ruber* and *P. obliquiloculata* will be used to trace the changes in monsoon variability and oceanic circulation.