

Indian Ocean Observing System (IndOOS)

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The Indian Ocean plays an important role for African-Asian-Australian monsoons, climate variability in regions surrounding the Indian Ocean, and its remote impacts at global scale through atmospheric teleconnections. However, a long-term, sustained observing system in the Indian Ocean had not been started as of about a decade ago, leaving the Indian Ocean as the least observed ocean among the three major basins. To fill this observation-gap, the Indian Ocean Observing System (IndOOS) has been developing in a recent decade. It is designed to provide high-frequency, near real-time climate-related observations, serving the needs of the intraseasonal, interannual and even decadal time-scale climate studies and services.

IndOOS is a multi-platform long-term observing system, which consists of Argo floats, surface drifting buoys, tide gauges, a surface mooring buoy array (RAMA), VOS based XBT/XCTD sections, and satellite measurements as a backbone observation for sea surface conditions. RAMA is the main platform for in situ observations in the tropical region, whose design was evaluated and supported by observing system simulation experiments. The first RAMA buoy was deployed in 2000 and, since then, a significant progress has been made in implementation of the observing system and also in scientific outcomes from the observed data. The proposed array for RAMA consists of 46 moorings, of which 27 locations are occupied as of Dec 2010. The Indian Ocean data thus collected is available through the data portal system maintained at INCOIS, India. This presentation summarizes recent progress in the observing systems in the Indian Ocean.

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