

## The Indonesian Throughflow: Data Collection

### Core Locations

The [Indonesian throughflow](#) (ITF) is a major passageway in the world's ocean system. The ITF transfers relatively cool, fresh thermocline water, and relatively warm and fresh surface water from the Pacific to the Indian Ocean. Additionally the ITF is located on the western margin of the Western Pacific Warm Pool, an area from which the earth's atmosphere derives a large part of its heat and water budget. Consequently, oceanographic changes in this region are intricately linked with the changes in the earth's climate system, making it an ideal location to study paleoclimatology. Specific coring sites were chosen in areas with strong sedimentation rates (for higher resolution) and upwelling.

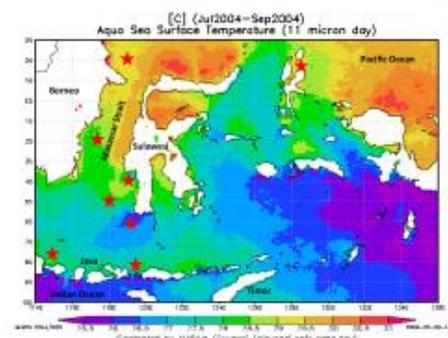


[Enlarge Image](#)

Map of the world with study area circled in red. (Living Earth Inc.)

### Core Collection

During 2003, in a joint collaboration with Indonesian scientists and researchers at Rutgers University, WHOI, and SUNY at Albany, sediment cores were collected from the Indonesian Seas. Both gravity cores and multicores were taken from the Indonesian research vessel the Baruna Jaya VIII. Multicores were lowered gently into the sediment-water interface, decreasing the likelihood that surficial sediments would be disturbed by the impact of a core penetration, and increasing the preservation probability of the most recently deposited sediment.



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Map of July-September SSTs in the Indonesian region from 2004 (a non-ENSO year). Pinks represent warm SSTs and low upwelling, violets represent cool SSTs and strong deepwater upwelling. Red stars indicate sample areas. (Generated with data from NASA's OBPQ MODIS-Aqua)



Research Vessel the Baruna Jaya VIII  
(Centre for Development  
and Co-operation in Fisheries)

Multicore rig on the Baruna Jaya  
(D. Oppo)

### Core Storage

After collection, cores were stored in the WHOI Seafloor Samples Laboratory along with roughly 24,000 other core sections from more than 3,800 sites. Together these samples fill a warehouse-sized room with shelves stacked floor to ceiling.



[Enlarge Image](#)

Shelves of cores in the WHOI Seafloor Samples Laboratory. (Tom Kleindinst)



Split sediment core from the Baruna Jaya VIII cruise. (D. Oppo)

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