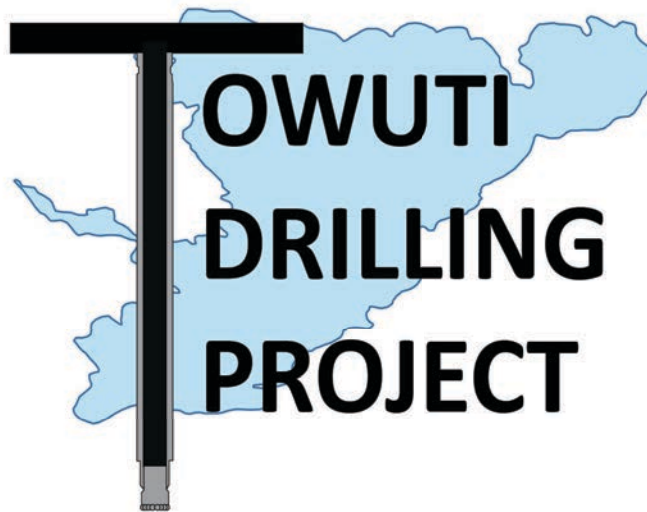




The Towuti Drilling Project is an international collaboration between scientists in the United States, Indonesia, Germany, Canada, Australia, Switzerland, Singapore, and the United Kingdom. Our proposed research builds upon science goals defined at the Towuti Drilling Workshop, attended by 62 scientists, governmental, and industrial partners in March 2012.



The Towuti Drilling Project is building partnerships between scientists, local government, and stakeholders to enhance participation, knowledge transfer, and scientific capacity to sustain Towuti's ecosystems despite environmental change.



The Towuti Drilling Project operates under the auspices of the International Continental Drilling Program (ICDP), with operational support from DOSECC, Inc., and with sponsorship from national and international agencies. For more information, contact the principal scientists:

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<http://towuti.icdp-online.de>

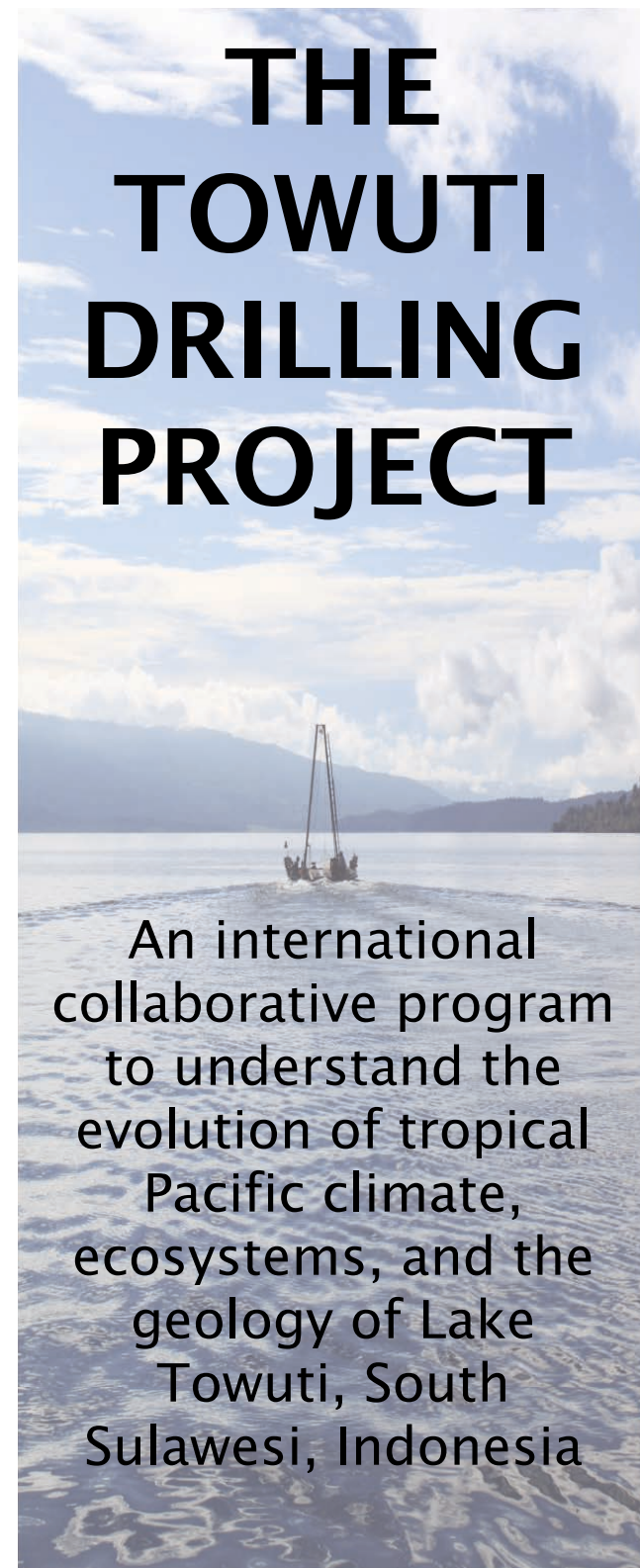


BROWN



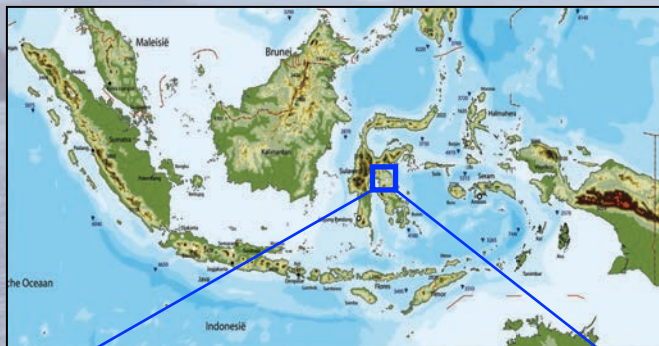
THE TOWUTI DRILLING PROJECT

An international collaborative program to understand the evolution of tropical Pacific climate, ecosystems, and the geology of Lake Towuti, South Sulawesi, Indonesia

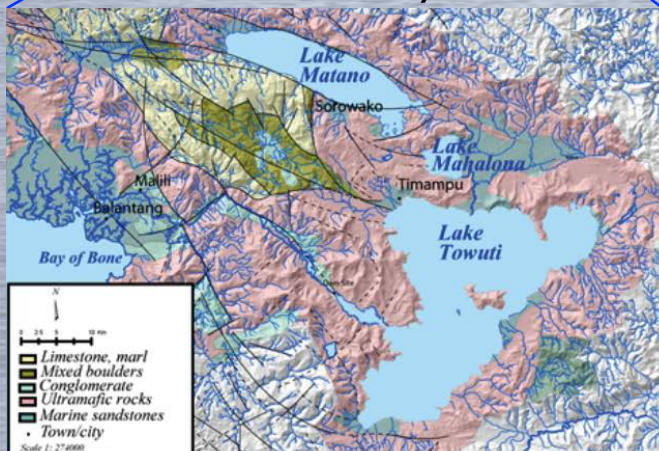


Lake Towuti is located on the island of Sulawesi, central Indonesia, at the heart of the Indo-Pacific warm pool, the world's largest zone of deep atmospheric convection. Towuti is the largest of the Malili Lakes, an ancient highly biodiverse lake chain, and is hosted in the East Sulawesi Ophiolite, an ultramafic, metal-rich rock. Towuti contains hundreds of meters of sediment that can be used to reconstruct climatic and environmental change during the last million years, one of the only such records in Southeast Asia.

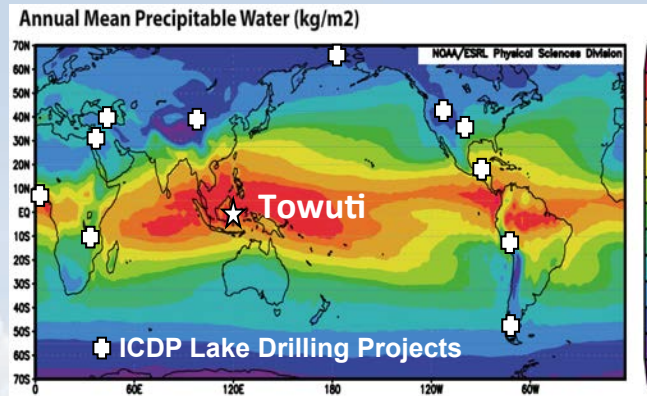
The Towuti Drilling Project seeks to obtain long drill cores of this sediment to investigate the coupled climate, biological, and geological evolution of this unique ecosystem.



The Malili Lakes System

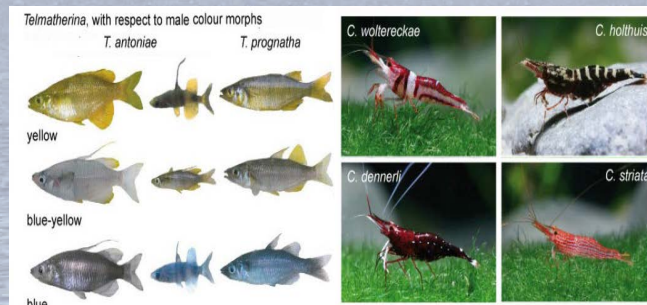


Past Indo-Pacific Climate Variations



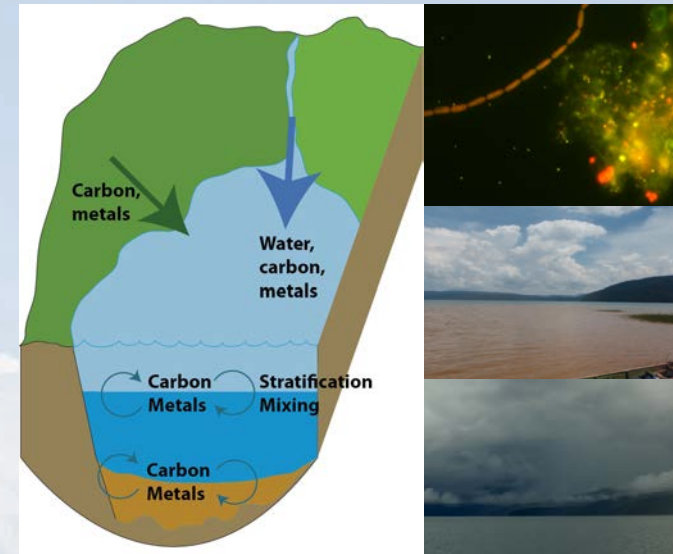
The Indo-Pacific is the source for much of the world's water vapor, yet we have little knowledge of long-term changes in the regional water cycle. We will use Lake Towuti sediment cores to provide the first long climate reconstruction from central Indonesia, linking to a network of lake drilling sites within the International Continental Drilling Program to assess the region's role in global climate change.

Malili Lakes Biological Evolution



The Malili Lakes host highly endemic flocks of fishes, shrimp, and snails, and are surrounded by one of the most diverse rainforests on Earth. Through scientific drilling, we will determine the age of Lake Towuti, rates of biological evolution, and the sensitivity and resilience of Towuti's aquatic and rainforest ecosystems to climatic and environmental change.

Carbon and Metal Cycling in Towuti



The Malili Lakes are the world's largest iron-rich aquatic ecosystems. The ophiolitic landscape surrounding Towuti supplies metals and organic matter that drive fundamentally important biogeochemical processes in the lake. Drill cores will allow us to investigate the impacts of climate change, erosion, and landscape change on microbial ecosystems, carbon, and metal cycling.

Through collaborative study of past changes in the coupled climate, chemistry, ecosystems, and evolution in this unique setting, we will improve our knowledge of how to maintain a sustainable Towuti ecosystem in light of changes in climate and human land-use.

