ZMT LEIBNIZ CENTRE for Tropical Marine Research

The Leibniz Centre for Tropical Marine Research (ZMT) GmbH (www.leibniz-zmt.de) is an independent research and teaching institute that provides scientific knowledge for the protection and sustainable use of tropical coastal ecosystems. To this end, we work in an inter- and transdisciplinary manner with our partners in the tropics. The ZMT is a member of the Leibniz Association.

Master and Bachelor Thesis Projects

available in the Geoecology and Carbonate Sedimentology Workgroup (ZMT)

As part of ongoing projects, we offer opportunities for enthusiastic students to conduct their theses (Bachelors or Masters) on mesophotic and shallow coral reef sediments and foraminiferal samples from the Indo-Pacific and the Red Sea. Briefly, the potential projects could evolve around:

- The characterization of sediments from mesophotic reef environments in the central Red Sea, describing these unique and still rather unknown ecosystems. While cooperating teams are characterizing the coral diversity, this project studies the accompanying fauna that will unravel the environmental conditions of these reefs that are located in water depth hindering direct observation.

- The impact of tourism-related wastewater inputs into a coral reef environment of a small island in the Caribbean, focusing on sediment- and photography-based assessment of nutrient distribution and their effects on bioindicators of local conditions for reef development and resilience (i.e. isotopic and chemical analyses, FORAM Index and coral recruitment).

- The assessment of coral reef carbonate and sediment production across ecological zones around a low-lying reef island on the Great Barrier Reef, focusing on contributions of the foraminiferal and calcifying algae communities, or assessing links between ReefBudgets and sediment composition to understand processes affecting future island shoreline nourishment.

- Temporal or spatial shifts in the foraminiferal communities in the northern Red Sea, e.g. due to the short- to long-term re-establishment of a micro-benthic community after a major storm event, or the influence of experimental nutrient enrichment in seagrass meadows at sites of contracting anthropogenic impacts (i.e. ecophysiological as well as community changes).

In the proposed projects, you would work with different international researchers and local experts. If you have related project ideas along these lines we are most happy to discuss how those could be implemented. Analyses will be mainly conducted in the Experimental Marine Laboratories at ZMT in Bremen. Candidates (gender neutral) should have an interest in tropical marine ecosystems, community analyses, carbonate sedimentology, global change impacts, and microscopy. Applicants should have some experience handling sediment samples and affinity for laboratory work, and be fluent in German or English.

The projects can start at your earliest convenience. If you are interested and you would like to apply or discuss prospective research questions, tasks, and collaborations in more detail, please get in touch with Prof. Hildegard Westphal (hildegard.westphal@leibniz-zmt.de) or Dr. Marleen Stuhr (marleen.stuhr@leibniz-zmt.de).

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