



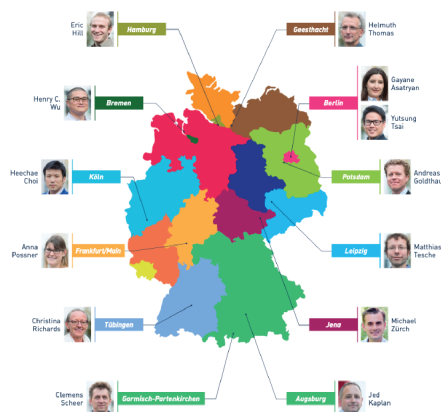
Reconstruction of anthropogenic environmental changes from a Cuban coral over the last 175 years

Marie Harbott¹, Henry Wu^{1,2}, Henning Kuhnert³, Carlos Jimenez⁴, Patricia Gonzales⁵, Tim Rixen^{1,6}

¹Leibniz Zentrum für Marine Tropenforschung, ²University of Bremen, ³Marum, ⁴Enalia Physis Environmental Research Centre (ENALIA), ⁵Centro de Investigaciones Marinas Universidad de la Habana, ⁶University of Hamburg

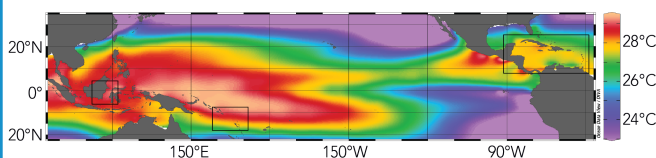
Make Our Planet Great Again

The OASIS project is part of 55 research projects from the joint-initiative "Make Our Planet Great Again" in France and Germany. We are one out of 13 projects in Germany from the Cluster Earth System functioning. The Geran projects are shown on the map below.



OASIS

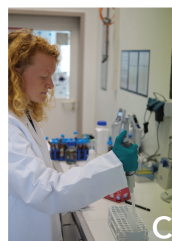
Ocean Acidification CriSIS (OASIS) researches Ocean Acidification in the tropical oceans using coral archives. The Indonesian Through Flow (ITF), the South West Pacific, and the Caribbean Sea are regions of interest. The SST map below shows the regions of interest in black squares.



Methods



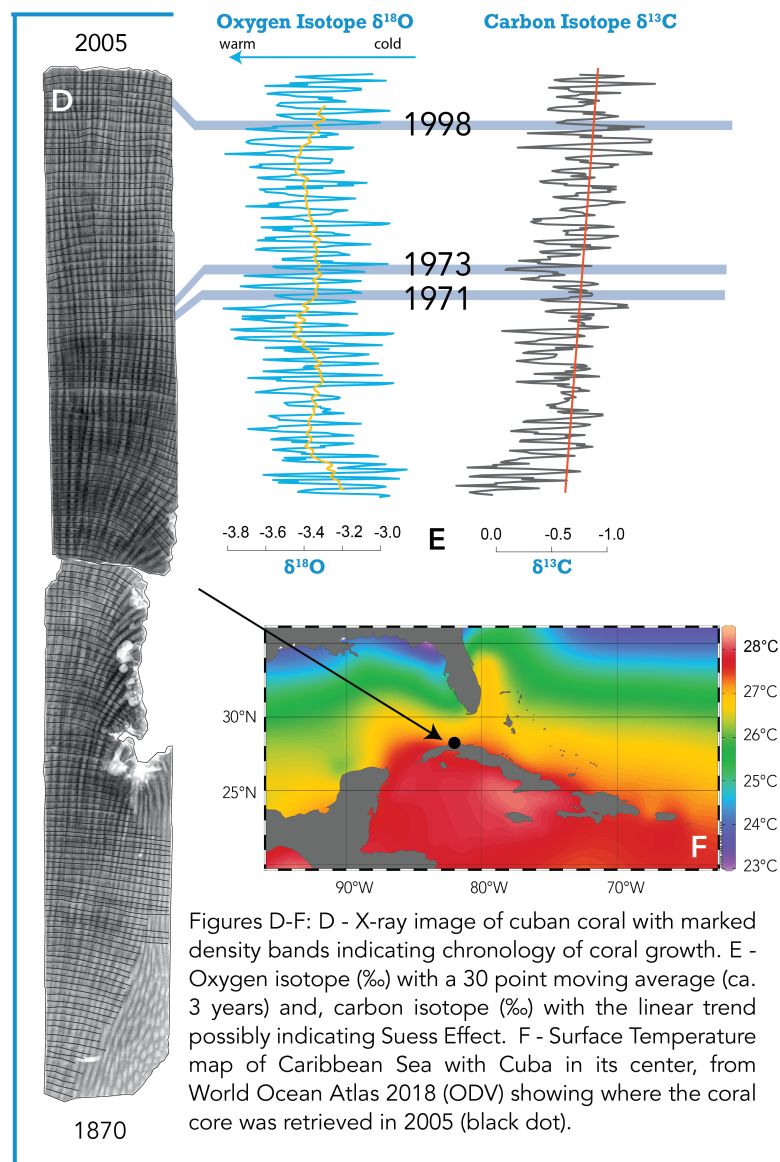
Figures A - C: A - Extraction of mini-core from coral. B - After drilling powder from Coral core the C - sample powders are dissolved for trace element analysis.



Coral Cores as Climate Archives

Ocean warming and ocean acidification (OA) are increasingly influencing marine life. A percentage of the increasing amount of CO₂ in the atmosphere will eventually be absorbed by the ocean, which changes the ocean's carbonate chemistry and threatens the ecological competitiveness of calcareous marine organisms. Here we present results from a multi-proxy approach for the reconstruction of environmental change and natural climate variability from a North Cuban *Siderastrea siderea* coral. The sub-seasonally resolved records indicate interannual to decadal changes in SST and seawater carbonate chemistry since 1963 CE. The record will be extended in the course of the project.

Preliminary Results



The OASIS project is funded by the Federal Ministry of Education and Research (BMBF) under the "Make Our Planet Great Again – German Research Initiative", grant number 57429626 to Dr. Henry C. Wu (Junior Research Group Leader), implemented by the German Academic Exchange Service (DAAD).