

MARUM / GLOMAR Specific Knowledge Course

Sea Level and Coastal Changes

Dr. Alessio Rovere

MARUM – Center for Marine Environmental Sciences and Leibniz Center for Tropical Marine Ecology (ZMT)

3 – 4 November 2016, MARUM Bremen

Objectives

The general aim of the course is to give a first overview on different aspects of the study of paleo sea level changes. The course will be composed of 4 theory sessions and 1 session to discuss three papers which will previously be assigned to the class.

The course will cover the causes of eustatic sea level changes, the processes behind relative sea level changes and their effects at different time scales; and the techniques used to measure changes in sea level at geological time scales (from the Common Era to the Quaternary).

Topics

Session 1 - Causes of sea level changes: steric sea-level rise, water density, melting ice caps, gravitational effects etc. Definition of 'eustatic' sea level.

Session 2 - Relative land/sea level changes: tectonics, co-seismic uplift, isostasy, sediment compaction, dynamic topography.

Session 3 - Relative sea level markers measured in the field: archeological, sedimentological, biological, geomorphological.

Session 4 - Sea level changes at different times and implications for the future: Holocene, Last Interglacial, MIS 11, Pliocene.

Session 5 - Practical exercise. One week before the start of the course, students will be assigned three papers to read. The papers will contain data on last interglacial sea levels. Two questions will be proposed to the class, that will have to elaborate a field and modelling strategy to solve these questions.

Location and Time

MARUM, University of Bremen, Leobener Strasse, 28359 Bremen, Germany
MARUM I building, room 2060

Day 1	3 November 2016	09.00 – 12.30 hrs.
Day 2	4 November 2016	09.00 – 17.00 hrs.

Registration

To register for this course, please visit the [course web site](#).

Please note that your registration will be binding.

The registration deadline for this course is **25 October 2016**.

Any enquiries regarding the course should be addressed to glomar-courses@marum.de.