LAGOA DE SANTO ANDRÉ The Holocene evolution of a coastal lake at the Atlantic coast of Portugal



Sebastian Frank¹, **Hannes Laermanns¹**, Anna Pint¹, Barbara Wagner¹, Piero Bellanova^{2,3}, Lisa Feist², Margret Mathes-Schmidt², Klaus Reicherter², Helmut Brückner¹

¹Institute of Geography, **University of Cologne**, Zülpicher Straße 45, 50674 Cologne, Germany ² Neotectonics and Natural Hazards Group, **RWTH Aachen University**, Lochnerstraße 4-20, 52056 Aachen, Germany

³ Institute for Geology and Geochemistry of Petroleum and Coal, **RWTH Aachen University**, Lochnerstraße 4-20, 52056, Aachen, Germany

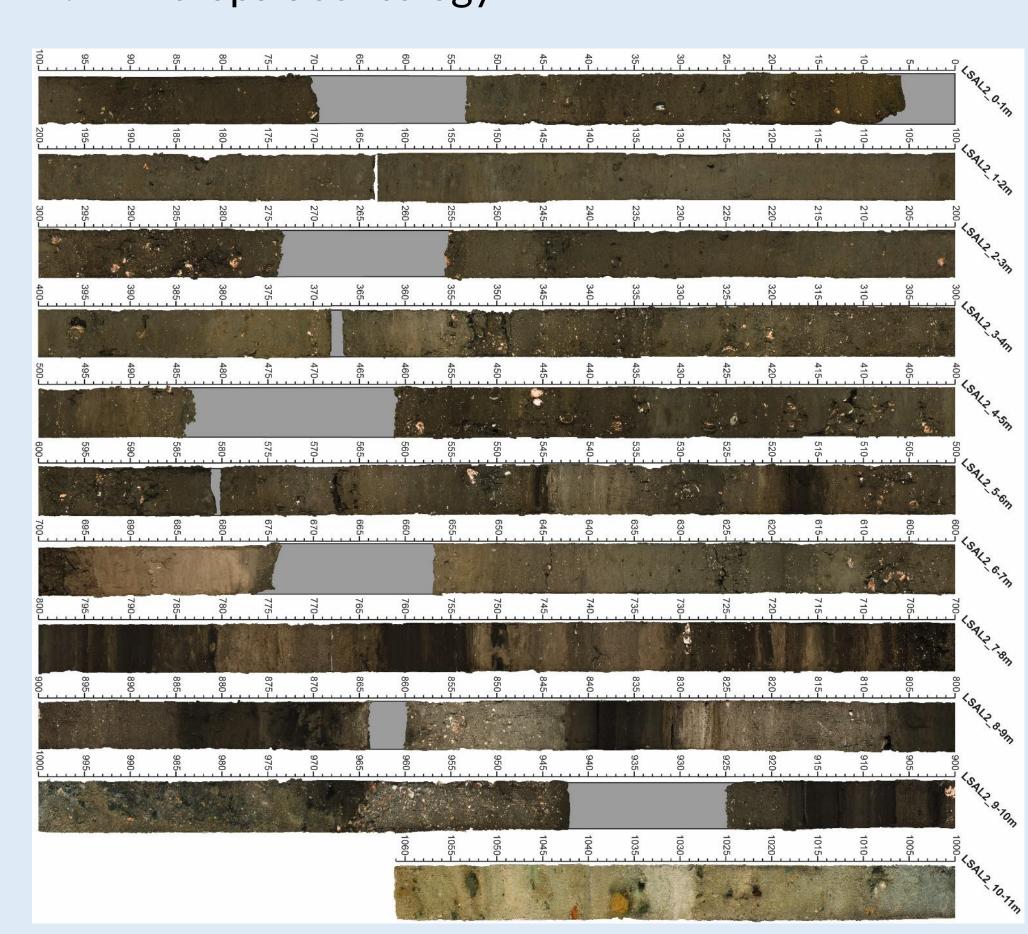
BACKGROUND

- Located at the west coast of Portugal, ca. 80 km south of Lisbon
- Continuous Holocene sedimentation → Excellent geo-bio-archive
- Exposure to extreme wave events
- Artificial annual reconnection to the open sea since at least 17th century AD \rightarrow High recent biodiversity



METHODS

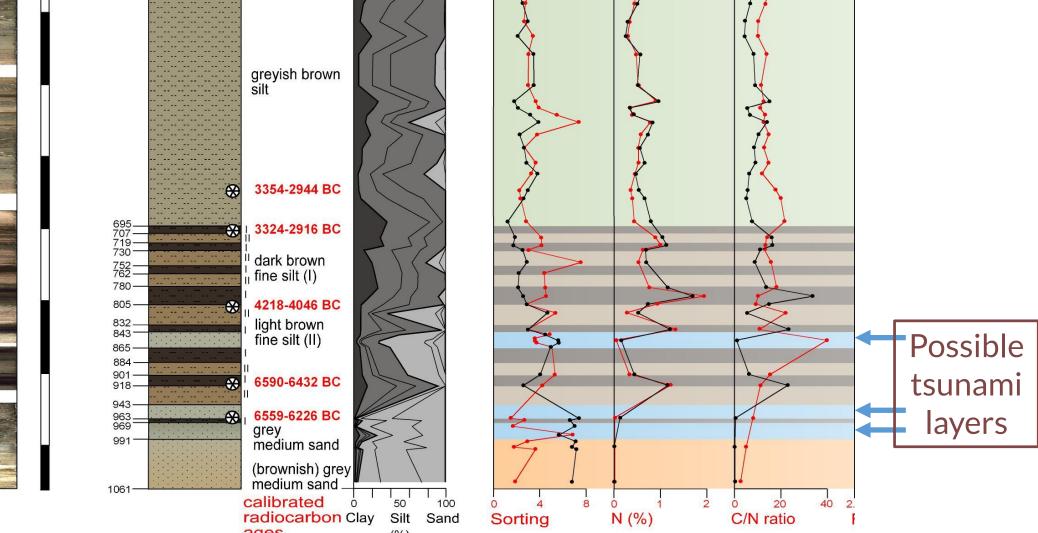
- 1. Lake drilling using a UWITEC floating platform
- 2. Granulometry
- 3. Geochemistry (XRF scans with ITRAX core scanner, C/N analysis, magnetic susceptibility)
- 4. Micropalaeontology

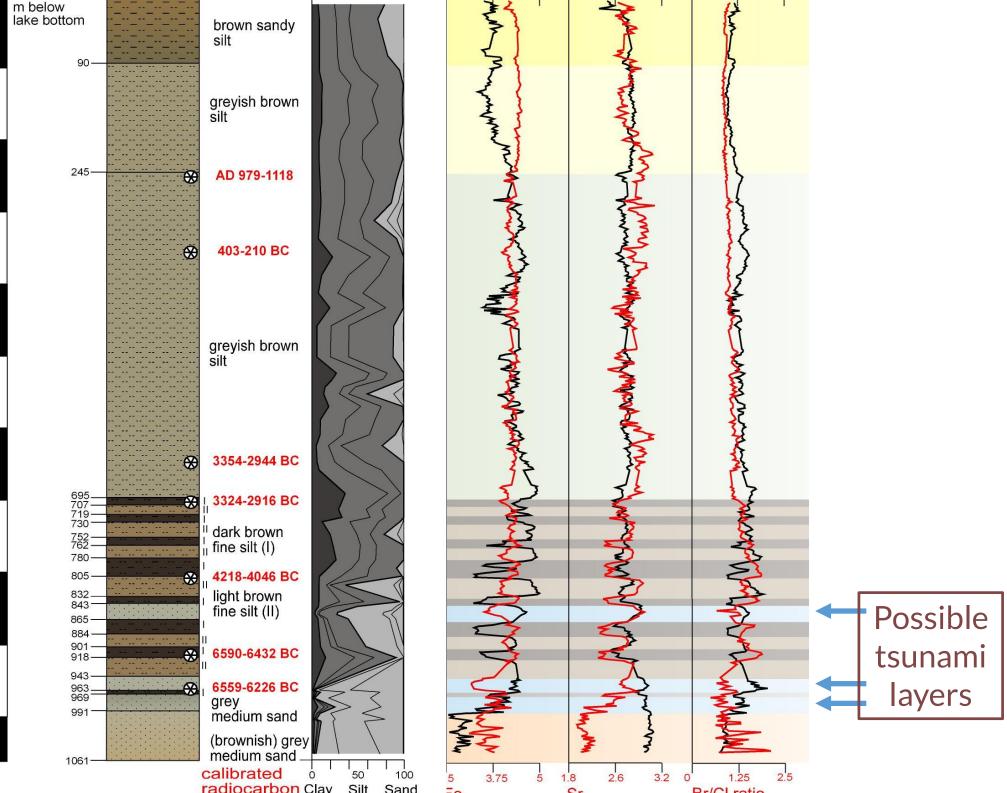


The sediment core reveals evidence of three possible tsunami events between the 7th and 5th millennium BC.



Results of the geochemical analyses





Age/depth model

(according to Blaauw and Christen, 2011)

