Call for Participation

Workshop: **Lake Kinneret Drilling: reconstructing Pliocene-Quaternary hydroclimate and seismic history of the Levant (KIND)**

12-15 July 2025, GFZ, Potsdam, Germany

We invite applications for participation in an ICDP-sponsored scientific workshop on the scientific drilling of Lake Kinneret, focused on the hydro-climate, paleoseismic and paleomagnetic history of the Pliocene-Quaternary East Mediterranean - south Levant region.

The East Mediterranean - south Levant region, at the confluence of Asia, Europe and Africa, and on the fringe of the Sahara Desert, is characterized by regional hydro-climate that is extremely sensitive to even small global climate perturbations. The region has served as a major pathway for the migration "Out of Africa" of fauna, flora and hominids throughout the Quaternary, as well as for the development of human culture. Seismic activity along the rift is a major hazard to infrastructure and human life, and along with future predictions of increased aridity over the coming century, as well as existing severe geopolitical strife, there is a critical need to identify and quantify climate change patterns, seismic risks to infrastructure and human life, and the overall ecological impacts of these processes on the environment.

The late Quaternary Lake Kinneret (a.k.a. the Sea of Galilee) and its late Neogene-early Pleistocene precursors (e.g. Lake Bira), deposited a thick sequence of lacustrine sediments during the past ~ 9 Ma. Seismic profiles across the tectonically subsiding Cursi Basin in the middle of the modern lake, as well as preliminary results from sediment cores, indicate that the sedimentary sequences are flat-lying with no detectable disturbances, except for discrete disturbances that record seismic events. The sediments are dominated by primary authigenic calcite, whose chemical and isotopic composition documents regional hydrology and lacustrine conditions since at least the Pliocene, at an extremely high resolution due to high sedimentation rates. The authigenic carbonates allow for highly resolved dating of the sedimentary sequence across the Quaternary and Pliocene. Accordingly, the Kinneret sedimentary sequence has the potential to serve as one of the longest, and highly resolved lacustrine records on Earth, which is particularly important due to the relevance of this site to: (1) High resolution reconstruction of Pliocene-Quaternary hydro-climate history of the Levant and East Mediterranean, which is considered a major hot spot of projected climate warming; (2) Evaluation of the impacts of climate change on human history and regional ecology; (3) Reconstruction of seismic activity along the Dead Sea Rift since the Pliocene.

The specific objective of the KIND project is to establish a Pliocene-Quaternary chronostratigraphic reference record at a sub-centennial resolution, which will include a hydroclimate record, paleoseismicity record, geomagnetic record, pollen and paleo-botanical record, and chemical and isotopic records (e.g., stable and clumped isotopes).

We invite researchers from the international scientific community, representing a broad range of disciplines, including but not limited to sedimentology, chemo-/bio-/cyclo-/magneto-stratigraphy, isotope and sedimentary geochemistry, organic geochemistry, geochronology, paleobiology, palaeoclimatology, paleomagnetism, structural geology/tectonics, and prehistoric archeology to participate in the workshop.

The workshop is planned to be held at GFZ, Potsdam, Germany. ICDP will (partly) support travel and expenses for selected participants, with financial support preferentially given to early career scientists and participants from low-income countries. Please submit a brief application with contact details, 2-page CV, and a (maximum) 2-page summary of relevant expertise and intended contributions to the workshop to Adi Torfstein (adi.torf@mail.huji.ac.il) and Perach Nuriel (Perach.Nuriel@unige.ch), prior to 1st March, 2025. Participants will be selected by a steering committee and invited on the basis of the relevance of their expertise to the aims of the project and workshop, and the need for a balanced representation of expertise, disciplines, and career stages. Early career scientists are encouraged to apply. Preference will be given to scientists from ICDP member countries.

For more information see: https://www.icdp-online.org/projects/by-continent/asia/kind-israel/