

Eighth GEBCO Science – presentation abstract

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Oral presentation title: Active tectonic, morphology and submarine deformation in the northern Gulf of Eilat/Aqaba

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Abstract

The Gulf of Eilat/Aqaba is the northeast arm of the Red Sea and was formed with the initiation of the Red Sea rifting in the Late Oligocene to Early Miocene. The studied area at the northern part of the Gulf is the transition zone between an echelon basin (the Eilat Deep) to the adjacent continental sedimentary basin in the Arava Valley and might be the location where a transverse fault transfers the major part of the left lateral transform deformation from the east to the west.

The cities of Aqaba and Eilat are built directly over the active faults of the Dead Sea transform (DST) fault system and are most vulnerable to destructive damage from a devastating future tectonic activity.

The aim of this ongoing research (2006-2012), supported by the USAID MERC program, is to evaluate the risks to these cities by conducting detail high resolution geophysical and geological studies of the Gulf Head and the adjacent land area.

The present seminar will describe the complex tectonic setting of the area, the methods we use offshore and on land, the data collected so far, its interpretation and our future research plan.