



Deformation of the Inner Makran Accretionary Prism (SE Iran): First fieldwork results

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The Makran forms one of the world's largest accretionary prisms. It results from the active convergence that began in the late Mesozoic between the Arabian and Eurasian plates. The present-day convergence rate is approximately 4 cm/year. The 500 km width, of which 150 km are offshore, and low taper angle ($\sim 3^\circ$), combined with a 7 km thick sequence of marine sediments, raise several questions regarding the structure, mechanics and rheology of this accretionary wedge.

A large part of the Makran is exposed in southern Iran and Pakistan. Excellent exposure allows combining inland field and GIS-information with offshore, mostly seismic data. We present field observation from the Iranian Makran. Fieldwork focused on the northern, old part of the wedge, from the ophiolites in the north to the Ghasr-e Ghand fault in the south.

The sedimentary succession consists of a several-km thick, mostly Eocene formation of redeposited, dissociated turbidites with a shaly matrix and exotic blocks, the so-called sedimentary mélange, and well-bedded turbidites of Eocene to Miocene age. Combined EW-trending folding and thrusting that seem to be decreasing in intensity southward express a bulk N-S shortening of Eocene to Miocene age. Two sets of NE-SW and NW-SE-striking strike-slip faults offset the thrusts and folds; there strong geomorphologic expression suggests that they are post-Miocene, possibly Quaternary deformation features. Deformation that could be unequivocally related to internal readjustments of the wedge during its continuous frontward growth is absent. In particular, in contrast to the coastal region further to the south, there is no evidence

for widespread normal faulting in the old Makran accretionary wedge.