

Neotectonics along the Mae Hong Son fault in Mae Hong Son province, northern Thailand

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In the Indochina region, since the late Paleogene, the collision of the Indian and Eurasian plates has resulted in predominantly NW-SE and NE-SW strike-slip faults, and N-S dip-slip faults (Tapponnier et al., 1986; Peltzer and Tapponnier, 1988). Important and well-known fault zones in this region include the Red River Fault Zone in Vietnam, the Sagaing Fault Zone in Myanmar, and the Mae Ping and Three Pagoda fault zones in western Thailand (Tapponnier et al., 1986; Morley, 2002; Fenton et al., 2003). The continued plate indentation caused the movement of major strike-slip faults in this region (i.e., the Red River Fault Zone in the eastern side and the Sagiang Fault Zone in the western side). The movement on these faults, accompanied with the regional E-W extension during the Oligocene to early Miocene, initiated the formation of Cenozoic basins in Thailand (Uttamo et al., 2003). The Mae Hong Son area consists of two Cenozoic basins that were developed by the Mae Hong Son fault (i.e., the Khun Yuam and Mae Sariang basins). In order to clarify neotectonics of this region, the Mae Hong Son fault was selected as a target for this study.

Interpretations of remote-sensing, including Landsat TM7 images and aerial photographs provide good information for locations, and morphotectonic features of

fault traces in the study area. The Mae Hong Son fault changes its strike and fault type into three parts; the NW-SE strike-slip faults in the southern part, the NE-SW strike-slip faults in the north, and the N-S dip-slip faults in the central.

Morphotectonic landforms formed by faulting in the Mae Hong Son area are fault scarps, triangular facets, wine glass canyons, hot spring, offset stream and linear mountain front. The Mae Sariang Cenozoic basin is an oval shape that orients in the N-S direction. This oval shape of the basin is bordered on both the eastern and western sides by the N-S-trending Mae Hong Son fault. Based on evidences in the field and remote sensing data, the Mae Sariang Cenozoic basin is interpreted as a releasing bend basin. This basin was possibly developed by the movement of NW-SE strike-slip fault associated with E-W extension.

次回のお知らせ

日時：2月23日(水) 17時より

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