



The geomorphological map of Lake Tana basin (Ethiopia)

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The geomorphological map of Lake Tana basin ($15\ 077\ km^2$, Nile basin, Ethiopia) was prepared from fieldwork data, maps and satellite data that were processed in a GIS system. It contains four major components: (i) hydrography, (ii) morphology and -metry, (iii) materials and (iv) processes. The scale is 1:500 000. The geomorphological setting of the basin consists of lavas that erupted from fissures or (shield) volcanoes during the Tertiary and Quaternary eras, were uplifted and ultimately sculpted by (mainly water) erosion. Lake Tana emerged by the combination of a lava barrier blocking the Blue Nile to the south and by epirogenetic subsidence. Since the time that the lake reached its maximum extent, extensive floodplains were created, river valleys have been filled with sediment and higher laying topography has been eroded. Today, the lake plays a lesser role in landscape formation because of a decreased lake extent ($3041\ km^2$ now) as compared to the ancient maximum ($6602\ km^2$). Dominant processes today are merely fluvial and denudative. Recent (1886-2010) changes in lake coast are small with exception of the delta of the major feeding river, Gilgel Abay, which increased disproportionately the last 15 years. This indicates a large input of sediment which is mainly due to rivers flowing through Quaternary lavas. The recent sediment input increase is most probably related to human induced land-use changes.