

### **D-30: Geomorphological mapping of the west coast of Sri Lanka using aerial photographs**

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Since a detail geomorphological map could be used as a basic tool in the classification of land suitability, soil survey, road construction, nature conservation, etc, mapping of landforms and their allied features is an essential part in the geo-information system (GIS) of an area. However, maps showing landforms and geomorphological processes are very rare in Sri Lanka as compared to other countries. Considering the paucity and the necessity of GIS, an area located in the western coastal plain was selected for the study. Using 10 stereo triplets of aerial photographs, interpretation was carried out to demarcate landforms and their allied features. The tentative map compiled by the interpretation of the aerial photographs was elaborated by means of field checking of each landform.

A classification of landforms included in the legend of the map is based on the genesis. Accordingly 6 categories of landforms were investigated and mapped as marine, fluvial, aeolian, fluvio-marine and structural origin. Further classification of each category of landform was based on the location and relative chronology. Accordingly, 35 landforms were identified and

included in the map. Materials checked in the field supported identification of some fossilized marine landforms. Further laboratory testing on the collected sediment samples is being carried out to identify the landforms originated by the mid-Holocene marine transgression. Since the landforms are demarcated with boundaries and geomorphological details, this could be used as a base map for other surveys in the terrain.