The Badlands as the Most Eroded Landscapes in the Republic of Armenia (RA)

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Relief of a badland type is formed in the closed valleys and basins of the Earth, in subtropical and tropical belts, under conditions of arid and semiarid climate. These and other rather partitioned slopes occupy a considerable part of RA lowlands and are the result of erosion processes peculiarity under the arid conditions of the climate. Researches of badlands usually ascribe the main role in the formation of the relief of this type to endogene factors, leaving minor importance to climatic factors. We have thoroughly observed shortrange rains and heavy showers. The latter ones cause numerous intensive eroded forms of relief. We divide the badlands in RA into 3 types: 1) classical badland on clay, marly and slightly cemented sandstones, 2) structural badlands on main rocks, 3) badlanding slopes. Badlanding slopes are particularly developed on the territory of RA. This phenomenon is discovered by us and serves as a process during which the eroded are so poor in soil-vegetation cover that they become badlands. Badlanding is aggressive phenomenon. This process is stimulated by the anthropogene factor, particularly, the wrong ploughing of the slopes and planless pasturing of small cattle.

Key words: badland, eroded landscapes, soil, arid climate, relief, slope.
Tectonic Geomorphology of Zagros Structural Belt of SW Iran, a type example of Convergence Margin Landform

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ABSTRACT: The morphogeny of the Zagros Structural Belt of SW Iran is the morphotectonic expression of the Alpine-Himalayan subduction cycle and collision of Iranian and Arabian plates which were separated by oceanic crust of Neo-Tethys up to Cretaceous. During Cretaceous subduction started as global event, this led to the closing of Neo-Tethys. The Zagros trough finally closed around Miocene concomitantly with opening of Red Sea. Continued opening of Red Sea created the present Zagros morphogeny during last 4-5 Ma which has generated a relief of about 5 km above mean sea level with development of erosional cycles.

Geomorphologic evidences studied through landsat TM data indicate that the timed sequence of subduction-collisional events resulted in the formation of four lithotectonic-geomorphic zones such as Sanandaj-Sirjan Zone (SSZ), Imbricate Zone (IZ), Zagros Fold Belt (ZFB) and Molasses Cover Sequence (MCS), with tectonically active basement faults boundaries.

Kew Word: Geomorphology, Tectonic, Zagros, Neo-Tethys, Red Sea, Subduction cycle

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Landforms and Their Late Quaternary Evolutions in the Deserts of Northwestern China
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Sand seas, desert plains, pediments, desert gorges, alluvial fans and dried lakebeds are common features in the desert areas of northwestern China. The occurrence of these landforms is much more complex than suggested in previous studies. With a special reference to climate and tectonics, we have been studying the distribution pattern of the various landforms in the desert environment. A comparison between the Taklamakan Desert in Xinjiang and Badain Jaran Desert in Inner Mongolia is presented in order to show the regional difference. In these studies, we pay great attention to the landscape evolutions during the late Quaternary in consideration of morphodynamic changes. The research method includes interpretation of satellite imageries and field examinations. The chronology is based on radiocarbon and thermoluminescence dating. Grain sizes, heavy mineral assemblages and palaeomagnetic properties are analysed to deduce the sources of the different sediments. We think that the shifting of the global and local climate systems has considerably triggered the evolution of landforms in these deserts.

Key words: desert, dune, landscape evolution, global change, China
Geomorphology and Desertification in the Central Burma Basin, Myanmar

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This preliminary presentation introduces overviews of the geomorphological setting of the Central Burma Basin, Myanmar, and desertification there. Desertification in the area is one of the significant environmental problems in the country. The Central Burma Basin lies between the Sinoburman Highlands(East) and the Indoburman Ranges(West). The N-S trending Tertiary volcanic arc separates the Basin into a fore-arc basin to the W (Ayeyarwady river valley) and a back-arc basin to the E (Sittoung river valley). North to east bound subduction and accretion of several plates of Gondwanan affinity developed these features. The sub-basin between 19N and 22N of the fore-arc side is the Salin Basin and mainly underlain by deltaic and fluvial sandstones and transgressive shales. The Salin Basin is also called as the Central Dry Zone and receives ~700mm/yr of monsoon rainfall on average, where erosional processes such as wind erosion, sheet wash, gully erosion, and fluvial erosion and transport appear to be dominant. Serious deforestation in the Central Dry Zone mainly due to expansion of farmland and cutting fuelwoods seems to accelerate the erosional processes, i.e. desertification.

Key words: Myanmar, central burma basin, central dry zone, erosional processes, desertification