

# STRATIGRAPHIC VARIATION IN WESTERN, CENTRAL AND EASTERN HIMALAYAN FOREDEEPS AND ITS RELATION TO HIMALAYAN OROGENY

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Physiographically, the Indian craton is bounded by the mountain chains of Sindh-Baluchistan-Hazara, the Himalaya and the Assam-Arakan fold belts towards the northwest, north and east. On the basis of the compelling geological and geophysical evidences, it is now clear that the Tethys Sea surrounded the northern part of the Indian plate. The northern margin of the Indian plate was carried passively northward as the trailing edge with the subduction zone formed at the northern side of the Tethys Sea. The collision of Indian plate with Eurasian plate and the closure of the intervening sea gave rise to the mighty Himalayan belt and the associated foredeeps defined differently in different parts of the region.

The present study is to amalgamate various stratigraphic and seismic sections considering the structural style and depositional pattern to find out variation of stratigraphic sequences and the dip of the basement in the Himalayan foredeep basins within the frame work of global tectonics. Two main types of foredeep basins with distinct subsidence pattern, basement dip and sedimentary thickness have been inferred. Eastern and northeastern dipping Assam-Arakan foredeep are characterized by low rate of subsidence, less sedimentary thickness and low basement dip. In contrast, the west and northwest Himalayan belt of Sindh-Baluchistan-Hazara shows relatively high rate of subsidence, more sedimentary thickness and high basement dip.