Tectonostratigraphic Evolution and Paleogeographic Reconstruction of Northeastern India.

G.C.NAIK, KDMIPE, ONGC, Dehra Dun, India

Integrating vast amount of geoscientific data, and covering various aspects of the dynamic stratigraphy within the framework of global tectonics, the paper purports to synthesize the regional tectonostratigraphic evolution pattern, discuss the paleogeography and finally compare the evolutionary history of Upper Assam with the global basin classification systems. Geological problems like stratigraphic inconsistencies i.e., sporadic occurrence of Cretaceous to Early Paleocene pre- to syn-rift systems tracts, distribution of Late Paleocene-Eocene interior sag passive margin systems tracts (Kopili Formation) and its present day association with the time equivalent accretionary prism sediments (Disang Group), synchronous deposition of the molasse (Tipam Formation) and the flysch-like sediments (Surma Formation) along the strike of the foreland basin has been addressed in light of the complex geodynamic scenario of the region.

Being evolved due to the rifting and drifting of Indian plate from the Indo-Australo-Antarctica plate during Early Cretaceous time, the region has subsequently developed into a passive margin and later changed into an orogenic belt with evolution of Upper Assam foreland basin during Late Eocene. Oblique Collision and Tectonic Wedging in northeastern part with progressive shifting of orogenic front towards south and southwest explains the stratigraphic problems more lucidly. Tectonic evolution has exerted a major influence on the sedimentation and the subsequent stratigraphic evolution of the northeastern India.