TECTONIC AND CRUSTAL EVOLUTION OF THE PRECAMBRIAN OF CENTRAL INDIA

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The Precambrian lithoassociation in Central India, ranging in age from early Archaean to Neoproterozoic are distributed in two distinct crustal provinces. They are the Southern (SCP) and Northern Crustal Provinces (NCP), separated by a crustal scale shear zone. The shear zone represents the southern part of the Mesoproterozoic Sausar Mobile Belt (SMB) which includes dismembered granulite belts and gneiss-supracrustal associations. The terrain to the south of this mobile belt (the SCP) is included in the Bastar Craton and that to the north (NCP) in the Bundelkhand Craton. The SMB comprises components of both these cratons. The SCP and NCP include older gneiss-supracrustals , younger supracrustals, mobile belts and Proterozoic cover sequences. The older gneisssupracrustals have yielded whole rock ages greater than 3.0 b.y. and include mainly upper amphibolite facies igneous and metasedimentary supracrustals, referred to as Sukma Group. Younger supracrustals, late Archaean to Mesoproterozoic in age, usually occur in large linear belts in unconformable or tectonic contact with older gneiss-supracrustals and include volcanic, sedimentary and granitic components. They show deformation and metamorphism under greenschist to amphibolite facies conditions. Based on the structure/ tectonic overprinting and metamorphic evidences coupled with geochronologic data an older (~ late Archaean) and younger (Mesoproterozoic) granulite-mobile belt association can be recognised in the area. Platformal cover sequences , Palaeo- to Neoproterozoic in age occur in distinct intracratonic basins and comprise dominantly sedimentary or volcanosedimentary lithological components.