

Understanding the Deccan Trap Large Igneous Province in western India is important for deciphering the India–Seychelles rifting mechanism. This book presents 13 studies that address the development of this province from diverse perspectives including field structural geology, geochemistry, analytical modelling, geomorphology and geophysics (e.g., palaeomagnetism, gravity and magnetic anomalies, and seismic imaging). Together, these papers indicate that the tectonics of Deccan is much more complicated than previously thought. Key findings include: the Deccan province can be divided into several blocks; the existence of a rift-induced palaeo-slope; constraints on the eruption period; rift–drift transition mechanisms determined for magma-rich systems; the tectonic role of the Deccan or Réunion plumes; sub-surface structures reported from boreholes; the delineation of the crust–mantle structure; the documentation of sub-surface tectonic boundaries; post-Deccan-Trap basin inversion; deformed dykes around Mumbai, and also from the eastern part of the Deccan Traps, documented in the field.