

Contents

Foreword	V
1. General introduction	1
1.1 Area and population	1
1.2 Geological research, economic development, infrastructure	1
1.3 Physiographic units	7
1.4 Climate and vegetation	12
2. Regional geology	16
2.1 Setting within Southeast Asia	16
2.2 Regional structural features	19
2.3 Indo-Burman Ranges, Arakan Coastal Area, Bay of Bengal (by D. BANNERT & D. HELMCKE)	22
2.4 Inner-Burman Tertiary Basin	32
2.5 Sino-Burman Ranges (by J. BRINCKMANN)	36
2.6 Eastern Himalayas (by D. BANNERT & D. HELMCKE)	41
3. Stratigraphy, tectonics and magmatism	43
3.1 Stratigraphy	43
3.11 Precambrian and Paleozoic (by J. BRINCKMANN)	43
3.111 Precambrian	43
3.112 Late Precambrian and Cambrian	51
3.113 Ordovician	55
3.114 Silurian	61
3.115 Devonian	65
3.116 Carboniferous	68
3.117 Permian	72
3.12 Mesozoic and Cenozoic (by F. GRAMANN)	77
3.121 Triassic	77
3.122 Jurassic	83
3.123 Cretaceous	86
3.124 Tertiary	89
3.125 Late Tertiary and Quaternary	99
3.2 Tectonics	104
3.21 Indo-Burman Ranges and their W foreland (by D. BANNERT & D. HELMCKE)	104
3.22 Eastern Himalayas (by D. BANNERT & D. HELMCKE)	107
3.23 Inner-Burman Tertiary Basin and Gulf of Martaban (by D. BANNERT)	110
3.24 Sino-Burman Ranges (by J. BRINCKMANN)	114
3.3 Magmatism	123
3.31 Pre-Mesozoic igneous rocks (by J. BRINCKMANN)	123
3.32 Mesozoic and Cenozoic igneous rocks	127
4. Paleogeographic evolution	143

5. Energy, metallic and non-metallic raw materials, water and soil	157
5.1 Energy raw materials	158
5.11 Hydrocarbons	158
5.12 Bituminous rocks	169
5.13 Coal, peat	169
5.14 Nuclear fuels	172
5.2 Metallic raw materials	173
5.21 Noble metals, iridium, osmium, selenium, tellurium, niobium, tantalum, rare earths	175
5.22 Non-ferrous metals, tin, tungsten (by J. BRINCKMANN)	177
5.23 Iron and metals for steel alloys	193
5.24 Light metals	199
5.25 Special metals	201
5.3 Non-metallic raw materials	202
5.31 Industrial minerals	202
5.32 Stones and earths	206
5.33 Precious stones and semi-precious stones (by J. BRINCKMANN)	207
5.4 Water and soil	212
5.41 Surface water	212
5.42 Thermal springs	214
5.43 Groundwater	217
5.44 Soils and soil utilization	221
Bibliography	226
Locality Index	261
Subject Index	279