

DEVELOPMENT OF NORTH EASTERN REGION

WORK DONE BY GEOLOGICAL SURVEY OF INDIA(GSI) IN NORTH EASTERN REGION

11.1 A total of 33 nos. of investigation were carried out in NER (including Sikkim) during 2002-2003.

Specialized Thematic Mapping

11.2 A total area of 400 sq.km area was covered for specialized thematic mapping in Pakke- Kessang area, East Kameng district, Arunachal Pradesh and Tyrsad- Barapani shear zone, Ri-Bhoi district, Meghalaya with special emphasis on the Basement - Shillong Group relationship

Photo Geological Mapping

11.3 Photogeological studies were taken up in the gap areas of Arunachal Pradesh.

Regional Geochemical Surveys

11.4 Regional geochemical mapping in Hamren Sub Division, Assam was taken up.

Mineral Investigation

11.5 A total of 6 investigations on basemetal, dimension stone, limestone and shelly limestone were taken up.

11.6 In Sikkim, investigation for basemetal (copper) in Rungdu-Sodunglakha-Kerabari area, East Sikkim district was continued. Mineralisation is hosted by quartz-chloritoid-biotite schist where a few spot high values (1.5-2% Cu) are recorded in all the three areas; but drilling could not intersect any significant mineralisation. However, the investigation will continue to cover an area of 700m x 400m between Kapchey block and Rungdu block in the field season 2002-03.

11.7 Finding out of a promising area of dimension stone of 2.75km X 1.25 km around Darka-Deoli and Calc granulite band with good polishing characteristics with an area of 3.5 km X 1km at Matia ridge, Goalpara district, Assam are mentionable. The coarse to medium grained, massive, grey to pink granites occurring in area between Malangkhar & Kynshi and the dark grey, fine grained granite bodies of Lawar area of Meghalaya can also be used as dimension stones.

11.8 Investigation for limestone in Jalapet block, Jaintia hill district Meghalaya revealed a tentative reserve of 294.250 million tones of probable category of all grades. A total probable limestone reserve of 555 mt.has been calculated from data accrued in 20 boreholes drilled in Lanket block, Jaintia hill district, Meghalaya. In Mizoram, reconnoitary traverses taken up during FS 2001-02 indicated the presence of four shelly limestone bands around Tuirial, four bands in PHE area and two bands in Sesawang in Aizwal district. The bands extend over a strike length of 1km and thickness varying from 1m to 5m.

Geoenvironmental Studies

11.9 Four items of geoenvironmental studies were taken up

11.10 Geoenvironmental appraisal studies have been carried out in the Tista Basin, upstream of Singtam, Sikkim. Landuse pattern of Nanching town is primarily governed by altitude, drainage and communication facilities. Distribution of cultivated land increases in the downstream side in the southern part of the area and the human settlements are distributed in a diffused pattern.

11.11 Dobaka area, Nagaon district, Assam is drained by Jamuna river originating from Mikir hills. The prolonged use of water with high fluoride content is responsible for the teeth decay, development of black spots on teeth, stiffening of joints, twisting of limbs etc. observed among a part of population in Tapatjurigaon, Kacharipara, Karaiguni, Nibagaon and Basariguni villages, Nogaon district, Assam.

11.12 Landslide Hazard Zonation mapping was carried out in parts of Aizwal and Kolasib districts, Mizoram. Landslide inventory along NH54 between north of Sairang and north of Kolasib has been completed.

DOVEMAP

11.13 Under the Development of Village Economy Through Mineral Appraisal Project (DOVEMAP) in Assam, Meghalaya and Tripura 88 villages were covered. Thematic maps on geology, geomorphology, soil, land use, natural resource and environmental hazards were prepared for each village on cadastral map base. In addition data on socio-economic scenario, rainfall, demography etc. were also collected. The areas are mainly covered with quaternary and recent river sediments, which may be categorised as older alluvium, younger alluvium and recent flood plain. River bank erosion, gulying of the surface of older alluvium and water logging are the main natural hazards recorded in the area.

Earthquake Geology

11.14 Magneto-telluric (MT) and deep electrical resistivity soundings (DES) along Tamulpur-Guwahati-Shillong-Dawki corridor was carried out to decipher deep crustal structure. The MT study has brought out different sub-surface layers up to a depth of 20 Km. Conductive zones are inferred at a depth range of 8-15 Km at some places within the study area. DES data on the other hand, shed light on the basement depth.

11.15 A Micro Earth Quake (MEQ) database of NER, based on GSI temporary network and NGRI/RRL (Jorhat) permanent network data (1980-99) has been prepared.

11.16 Active fault mapping for neotectonic and paleoseismic studies in Garo hills, Meghalaya has been taken up. Under this programme 25 sq.km was mapped in 1:25,000 scale and detail mapping of 0.25 sq.km in 1:5000 was carried out.

11.17 A local area seismic network was operated between 20.01.2002 and 30.05.2002 in the Jaintia hills and north Cachar hills. 95 local and teleseismic events were recorded during the period. Processing of data is in progress.

Geotechnical Investigations

11.18 4 items with 25 components were taken up and suitable recommendations have been made.

Geophysical Surveys

11.19 One item of Gravity -Magnetic Surveys was taken up in Ri-Bhoi district, Meghalaya and necessary data have been collected.

WORK DONE BY INDIAN BUREAU OF MINES (IBM) IN NORTH-EASTERN REGION

11.20 Sub-regional office of IBM at Guwahati continued to undertake inspection of mines/ studies on development of resources of the North-Eastern region. During the period 5 mines were inspected for enforcement of provisions of MCDR, 1988 and for processing and disposal of mining plans.

11.21 IBM has also taken up the following studies which are in progress.

- (a) Three technical consultancy assignments on preparation of mining plan & mining scheme and topographic survey.
- (b) Preparation of Environmental Management Plans in respect of four mines.
- (c) Beneficiation studies on silica sand and clay samples collected from North-Eastern States.

11.22 In addition to the assignments in progress, IBM has completed 2 assignments on preparation of (i) Mining scheme of Umrangso Limestone Mine for M/s Umrangso Cements Ltd., and (ii) Mining plan of Bhotang copper mine for M/s Sikkim Mining Corporation and submitted the reports. Seven beneficiation studies on Silica sand, clay and copper-lead-zinc samples from North-Eastern States were also carried out.

11.23 A work shop to discuss and finalise the proposals for North-Eastern Assistance Programme of IBM was organised at Nagpur, in which seventh representative of State DGMs of North-Eastern States and IBM officers participated.

11.24 Action to procure and supply Table Top/Lap Top computers, Research Polarising Microscope, Single disk grinding polishing machine, Vibrating cup mills, Flourimeter, Environmental monitoring kits etc., to the North-Eastern States are in progress.