

**MINUTES OF THE THIRD MEETING OF CGPB COMMITTEE VIII
(GEOLOGY AND MINERAL RESOURCES OF NORTH EASTERN REGION)
SHILLONG , DATE: 04-08-2010**

03.00.00 The 3rd Meeting of the Central Geological Programming Board committee-VIII “Geology and Mineral Resources of North Eastern Region” was held on 04-08-2010 in Conference Hall of North Eastern Council, Shillong under the chairmanship of Shri Jitendranath Ray, Deputy Director General & HOD, Geological Survey of India, North Eastern Region & the Convenor of Committee VIII.

The following officers of various Member Organisations attended the Committee Meeting and participated in the discussions.

Sl. No.	Name & Designation	Name of the Organisation
1.	Shri J.N. Ray, Dy. Director General & HOD, Convenor	Geological Survey of India, North Eastern Region, Shillong.
2.	Shri A.K. Bhandari, Advisor	C-Tempo, Ministry of Mines
3.	Shri N.K. Dhir, Director (G) & PSS and Member Secretary	Geological Survey of India, North Eastern Region, Shillong.
4.	Dr. Indra Prakash, Director & Regional Mission Head Mission-IV (Multidisciplinary Geoscience)	Geological Survey of India, North Eastern Region, Shillong.
5.	Shri Suhas Khadse	Mineral Exploration Corporation Ltd., Nagpur.
6.	Shri G.C. Saha, Regional Director	CGWB, NER, Taran Nagar, Guwahati-781005
7.	Shri A.B. Chowdhury, Director	Ministry of Earth Sciences
8.	Shri R.K. Porwal, Reg. Min. Geol.	IBM, Nagpur
9.	Shri G.B. Joshi, Dy. Regional Director	AMD, NER, Shillong
10.	Dr. P.P. Nageswara Rao	NESAC, Barapani, Shillong
11.	Dr. D.K. Bhattacharyya	Directorate of Mineral Resources, Shillong
12.	Shri J.K. Sinha, Jt. Director	D.G.M., Govt. of Manipur
13.	Dr. M.K. Sarma, Jt. Director (G)	Directorate of Mineral Resources, Shillong
14.	Shri H.H. Choudhury	D.G.M., Govt. of Assam
15.	Dr. H. Lallenmawia	D.G.M., Govt. of Mizoram
16.	Shri P.B. Sarolkar, Director & Regional Head Mission-III	Geological Survey of India, North Eastern Region, Shillong.
17.	Shri D. Jayapaul, Director & Regional Head Mission-IV (Fundamental Science)	Geological Survey of India, North Eastern Region, Shillong.
18.	Shri K. Chinnuswamy, Director (Chem.) STSS-Chem. Lab.	Geological Survey of India, North Eastern Region, Shillong.
19.	Dr. Baldau Singh, Director (Geophy.)	Geological Survey of India, North Eastern Region, Shillong.
20.	Dr. B.K. Sareen, Supdt. Geologist	Geological Survey of India, North Eastern Region, Shillong.
21.	Shri T. Rajakumar, Supdt. Geologist	Geological Survey of India, North Eastern Region, State Unit, Tripura-Mizoram, Agartala.
22.	Shri R. Baskaran, Supdt. Geologist & Regional Head Mission-IA	Geological Survey of India, North Eastern Region, Shillong.

23.	Dr. K. Mazumdar, Director & Regional Mission Head Mission-V	Regional Training Institute, G.S.I., NER, Shillong.
24.	Shri J.C. Dutta, Supdt. Geologist & Regional Head Mission-II	Geological Survey of India, North Eastern Region, Shillong.
25.	Dr. H.S.M. Prakash, Supdt. Geologist & Regional Head Mission-IB	Geological Survey of India, North Eastern Region, Shillong.
26.	Shri A.K. Sharma, Supdt. Geologist	Geological Survey of India, North Eastern Region, State Unit, Arunachal Pradesh, Itanagar.
27.	Dr. Abhijit Roy, Sr. Geologist	Geological Survey of India, North Eastern Region, Shillong.
28.	Shri Rajib Chakraborty, Senior Geologist	Geological Survey of India, PSS (P&M) CHQ, Kolkata
29.	Dr. S. Raju, Supdt. Geologist	Geological Survey of India, North Eastern Region, State Unit, Manipur-Nagaland, Dimapur
30.	Shri K.V. Ramachandran, Supdt. Geologist	Geological Survey of India, North Eastern Region, Shillong.
31.	Shri S. Ramamurthy, Supdt. Geologist	Geological Survey of India, North Eastern Region, Shillong.
32.	Shri J.M. Gautam, Supdt. Geologist	Geological Survey of India, North Eastern Region, Shillong.
33.	Dr. K.S. Raghav, Sr. Geologist	Geological Survey of India, North Eastern Region, Shillong.
34.	Shri Alok Chitranshi, Sr. Geologist	Geological Survey of India, North Eastern Region, Shillong.
35.	Shri B.K. Mishra, Sr. Geologist	Geological Survey of India, North Eastern Region, Shillong.
36.	Dr. S.C. Tripathi, Sr. Geologist	Geological Survey of India, North Eastern Region, State Unit Sikkim.
37.	Dr. V.V. Sessa Sai, Senior Geologist	Geological Survey of India, North Eastern Region, Shillong.

03.01.00 Welcome Address by the Member Secretary

The Member Secretary welcomed all the members and invitees to the 3rd Meeting of the CGPB Committee VIII on “**Geology and Mineral Resources of North Eastern Region**”. He expressed his concern over thin attendance of the members and permanent invitees and requested all to ensure their attendance in all future meetings.

He also requested all States to conduct SGPB Meetings well in time and send the approved agenda items for consideration by this Committee. All the proposals approved during the SGPB meetings should be in freehold areas and forest clearance obtained so that the proposals once approved and finalised are not dropped for want of such clearances. He also stressed that proposals should be formulated keeping in mind the manpower constraint in GSI. GSI is ready for collaborative programmes and can exchange scientific data with the State DGMs. He requested that the state departments should prepare short, medium and long term proposals and five year rolling plans to facilitate flawless comprehensive national planning and allow everybody to plan with judicious utilisation of resources.

(Action: State DGMs)

He further informed that the Base Document on Committee-VIII has been circulated to all members for their views and comments for consideration, discussion and finalisation of the document. He requested all the members who have not yet responded to send their comments at the earliest. At the end he urged all to participate in the meeting with zeal and enthusiasm and hold discussion within the defined terms of reference for this Committee.

(Action: All Members)

03.01.01 Inaugural Address by the Convenor

The convenor welcomed all the delegates and requested to introduce themselves to the house. He informed that the basic objective and purpose of this Committee meeting is to facilitate interaction among the various State Government Departments and Stakeholders engaged in geoscientific pursuit in the North Eastern Region for better appreciation of geological resources & constraints and also to exchange ideas among members in order to arrive at fruitful results with comprehensive and integrated approach.

He informed that the process of interaction between NER, GSI and State DGMs and Stake holders have been continued. Recently, we had dialogue with DGM, Assam on various proposals of investigations in Assam on manpower sharing basis. Discussion was also held with the Principal Secretary, Mining & Geology, Govt. of Meghalaya on the scope of taking up new programmes on coal, limestone or decorative stones during FSP 2010-12 of GSI, NER. GSI, NER desires further interaction with other DGMs as well. He urged to conduct SGPB meetings regularly.

He also informed that various private entrepreneurs and public institutions have shown interest in exploration and exploitation of mineral resources of NE Region during the investors' Meet at Guwahati, held in November, 2009. He also informed about the scope of dissemination of GSI data and facilitating training programmes at GSI TI

He informed the house that a number of courses have already been conducted by the RTI, Shillong to cater to the need of the State Departments. A few courses by FTC at Aizawl are being envisaged in near future.

He requested the State DGMs to come forward with proposals for training of their officers at RTI and FTC. GSI, NER is looking forward to closer interaction with state DGMs on this issue. He further stressed that SGPB meetings should be held at least 6 months before the main CGPB meeting to facilitate incorporation of proposals from state departments in the FSP of GSI.

(Action: All State DGMs)

03.02.00 Confirmation of the Minutes of the 2nd Meeting of the Committee VIII

In his initial remarks, the Member Secretary informed that no action taken report has been received from participating agencies for followup action. However he presented the action taken by GSI.

He requested all the state departments to submit their agenda items well in time so that it can be incorporated in the review material.

(Action: All State DGMs)

Reacting to 02.02.01 (1st paragraph) Director RSAS informed the house that heliborne survey is proposed to be carried out over the ophiolite belt of Manipur-Nagaland & Barapani shear zone, Meghalaya.

03.02.01 Reacting to 02.02.01(last para) the Member Secretary informed that due to delayed holding / not holding the SGPB meetings by the state DGMs, it is now too late for incorporation of the proposals in FSP documents. However agenda items have been received only from Mizoram (on 03.08.10) and Manipur (31.07.10).

03.02.02 Reacting on para 02.02.05, the Member Secretary informed that no new proposal for customised training has been received from State DGMs. He informed that a total of 12 participants took part in the training programme conducted for the Surveyors of DGM. He also informed that “Training programme on Drilling techniques” and “Field Workshop on landslide studies at Gangtok” had to be deferred for non-receipt of sufficient nominations from State departments. He once again requested all the DGM to come forward with their need for training and forward sufficient nominations for conducting the training programme.

03.02.03 During the discussion on para 02.03.05, the convenor informed that discussions were held between GSI and NESAC and draft MoU has been forwarded to DG, GSI for approval. Director, NESAC informed that the letter of concurrence from Dy. DG GSI, NER, Shillong will suffice to initiate the programme.

On query from the Member Secretary, whether any State DGM has interacted with NESAC for remote sensing inputs the Director, NESAC informed that only DGM, Nagaland has approached the NESAC for helping them in preparing the ground water resource map of Nagaland. He also stated that NESAC had provided plan of action to MOES for Lafarge projects.

03.02.04 During discussion on para 02.04.03, it was informed to the house that GSI has provided technical know how and literature to DGM, Assam regarding the exploration for dimension stones. Dr. S. Raju, Supdt. Geologist took joint field traverses with officers of DGM, Assam in connection with the investigation of decorative stones.

03.02.05 On a query by the DGM, Mizoram on para 02.02.03 on the Core Committee the Member Secretary informed that no nominations were received for constitution of Core Committee. Shri A. K. Bhandari, Advisor, suggested that the Core Committee should be constituted at the earliest.

(Action: All DGMs)

The minutes of the meeting were confirmed by the house.

03.03.00 Discussion on the Draft Base Document of CGPB Committee VIII

03.03.01 During discussion Shri Rajiv Chakraborty, Sr. Geologist, CHQ informed that a lot of work has been done to establish the Geology and Mineral

Resources of NER and GSI has developed the base line data for the prognostication for geologically potential domains. With these base line data now we have to narrow down areas for future assessment. It is time now to reassess the low grade deposits. In this connection he informed that the base document should include the status of exploration by the State Departments and other organisations engaged in the Mineral Exploration as well.

(Action : All Members & Invitees including State DGMs)

03.03.02 Shri A.K. Bhandari, Advisor, C-TEMPO informed the members that a lot of effort has been made by the Govt. India for the development of NER and same was emphasised during the conference for Investors Meet in Nov. 2009. He further said that as North Eastern Region is prone to geological hazards, e.g., seismic hazard, a judicious mix of mineral investigation data and the hazard mitigation measure data should be incorporated in the Base Document. He pointed out that there is shortage of manpower in GSI as well as in DGMs. Therefore, proper collaboration in respect of resources is required and future work planned judiciously.

03.03.03 The representative from Atomic Minerals Division requested that the information on Meghalaya Uranium prospect and alkaline suites of rocks of Assam should be incorporated in the Base Document. He also emphasized on adding information on the potential areas for further investigations. The Convenor requested AMD to submit the information of all the States in a classified manner for incorporation in the document.

(Action: AMD)

03.03.04 The representative of Mizoram pointed out certain mis-spelt locality names, and need for some corrections in the resource potential. The Convenor requested him to convey all suggested corrections for incorporation in the document.

(Action : DGM, Mizoram)

03.03.05 The Regional Director, CGWB appreciated the document and stressed upon inclusion of Geoenvironmental aspects in coal and limestone areas in the document. He also emphasized on the need of collection of some of water samples which are to be analysed for heavy metals. He informed that there are reports for arsenic pollution in Dhemaji and Kamrup districts of Assam. Therefore comprehensive information on Geoenvironmental studies should be included in this document. The Convenor assured that a state wise data on water resources (as provided by CGWB) can be incorporated in the document.

(Action : Member Secretary)

03.03.06 The representative from IBM, informed that they will provide the information on the mineral resources of NER as per the UNFC classification so that latest data can be incorporated in the base document.

(Action: IBM)

03.03.07 The representative of MOES informed that there is a need for exploration for deeper deposits and accordingly the need of technology

development will be appreciated. Shri N.K. Dhir, Member Secretary informed that GSI has already planned a heliborne surveys in parts of Meghalaya (Barapani shear zone) and Manipur-Nagaland states (Ophiolite belts) which will be helpful in identifying potential blocks for deeper level exploration.

- 03.03.08** The Director, NESAC once again requested GSI to finalise the MOU so that work can be initiated at the earliest. He also informed that NESAC will provide free training to GSI officers to carry out the studies and NESAC will also provide information for the district resource maps. He informed that GSI has done a very good work on disaster management, risk assessment and seismic microzonation for Guwahati city. NESAC has signed MOU with the State Govt. of Assam to prepare multi hazard zonation maps for Dibrugarh and Silchar town which will be an UNDP programme. Therefore there is a need for better interaction between GSI and NESAC for better studies in this regard. The Convenor appreciated the proposal and assured that any information required for the studies can be provided to the State Govts. as well as NESAC free of cost.

(Action: GSI/NESAC)

- 03.03.09** The Member Secretary requested all the members to provide data on suggested additions and modifications in the base document in soft copy as well as hard copy by 11th August 2010 so that the base document can be finalised before the main CGPB meeting.

(Action: All Members)

- 03.04.00** **Review of work done during the F.S. 2009-2010**

- 03.04.01** **Other Member Agencies, Permanent Invitees & Co-opted Member**

During discussion the Joint Director of DGM, Manipur informed that due to late receipt of fund some of the items could not be taken up. The drilling programme with CGWB did not materialise and the backlog will be completed by Sept. 2011. Regarding decorative stones exploration, Govt. of Manipur will require guidance from GSI. The Convenor informed that GSI will give support for further work.

The representative from DMR, Meghalaya informed that three limestone investigations and one investigation for silica sand have been taken up during F.S. 2009-10. He also informed about the proposals to be taken up during F.S. 2010-11. He requested GSI to take up a programme on mapping of underground caves. The Convenor informed that underground mapping of caves require lot of resources including time and manpower. However, for the time being GSI can only provide a map showing limestone occurrences in which the caves can be marked by DMR, Meghalaya.

Representative from Assam informed regarding the investigations for limestone in New Umrangsho area (T.S.No. 83C/14) and investigation of coal at Amlakhi-Manja area, Karbi Anglong district of Assam. Both the investigations will continue with systematic drilling to assess the potential blocks.

The representative from MECL informed that the Jiyajuri work has been completed. Regarding oil shale potential, they will submit the report. The work on Rupa dolomite has started in May, 2010

During discussion, the Regional Director, CGWB informed that they have conducted studies in 30 boreholes during FSP 2009-10. He also informed that it is not possible to work in Manipur.

IBM representative informed that they are preparing the National Mineral Inventory.

Representative from MOES informed that they are not involved in Mineral Exploration.

Dr. Joshi of AMD made a presentation on AMD activities in Wahkut Drilling Block and Umthongkut Drilling Block.

03.04.02 GSI (Mission Mode) - by the Mission In-charge of Missions I (A,B), II A,B), III and IV (Fundamental and Multidisciplinary Geoscience)

The Regional Mission Heads and Mission In-charges of GSI, NER made presentation on various GSI activities under Mission-I A,B, II, III & IV.

03.05.00 Outline of the proposed action plan

03.05.01 Other Agencies (2010-2011)

The proposals of other agencies were discussed in the meeting. The representative from Govt. of Mizoram presented the Annual work programme of Geology & Mining Wing, Deptt. of Industries for the F.S. 2010-11. This programme has been approved in the SGPB Meeting. The representative of the Govt. of Manipur informed that during F.S. 2010-11 three items of investigation programmes have been proposed.

Project No. 1 : **Prospecting of Limestone in Chandel District, Manipur (Toupokpi-Nungpal-Chakpikarong and Pallel, etc.).**

Project No. 2 : **Geo-chemical prospecting of Minerals (base metal, noble metals, etc.) at Khudengthabi-Lalchao area in Chandel District, Manipur.**

Project No. 3 : **Exploration & Industrial Testing of Serpentinite of Manipur at Khudengthabi-Kwatha area in Chandel District, Manipur.**

03.05.02 GSI (2010-12)

The Convenor informed that the new FSP of GSI will be implemented for 1 ½ years with effect from 01-10-2010 to 31-03-2012.

The Mission In-charges of various Missions of GSI informed regarding the proposed items for F.S. 2010-12.

03.05.03 Training programmes of RTI, Shillong and FTC, Aizawl, NER under Mission-V

The Director, RTI informed the house regarding the courses already conducted and to be conducted under Mission-V in RTI, Shillong and FTC, Aizawl. He informed that the course on the training programme in Drilling techniques for officials of DGMs, NER will be conducted from 18.08.2010 to 03.09.2010. Course on Remote Sensing & Geographic Information System for DGMs in NER will be conducted during 14.09.10 to 22.09.10 at Aizawl. He informed that the matter was discussed in the SGPB Meeting. The State Govt. has been requested to provide accommodation and support for the inauguration of the FTC. The representative from Govt. of Mizoram assured to give all support for the establishment of FTC at Aizawl.

(Action: State Dept of Mizoram)

He also requested all State DGMs to be liberal in nominating officers for the trainings being organised by GSI.

(Action: State DGMs)

03.06.00 Discussion on agenda of State DGMs and other agencies

03.06.01 Discussion on Agenda of Govt. of Mizoram

Agenda - 1 : Investigation for Micro seismic Hazard Zonation of Aizawl city, the capital of Mizoram : The representative of Mizoram requested GSI to take up the Micro seismic study of Aizawl city. Shri K. Mazumdar informed that GSI has report on Urban Geology of Aizawl city conducted during 2007-08. He suggested Mizoram Govt. to develop their expertise. Shri N.K. Dhir, Member Secretary requested Mizoram Govt. to nominate officers for training on 'Micro seismic study' to enhance their capacity in order to take up collaborative project with GSI. Dr. Mazumdar informed that as per the plan for 11th Five Year Plan, GSI has already planned for Micro seismic Zonation map of Jorhat city during F.S. 2010-12. Therefore, GSI can only depute the officer for advice and guidance if Mizoram takes up the programme on their own as GSI has limited experts to carry out such studies in NER.

(Action : DGM, Mizoram)

Agenda - 2 : Detailed Geological and Geotechnical Investigation of Khuangchera Puk near Reiek, Aizawl District for Geo-tourism aspect: Regarding Geological and Geotechnical studies on the historical tunnel/underground cave the Convenor informed that this will be a multi disciplinary work and requested Mizoram Govt. to submit their proposal indicating the nature and quantum of work to be involved so that GSI can consider to take up the programme in future.

(Action : DGM, Mizoram)

Agenda - 3 : Geological impact study of construction of heavy constructions in Aizawl city: On this issue Dr. K. Mazumdar, Supdt. Geologist informed that the construction activity should be made as per the building by-laws and strict implementation of by-laws to be ensured.

Agenda - 4 : Mapping of active fault zones of Mizoram for Earthquake monitoring and human safety: It was informed that RRL, Jorhat is carrying out earthquake monitoring in the area. The Convenor requested DGM, Mizoram to identify active faults & submit proposal for a specific fault for consideration. Dr. Mazumdar intended to carry out preliminary examination of active faults proposed by DGM, Mizoram and accordingly a programme can be chalked out in future.

(Action : DGM, Mizoram)

Agenda - 5 : Study of Mineral reserve for building stone and sand deposits in different districts in Mizoram: The Convenor informed that minor mineral is in the purview of the State Govt. Geology & structures of Mizoram are simple and such studies can be taken up by the State Govt. However, the available information / reports on minor minerals can be obtained from GSI.

(Action: Govt. of Mizoram)

03.06.02 Discussion on Agenda of Govt. of Manipur

Item - 1: Geophysical Prospecting for Chromite in Manipur by GSI : The Convenor informed that this programme may be taken up during F.S. 2012-13. It was informed that Heliborne Survey is proposed for ophiolite belt of Manipur. The representative of MECL informed that if feasible MECL can take up drilling work and he requested Manipur Govt. to submit detailed proposal.

(Action : DGM, Manipur)

Item - 2 : Lithostratigraphic Mapping of Barail and Surma Sediments in Tamenglong and Churachandpur Dist., Manipur for locating Coal occurrences : The Member Secretary informed that this has been already discussed in the 46th CGPB Meeting, wherein it was suggested that GSI can take up collaborative work with Geology & Mining Deptt. and requested GMD to hold detailed discussions with the Director GSI, Dimapur. GMD did not follow it up. It is once again requested that GMD may submit detailed programme including coordinates and background information from the most potential area for a collaborative programme.

Item - 3 : Photogeological Mapping / Systematic Geological Mapping of the area covered by the Survey of India Toposheet No. 83H/16 and 84E/13 in Chandel District, Manipur : The proposed sheets will be covered during the execution of MOU between NESAC & GSI. The photogeological map will be finalised by NESAC and GSI joint collaborative studies. The Manipur Govt. will get information after mapping is over.

Item - 4 : Capacity Building Training Programme for Delineation and Raising / Mining of industrially workable blocks of Serpentinites in the Ophiolite Belt in Chandel and Ukhrul District, Manipur : The Convenor requested the State representative to contact Director, RTI Shillong for the training programme on 'Dimensional Stone Studies'.

(Action: DGM, Manipur)

Shri A.K. Bhandari, Advisor advised DGM, Manipur to contact "Centre for development of Stones", MOM funded agency in Jaipur for work related to mining of blocks.

03.07.00 Discussion on policy issues and functioning of the committee within the framework of Terms of Reference

The Convenor informed that suggestions from SGPB Meetings for policy decisions may be communicated to the Committee VIII for discussion in the 47th CGPB Meeting

03.08.00 Discussion on proposed workshop on Medical Geology at GSI, NER, Shillong

Shri P.B. Sarolkar, Director, GSI informed that the Workshop on Medical Geology has been proposed to be held during 27th-28th September, 2010. DG, GSI has already approved for conducting the workshop. The first circular will be submitted next week. He requested all member organisations to participate in the workshop and submit abstract within one month. The workshop will deal with arsenic and fluoride related hazards on all India basis. The circular will be put in the GSI portal.

03.09.0 Any other agenda for discussion with the permission of the Chair

The Convenor requested all the member organisations to submit their additional agenda at the earliest so that these agenda can be discussed in the 47th CGPB Meeting

03.10.0 Closing Remarks by the Convenor

The convenor in his closing remarks thanked all the members for such lively discussions and fruitful interaction. He appreciated all members for their excellent presentation and that the committee is functioning very well.

Regarding the Base Document, he informed that many constructive suggestions have been received. All the suggestions will be incorporated to fill in the gaps in the document. The feedback from State departments are to be incorporated in a classified format. Untimely SGPB meetings are hindrance for planning. Therefore, he requested the State Departments to hold SGPB Meetings well in time so that their programmes can be accommodated on manpower sharing basis. He requested DGMs to forward only those proposals which they cannot do themselves. He also expressed that there is a scope for extension of collaboration between GSI, NESAC and CGWB, and the state departments as well.

He suggested that besides mineral exploration, other societal issues like environmental, landslide, earthquake studies should be given due weightage in our future programme proposals for effective annual plan and rolling plan. Sincere cooperation is urgently required from DGMs.

At the end he requested DGM, Mizoram for providing space/building for FTC, Aizawl so that FTC can be inaugurated while launching the 1st training programme of FTC on 14.09.2010.

(Action: All Members)

03.10.0 Vote of thanks

The meeting ended with a vote of thanks by Shri P.B. Sarolkar, Director.