

MINUTES OF WORKSHOP ON ‘NGCM COVERAGE BEYOND OGP AREA - STRATEGY AND PERSPECTIVE PLAN’ HELD ON 22nd -23rd SEPTEMBER, 2017 AT HYDERABAD

A workshop on ‘NGCM Coverage Beyond OGP Area - Strategy and Perspective Plan’ was conducted jointly by National Mission-1A, Central Headquarters,GSI, Kolkata and GSI Training Institute, Hyderabad at GSITI Campus on 22nd -23rd September, 2017 under the Chairmanship of Shri N. Kutumba Rao, Director General, GSI. The list of participants of the workshop is given in Annexure-1.

1.0	Inauguration of the Workshop
1.1	Smt. Mita Ganguly (Das), DDG, Geochemical Mapping, NM-1A extended a warm welcome to all the delegates attending the NGCM Workshop and briefed about the necessity of the workshop. Shri R. Baskaran, DDG, Geological & Geophysical Mapping emphasized the need of integration of Geo -Scientific Baseline Data for mounting future exploration programmes of GSI .
1.2	Shri K. Duraisamy, ADG & NMH-1A, extended hearty welcome to the Director General, GSI and the participants of the workshop. In his address he explained that the OGP toposheets would be covered by March, 2019 excluding the inaccessible part of the area and therefore, GSI should prepare a Strategic Plan and Road Map/Vision Document to cover the non-OGP areas in a systematic manner after March , 2019.
1.3	Shri Ashok Kumar, DDG &HOD, Mission-V, GSI TI, Hyderabad in his address to the house told that Training Institute is always ready to meet the requirements of the Organisation by arranging such meetings and workshop at short notice. He also outlined the scope of the workshop on NGCM and also Data Integration and interpretation is the need of the hour after implementation of the NMEP policy 2016 by the Ministry of Mines, Government of India.
1.4	In his inaugural address, the Chairman of the workshop, Shri N. Kutumba Rao, DG, GSI remarked that this NGCM workshop was a long pending issue and is essential as the OGP areas would be completed by March 2019 so is the need for strategic plan for coverage beyond OGP areas. <ul style="list-style-type: none"> • He also emphasized on mineral exploration activities in the brown field areas on priority basis. • He also emphasized on the NGCM survey toposheet wise and compilation on Degree sheet wise with the ultimate goal of preparation of seamless Geochemical anomaly maps of different elements. • He also expressed his concern about the huge pendency of NGCM samples for analysis and suggested to work out the action plan through Lab networking system to clear the backlog in a time bound manner so that report circulation can be done in time.

2.0	Technical Session
2.1	<p>Shri K. Duraisamy, ADG & NMH-1A presented the status of NGCM coverage in OGP area of the country up to March 2017. He explained that as the accessible part of the OGP area would be completed by March 2019, there after GSI has to prepare a Strategic Plan and Road Map/Vision Document to cover the non-OGP areas, in different geomorphic entities of the country.</p>
2.2	<p>Shri S.R.Kisku, ADG & HOD, ER gave an overview of NGCM activities of Eastern Region. Shri N.K.Punj, DDG & RMH-I, ER presented the NGCM status and perspective plan for Eastern Region. He informed that till March 2017 a total of 200 toposheets has been covered out of which 166 toposheets are of OGP area. Another 28 toposheets would be covered during the FS 2017-18. He suggested that NGCM work to be taken up in areas of Gangetic Plain of Bengal where incidence of contamination for arsenic, fluoride, uranium, selenium etc. are reported.</p> <p>During his presentation he intimated the house that four toposheets i.e. 65M/7, 11 and 74A/8 and 65F/15 need to be replaced because of law and order problem in the area.</p> <p>The Chairman suggested to all the members to write letters and approach the authorities for working in the troubled area. Letters, e-mails and news paper cuttings are to be documented for each item. Documentary evidences are to be produced before submitting for alteration or modification of the toposheet or mounting the proposals for F.S. 2018-19.</p> <p style="text-align: right;">(Action : All HODs)</p>
2.3	<p>Shri A. Thiruvengadam ADG & HOD, WR gave an overview of NGCM activities of Western Region. Shri S.D. Patbhaje, DDG & RMH-I, WR presented the NGCM status and perspective plan for Western Region. He intimated that 191 OGP toposheets and 116 Non-OGP sheets have been completed till March 2017 including the parts covered by the State Govt. of Gujarat and Rajasthan. During the presentation, RMH-1, WR intimated that 93 toposheets have been covered by the State Govt. of Gujarat and 5 toposheets by the State Govt of Rajasthan. Out of 93 toposheets, reports were submitted for T. S. No. 41E/2, 6, 10, 15 and reports for T.S. No. 41I/2,3,9,13 and 41E/12 are under process of finalisation. The DDG & RMH-1 has also told that the progress of chemical analysis in the GMRDS Lab. has been extremely slow due to shortage of man power in their Lab. Chemical results, field observation sheets and sample location maps of fourteen toposheets are not traceable at GMRDS (CGM) end. He also intimated that reports have not been handed over to GSI. It is also the number of elements analysed by DGM Gujarat are 42 as against 62 of GSI.</p> <p>The Chairman stated that the State Governments have not honoured the MoU with GSI. Even if they have not overcome their problem to analyse and finalise the reports, he expressed the apprehension that entire NGCM</p>

	<p>in Gujarat state may be redone by GSI. The DDG (Chemistry) informed that chemist of Gujarat to come up with solution, and WR chemical lab will help in analysis. He requested National Mission-1A and ADG & HOD, WR to visit Gujarat to meet and discuss with the concerned authority for the updates and to take a call for future course of actions.</p> <p>(Action : National Mission-1A and HOD, WR)</p>
2.4	<p>Shri Janak Raj, DDG & RMH-1, NER presented the status of Geochemical Mapping of the North Eastern Region. He intimated that Geochemical Mapping has been completed in 47 OGP toposheets (41 full and 6 part) and 49 Non-OGP toposheets (30 full and 19 part) till March 2017. However, there was no programme on GCM in NER during 2016-17. Another 9642 sq km would be completed during FS 2017-18 in 16 toposheets. He also intimated that the remaining OGP areas would not be taken up immediately because of the prevailing law and order problems. Shri P. K. Mukhopadhyay, Director, P&M-2 suggested that all the partially covered toposheets of OGP or Non-OGP area, may be taken up to complete the toposheets which was agreed upon.</p> <p>(Action : All HODs)</p>
2.5	<p>Shri Som Nath Chandel , ADG & HOD, NR gave an overview of the Region. The status of Geochemical Mapping in Northern Region was presented by Shri T. Mullaivendhan, DDG & RMH-1, NR. He intimated that an area of about 1.08 lakh sq km has been covered till March 2017 under NGCM from Northern Region. This includes 0.89 lakh sq. km of NR (including about 21,000 sq. km. OGP area in 56 no of Toposheets of NR) and about 19,000 sq km of WR (7 toposheets) and CR (21 toposheets). Only TS No. 53H/6 could not be covered as it forms a part of National capital region (NCR), Delhi which contains 86 sq. km of OGP area. During his presentation, he informed the house that OGP areas of the Northern Region are almost covered, as such some Geologists of NR are engaged in NGCM projects of WR area for the current Field Season 2017-18.</p> <p>It was suggested by NR to take up around 50 toposheets in Non-OGP area falling in Namami Ganga Project. The Chairman suggested that all the relevant information and parameters of data collection are to be provided before submitting the proposal for approval.</p> <p>Question was raised by Northern Region as to which Region should be the custodian of the samples if officers of one Region are deployed in other Regions. It was decided by the house that regional HOD, from where the samples are collected will be custodian of the samples. Samples will be analyzed by the region, to which the officers collecting NGCM samples belong.</p> <p>(Action : All HODs)</p>
2.6	<p>Status of Geochemical Mapping of Central Region was presented by Shri</p>

	<p>Rajeshwar Paul, DDG & RMH-1, CR. He intimated that Geochemical Mapping, till March 2017, includes 226 nos of OGP area bearing toposheets and 23 Non-OGP toposheets. He pointed out that law and order problem as well as inaccessibility of some areas is the major hurdles for the Region to complete the OGP area. He also suggested that as the new items for FS 2018-19 are yet to be formulated; it has to be done by leaving the problematic toposheets. To this point, ADG & NMH-1A clarified that the uncovered toposheet list has been provided to the regions. It is the responsibility of the concerned State Unit/ Regions to sort out the ground feasibility to make FSP items.</p> <p>The Chairman suggested to document the efforts made in meeting the forest officials, correspondence made with them facilitating to obtain approval from the competent authority. He further emphasized on checking for reservoirs or large water bodies in the latest toposheets and land imageries including ground feasibility study before proposing the area for NGCM. The Deccan Traps areas are to be worked for surficial distribution of elements and not for mineral exploration point of view, and hence may not be proposed till a decision is taken.</p> <p style="text-align: right;">(Action : All HODs)</p> <p>Shri D.S.Jeere, Suptdg. Geologist, CR presented the methodology adopted in different countries for Geochemical Mapping and suggested further planning may be done to collect sample basin wise which would be useful for exploration activities.</p>
2.7	<p>Status of Geochemical Mapping of Southern Region was presented by Shri S.A.Chore, DDG & RMH-1, SR. He intimated that Geochemical Mapping, till March 2017, includes 307 OGP area bearing toposheets and 36 Non-OGP toposheets. During his presentation, he informed the house that due to law and order problem as many as 12 NGCM items would be requiring modification for FS 2017-18. Regarding uploading of Geoscience baseline data for NGCM, he intimated that the compilation of data for part toposheets covered in some toposheets of SU: AP, K&G would take some time to achieve 100% uploading status for NGCM up to FS 2015-16. For analysis of NGCM samples pertaining to FS 2016-17, he apprised that unless samples are diverted to other Regions for analysis, progress reports would not be circulated by December 2017.</p> <p>The Chairman advised the DDG (Chemistry) to prepare a road map in consultation with the Regions for early analysis of the samples.</p>
2.8	<p>Shri F. Kharshiing, DDG, Chemical presented the status of analysis of NGCM samples. He informed that a total no. of 39040 NGCM samples (2632 –NR, 16819-SR, 4359-WR, 6775-ER, 8455-CR) have been received for analysis pertaining to FS 2016-17. The samples would be analysed for package A& H by December 2017. The samples of NR have already been analysed for package A&H.</p> <p>Shri P. Tarafdar, Director, P&M-7 suggested that for each toposheet, all the batches of samples submitted are to be listed. He further suggested that</p>

	<p>the RMH-1 of the Region should make a road map in consultation with the Chemical Division to get the analysis in such a way that some reports are generated in each month.</p> <p>The Chairman advised the Regions to prepare the Road map as suggested by Shri Tarafdar, Director. He advised the Chemical Division to keep the analytical results in Share Folders with a copy to RMH-1/ TC Division of State Units and the authors.</p> <p style="text-align: center;">(Action : DDG ,Chemistry, All HODs, All RMH-1)</p>
2.9	<p>Shri M.C.Saha, Sr. Chemist told that instrumental techniques are not capable of giving upto 2 ppb level for Pt-Pd analysis. If the detection level is increased to 5 ppb, then GSI Labs may be able to analyze these elements.</p> <p>The Chairman suggested exploring the possibilities for in house analysis of samples for Pt-Pd and submitting a report. He also advised to take proper action for optimum utilization of the instruments.</p> <p style="text-align: center;">(Action : DDG ,Chemistry)</p>
3.0	<p>Smt. Mita Ganguly (Das), DDG, Geochemical Mapping, NM-IA briefed about the objective of the workshop and emphasized to prepare the strategy and perspective plan to cover the remaining Non-OGP part of the country. She told that the House is open for discussion and requested all the members to give their opinion on various geomorphic units.</p>
3.1	<p>Discussion and Decision / Recommendations on strategy to cover the Non-OGP areas:</p> <p>Following decisions were taken to cover the Non-OGP areas of the country beyond March 2019</p> <ul style="list-style-type: none"> • After March, 2019 NGCM will continue on priority basis in non-OGP hard rock peninsular area except Deccan Trap as per existing norm of 1×1 sq km grid sampling. • NGCM will be taken up in Himalaya Terrain, after March 2019, by 2×2 sq km grid sampling, i.e. one sample will be collected per 4sq km area without making composite sample. • The Indo-Gangetic Alluvium, The Deccan Trap and the Thar Desert will not be considered for NGCM at present. However, these will be taken up at a later stage. • Each Region must submit their revised perspective plan for NGCM in non-OGP areas within 31st October, 2017 to NM-IA office. • No need to collect any stream sediment samples from large water bodies falling in toposheets being covered by NGCM. • If any Region collects samples from other Region, samples are to be submitted to the Region where the area is covered with all the relevant data. Samples will be analysed by the Region which has collected. • Repository for NGCM samples should be well maintained and may be upgraded, if required, to preserve NGCM samples as long as

	<p>possible.</p> <ul style="list-style-type: none"> • Regional Geochemical Division of each region under Mission-I must carry out NGCM data integration instead of Mission-III. • Young Geologists/Sr. Geologists having a minimum of four year field experience and relevant training in NGCM data handling and integration should be posted to RGD cell, Mission-I. If required, selected personnel for RGD division may be sent for advance/specialised training. • While formulating F.S.P 2018-19, all Regions must calculate area of proposed toposheets by ARC-GIS software. • All regions should prepare project wise NGCM sample analysis pendency report and submit it to respective chemical division to prioritise NGCM sample analysis for circulation of reports for FS 2016-17. • Before seeking exemption in carrying out NGCM in highly inaccessible rugged terrain, new Open Series Toposheets (OSM) of Survey of India sheets and Google earth images must be studied in detail to assess the present ground condition and connectivity of roads. <p style="text-align: right;">(Action : All HODs, All RMH -I, DDG, Chem)</p>
3.2	<p>Shri K. Duraisamy, ADG & NMH-1A expressed his thanks to all the members for their active participation during the deliberations of the workshop. He also apprised the House that the outcome of the workshop will lead to prepare seamless Geochemical Maps of the country.</p>
3.3	<p>In his concluding remark, the Director General, GSI and Chairman of the Workshop pointed out the followings</p> <ul style="list-style-type: none"> • GSI should give more emphasis on conversion of raw data into meaningful M-II projects. • As huge no. of samples are analysed, the quality of analysis is to be maintained.
3.4	<p>The session was concluded with a Vote of Thanks proposed by Shri R. Balaji, Director, CGMT, GSITI, Hyderabad</p>

List of Participants

Sl. No.	Name	Designation
1	Shri N. Kutumba Rao	Director General, GSI
2	Shri Krishnan Duraisamy	Additional Director General & NMH-1A
3	Shri A. Thiruvengadam	Additional Director General & HOD, WR
4	Shri M. Sridhar	Additional Director General & HOD, SR
5	Shri Brij Kumar	Additional Director General & NMH-III
6	Shri P A Ramesh Babu	Additional Director General , STSS & ASS
7	Shri Godise Vidya Sagar	Additional Director General , NMH-IV & PSS
8	Shri Sona Ram Kisku	Additional Director General & HOD, ER
9	Shri Som Nath Chandel	Additional Director General & HOD, NR
10	Shri R. Baskaran	Dy. Director General , NM-1A, Kolkata
11	Dr. S. Raju	Dy. Director General , SU: TNP, Chennai
12	Shri Ashok kumar	Dy. Director General & HOD, GSITI, Hyderabad
13	Shri S.A.Chore	Dy. Director General & RMH-1, SR, Hyderabad
14	Shri M.A.Karim	Dy. Director General , SU: KG
15	Shri Janak Raj	Dy. Director General & RMH-1, NER
16	Shri Rajeshwar Paul	Dy. Director General & RMH-1, CR
17	Shri S.D. Patbhaje	Dy. Director General & RMH-1, WR
18	Shri T. Mullaivendhan	Dy. Director General & RMH-1, NR
19	Shri N. K. Punj	Dy. Director General & RMH-1, ER
20	Shri K. Basvaraja	Dy. Director General & RMH-II, CR
21	Shri G. V. Vidya Sagar	Dy. Director General & HOD, MCSD
22	Shri F. Kharshiing	Dy. Director General , Chemical, Kolkata
23	Smt. Mita Ganguly (Das)	Dy. Director General , NM-1A, Kolkata
24	Shri P. C. Patra	Dy. Director General , SU: AP, Hyderabad
25	Shri V. K. Chittora	Dy. Director General , GSITI, Hyderabad
26	Shri Ch. Venkateswara Rao	Dy. Director General , SU: TGN, Hyderabad
27	Shri P. Tarafdar	Director, Mon-7, PSS-P&M, Kolkata
28	Shri P. K. Mukhopadhyay	Director, Mon-2, PSS-P&M, Kolkata
29	Shri M.N.Mishra	Director, M-III, SR, Hyderabad
30	Dr. Sanjay Das	Director, RGD, SR, Hyderabad
31	Shri Brijesh Kumar	Director, Mission-1, NR, Lucknow
32	Dr. Taraknath Pal	Director, PSS, GSITI, Hyderabad
33	Shri Tanay Dutta Gupta	Director, PSS, SR, Hyderabad
34	Shri S.K.Dash	Director, NM-1A, Kolkata
35	Shri R. Balaji	Director, CGMT, Hyderabad
36	Shri S.K.Biswas	Director, Geophysics, NM-1B, Kolkata
37	Dr. Pankaj Mala Bhattacharya	Suptdg. Geophysicist, NM-1A, Kolkata
38	Shri D. S. Jeere	Suptdg. Geologist, NM-IIA, Nagpur
39	Shri M. C. Saha	Senior Chemist, ER, Kolkata
40	Shri Sankha Das	Senior Geologist, NM-1A, Kolkata