# 32

STANDING COMMITTEE ON COAL AND STEEL (2016-2017) SIXTEENTH LOK SABHA

**MINISTRY OF MINES** 

SKILL DEVELOPMENT IN MINING SECTOR

THIRTY -SECOND REPORT



LOK SABHA SECRETARIAT NEW DELHI AUGUST, 2017/SRAVANA, 1939(Saka)

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# STANDING COMMITTEE ON COAL AND STEEL (2016-2017)

(SIXTEENTH LOK SABHA)

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# SKILL DEVELOPMENT IN MINING SECTOR

Presented to Lok Sabha on 10.08.2017 Laid in Rajya Sabha on 09.08.2017



# LOK SABHA SECRETARIAT NEW DELHI AUGUST, 2017/SRAVANA, 1939(Saka)

# CONTENTS

COMPOSITION OF THE COMMITTEE (2016-17)	(ii)
INTRODUCTION	(iv)

# PART-A

CHAPTER 1	INTRODUCTORY	1			
CHAPTER 2	SKILL DEVELOPMENT IN MINING SECTOR	4			
CHAPTER 3	SKILL GAP IN THE MINING SECTOR	16			
CHAPTER 4	SKILL DEVELOPMENT IN MINE PSUs	21			
CHAPTER 5	FUNDING MECHANISM FOR THE SKILL PLAN	34			
	PART-B				
OBSERVATIONS/R	ECOMMENDATIONS OF THE COMMITTEE	39			
ABBREVIATIONS 54					

# ANNEXURES

Ι	Minutes of the Sitting of the Standing Committee on Coal and Steel (2016-17) held on 11.01.2017	56
II	Minutes of the Sitting of the Standing Committee on Coal and Steel (2016-17) held on 03.08.2017	58

# COMPOSITION OF THE STANDING COMMITTEE ON COAL & STEEL(2016-17)

# Shri Rakesh Singh- Chairperson

# Name of the Member

# Lok Sabha

- 2. Shri A Arunmozhithevan
- 3. Shri Kalyan Banerjee
- 4. Shrimati Jyoti Dhurve
- 5. Shri Nagesh Godam
- 6. Shri Shailesh Kumar
- 7. Dr. Banshilal Mahato
- 8. Shri Kamalbhan Singh Marabi
- 9. Shri Ajay Nishad
- 10. Shrimati Riti Pathak
- 11. Shrimati Ranjit Ranjan
- 12. Dr. Ravindra Kumar Ray
- 13. Shri Chandu Lal Sahu
- 14. Shri Tamradhwaj Sahu
- 15. Shri Tathagata Satpathy
- 16. Shri Janardan Singh "Sigriwal"
- 17. Shri Pashupati Nath Singh
- 18. Shri Rama Kishore Singh
- 19. Shri Sunil Kumar Singh
- 20. Shri Sushil Kumar Singh
- 21. Shri Krupal Balaji Tumane

# Rajya Sabha

- 22. Shri Ali Anwar Ansari
- 23. Dr. Pradeep Kumar Balmuchu
- 24. Shri Ranjib Biswal
- 25. Shri Md. Nadimul Haque
- 26. Shri B.K Hariprasad
- 27. Shri Ranvijay Singh Judev
- 28. Shri Ram Vichar Netam
- 29. Shri Dilip Kumar Tirkey
- 30. Vacant
- 31. Vacant

# SECRETARIAT

- 1. Shri U.B.S. Negi
- 2. Shri Ajay Kumar Garg
- 3. Shri Arvind Sharma
- 4. Ms. Miranda Ingudam
- 5. Smt. Madhu Tandon

- Joint Secretary
- Director
- Additional Director
- Deputy Secretary
- Sr. Exe. Asstt.

# INTRODUCTION

I, the Chairperson, Standing Committee on Coal and Steel having been authorized by the Committee to present the Report on their behalf, present this Thirty-Second Report (Sixteenth Lok Sabha) on the subject "Skill Development in Mining Sector" relating to the Ministry of Mines.

2. The Standing Committee on Coal and Steel (2016-17) have selected the subject for detailed examination and report to the Parliament. The Committee were briefed by the representatives of the Ministry of Mines, Mines PSUs and Ministry of Skill Development and Entrepreneurship on 11.01.2017. Based on briefing and written testimony submitted to the Committee, a report on the subject was prepared.

3. The Committee considered and adopted the Report at their sitting held on 03.08.2017.

4. The Committee wish to express their thanks to the officials of the Ministry of Mines, Mines PSUs and Ministry of Skill Development and Entrepreneurship for placing before them and in furnishing material/information from time to time as desired by the Committee.

5. The Committee place on record their profound appreciation for the valuable assistance rendered to them by the officials of the Lok Sabha Secretariat attached to the Committee.

6. For facility of reference and convenience, the observations and recommendations of the Committee have been printed in bold letters in Part-II of the Report.

NEW DELHI; 03 August, 2017 12 Sravana, 1939(Saka) RAKESH SINGH Chairperson Standing Committee on Coal and Steel

(iv)

6

#### Report

# Part -I

### Chapter-I

## Introductory

Skills and knowledge are the driving focus of economic growth and social development for any country. The Skill ecosystem in India is undergoing major reforms and policy interventions as India embarks on its journey to become a knowledge economy. India is blessed with 65% of its youth in the working age group. In terms of the Achievements Report of the Department of Industrial Policy and Promotion (DIPP) on the Ministry of Skill Development and Entrepreneurship on "Skill Development Sector" released on 21 December, 2016, in the next 20 years, the labour force in the industrialized world is expected to decline by 4% while in India it will increase by 32% which creates a need and opportunity to provide its workforce with required skill sets and knowledge to enable them to contribute substantially to the economic growth of India. The Skill Gap Study by the National Skill Development Corporation (NSDC) for the period of 2010-14 reports that over 109.73 million additional skilled manpower will be required by 2022 across different sectors. To steer and coordinate the current skilling initiatives with quality deliverables, the Ministry of Skill Development and Entrepreneurship (MSDE) was created in November 2014 to drive the 'Skill India' agenda in Mission Mode. The DIPP Report stated that the intervention taken up by the Government during the last two years have resulted in the number of trained Indians growing by 36.8% from 0.76 crores in Financial Year 2014-15 to 1.04 crores in Financial Year 2015-16. Presently, only 2% of the total workforce in India, in the age group of 15-59 years out of the total population of 1.21 billion, have undergone skills training as per the paper published by Federation of Indian Chambers of Commerce and Industry (FICCI) on 'A brief overview of the Skills Development Sector'. India can become the worldwide sourcing hub for skilled workforce. The skills challenge becomes acute for India considering that India has a large portion of its population below 25 years of age and this young population can be transformed into a productive workforce giving Indian Economy a 'Demographic Dividend'. The realization of this demographic dividend led to

the formulation of the 'National Skills Policy' 2009 which set a target of imparting skills training to 500 million by 2022. In recognition of the fact that, Skill Development is an essential prerequisite for sustainable and inclusive growth, the National Skill Development Policy 2015 has not only put forth a strong vision to create an ecosystem of empowerment by skilling on a large scale at speed with high standards and to promote a culture of innovation-based entrepreneurship which can generate wealth and employment so as to ensure sustainable livelihoods for all citizens, but more importantly it has also rolled out time bound action plan for superseding all the training facilities and existing vocational frameworks with qualification packs (QP) and National Occupational Standards (NOSs) in terms of National Skill Qualification Framework (NSQF). To address the above challenges and reap the benefits of the demographic opportunity, skills initiative in India need to focus on quantity, quality and access and need to focus on designing skilling progress that are scalable, replicable and accessible. Skills certification need to be in sync with the needs of the industry. The recommendation made by the FICCI Skill Development Forum include inter-alia building Skills Training as a mainstream and inclusive programme to be promoted by creating a formal arrangement among the three Key Stakeholders in the delivery pyramid viz. Government, Industry and Skills Providers; Industry led 'Train the Trainee (TTT) Programmes; Funding support by Central Government to State Government Institutions to make skills trainer a lucrative career option; greater focus on international collaboration for better understanding of the fast changing skills demands; increased FDI in skills; promoting B2B (Business to Business) partnerships between Indian and International companies; engaging multi-national corporation to provide skill solutions that transpose the models and practice; reverse transfer of the best practices from India to the world. The FICCI Skill Development forum for the 12th Five Year Plan highlighted the following points to address the quantity issues. viz. :-

- i. A need for policy convergence by building skills training as a mainstream and inclusive program, to be promoted by creating a formal arrangement among the three key stakeholders in the delivery pyramid: Government, Industry and Skills providers
- ii. Greater interaction should be encouraged among industry, academia and skills providers to narrow the gap between the demand and supply of skilled manpower
- iii. Focus on Informal sector by finding a model that reaches out to the people

and livelihood promotion institution and NGOs are engaged effectively.

iv. Large corporate houses could engage in training programs for youth from rural, urban villages, towns and cities, as an Industry skills training would offer immediate return to the society by improving lives of people.

1.2 Keeping in view the paramount importance of the National Skills Mission which had set a target of imparting skills training to 500 million by 2022, the Standing Committee on Coal and Steel (2016-17) had selected the subjects "Skill Development in the Coal Sector"; "Skill Development in the Mining Sector"; and "Skill Development in the Steel Sector" pertaining to all the three Ministries viz. Coal, Mines and Steel under its jurisdiction. The Committee during their sitting held on 11.01.2017 examined the subject, "Skill Development in the Mining Sector" and were briefed on the subject by the representatives of the Ministry of Mines and Ministry of Skill Development and Entrepreneurship. During the sitting, the Committee deliberated on points like National Policy for Skill Development; steps taken by Ministry of Mines for alignment with the National Skill Development Framework; Memorandum of Understanding (MoU) between Ministry of Mines and Ministry of Skill Development & Entrepreneurship (MSDE); MoU between National Skill Development Corporation (NSDC) and Hindustan Corporation Ltd. (HCL), Mineral Exploration Corporation Ltd.(MECL) and National Aluminium Corporation Ltd. (NALCO); Maximizing apprenticeship training; Implementation of Skill Development Plan; Implementation of MoU between Ministry of Mines and MSDE and Skill Gap study; training imparted by Geological Survey of India (GSI), Indian Bureau of Mines (IBM), NALCO, HCL and MECL in different discipline; Establishment of National Skill Corporation for Training and Skill Development by MSDE; etc.

1.3 The Detailed examination of the above issues by the Committee on the basis of written and oral information/testimony furnished by the representatives of the Ministry of Mines, Mines PSUs and the Ministry of Skill Development and Entrepreneurship are highlighted in the succeeding chapters.

# Chapter-II

# SKILL DEVELOPMENT IN MINING SECTOR

# Signing of MoU between Ministry of Mines and Ministry of Skill Development and Entrepreneurship

According to a Background Note furnished to the Committee by Ministry of Mines, they were informed that Ministry of Mines entered into MoU with Ministry of Skill Development and Entrepreneurship (MSDE) on 10<sup>th</sup> July, 2015. The MSDE through Directorate General of Training (DGT) and National Skill Development Corporation (NSDC) will be responsible for implementation of the MoU. DGT looks after the whole ecosystem of Industrial Training Institutes (ITIs), Advanced Training Institutes (ATIs), Regional Vocational Training Institutes (RVTIs) and Apprenticeship, under an overarching framework of National Council of Vocational Training (NCVT), which looks after the curriculum, assessment and certifications, for trainees, trainers and assessors. NSDC on the other hand catalyses creation of large, quality, non-profit vocational institutions, and enables support systems such as quality assurance, information system and train the trainer academics either directly or through partnerships. NSDC has been mandated by Government of India to promote Sector Skill Councils in high growth and priority sectors, to formulate the National Occupational Standards for different jobs roles, set up certification standards and norms, conduct labour market studies etc. Ministry of Mines (MoM), in turn will facilitate implementation of activities related to skill development and upgradation through its public sector undertaking (PSUs), namely, National Aluminium Company Limited (NALCO), Hindustan Copper Limited (HCL) and Mineral Exploration Corporation Limited (MECL); attached office of Geological Survey of India: subordinate office of Indian Bureau of Mines: and three autonomous bodies, namely, Jawaharlal Nehru Aluminium Research Development and Design Centre, Nagpur (JNARDDC), National Institute of Rock Mechanics (NIRM) and National Institute of Miners' Health (NIMH).

2.2 For skill development in the mining sector, the Committee were informed that MSDE has signed MOUs with Ministry of Coal, Ministry of Mines and Ministry of Steel to provide an overall framework of cooperation towards skilling. The skill development

efforts for mining related job roles are implemented through NSDC and Skill Council for Mining Sector (SCMS).

2.3 On being asked to highlight the present status of implementation of the National Policy for Skill Development, 2015 especially in Mining Sector indicating therein the achievements made so far vis-à-vis the core aim and objective set out by this policy, the Ministry of Skill Development and Entrepreneurship stated that the core aim of the policy is to bring uniformity in the skilling activity, to align it to common standards and link skilling with demand centres. To achieve this aim, Skill Council for Mining Sector (SCMS) has done occupational mapping, developed Occupational Standards, created training infrastructure, Empanelled Training Partners and Assessment Agencies and created a pool of expert trainers & assessors, and carried out certification. It works with the mining industry in PPP mode. SCMS has developed Qualification Packs (QPs) and corresponding National Occupational Standards (NOSs) for 45 entry level job roles as on both for opencast and underground mines aligned to the needs of the mining industry and statutory requirements. These job roles cover about 70% workforce of the sector. These have been validated by the industry and approved by Qualifications Registration Committee (QRC) of National Skill Development Corporation (NSDC).

# **Skill Council for Mining Sector**

2.4 SCMS was established in December, 2013 under Public-Private partnership mode with the support of MoM. Ministry of Skill Development & Entrepreneurship (MSDE) in its notification dated 17<sup>th</sup> March, 2015 has authorized SSCs as non-statutory certification agency. The main task of SCMS is to develop skill competency standards and qualifications, benchmarking it with national and international standards and to work with the mining industry in PPP mode. SCMS plans to up-skill and train 4.5 lakh workers in mining sectors including 50, 000 new inductees in the next 10 years.

# SCMS Conducts:

- i. Skill Gap Studies.
- ii. Develop competency based National Occupational Standard (NOS) for 100 job roles in mining sector.
- iii. Signing of MOUs with industry players

- iv. Create a pool of experts as trainers through 'Training of Trainers'
- v. Empanelment of Training Partners and Assessing Agencies.
- vi. Assessment and Certification
- vii. Setting up of 'Center of Excellence'

# Contribution of Skill Council for Mining Sector

2.5 On being asked to state the major achievements of SCMS after its establishment and how far it has been able to achieve its objectives, the Ministry of Skill Development and Entrepreneurship furnished the following information:-

"Skill Council for Mining Sector (SCMS) promoted by Federation of Indian Mineral Industries (FIMI) and supported by Ministry of Mines was registered under Section 8 of the Companies Act, 2013 in December 2013, with the objective to develop Occupational Standards, conduct Training need analysis, and Skill Gap Studies, Empanelment of Training Partners and Assessment Agencies, create training infrastructure and create a pool of expert trainers & assessors, carry out assessment & certification, and work with the mining industry in PPP mode.

Achievements of SCMS are detailed below:

- i) SCMS carried out Occupational Mapping and Skill Gap Study for the sector
- SCMS has developed Qualification Pack (QPs) and National Occupational Standards (NOSs) for 45 entry level job roles aligned to NSQF levels, both for open cast and underground mines, which have been validated by industry and approved by Qualifications Registration Committee (QRC) of NSDC.
- iii) Competency based curriculum packages consisting of syllabus, student manual, trainers guide, training manual, assessment and testing guidelines have been developed.
- iv) SCMS has affiliated 46 training partners and 16 assessment agencies to roll out training and assessment.
- v) SCMS has created pool of Lead trainers, Trainers, Lead assessors and Assessors through regular Training of Trainers (TOT) and Training of Assessors (TOA) Programmes.
- vi) **Pradhan Mantri Kaushal Vikas Yojana (PMKVY-1.0):** PMKVY-1.0 was launched in June 2015 under which SCMS has carried out training and certification of 43,609 both for new inductees (un-employed youth & school dropouts) and RPL on job roles like Safety Operator, Mine-Electrician, Mechanic / Fitter, Mine Mazdoor, Sampler, Data Entry Operator, Sprinkler Drivers, Dumper Operator, Assistant Mine Surveyor

and explosive handler across 16 state and 104 districts through its training partners.

- vii) Under Industry funded programme, SCMS has conducted up-skilling and certification of 36,935 in-service workers under RPL in the states of Rajasthan, Karnataka, Odisha, Gujarat, Jharkhand, West Bengal, Maharashtra, Chhattisgarh and Madhya Pradesh through its accredited training partners.
- viii)SCMS has engaged with the following companies for industry funded training & certification (RPL) of in-service workers.
  - (a) Gujarat Mineral Development Corporation (GMDC),
  - (b) Manganese Ore India Limited (MOIL)
  - (c) Odisha Mining Corporation Ltd.
  - (d) Adani Enterprises and
  - (e) Coal India Limited
  - ix)The certification under RPL will grant recognition to the skills of the workers, who have acquired their skills through informal learning and lacked any formal certification.

# <u>PMKVY-2.0</u>

# Fresh Skilling:

To bring uniformity and standardization in the delivery of the training across various centres "Standard Participants Hand" books along with trainer guide and presentations are being standardized by SCMS. SCMS has shortlisted 9 roles to be rolled out for training under PMKVY-2.0 for which student handbooks and trainer guide are available. The training centre details have been uploaded on SMART Portal of NSDC for accreditation. Fresh trainings are being imparted by the accredited training centres.

As per the guideline, 23 centres have been accredited and affiliated where training is being conducted for 2,243 candidates in various job roles of mining trades.

**RPL Project:** Under PMKVY 2.0 RPL project NSDC/MSDE has approved 2 proposals

- RPL in Rajasthan for training of 5,000 in-service workers in Jodhpur District of Rajasthan in trades of Bulldozer operator, Mazdoor/Helper, Excavator Operator, Mechanic/Fitter and Loader Operator. The Project was launched on 23<sup>rd</sup>January 2017 at Fidushar, Jodhpur, Rajasthan. Up to 31<sup>st</sup>March 2017, 4,448 workers had been certified and balance are in progress.
- ii) The RPL MP & Rajasthan Program for certifying 10,000 mine workers from Rajsamand, Bhilwara, and Chittorgarh districts in Rajasthan; and Gwalior, Morena and Datia districts in Madhya Pradesh, was initiated in April 2017 and enrollments were done for Wire Saw Operator, Dumper Operator & Mine Electricians. Trainings for Dumper Operator and Mine Electrician has started with 200 workers in four batches at Gwalior.

# State Presence

SCMS has signed MOU with 179 industry partners for demand aggregation and ensuing availability of skilled manpower. SCMS has also signed MOUs with State Skill Mission i.e. <u>Rajasthan Skill and Livelihoods Development Corporation</u> (RSLDC); Uttarakhand Skill Development Mission (UKSDM); Uttar Pradesh Skill Development Mission (UPSDM) and Jharkhand State Skill Development Mission (JSSDM) with the aim to align their training, assessment and certification of candidates as per QPs / NOSs of SCMS in line with NSQF frameworks."

2.6 Several other steps taken for implementation of the Skill Developme t Programme in the country are as under:-

- (i) Industry funded Trainings: Till date 198 new inductees (excluding PMKVY), trained in the job roles of Mine Welder and Mine Electrician at Multi Skill Development Centre, Barkakhana & Skill development Institute, Bhubaneswar were certified by SCMS. Certification of 803 in-service workers under RPL of various Mining Companies including PSUs.
- (ii) Development of Qualification Packs & Operating Standards: SCMS has developed Qualification Packs (QPs) and corresponding NOSs for 45 entry level job roles so far, both for opencast and underground mines aligned to the needs of the mining industry and statutory requirements. These job roles cover about 70% workforce of the sector. These have been validated by the industry and approved by QRC of NSDC. The Qualification Packs form the performance, assessment and certification criteria to ensure that skills possessed by workers are certified in a measurable manner.

SCMS also has certified 9,143 candidates under PMKVY RPL.

(iii) <u>CIL – NSDF- NSDC Project:</u> A Tri-partite MOU was signed between CIL, NSDF and NSDC on 3rd May, 2015 where CIL committed to provide funds to skill 2.7 lakh persons in 2 years as per National Skill Qualification Framework (NSQF) in its operational areas and neighboring regions. The RPL component and skill development of in service workers of CIL and its subsidiaries under "CIL-NSDF-NSDC project" is implemented through Skill Council for Mining Sector (SCMS). The RPL training across all the subsidiaries of CIL commenced from 15th July, 2016 and till date RPL of 11,202 in-service workers of CIL in 32 job roles has been conducted.

- (iv) <u>NMDC- NSDF- NSDC Project</u>: Under NMDC-NSDF-NSDC Project certification of 750 in- service workers have been carried out at Kirandul, Dantewada & Bacheli, Chhattisgarh and Donimalai, Bellary, Karnataka in job roles of HEMM Mechanic, Machanic /Fitter and Mine Welder.
- (v) <u>HCL-NSDF- NSDC Project:</u> RPL and fresh skilling programmes have been conducted at Ghatshila (Jharkhand), Khetri (Rajasthan) and Malanjkhand (Madhya Pradesh). Total 525 workers of Hindustan Copper Limited (HCL) including 32 new candidates have been trained & certified so far in mining job roles.

# Other Achievements

**Hindustan Zinc Limited (HZL) :** To address the shortage of skilled workforce in the mining sector, especially in underground mining operations of HZL where overseas workers are engaged in its underground operations, SCMS has entered into an MOU with Hindustan Zinc Limited to support the structured training including soft skills and on the job training spanning 18 months to make them employable on Heavy Earth Moving Machineries (HEMM) and Jumbo Drill Operators (JDO) on the QP and NOSs in line with the National Skill Qualification Framework as a part of its CSR initiatives. The training of 120 students recruited from across Rajasthan has started since 3<sup>rd</sup> October, 2016 through our training partner Indian Institute of Skill Development.

**Standalone Centers:** Promoted setting up of 14 standalone training centers in mining sector job roles through our training partners.

**Rozgar Mela – Mirzapur, Uttar Pradesh:** SCMS participated in Job Mela was held on 5<sup>th</sup> and 6<sup>th</sup> December, 2016 at "Rajkeeya Inter College, Mirzapur. Skill Council for Mining Sector was recognized by the Minister for the exceptional work done at Mirzapur and gave a Certificate of Appreciation."

2.7 On being asked as to what have been the major achievements of MSDE so far, the Ministry of Skill Development and Entrepreneurship stated that Skill Council for Mining Sector (SCMS) has developed Qualification Packs (QPs) and its corresponding National Occupational Standards (NOSs) for mining sector job roles both for opencast and underground mining operations which are approved by QRC of NSDC and National Skill Qualification Committee (NSQC) under NSDA. The Skill ecosystem under MSDE through NSDC and NSDA have enabled support in developing these QPs and NOSs and its training packages. Support from inter-ministerial tie up has ensured that the project has rolled out in smooth and efficient way. Tripartite agreements have been

signed with various PSUs under Ministries of Coal, Mines, and Steel including Coal India Limited, MECL, Hindustan Copper Limited, NALCO, and NMDC. The consolidated target under these MoUs is to train 272,408 beneficiaries across various sectors. Recognition of prior learning (RPL) has been successfully completed for 39,534 employees and contract workers of CIL, NMDC, NALCO and HCL.

2.8 On further being asked as to how many mining related job roles have been implemented through NSDC and SCMS for skill development in the mining sector, the Ministry of Skill Development and Entrepreneurship stated that SCMS has implemented the trainings and certifications for 34 job roles both for opencast and under-ground mines.

2.9 Enquired about the requisite facilities that have been made available with SCMS to achieve this ambitious target and if not, what were the major constraints/ impediments being faced in achievements of these targets set, the Ministry of Skill Development and Entrepreneurship stated that for achieving the target, Skill Council for Mining Sector (SCMS) had carried out empanelment of training partners and assessment agencies, it involves creating appropriate training infrastructure, creating a pool of expert trainers through Training of Trainers and Assessors programme, setting-up standalone centres, strengthening of the existing training centres setup by the industry and creating Centres of Excellence as per NSDC guidelines.

- i) SCMS has affiliated 46 Training Partners and 16 assessment agencies
- ii) Promoted setting up of 14 standalone training centers in mining sector job roles through our training partners.
- iii) Create a pool of certified trainers and assessors with 255 trainer certifications and 150 assessor certifications in various Mining trades.
- iv) In addition, the existing Vocational Training Centers (VTCs) available with the industry are being upgraded."

2.10 On being asked as to whether requisite facilities were available with SCMS to achieve this ambitious target, the Ministry of Skill Development and Entrepreneurship stated that <u>Training under Coal Sector:-</u> SCMS has a dedicated team including project monitoring unit to successfully implement the ambitious CIL project. SCMS has 46 accredited training partners (including 14 NSDC partners) with a pool of 255 certified

trainers and 16 assessment agencies housing 150 certified assessors in mining sector's job roles.

2.11 It was apprised that SCMS was to upskill and train 4.5 lakh workers including 50,000 new inductees in the Mining Sector over a period of 10 years. In this context, on being asked as to how the target of 4.5 lakh employees to be trained was arrived at and the achievements made so far and as to whether the requisite facilities are available with SCMS to achieve this ambitious target, the Ministry in its reply stated as under:-

"The Committee constituted by Federation of Indian Mineral Industries (FIMI) to go into the issue of skill development for the mining sector, while formulating the proposal for setting up of sector skill council for mining, considered and deliberated on the present state of mining industry of the country and future skill requirements. Mining Industry is largely fragmented. In the organized sector majority of the workforce is employed in Coal mining activities. In Non- Coal mining 86% of the mining leases in India are less than 50 hectares in size and account for 16 percent of mining area which are labour intensive with low level of mechanization, 14 percent of mining lease are 50-200 hectares and above (covering 84 percent of mining areas) operated both by public and private sector companies with high degree of mechanization. There are several small scale operational mines in unorganized sector engaged in mining of minor minerals, sand and quarrying, which employ a major workforce having no formal training. The Committee also took note of the study sponsored by Ministry of Mines through Confederation of Indian Industry (CII) & IMaCS during the year 2010. It was estimated that given the estimated increase in the mining output as well as the expected changes in the productivity levels, the total employment in the mining industry is estimated to increase to 1.1 million from 0.95 million by the year 2017 and 1.2 million by the year 2025. (Source: IMaCS analysis)

			Manpower	Gap (in Years)		
Skills	Role	2010	2017	2022	2010-17	2010-22
Specialized skills	Geologist & Geophysicist	28,500	30,020	30,225	1,520	1,725
Skill level-l	Engineers & other graduates	1,23,500	1,26,500	1,29,038	3,000	5,538
Skill level-ll	Diploma/Certificate holders & other Statutory	3,13,500	3,41,000	3,72,000	27,500	58,500
Skilled ; skilled	Trained operator for maintenance, HEMM, Fitters, Welders etc.	4,84,500	6,05,000	6,39,375	1,20,500	1,54,875
Total Manpower	All skill manpower	9,50,000*	11,0,2520	11,70,638	1,52,520	2,20,638

Coal sector account for 70% of workforce in mining sector.

The key factors affecting the human resources and skill requirement in the Indian

Mining Industry are technology up-gradation, increase in productivity to meet the growing demand, stringent environment and sustainable development framework, globalization and ageing profile of workforce and long gestation period for skill acquisition. The mining sector is facing a slow down due to various judicial and regulatory interventions adversely affecting the mining operations in Karnataka, Goa and other States and also intake of manpower. Due to the current global economic slowdown, many of the mining companies in India are under pressure and less sure on immediate expansion.

The mining industry's contribution to the GDP hovered around 2% during the last few years. Given the estimated increase in the mining output as well as the expected changes in the productivity levels, the total employment in the mining & exploration of Coal, Metallic and Non-metallic, Minor & Other minerals is estimated to increase to 1.1 million by the year 2017 and 1.2 million year by the year 2022. Coal and lignite is expected to continue to be the maximum employment sector till 2022.

Demand and supply gap of about 1500-2200 geoscientists and about 3000-8500 mining engineers are expected between 2010-2017/25 to focus on sustainable development, mine safety and energy efficient technologies. The training needed for this category would be catered to by GSI, IBM & SMI (Sustainable Mining Initiatives) of FIMI and experienced/specialized persons from the industries. An initial skills assessment exercise of semi-skilled and categories below reveal 50-55% of such manpower in India require urgent re-skilling or up-skilling for which there is no credible industry specific institute in the country. The mining operations across mining sub-sectors are witnessing a trend for using newer and bigger machinery there by employment for such machinery operators is expected to grow significantly across mining sub-sectors and will also entail up-skilling of the existing workers.

Keeping these factors in view as per the operating model, SCMS plans to train approximately 1.20 lakhs of existing manpower for non-fuel minerals sector, remains 2.80 lakhs for Coal Sector and approximately 50,000 new inductees to make them employable for role in the corporate sector within a period of ten years and totaling to 4.50 lakhs.

A comprehensive 10 years plan was proposed and approved by NSDC.

	Milestones for achieving the target										
Parameter	Y1	Y2	Y3**	Y4	¥5	Y6	Y7	Y8	Y9	Y10	Total
Cumulative No. of training organizations accredited	1	4	9	14	19	24	29	34	39	44	44
Number of Trainers Trained	50	75	100	200	200	200	200	200	200	200	1625
Number of in- services people certified	2,500	5,000	10,000	20,000	37,000	45,500	55,000	70,000	75,000	80,000	4,00,000
Number of new trainees certified	500	1000	1,500	2,000	2,500	3,500	5,000	8,000	11000	15000	50,000
Total Number of people certified	3,000	6,000	11,500	22,000	39,500	49,000	60,000	78,000	86,000	95,000	4,50,000

The progress is continuously monitored by NSDC and its Governing Board comprising industry leaders, Government representative of line ministries, Academia and NSDC. Mid-term corrections as needed for the successful implementation will be adopted."

2.12 When asked to highlight as to whether the Ministry of Mines have prepared any roadmap to face this huge demand and what are the constraints/impediments faced in this regard, the Ministry in its reply has stated as under:-

"As per the allocation of Business Rules, Skill development is not a part of mandate of Ministry of Mines. However, being the nodal Ministry for the mining sector, the Ministry has entered into MoU with Ministry of Skill Development and Entrepreneurship for taking forward the skill development mission. The Ministry does not have any project schemes for training. However, the field organisations of Ministry of Mines like Geological Survey of India (GSI), Indian Bureau of Mines (IBM) and PSUs (NALCO, HCL & MECL) have training facilities for their employees.

The 3 PSUs will be extending the training facilities for the people living around their facilities in consultation with National Skill Development Corporation and SCMS. NALCO and HCL are augmenting the training facilities for meeting the demand of mining sector to the extent possible. In addition, NALCO and HCL

are setting up two Centre of Excellence in mining sector at Damanjodi (Orissa) by NALCO and Khetri (Rajasthan) by HCL."

2.13 During the briefing by the representatives of Ministry of Mines and Ministry of Skill Development and Entrepreneurship (MSDE), the Committee asked whether National Occupational Standard were in tune with International Benchmarks. The representative of the Ministry of MSDE thereupon stated that so far, 4500 NOS and about 1600 QP have been made and the joining of 4 NOS becomes one QP. MSDE has launched NRI Skill Development Scheme, which was international standard. Initially MSDE has taken 82 job roles from England and 26 from Australia. This is acceptable in 80 countries.

2.14 On being asked as to how exactly the Ministry of Skill Development and Entrepreneurship (MSDE) was seeking to ensure that national standards and quality for skilling are globally aligned, the Ministry of Skill Development and Entrepreneurship replied that the National Skill Development Agency (NSDA) has been mandated to operationalize National Skill Qualifications Framework (NSQF) which was a quality assurance framework. In this regard, NSDA had been working with the Ministries in the Government of India, State Governments and private agencies in the skills space to facilitate NSQF alignment of all educational programs, trainings and skilling activities. In the process of aligning skill trainings to NSQF, international comparability is one of the components which is looked upon for aligning skill trainings to global standards. Further, NSQF alignment of qualification takes into consideration the inputs from the industries, sectoral stakeholders making the candidates industry ready.

2.15 On further being asked as to how the envisaged credible certification, credit accumulation and transfer of accumulated competencies of skilled individuals would be formulated and implemented, the Ministry of Skill Development and Entrepreneurship stated that the framework for credit accumulation and transfer of credits is yet to be finalized.

2.16 On being asked to highlight the constraints / impediments faced by MSDE in the implementation of the National Policy for Skill Development, 2015 with particular emphasis on skill development projects in the Mining Sector, the Ministry of SDE stated

that there exist several challenges in the skilling and entrepreneurship; a few of which were enumerated as below:

- (i) "Public perception that views skilling as the last option meant for those who have not been able to progress/opted out of the formal academic system.
- (ii) Skill development programmes of the Central Government are spread across more than 18 Ministries/Departments without any robust coordination and monitoring mechanism to ensure convergence.
- (iii) Mismatch between demand and supply at the sectoral and spatial levels.
- (iv) Limited mobility between skill and higher education programs and vocational education
- (v) Pre-dominant non-farm, unorganized sector employment with low productivity but no premium for skilling

It was further stated that the MSDE was working towards addressing these challenges."

2.17 On being asked as to how many sector skill councils have been set up so far and what are the sectors covered there under and to highlight the achievements made so far, if any, by the NSDC as well as those of Sector Skill Councils, the Ministry of Skill Development and Entrepreneurship stated that 40 Sector Skill Councils have been set up so far in the sectors mentioned below:-

"Automotive, Security, Retail, IT- ITes, Media, Rubber, Healthcare, Gems & Jewellery, Electronic & Hardware, Agriculture, Telecom, BFSI, Leather, Food Processing, Logistics, Plumbing, Capital Goods, Construction, Life Science, Aviation & Aerospace, Iron & Steel, Power, Mining, Textiles & Handlooms, Apparels, Beauty & Wellness, Handicrafts, Tourism & Hospitality, Infrastructure Equipment, Sports, Oil & Gas, Coating & Painting, Green Jobs, PWD, Domestic Workers, Furniture & Fittings, Instrumentation, Strategic Manufacturing, Management & Entrepreneurship and Professional Skill Council."

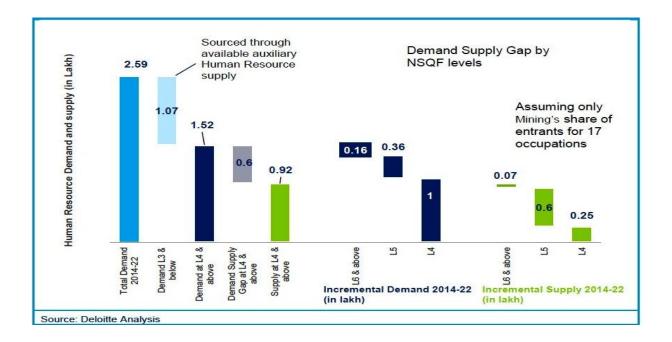
# Chapter-III

## SKILL GAP IN THE MINING SECTOR

Indian mining sector employed 23.86 lakh people in the year 2013-14. The Fuel Mineral (coal & lignite) employed 5.69 lakh, Metallic, Non- Metallic 1.46 lakh, Minor Mineral Dimensional stone 14.10 lakh and Mineral processing, Prospecting and exploration along with Engineering and allied services (environment health & safety) account for 2.5 lakh workers. An incremental demand of 2.59 lakh is expected over the period 2013-14 to 2021-22. The Skill Council for Mining Sector (SCMS) through its consultant Deloitte Touche conducted the Human resource and Skill gap study for the period 2014-2017 and 2017-2022 for Indian mining sector.

Deloitte Touche Tohmatsu India LLP in association with Skill Council for Mining Sector (SCMS) has done a skill gap study and they had submitted their report in May 2016 to NSDC. The report projected the human resources requirements of mining industry, mapping the human resources skills available currently in the mining industry to match such requirements, identified skill gaps, and suggested measures to bridge the same. As per the study done by the Deloitte, total incremental demand in the mining sector including coal would be around 2.59 lakh. Out of this demand for 1.07 lakh human resources at NSQF level 3 could be sourced through auxiliary supply. Upto NSQF level 3, no serious challenge in terms of possible disruption in the supply of human resources is anticipated. To cater to the demand upto level 3, a large pool of human resources will be available during 2014-2022 which includes 17 types of occupations such as mazdoor / skilled helper, etc. The challenge, however, for the mining sector would be to attract new entrants from pool of supply into mining careers as the pool is available across all competing industries. Further, for induction in the mining sector human resources available in the pool would require adequate training to work in mining ecosystem. In view of the availability of large manpower available for taking up the job upto NSQF level 3 no gap is anticipated in this segment. The projected skill gaps at various NSQF levels are presented in a diagram below:

3.2 Incremental Human Resources Demand Supply Gap (In lakh) – Mining's share of entrants for 17 occupations excluding mazdoor / skilled helper, 2014-2022



3.3 While no major supply gap is anticipated upto Level 3, yet the table above also indicates that during the period under reference there would be serious demand supply gap at NSQF level 4 and above. Against the incremental demand of 1.52 lakh human resources in this segment, the supply through existing sources would be to the tune of 92,000 workers, thereby, leaving the skill gap of 60,000 skilled workers to be trained specifically for taking up the job in the mining sector at the level of NSQF level 4 and above. It is anticipated that out of 60,000 skilled workers, 42,000 workers would be required in the coal sector and remaining 18,000 workers would be the projected incremental requirement for the minerals coming within purview of the Ministry of Mines. The resources of supply at NSQF level 4 is through diploma holder / ITI's equivalent certificate holder and includes the jobs such as drill operator, dumper, HEMM maintenance operators, shovel operator etc. This shortage can be met either through larger enrolments of fresh incumbents in ITI's offering the specialized mining courses or through up-skilling the workers available at NSQF level 3 and below. The role of MSDE is of critical importance in increasing the intakes of trainees and thereby filling the large number of un-utilized seats and also ensuring that larger number of ITIs impart specialized training suited for mining sector requirements. No human resource gap is projected for NSQF level 5 in the mining sector. However, the report of Deloitte

highlights that human resource deficit at NSQF level 6 and above (Doctorate and post graduate) would be roughly about 1100 per annum. These skills are necessarily required for key mining activities like geological exploration, exploration drilling and ore dressing etc.

3.4 In a nutshell, the following are the conclusion of the study done by Deloitte in respect of mining sector in general (including coal) and MCDR minerals governed by Ministry of Mines in particular:

- Out of projected incremental demand of 2.59 lakh new inductees, the demand of 1.07 lakhs at the NSQF level 3 and below is anticipated to be fully met through auxiliary human resource supply. Out of this approximately 74000 pertain to coal sector and remaining 33000 in mining sector other than coal.
- At NSQF level 4 and above the anticipated demand and supply gap is 60000 workmen. Out of this approximately 42000 would be required in the coal sector and remaining 18000 in respect of MCDR minerals governed by Ministry of Mines.
- Though there is no shortage at the level of NSQF level 3 and below necessary skilling during induction would be required before the available human resources enter into the mining sector related jobs.
- In addition to this projection, with a view to have holistic picture on skill upgradation requirement, the manpower deployed in the mining sector has to be brought under Recognition of Prior Learning (RPL) certification programme.

Furthermore, skill upgradation of the apprentices through on the job training would be the other important component where appropriate investment is to be made.

# Addressing the Issue of Skill Gap in the Mining Sector through Strategic Partners

3.5 Mining sector in India is highly fragmented. While Ministry of Mines provides the regulatory framework in the context of major minerals, the responsibility of grant of mining lease and their management on scientific lines is with the State Government. Therefore, success of any strategy to foster scientific mining practices and deployment of trained manpower hinges on proactive participation of the respective State Governments. To bring the states on board for implementation of skill development, Ministry of Mines uses its convening power to continuously discuss the issue with respective states. Ministry of Mines has prepared a Skill Plan for the Mining Sector and shared it with all the States during the Mining Conclave organized in July, 2016. Ministry of Mines has also written to the States to dovetail a suitable strategy for the Skill

Development in the Mining Sector. Further, 95% of the Mining leases are in the private sector, therefore, any credible approach towards skill development invariably involves significant role of the private sector. Skill Council for Mining Sector not only serves as a think tank for development of qualification packs in line with National Skill Qualification framework but also play an important role in extending training facilities to the private sector for upgradation of skill on a continuous basis.

3.6 Keeping in view that 95% of the Mining leases are in the private sector, when the Committee asked to highlight as to how the Ministry would envisage the role of the private sector in addressing the issue of skill gap in the mining sector through strategic partnership and to highlight as to whether the Ministry of Mines have prepared any roadmap to face this huge demand and the constraints/impediments faced in this regard, the Ministry of Mines has apprised the Committee as follows:-

"Training in the private sector in the mining industry is confined to safety training mandated under the Mines Act 1952. Private sector has been found wanting in training in new regime of training of human resources. In order to gear up the private sector for the training challenge, it is necessary to catalyse investment from industry through CSR and otherwise for raising resources for training. It is also necessary to change the mindset of the private sector that training is not an unnecessary expenditure and that providing training is beneficial to the company in the long run.

The Vocational Training Act (1966) provides for training each and every individual entering into the mining activities to be trained through in house facilities. Some of the big companies in mining sector do have the in-house facilities for training the work force. The small mining companies do not have such in-house facilities. SCMS is the nodal agency for training such workers from the private sector."

# New Policy Thrust towards Standardized Training Programmes in terms of International Occupational Standards.

# Engaging the Private Sector

3.7 While the government itself is a large employer, the primary focus of skill development is essentially towards private sector employment and entrepreneurship. So far, private sector itself has not geared up for the challenge. It is necessary to catalyse investments from the industry and support candidates in raising resources for training. The Vocational Training Act, 1966 provides for training each and every individual entering into the mining activities to be trained through in-house facilities. The

big players in the mining sector reportedly have the in-house capacity for skilling the workforce entering into the mining sector. However, more labour intensive field of minor minerals is dominated by small holder mining operations which so far find the skill upgradation programme as a cost factor and thus they do not encourage in-house training. This segment is also required to be reached through the activities are being proposed to be undertaken under the Skill Plan. The private sector is envisaged to approach through various confederations and SCMS.

# **Chapter-IV**

# SKILL DEVELOPMENT IN MINE PSUS

Progress of Mines PSUs in Skill Development

The Annual Report (2016-17) of the Ministry of Mines highlights the progress of PSUs in Skill Development as under : -

• Amount spent on Skill Development during the last 3 years and the current year:

(Rs. In Lakhs)

Year	NALCO	HCL	MECL
2013-14	623	11.66	1.41
2014-15	571	37.89	1.58
2015-16	831	9.33	22.37
2016-17	197 (upto Sept.,	14.00 (upto Oct.,	4.38 (upto Sept.,
	2016)	2016)	2016)

# Existing Training Facilities vis-à-vis Skill Development Plan

4.2 On being asked to elaborate the stated role of the PSUs for implementation of appropriate roadmaps facilitating Standardized Training Programmes, the Ministry of Skill Development and Entrepreneurship informed the Committee that National Skill Development Corporation (NSDC) actively engages with various Public Sector Undertakings (PSUs) across the country to offer fully funded employability programmes. This allows PSUs to fulfill their CSR obligations and empowers under privileged sections of the community to become economically independent which is the prime focus of the CSR programmes of all PSUs. NSDC has signed MoUs with various PSUs under Ministries of Coal, Mines, and Steel including Coal India Limited, MECL, Hindustan Copper Limited, NALCO, and NMDC. The consolidated target under these MoUs is to train 272,408 beneficiaries across various sectors.

4.3 On being asked as to what kind of training was being conducted by NSDC for Project Affected Persons (PAPs) in these Multi Skill Centres, the Ministry of Skill Development and Entrepreneurship stated that the Pilot project for fresh skilling of communities in and around Project affected areas had commenced under few sectors identified according to NSDC Skill Gap reports. Tripartite MoU with CIL targets to train 70,000 beneficiaries across 34 operational districts of Coal India. Project aims to scale up the fresh training activities in 2017-18. So far pilot-trainings have been initiated under Mining, Security, Apparel, and Plumbing sector across various subsidiaries.

4.5 On being asked as to whether the course module of such intended training would practically address and augment skills towards mine safety concerns, the Ministry of Skill Development and Entrepreneurship stated that trainings under fresh skilling are conducted under Mining as well as Non-Mining Sectors which are finalized as per NSDC Skill Gap report for respective districts (in consultation with respective CIL subsidiaries). The course module pertaining to mining sectors job roles have specific National Occupational Standards (NOSs) for Health & Safety which have been developed keeping in view the guidelines as per Mines Act, 1952 being regulated by DGMS. The course module has been designed as per the guidelines.

# **Skill Development Plan for Mines PSUs**

4.6 Skill Plan for the Mining Sector (2016-2022) was unveiled at National Conclave on Mines & Minerals at Chhattisgarh in July, 2016. It aims to develop, design and disseminate training modules required for scientific, sustainable and safe mining practices within the framework of National Policy of Skill Development and Entrepreneurship 2015. The main objective is to focus on outcome-based approach towards quality vocational training skills for both youth and employers to increase employability and better livelihood for individuals.

The activities to be undertaken under the skill plan are enumerated below:

- i. Enhancing the existing training facilities of PSUs, attached and subordinate offices of Ministry of Mines
- ii. Setting up of 2 Centre of Excellence: one each by NALCO and HCL
- iii. Skill development to get priority in fund allocation under CSR
- iv. Promoting Apprenticeship: 10% of the workforce shall be through apprenticeship programmes
- v. Recognition to Prior Learning (RPL)
- vi. Coordination of skilling efforts: engaging with States for skill development initiatives

vii. Coordination of skilling efforts: engaging with private sector for skill development initiatives

4.7 As per the Skill development plan of the Ministry of Mines all human resources deployed in PSUs and dealing with mining activities have to draw a phased programme for ensuring Recognition of Prior Learning (RPL) certification of all its employees and as MOUs signed with MSDE. Consequent to the umbrella MOU signed between MSDE – Ministry of Mines and MSDE – Ministry of Steel, the PSUs of the Ministry of Mines i.e. MECL, HCL, NALCO and PSUs of Ministry of Steel i.e. NMDC and MOIL have entered into MOUs with NSDC-NSDF for RPL and fresh skilling and setting up of Corporate Skills Excellence Centre to be funded from CSR funds as detailed below:

CSR/CSEC Projects	Target (2015-16)	Target Allocated (2015-16)	Trained (2015-16)	Certified till date (Dec., 2016)
MECL	200	100	100	32
HCL	574	574	525	453
NMDC	1,200	1,200	750	586

4.8 On being asked as to whether the formulation of the stated National Occupational Standards are in tune with accepted International Standards and to elaborate the role of the PSUs for implementation of appropriate roadmaps facilitating such Standardized Training Programmes, the Ministry in its written reply informed the Committee as under :-

"National Occupational Standard (NOS) describes what individual need to do, know and understand in order to carry out a task at workplace. Each NOS specify the standard of performance that an individual must achieve when carrying out a task at the workplace together with the knowledge & understanding. A job role may require performance of number of tasks, the NOSs for these tasks will form the Qualification packs (QPs) for that job role. NOSs are benchmarks of good practices. These are developed in consultation with mining industry, employers, statutory bodies and standards setting organizations. International inputs from other mining country are considered and factored as contextual to the Indian mining environment. There are 3 PSUs namely, National Aluminium Company Ltd (NALCO), Hindustan Copper Ltd (HCL) and Mineral Exploration Company Ltd. (MECL) under administrative control of Ministry of

Mines. NALCO & HCL are involved in extraction of Bauxite and Copper ores for production of Aluminium and Copper metal respectively. MECL carries put mineral exploration activities. All the 3 PSUs have in-house training facilities for providing training to their trainees. NALCO has 3 well equipped training centres, HCL has 3 training centres and MECL has 1 training centre. All the 3 PSUs have signed Memorandum of Understanding with NSDC during the year 2015 and their action plan is driven by the action plan enumerated in the MoU. All the 3 PSUs will be earmarking 10% of CSR funds for skill development and the number of apprentices to be trained will be equal to 10% of their total staff strength. All the workers employee in PSUs will be certified as per NSQF levels in three years. All other employees and contractual workers will be brought under RPL certification.

NALCO: NALCO complies with and implements all the policy guidelines to facilitate the standardized training programs i.e. Qualification Packs (QP) developed by various Sector Skill Councils. In compliance and in accordance with MOU signed amongst NALCO, NSDF and NSDC, Skill Development training classes in non-mining trades like Beauty, Health Care, Apparel, Hospitality and Retail has already started from 12th December 2016 in the three districts i.e. Khordha, Koraput & Angul of Odisha State. This will cover 1200 candidates over two year's period. RPL training for the 420 workmen engaged through various Bauxite Mines shall start around 20th February 2017. In contracts in compliance with Skill Plan for Mining Sector (2016-2022) formulated by Ministry of Mines (GOI), NALCO is in process of setting up of Corporate Centre of Excellence for Mining Sector in Damanjodi. The proposed Centre will be operational by June 2018, with annual training capacity of 250 candidates i.e. 150 candidates in Simulator based trades and 100 candidates in other trades. Primary emphasis of the proposed centre shall be training for operating the HEMM as Human Resource & Skill Requirement Study for Indian Mining Sector done by Deloitte mentions that "The highest share of (38.6%) of incremental Human Resource demand is expected at NSQF level 04 (i.e. Diploma/ ITI equivalent certificate holders). The majority of this segment is anticipated to participate primarily in mineral extraction activities with specific skills to operate trade specific tools and machineries. Besides, NALCO on their own initiative, have floated tender on 29.11.2016 for empanelment of training partners for imparting skill training to 4000 nos. local youth in non-mining trades. HCL: Hindustan Copper Limited has signed Memorandum of Understanding with National Skill Development Corporation (NSDC) under Ministry of Skill Development and Entrepreneurship for training under 'Recognition of Prior Learning' to its employees and Contract Labour as well as 'Fresh Skilling Training' for village youths. Apart from this, the training Program Scheduled to start from Financial Year 2017-18 in its 'Skill Development Institute as an Upgraded Training Center' at Khetri shall be as per the Course Curriculum designed by Skill Council for Mining Sector (SCMS). All the trainings are being conducted as per National Skill Qualification Framework. MECL: Entering into

MoU with NSDC - MECL signed an MoU for Skill Development Project with National Skill Development Corporation (NSDC) and National Skill Development Fund (NSDF) on 1st October, 2015.Under this project, MECL has committed to provide training for fresh skilling of 200 youth and women over a period of 2 years (i.e. FY2015-16 and FY2016-17) as per National Skills Qualification Framework (NSQF)."

# Training Facilities by PSUs

# A. National Aluminium Company Limited (NALCO)

4.9 NALCO has developed training infrastructure in the form 3 well equipped training centres at M&R Complex, Damanjodi, Koraput, S&P Complex, Angul and Corporate Office, Bhubaneswar. Under the training for non-executives, at entry level, candidates taken as SUPTs (Skill Up-gradation Practical Trainee) for 3 years of training, after successful completion of same, they are given induction training as JOTs (Junior Operator Trainees) for 1.5 years and further they are selected as regular employee after successful completion of training. At the Executive level training selected candidates are given on the job training for one year, out of which induction training is given for 21 days at Corporate Office and 15 days each at both the Complexes (M & R Complex & S & P Complex). NALCO has capacity to impart technical training on mining sector related trades to 900 people per annum. For this NALCO invests about Rs. 2 crore per annum. NALCO has planned to augment its capacity to train about 6000 participants between 2016-17 to 2021-22 with an estimated budget of Rs. 20 crores.

# B. Mineral Exploration Corporation Limited (MECL)

4.10 The organization's strength lies in the exploration work. MECL has training facility at "Gurukul", where currently 50 drilling technicians working with various State Governments are trained. This training is fully funded by the respective State Governments. In addition to 10% mandatory expenditure on Skill Development from CSR fund, MECL has kept a budget of Rs. 1.5 crore from its own resources for the year 2016-17 and 2017-18. This will be utilised for training 150 apprentices in various states where MECL's exploration work is going on. MECL has committed to contribute Rs. 26.70 lakhs from CSR funds to NSDF through NSDC to impart skill development activities to 200 youth during Financial Year 2015-16 and Financial Year 2016-17. The fund drawn from CSR for Skill Development will be exclusively used for training

modules of NSDC at different training centres in Tamil Nadu, Andhra Pradesh and Chhattisgarh.

4.11 During the Briefing, the Secretary, MSDE has also submitted that CSR funding is strictly monitored by the Ministry. The Ministry gets money from PSUs and Private Industries. Therefore, monitoring happens very strictly because auditing of the fund would be based on the outcome of project such as whether the beneficiaries who took training, started working or not, what was the impact on their income etc.

# C. Hindustan Copper Limited (HCL)

4.12 Hindustan Copper Limited (HCL) has established Skill Up-gradation Training Programmes throughout its Operating Units for imparting training to the employees as well as local youths in and around its operating units. HCL has 3 training centres at Ghatsila, Malanjkhand & Khetri which have capacity to impart training to 150 participants per annum. The cost of running the training facilities in HCL is about Rs. 1 crore per annum. During the skill plan period HCL plans to extend the training facilities to 1100 trainees with estimated cost of around Rs. 7 crore.

# Skill Development Plan (SDP)

4.13 The Committee have been apprised by the Ministry of Mines that the main objective of the Skill Development Plan for Mining Sector (2016-22) unveiled in July, 2016 is to focus on outcome-based approach towards quality vocational training skills for both youth and employers to increase employability and better livelihood for individuals. In this context when asked about the timeframes within which such skilling activities are to be taken up and the quantum of targeted beneficiaries and whether the course modules of such intended training would practically address augmentation of skills towards mine safety concerns, the Ministry stated in its written reply as under:-

"In association with Skill Council for Mining Sector a skill gap study titled 'Human Resources & Skill Requirement study for the Mining Sector' was completed by Deloitte Touche Tohmatsu India LLP in May, 2016. The study focused on identifying the workforce and skill requirement for mining sector over the 8 year period 2014-22. The Skill Plan was unveiled at National Conclave on Mines & Minerals at Chhattisgarh in July, 2016. As per the report, the Indian mining industry employed nearly 23.86 lakh workers in 2013-14 across Prospecting & Exploration, Mineral Extraction, Associated Services and Mineral Processing & Beneficiation – this is expected to increase to 26.45 lakh (i.e. additional

incremental demand of 2.59 lakh people) with CAGR of 1.3% from 2013-14 to 2021-22.

The RPL, qualitative training programmes in line with NSQF, augmentation of existing capacities in the training centres, setting-up of centres of excellence, earmarking of 10% of CSR for skilling activities and hiring 10% of the work force under the apprenticeship programme are the key highlights of the activities in which agencies associated with Ministry of Mines would indulge in."

# Progress of PSUs in Skill Development

# Setting up of Centres of Excellence

4.14 In addition to business as usual activities related to training of the human resources and its proposed augmentation, two Centres of Excellence in mining sector are proposed to be developed during this period in Damanjodi (Odisha) by NALCO and in Khetri (Rajasthan) by HCL. The mining innovation is especially focused on better, cheaper extraction and hauling technology and methods to help in enhanced productivity and cost cutting. The move towards automated technologies has already revolutionized mines operation. Therefore, the objective of the Centre of Excellence is to provide state of art training and skill development in the areas of Excavation and hauling. The Centre will also strive towards quantum leap in harnessing productivity gains in HEMM and associated operations. The activities of the Centre would include:

- Skill Development and Corporate Training
- Demonstration of Technology and Best Practices
- Education and Training (use of simulator)
- Research and Development
- Incubation and Entrepreneurship through continued innovation and excellence.

4.15 Both NALCO and HCL are in touch with National Skill Development Council (NSDC). In consultation with them the tentative cost for setting up the Center of Excellence is estimated to be Rs. 8 crores for Khetri and Rs. 20 crores for development of CoE at Damanjodi by NALCO. Therefore, the two centers to be setup under the initiatives of Ministry of Mines will cost Rs. 28 crore. These centers are to be made fully operational during the financial year 2017-18.

# Utilization of CSR funds for Skill Development

1.16 Skilling of people affected by mining activities is best approached through

dedicated earmarking of CSR funds. The PSUs of Ministry of Mines have committed to provide 10 % CSR funds for skilling activity. This is to be utilized through programmes drawn by NSDC keeping national perspective in mind.

1.17 When asked as to whether the commitment to provide 10% of CSR funds for skilling activities by PSUs are being already in practice, the Ministry in its reply stated as under: -

"NALCO: (a) With reference to the observations regarding CSR spending, NALCO had already incurred 103.53% of the allocated CSR budget for the year 2015-16. Skill Development Programme has started at Angul, Khordha and Koraput District of Odisha through National Skill Development Council (NSDC). In the first phase 570 candidates are enrolled in different trades, retail, Apparel, Beauty & Wellness, Health Care & Hospitality. Besides the above, NALCO is also in the process of fixing independent training partners to impart Skill Development training programme at Angul, Damanjodi, Bhubaneswar &Vizag by selecting Training partners in line with that of NSDC.

(b) On being asked about the major constraints or impediments that are being faced in their skilling activities in PSUs and reasons thereof; the Ministry in its reply informed the Committee as under:

- i) Mobilization of the adequate number of candidates by the Training Partners, and subsequent drop out of the candidates after enrolment, in spite of providing skill training without any charges & guaranteeing employment opportunity/ self-employment avenue after successful completion of the training.
- ii) Need for aligning the trade skills as per NSQF with the recruitment eligibility requirements in PSUs./Government Sector. This will help in expanding employment opportunities of trained candidates as per NSQF.
- (c) Inputs regarding the various National Skill development institutes:

The production Units of NALCO are mainly located in the State of Odisha and there is lack of National level skill development institutes in the State specifically with reference to Aluminium production and mining activities. Accordingly, NALCO has already taken up steps for establishment of one Center of Excellence for HEMM operation at Damanjodi.

<u>HCL:</u> Hindustan Copper Limited has been implementing the Corporate Social Responsibility (CSR) funds fully and has been able to spend more than the mandated amount as per The Companies Act, 2013. Hindustan Copper

Limited has allocated funds for upgrading its existing Training Center to a 'Skill Development Institute as an Upgraded Training Center'. From FY 2017-18, training to Youths shall be provided in the said Institute on the 'Survey' Trade for 6 months followed by on the job training. There shall be 2 batches in a year each consisting of 30 trainees. The Training partner finalized for the training is 'IACM Smart Learning Limited, Delhi'. Renovation of the existing Training Center is presently underway.

<u>MECL:</u> Yes, MECL is implementing the Corporate Social Responsibilities (CSR) funds completely. The budgeted amount and actual expenditure on CSR for past two years and current year i.e. FY14-15, FY15-16 and FY 16-17 is as mentioned below –

S. No.	Financial Year	Allocated CSR Budget (Rs. In Lakhs)	Actual CSR expenditure (Rs. In Lakhs)
1	FY 2014-15	81.49	83.95
2	FY 2015-16	107.44	108.94
3	FY 2016-17	Rs. 166.66	CSR activities in progress

The budgeted amount and actual expenditure on Skill development from CSR funds for FY15-16 and FY 16-17 is as mentioned below –

S. No.	Financial Year	Allocated Skill Development fund from CSR Budget (10 %) (Rs. In Lakhs)	Actual expenditure (Rs. In Lakhs)
1	FY 2015-16	22.37	22.37
2	FY 2016-17	16.02	Skill development activities in progress

# Promoting apprenticeship

4.18 On the job apprenticeship training provides a win-win option for both industry and the trainees as with this mechanism the existing training facilities could be effectively utilized without any additional cost. PSUs of Ministry of Mines have put forth a credible target of drawing 10% of their workforce under apprenticeship programme and thereby enhance their employability in the jobs connected with the mining ecosystem. However its full potential will fructify only if private sector too gears up in making similar commitments. In-line with the National Policy as enunciated by MSDE, the endeavour of 3 PSUs is to source 10% of the workforce in the relevant job roles under apprenticeship

programme, for the year 2016-17. PSUs have committed to target training of about 1450 under this programme. The likely expenditure on this count is expected to be Rs. 20 crores per annum. Therefore, during the period of this skill plan upto 2022, Rs. 120 crores is to be budgeted by PSUs for on the job apprentices training programme. NALCO has listed out a target of training 1000 persons (2016-17) through 2 empanelled agencies one in Bhubaneshwar / Angul and other in Damanjodi / Vizag.

4.19 There have been 290 posts sanctioned under the apprenticeship programme of HCL with the allocated fund of 1.5 crores for the FY 2016-17. Out of 290 posts sanctioned 248 have been filled and the rest of the posts are in the process of filling up. With the estimated budget of Rs. 1.5 crores, MECL has proposed to train 150 apprentices during 2016-17 and 2017-18 in various States associated with exploration work. These apprentices are to be governed by Regional Directorate of Apprenticeship Training, Western Region, Mumbai.

# **Recognition to Prior Learning (RPL):**

4.20 RPL provides a framework for ways and means to bring the experience earned over period of time through a skill certification system. Recognizing skills learned in the workplace or through non-formal activities, as opposed to learning at formal educational and training institutions are important for vertical and horizontal mobility of workmen with experience; thereby opening the world of opportunities for migrating to the job of your choice with ease. All the human resources deployed in PSUs and dealing with mining activity have to draw up a phased programme for ensuring RPL certification for all of its employees.

- There are about 1800 employees in mining related activities in HCL. HCL has targeted to impart RPL to 279 unskilled and semi- skilled workers for the year 2016-17 and has identified 4 locations where maximum training intervention is required, namely, Khetrinagar, Jhunjhunu district (Rajasthan), Ghatsila, Purvi Singhbhum District (Jharkhand), Malanjkhand, Balaghat District (Madhya Pradesh) and Taloja, Raigarh District (Maharashtra). Remaining human resources are to be included under the RPL certification programme with a view to achieve 100% compliance by 2022.
- There are over 1300 workmen including contractual workers engaged in mining ecosystem in NALCO. The entire working population including the contractual workforce is targeted to be covered in next 4 years.

 MECL has 850 workmen including contractual workmen engaged in mining sector activities. MECL has set a target of completing RPL certification of all these workers by 2022.

### Enhancement of Existing Training Facilities

## Training Facilities in Geological Survey of India (GSI)

4.21 The Geological Survey of India Training Institute (GSITI) with its Head Quarters at Hyderabad and six Regional Training Institutes (RTI), at Lucknow, Jaipur, Nagpur, Hyderabad, Kolkata and Shillong together with the twelve Field Training Centers(FTI) at Aishmuqam, Saketi, Bimtal, Zawar, Kuju, Aizawl, Raipur, Sukinda. Kothagudem, Chitradurga, Vajrakarur and Salem backed by GSI laboratories impart training in different disciplines of earth science, other scientific technical and administrative subjects to officers from other organisations including trainees from foreign countries. During the year 2015-16, 101 training programmes were completed and 6 courses were in progress up to March 2016. Thus, a total of 107 courses have been conducted during the year 2015-16. A total of 2319 personnel were trained out of which 2125 are from GSI, 95 are from State DGM's, 27 international participants and 72 participants were from other organizations. Moving to future, GSI has plans to train 2500 per annum with relatively larger share of private sector participants requiring specific skill sets in the specialized field of exploration. Therefore, during the Skill Plan period up to 2022, GSI will be able to impart requisite skilling to 15000 participants.

#### **Training Facilities in IBM**

4.22 IBM imparts training to technical and non-technical officials of IBM and also to persons from the mineral industry and other agencies in India and abroad. The IBM Training facility was established in the year 1977. In the year 2015-16 IBM has conducted 10 programmes for IBM personnel and 9 programmes for industry and North East region. In the 9 training programmes for industry and north east region, 292 resource persons have been trained on beneficiation, characterization of ores and preparation of feasibility report as per UNFC classification. During last 3 years, on an average IBM allocates about Rs 25 lakhs per annum towards meeting the training requirements.

# Role of the State Government in the Skill Development

4.23 Firstly, State Governments also have large number of PSUs engaged in mining sector activities, State Governments will be sensitized to bring training facilities available with them at par with national framework; secondly as per the finding of the study of the Deloitte, half the workforce employed in the mining sector work in extraction of minor minerals, therefore their role as facilitator is of immense importance; thirdly recently 31 minerals have been declared as minor minerals, thereby enhancing the role of state in designing and implementing policies in respect of these mineral under the statute. In view of this, states have to play much larger role in aligning the training needs in handling the extraction of minor minerals in the larger context of meeting the deadline specified for making National Skill Qualification Framework (NSQF) mandatory.

4.23 Skill Plan for the Mining Sector as prepared by Ministry of Mines has been provided to all the stakeholders including the State Government during the National Conclave held in July, 2016. In addition following steps are proposed for engaging state governments with the skill plan:

- Development of skill plans by individual states specifying the role of their PSUs for universalization of Recognition to Prior Learning (RPLs) and quantitative and qualitative augmentation of training infrastructure.
- SCMS to closely collaborate with State Skill Development Mission for developing state level/ district level Skill Development Plans (target is to cover all the mineral rich states by 2018-19)
- Skill development to be permanent feature of the agenda of CCEC, (an apex level coordination forum) to review the skilling status periodically
- Ministry of Mines to encourage other States to develop systems for skill upgradation as put in place by Goa, Gujarat, Jharkhand, Karnataka and Odisha.
- Within the priority of District Mineral Foundation (DMF), skill up-gradation constitutes a vital thrust area. Monitoring mechanism is to be put in place to ensure that skill upgradation related priorities get due attention and more importantly the activity under skill up-gradation largely confirm to ecosystem of the mining sector.

4.24 When asked as to how they would coordinate the envisaged role of State Governments in aligning the training needs in the Mining Sector, the Ministry in its written reply stated as under: -

"The Ministry will be taking up this issue with the other State Governments in the quarterly Coordination cum Empowered Committee (CCEC) Meeting chaired by Secretary (Mines)."

#### **CHAPTER-V**

#### FUNDING MECHANISM FOR THE SKILL PLAN

The Ministry of Mines informed the Committee that the presence of large number of players both private and public (both at centre and states) in the organised mining sector and a large number of small holding miners in the unorganised sector make it a very difficult task for setting the benchmarks for skilling and associated funding mechanism for each of the stakeholder. As per the estimation presented by the Deloitte, the incremental demand of human resources in respect of the MCDR minerals is presented in the table below. Upto L3 level no major shortfall has been indicated, however, at entry level training needs would be to the tune of Rs. 128 crores estimated on the assumption of training at the entry level cost around Rs. 4000 per person.

Incremental Demand by NSQF job roles (no.)		Funding Requirement(Rs. Crores)	
Upto L3	32000	128	
L4	18000	36	
L6	1100	2	
Total	51100	166	

5.2 Against the funding requirement for skill upgradation in respect of mining activities concerning MCDR minerals to the tune of Rs. 166 crore, Rs. 83 crore is to be mobilized by the mining sector PSUs and GSI and IBM during the skill plan upto 2022. Out of this Rs. 83 crore, Rs. 36 crore are to budgeted for capacity augmentation and conducting the training courses, Rs. 18 crore are to be spent by the PSUs under the apprenticeship programme, Rs. 15 crore are to mobilized through the budgeted amount of IBM and GSI for the year 2017-18 to 2021-22 and remaining Rs. 14 crore are envisaged for setting up two Centre of Excellence. SCMS has projected expenditure to the tune of Rs. 26 crore in association with the private sector. Out of this Rs. 10 crore are earmarked for jobs of NSQF level 4 and above. Therefore, during the skill plan period the available funds are likely to be Rs. 109 crore thereby leaving a gap of Rs. 57 crore during the skill plan period. This gap is to be made up through various private sector and state sector initiatives.

5.3 When asked about the apprentice trained by the three Mine PSUs and the amount spent by them, the Ministry in its reply stated as under:-

(a) "Number of Apprentices trained during the last 3 years and for the current year:

Year	NALCO	HCL	MECL
2013-14	601	146	6
2014-15	736	161	8
2015-16	749	250	10
2016-17	842 (upto Sept, 2016)	290	55 (up to Sept, 2016)

# (b) Amount spent on apprenticeship training:

(Rs. In lakhs)

Year	NALCO	HCL	MECL
IEal	NALCO	HOL	
2013-14	148.73	31.09	1.41
2014-15	206.86	63.33	1.58
2015-16	367.60	108.90	11.69
2016-17	4.76	64.00	3.62 (up to Sept,
			2016)

In connection to the above data, during 2014-15, NALCO trained 736 apprentices while in 2015-16, it goes to 749, thus there is an increase of 13 people while there is an increase of Rs 161 lakhs to train these people. Similarly, during 2014-15, MECL trained 8 apprentices while in 2015-16, it goes to 10, thus there is an increase of 2 people while the amount spent increases to Rs. 10 lakh. Also, during 2016-17, there were 842 apprentices trained (increase of 93 from previous year) in NALCO and the amount spent on them is Rs. 4.76 lakhs while in MECL, 55 apprentices were trained (increase of 45 from previous year) and the amount spent is Rs.3.62 lakhs.

# System of Budgetary Allocation and Funding of Skill Council for Mining Sector

5.4 NSDC has a provision for making budgetary allocation for setting up sector skill councils supported by the industry. While approving the proposal submitted by Federation of Indian Mineral Industries (FIMI) to NSDC for funding assistance to setup Sector Skill Council for Mining Sector, NSDC has sanction

funding of rupees 5,00,00,000/- (Rupees Five Crore Only) as a grant to be disbursed in 3 tranche. As per term and conditions of NSDC funding assistance there has to be a promoter/ industry contribution of 50 lakh. With help of FIMI, SCMS managed funding of Rs. 62, 00, 000 through industry contribution. As per grant agreement signed between NSDC and SCMS on 3th January, 2014 NSDC had release the 1<sup>st</sup> trenche of rupees 2, 75, 00, 000 in March-April 2014 to set up and starts functioning as per approved Business Plan.

# Other Revenue sources for SCMS

5.5 Assessment Quality Assurance Fee, Affiliation Fee, Royalty from publishing Trainees Handbooks, Training of Trainers (TOT) and Training of Assessors (TOA) Fee and Industry Membership fee. Over and above the grant of Rs.5 cr. as approved by NSDC, SCMS could ask for grants from government through NSDC for special projects if needed.

5.6 On being asked to furnish the present status of implementation of the Tri-partite MoU, the Ministry of Skill Development and Entrepreneurship stated that the Project aims to provide training and undertake Recognition of Prior Learning (RPL) to 2.68 Lac persons over a period of 2 years as per National Skills Qualification Framework (NSQF) in its operational areas and neighbouring regions.

- i) Recognition of Prior Learning for unskilled and semi-skilled workers *Targeted at 1 Lac persons*
- ii) Skill training and certification for contract workers *Targeted at 0.68 Lac persons*
- iii) Fresh Skilling for youth and women in the operational areas *Targeted at 0.7 Lac persons*

iv) National Vocational Educational Qualification Framework in Schools

Targeted at 0.3Lac students in classes 9 to 12

v) Infrastructure augmentation/upgradation in Coal India and other training centres

# Upgradation and utilization of existing infrastructure, machinery, etc. available with CIL for the purpose of the project.

The Up-skilling and certification programme under Recognition of Prior Learning (RPL) Scheme for the in-service workers of 7 Subsidiaries Company of Coal India Limited started on 15th July 2016. Against a target of 40,000 workers, till end of March 2017, NSDC through its training partners has been able to conduct RPL of 38,634 (95% of assigned target) in-service workers. The fresh skilling of local youth (PAPs) have also started at Chhattisgarh and Jharkhand State.

5.7 On being asked to indicate the total no. of beneficiaries who have been skilled so far under this programme and the tangible benefits that have accrued to these beneficiaries, the Ministry of Skill Development and Entrepreneurship furnished the following information :

"Skilling Status:

Phase-I (2016-17) of CIL project majorly targeted Recognition of Prior Learning (RPL) certification of employees and contract workers. This has led to formal recognition and certification of these employees.

Projects	Project Target	Allocated Target	Trained	Assessed
CIL-RPL	168000	40000	38634	38190
CIL-	70,000	2622	720	199
Fresh				

5.8 On being asked to indicate the total funds outlays as well as the actual funds that have been incurred so far in this regard, the Ministry of Skill Development and Entrepreneurship furnished the following : -

# "Financial Status

Particulars	Amount in INR
Funds Received from CIL to NSDF	
	150,000,000
Funds Allocated/Committed to Training Partners	144,026,794
Total Project Monitoring Cost (@3%)	
	4,320,804
Total Expenses	148,347,598
Balance	
	1,652,402

5.9 During evidence, by the representatives of MSDE, submitted that at the moment, three major schemes are being run in the MSDE. The first scheme, the craftman's scheme has been in existence since the establishment of ITI in the British Rule during the year 1945, about 70 years ago, ITI's most striking and important scheme was that of long term training of people in the Manufacturing Sector. Apart from this, Prime Minister's Skill Development Scheme is the most ambitious plan of Skill Development in the country under which 1.25 crore people are targeted to be trained in the next four years. The third major Scheme is the apprenticeship in which the basic objective is to provide a job within the industry after 4-5 months of the training in the job. It has also been submitted that the Government of India had made an announcement through the Scheme of National Apprenticeship that the Government will pay 25% of the expenditure on the person who will hold any apprentice. Under this, MSDE will train 50 lakh people in the next 4 or 5 years.

# Part -II

# **Observations/ Recommendations**

The Committee note that India is among one of the countries in the world which has younger work force and it is increasing steadily. The Committee are, however, concerned to find that presently only 2% of the total workforce in the age group of 15-59 years in India have undergone skills training. This only reveals the skill gap and the enormous challenge that lies ahead in achieving the target set for imparting skills training to 500 million by 2022 in terms of the National Skills Policy, 2009. The Committee further note that the skills challenge becomes more acute for India considering that the country has a large portion of its population below 25 years of age. The Committee are, however, optimistic that India's workforce, the second largest in the world after China, can be transformed into a productive workforce giving the Indian Economy a 'Demographic Dividend' to make it a global hub for skilled manpower not only to cater to its own requirements but also to the labour shortage in other countries. The Committee, therefore, feel that bridging the enormous skill gap should be of utmost priority. Undoubtedly, the mismatch between skills versus jobs resulting in massive unemployment of working age group people, impacts the economy and results in social unrest which may sow the seed of insurgencies, etc. The Committee, therefore, applaud the Government's response to face this critical challenge by setting up a separate Ministry of Skill Development and Entrepreneurship which have since come out not only with the National Skill Development Policy, 2015 with a vision to promote a culture of innovation based entrepreneurship which can generate wealth and employment so as to ensure sustainable livelihoods for all citizens, but more importantly it has also rolled out time bound action plan for superseding all the training facilities and existing vocational frameworks with qualification packs (QP) and National Occupational Standards (NOSs) in terms of National Skill Qualification Framework (NSQF). The Skill Plan endeavours to integrate the steps being taken in the mining sector with the national framework. While appreciating the laudable initiatives of the

Government, the Committee hope that the Government will make all out efforts to implement the policy initiatives in a time bound manner so that the intended benefits of such skilling activities/initiatives are achieved. To this end, the Committee desire that the skill initiatives need to focus on three important parameters i.e. quantity, quality and access.

2. The Committee are of the view that skilling programmes need to be scalable, replicable and accessible and must have high degree of inclusivity. Keeping in view that usually the diplomas and certificates with which students graduate, are out of sync with the needs of the industry, the Committee desire that skilling standards developed by the Sector Skill Council (SSC) viz. National Vocational Qualification Framework (NVQF) and National Vocational Education Qualification Framework (NVEQF) should ensure clarity of career choices, options and receptivity of the qualification. The Committee further desire that to ensure quality of skills delivered, the Government should create a formal arrangement among the three key shareholders in the delivery pyramid viz. Government, Industry and skills providers for building skills training as a mainstream and inclusive programme. The 'Train the Trainee' (TTT) programme should be industry led and adequate funding support should be given by Central Government to State Government Institutions. Keeping in view India's large geographical territory, difficult terrain and varying social economic conditions, the Committee observe that standardization of skills is imperative. The Committee, therefore, recommend that a policy convergence by building skills training as a mainstream and inclusive programme be promoted by creating a formal arrangement among the three key stakeholders in the delivery pyramid. Further, greater interaction amongst industry, academia and skills provider may be encouraged to narrow the gap between the demand and supply of skilled manpower. The Committee also recommend that the Government should focus on informal sector by finding a model that reaches out to the people and livelihood promotion institutions and NGOs by engaging corporate houses that could initiate training programme for youth from rural as well as urban areas. The Committee may be apprised of the action taken in the matter.

#### Skilling Requirements in the Indian Mining Sector

3. According to the observations of a committee constituted by the Federation of Indian Mineral Industries (FIMI) on the present state of Mining Industry in the country and future skill requirements, the Mining Industry is largely fragmented with the majority of the workforce in the organised sector employed in the Coal Mining activities accounting for 70% of workforce in mining sector. As regards non coal mining, 86% of the mining leases are less than 50 hectares in size and account for 16% of mining areas which were labour intensive with low level of mechanisation whereas 14% of mining lease covering 84% of mining areas are 50-200 hectares and above which are operated both by public and private sector with high degree of mechanisation. The FIMI committee also took note of the study done by Confederation of Indian Industry (CII) and Icra Management Consulting Services Ltd. (IMaCS) during the year 2010 which estimated that given the expected increase in the mining output as well as the expected changes in the productivity levels, the total employment in the mining industry was estimated to increase to 1.1 million from 0.95 million by the year 2017 and 1.2 million by the year 2025. The Committee agree with the FIMI committee observation that the key factors affecting human resources and skill requirement in the Indian Mining Industry include technology up-gradation, increase in productivity to meet the growing demand, stringent environment and sustainable development framework, globalization and ageing profile of workforce and long gestation period for skill acquisition. As regards the training requirement for the estimated demand supply gap in respect of geoscientists and mining engineers to focus on sustainable development, the Committee note that the same would be catered by Geological Survey of India (GSI), Indian Bureau of Mines (IBM) and Sustainable Mining Initiatives (SMI) of FIMI and experienced/specialised persons from the Industries. Besides, an estimated 50-55% of semi-skilled and below category manpower require urgent re-skilling or up-skilling for which there is no credible industry specific institution in the country. The Committee were also informed that the increasing trend for using newer and bigger machinery for mining operations across the mining sub-sectors

would entail up-skilling of such machinery operators. Keeping in view the magnitude of the challenges observed in the skilling initiatives in the Indian Mining Sector, the Committee feel that skill development initiatives in this sector need to be implemented in a strategic manner through appropriate linkages as per the needs of the industries to achieve estimated requirement of 1.21 million skilled manpower by 2025. The Committee, therefore, desire that the Government should explore the feasibility of establishing a credible industry specific Institute to address the existing shortcomings and the needs of the mining sector in the country. The Committee would like to be apprised of the action taken in the matter.

#### Skill Council for Mining Sector (SCMS)

4. The Committee are happy to note that the Country is well endowed with many metallic and non-metallic mineral resources with the mining sector (nonfuel) currently accounting for approximately 2% of the GDP. The Committee however, note that scientific, sustainable and transparent mining practices require well trained manpower and skill development is the sine qua non for enhanced productivity and safety at the work place besides preparing the workforce to adapt to new state-of-the-art technologies. The Committee observe that skilling initiatives in the mining sector remains an important component of the National Policy for Skill Development, 2015 and the Ministry of Mines has unveiled Skill Development Plan for Mining Sector for the period 2016-22 in July 2016. The main objective of the Plan is to focus on outcome-based approach towards quality vocational training skills for both youth and employers to increase employability and better livelihood. To achieve this aim, Skill Council for Mining Sector (SCMS) was established in December, 2013 under Public-Private Partnership (PPP) mode with the aim to develop skill competency standards and qualifications, benchmarking it with national and international standards and to work with the mining industry in PPP mode. The Committee were apprised that as on 06.02.2017, the SCMS has done occupational mapping for developing National Occupational Standards for 45 entry level job roles both for opencast and underground mines aligned to the overall needs of the mining industry and

statutory requirements which would cover about 70% workforce of the sector. Further, Training Infrastructure, Empanelled Training Partners, Assessment Agencies, pool of expert trainers and Assessors have been created for carrying out certification. The Committee are happy to note that the Skill Council for Mining Sector (SCMS) has already initiated their plans to up-skill and train approximately 4.50 lakh workers including 50000 new inductees to make them employable within a period of ten years. Major achievements made by the SCMS after its establishment include inter-alia Human Resources and Skill Gap study for the period 2014-17 and 2017-22 for the Indian Mining Sector; carried out training and certification of 43,609 (both for new inductees and RPL on job) under the Pradhan Mantri Kaushal Vikas Yojana (PMKVY); signing of MoU with 149 Industry Partners for demand aggregation and ensuring availability of skilled manpower and with State Skill Mission in the four States of Rajasthan, Uttrakhand, Utter Pradesh and Jharkhand, etc. While appreciating the laudable work being done by the SCMS, the Committee desire that the overall aim as well as the core objective of ensuring national standards and quality for globally aligned skills through credible certification may be adhered to so that the competencies accumulated by the beneficiaries enable them to secure local, national and international job opportunities. The Committee would like to be apprised of the timeframes within which these skilling activities are taken up and the year wise quantum of targeted beneficiaries during 2014-22. The Committee also desire that SCMS should also take up the State Skill Mission with the remaining States like West Bengal, Andhra Pradesh, Maharashtra, Karnataka, Odisha, Madhya Pradesh, etc. and ensure the availability of skilled manpower in the entire country. The Committee would like to be apprised of the action taken in the matter.

#### National Skill Development Corporation (NSDC)

5. The Committee note that the skill development efforts for mining related job roles are implemented through National Skill Development Corporation (NSDC) and Skill Council for Mining Sector (SCMS). The Committee further note that the National Skill Development Agency (NSDA) with the mandate to operationalize National Skill Qualifications Framework (NSQF) which is a quality assurance framework, has been working with the Ministries of the Government of India, State Governments and Private Agencies to facilitate NSQF alignment of all educational programmes, trainings and skilling activities. Keeping in view the importance of aligning skills training to global standards, the Committee acknowledge the significance of the NSDC and trust that the NSDC will discharge their mandate in right earnest so that the overall targets set in the Mission of Skilling India are achieved within the broad time frame. The Committee also desire that progress of work towards formulation of a framework for credit accumulation and transfer of credits by the Ministry of Skill Development and Entrepreneurship (MSDE), may be actively pursued so that the same is finalized in the near future.

6. The Committee further observe that main constraints/impediments cited by the MSDE in the implementation of the National Policy for Skill Development 2015 with particular emphasis on Skill Development projects in the Mining Sector include *inter-alia* overall public perception that view skilling as the last option meant for those who have opted out of the formal academic system; absence of any robust co-ordination and monitoring mechanism to ensure convergence of skill development programmes of the Central Government; mismatch between demand and supply at the sectoral and spatial levels; limited mobility between skill and higher education programmes/vocational education; pre-dominant nonfarm, unorganized sector employment with low productivity but no premium for skilling; etc. The Committee are happy to observe that the MSDE have been working in addressing these constraints/impediments and trust that the Ministry would come out with a time bound action plan for redressal of the same. In this context, the Committee desire that efforts be made to bring about cohesive coordination amongst the various Central and State level as well non-Governmental agencies involved in the Skilling Mission so as to avoid duplicity of work as well as delays in implementation of skilling projects. The Committee may be apprised of the action taken in the matter.

#### Skill Gap in the Mining Sector

7. The Committee note that as per the skill gap study report of May, 2016 that was submitted to the National Skill Development Corporation (NSDC) by the Deloitte Touche Tohmatsu India LLP in association with Skill Council for Mining Sector (SCMS), the total incremental demand in the mining sector including coal would be around 2.59 lakh. The Committee appreciate the conducting of study on Skill Gap which has projected the human resources requirements of the mining industry, mapped the human resources skills available currently in the mining industry to match such requirements, identified skill gaps and also suggested measures to bridge the same in a realistic manner. Notably, the skill gap study concluded inter-alia that out of the projected incremental demand of 2.59 lakh new inductees, the demand of 1.07 lakh at the NSQF level 3 and below, (74000 in coal sector and 33000 in mining sector) are anticipated to be fully met through auxiliary human resources supply; anticipated demand and supply gap of 60000 (42000 in coal sector and 18000 in mining sector) workers at NSQF level 4 and above; requirement for mandatory skilling during induction would be required for NSQF level 3 and below although there is no shortage at this level; manpower deployed in the mining sector to be brought under Recognition of Prior Leaning (RPL) certification programme; skill upgradation of the apprentices through 'on the job training' to be treated as an important component where appropriate investment is required to be made. The Committee note that presently, the mining sector is highly fragmented with the responsibility of grant of mining lease and their management on scientific mines falling on the respective State Governments and moreover, 95% of the Mining Leases are in the private sector. The Committee, therefore, observe that the success of any strategy to foster scientific mining practices and deployment of trained manpower hinges on proactive participation of the respective State Governments while also dovetailing a suitable strategy for any credible approach towards skill development of the private sector. Keeping in view that the Skill Council for Mining Sector not only serves as a think tank for development of qualification packs in line with the National Skill Qualification Framework, but also play an

important role in extending training facilities to the private sector for upgradation of skill on a continuous basis, the Committee desire that the Ministry of Mines prepare a roadmap to address the issues of skill gap in the mining sector based on the skill gap study report. The Committee further hope that the Ministry would make earnest efforts to catalyse investment from industry through CSR for raising resources for training and also an aggressive regime be put in place to sensitise attitude of the private sector about the need for training and skilling of workforce entering into the mining sector. The Committee may be apprised of the action taken in the matter.

#### Skill Development Plans of Mine PSUs

#### National Aluminium Company Ltd. (NALCO)

8. The Committee find that NALCO has developed training infrastructure in the form of 3 well equipped training centres at Monitoring & Reporting (M&R) Complex, Damanjodi, Koraput, S&P Complex, Angul and Corporate Office, Bhubaneswar. The Committee also observe that under the training for nonexecutives, at entry level, candidates taken as Skill Up-gradation Practical Trainee, after successful completion of 3 years of training, are given induction training as Junior Operator Trainees for 1.5 years and thereafter selected as regular employees after successful completion of training. The Committee, further, find that at the executive level training, selected candidates are given on the job training for one year, out of which induction training is given for 21 days at Corporate Office and 15 days each at both the complexes (M&R Complex & S&P Complex). Presently, the NALCO has capacity to impart technical training on mining sector related trades to 900 people per annum and invests Rs. 2.00 crore per annum for this. The Committee also find that NALCO has planned to augment its capacity to train about 6000 participants between 2016-17 to 2021-22 with an estimated budget of Rs. 20 crore. The Committee appreciate the concerted efforts being made by the Company in imparting skill training to selected candidates at various levels. The Committee, however, desire that NALCO should augment steps in ensuring the full utilization of allocated funds for skill development programmes.

9. As regards implementation of all the policy guidelines to facilitate the standarized training programmes i.e. Qualification Pack (QP) developed by various sector skill, the Committee observe that in compliance and in accordance with MOU signed amongst NALCO, NSDF and NSDC, Skill Development training classes in non-mining trades like Beauty, Health Care, Apparel, Hospitality and Retail have already started from 12th December 2016 in the three districts i.e. Khordha, Koraput & Angul of Odisha State. This will cover 1200 candidates over two year's period. Recognition for Prior Learning (RPL) training for the 420 workmen engaged through various contracts in Bauxite Mines shall start around 20th February 2017. In compliance with Skill Plan for Mining Sector (2016-2022) formulated by Ministry of Mines (GOI), NALCO is in process of setting up of Corporate Centre of Excellence for Mining Sector in Damanjodi which will be operational by June 2018, with annual training capacity of 250 candidates i.e. 150 candidates in Simulator based trades and 100 candidates in other trades. Primary emphasis of the proposed Centre shall be training for operating the HEMM as Human Resource & Skill Requirement Study for Indian Mining Sector done by Deloitte mentions that "The highest share of (38.6%) of incremental Human Resource demand is expected at NSQF level 04 (i.e. Diploma/ ITI equivalent certificate holders). The majority of this segment is anticipated to participate primarily in mineral extraction activities with specific skills to operate trade specific tools and machineries. Besides, NALCO on their own initiative, have floated tender on 29.11.2016 for empanelment of training partners for imparting skill training to 4000 nos. local youth in non-mining trades. The Committee would like to be apprised of the details of the Training partners identified by NALCO in this regard and the present status of imparting training to them.

#### **Geological Survey of India (GSI)**

10. The Committee note that GSI with its Head Quarters at Hyderabad and six Regional Training Institutes (RTI) together with the twelve Field Training Centres (FTI) backed by GSI laboratories impart training in different disciplines of earth

science, other scientific technical and administrative subjects to officers from other organisations including trainees from foreign countries. Notably, during 2015-16, 107 training courses were conducted by GSI. The Committee also note that a total of 2319 personnel were trained out of which 2125 were from GSI, 95 were from State DGM's, 27 were international participants and 72 participants were from other organisations. While appreciating the training initiatives put in place in GSI, the Committee would also like to be apprised about the targets and achievements of training programme for the year 2016-17 and 2017-18 and its source of funding. The Committee are happy to find that the future plan of GSI include training of 2500 personnel per annum with relatively larger share of private sector participants requiring specific skill sets in the specialized field of exploration. The Committee hope that the Ministry of Skill Development and Entrepreneurship/GSI will continue its efforts to impart training to the participants through its purposeful training programmes that can be emulated across the country.

#### Setting up of Centres of Excellence

11. The Committee find that in addition to the business as usual activities related to training of the human resources and its proposed augmentation, two Centres of Excellence in mining sector are proposed to be developed during this period in Damanjodi(Odisha) by NALCO and in Khetri (Rajasthan) by Hindustan Copper Ltd. (HCL) . The Committee also find since mining innovation is especially focused on better, cheaper extraction and hauling technology and methods to help in enhanced productivity and cost cutting, the Centre of Excellence has to be entrusted with the task of providing state of art training and skill development in the areas of excavation and hauling. Admittedly, the Centre will also strive towards quantum leap in harnessing productivity gains in Heavy Earth Moving Machineries (HEMM) and associated operations. The Committee also find that the tentative cost for setting up the Centre of Excellence (CoE) is estimated to be Rs. 8 crore for Khetri and Rs. 20 core for Damanjodi by NALCO which are expected to be made fully operational during the financial year 2017-18. The Committee appreciate the laudable initiatives undertaken by NALCO/HCL

for development of Centres of Excellent and trust that these Centres would be set up within the prescribed time frame to attain the avowed objectives for which these Centres are being set up/developed. The Committee would like to be apprised of the status of the proposals made in this regard.

#### Funding Mechanism for Skill Development Plan

12. The Committee note that as per the estimation presented by the Deloitte, the funding requirements vis-à-vis the Incremental Demand by NSQF would be Rs. 128 crore for 32000 jobs upto Level 3, Rs. 36 crore for 18000 jobs upto Level 4; and Rs. 2 crore for 11,000 jobs upto Level 6 amounting to a total of Rs. 166 crore for 5,15,000 jobs. The Committee further note that during the skill plan period (2016-2022) the estimated available funds are to the tune of Rs. 109 crore thereby, leaving a gap of Rs. 57 crore which is to be made up through various private sector and state sector initiatives. The Committee further note that National Skill Development Corporation (NSDC) had sanctioned funding of Rs. 5 crore as a grant to SCMS which can also ask for grants from the Government through NSDC for special projects, if needed, over and above this grant. While appreciating the efforts being made to meet the funding requirements, the Committee desire that the Ministry should make earnest efforts to put in place a sustainable funding mechanism so that the skilling projects and activities taken up in the Mining Sector are implemented within the targeted timelines. The Committee also desire that proactive initiatives may also be undertaken to garner funds from respective State Governments involved as well as from the Private Sector so that the estimated funding gap is adequately met. The Committee may be apprised of action taken in the matter.

#### NEW DELHI; 03 August, 2017 12 Sravana, 1939 (Saka)

RAKESH SINGH Chairperson Standing Committee on Coal and Steel

#### ABBREVIATIONS

- ATIs Advanced Training Institutes
- DGT Directorate General of Training
- DIPP Department of Industrial Policy and Promotion
- GMDC Gujarat Mineral Development Corporation
- GSI Geological Survey of India,
- HCL Hindustan Copper Limited
- IBM Indian Bureau of Mines
- **ITIs Industrial Training Institutes**
- JNARDDC Jawaharlal Nehru Aluminium Research Development and Design Centre, Nagpur
- JSSDM Jharkhand State Skill Development Mission
- MECL Mineral Exploration Corporation Limited
- MOIL Manganese Ore India Limited
- MoM Ministry of Mines
- MSDE Ministry of Skill Development and Entrepreneurship
- NALCO National Aluminium Company Limited
- NCVT National Council of Vocational Training
- NIRM National Institute of Rock Mechanics
- NIMH National Institute of Miners' Health
- NOSs National Occupational Standards
- NSDC National Skill Development Corporation
- NSDF National Skill Development Fund
- NSQF National Skill Qualification Framework

- PMKVY Pradhan Mantri Kaushal Vikas Yojana
- QPs Qualification Packs
- QRC Qualifications Registration Committee
- RPL Recognition of Prior Learning
- RSLDC Rajasthan Skill and Livelihoods Development Corporation
- **RVTIs Regional Vocational Training Institutes**
- SSCs Sector Skill Councils
- TOA Training of Assessors
- TOT Training of Trainers
- TTT 'Train the Trainee
- TVET Technical and Vocational Education and Training
- UKSDM Uttarakhand Skill Development Mission
- UPSDM Uttar Pradesh Skill Development Mission

# MINUTES OF THE SITTING OF THE STANDING COMMITTEE ON COAL AND STEEL HELD ON 11 JANUARY, 2017 IN COMMITTEE ROOM 'C', PARLIAMENT HOUSE ANNEXE, NEW DELHI.

The Committee sat from 1130 hours to 1330 hours.

#### PRESENT

Shri Rakesh Singh

Chairperson

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#### MEMBERS

# LOK SABJA

- 2. Shri A. Arunmozhithevan
- 3. Shri Shailesh Kumar
- 4. Dr. Rabindra Kamar Ray
- 5. Shri Janardan Singh "Sigriwal"
- 6. Shri Krupal Balaji Tumane
- 7. Shri Ajay Nishad
- 8. Shri Tamradhwaj Sahu
- 9. Shri Shushil Kumar

# RAJYA SABJA

- 10. Dr. Pradeep Kumar Balmuchu
- 11. Shri Md. Nadeemul Haque

# **SECRETARIAT**

- 1. Shri U.B.S. Negi
- Joint Secretary
- 2. Shri Arvind Sharma -
- 3. Ms. Miranda Ingudam -
- Additional Director Deputy Secretary
- 0
  - WITNESSES

# MINISTRY OF MINES & PSUs

- 1. Shri Balvinder Kumar, Secretary, Ministry of Mines
- 2. Shri R. Sridharan, Special Secretary, Ministry of Mines
- 3. Shri Nikunja Bihari Dhall, Joint Secretary, Ministry of Mines
- 4. Shri Sudhakar Shukla, Economic Advisor, Ministry of Mines
- 5. Shri Shersha, Director, Ministry of Mines
- 6. Shri M. Raju, Director General, GSI
- 7. Shri R.K. Sinha, Controller General, IBM
- 8. Dr. Tapan Kumar Chand, CMD, NALCO
- 9. Shri K.D. Diwan, CMD, HCL
- 10. Shri Gopal Dhawan, CMD, MECL

# MINISTRY OF SKILL DEVELOPMENT AND ENTERPRENEURSHIP

1. Shri Rohit Nandan, Secretary,

- 2. Shri Rajesh Agrawal, Joint Secretary,
- 3. Shri Deepankar Mallick, DDG(T). DGT
- 4. Shri Anand Sherkhane, Director
- 5. Shri Vishal Sharma, CPO, NSDC
- 6. Ms. Vandana Bhatnagar, CPO, NSDC

2. At the outset, the Chairperson welcomed the Secretaries of both the Ministries and other representatives of the Ministry of Mines, Mines Public Sector Undertakings and Ministry of Skill Development & Entrepreneurship to the sitting of Committee and apprised them of the provisions of Direction 58 of the Directions by the Speaker, Lok Sabha. The Chairperson mentioned that the sitting of the Committee has been convened in connection with briefing by the Ministry of Mines on the subject 'Skill Development in Mining Sector'.

3. Thereafter, the representatives of the Ministry of Mines gave a visual presentation on the subject while the representatives of the Ministry of Skill Development briefed the Committee on various issues related to 'Skill Development in Mining Sector'. The points discussed during the sitting inter-alia included National Policy for Skill Development; steps taken by Ministry of Mines for alignment with the National Skill Development Framework; Memorandum of Understanding (MoU) between Ministry of Mines and Ministry of Skill Development & Entrepreneurship (MSDE); MoU between National Skill Development Corporation (NSDC) and Hindustan Corporation Ltd. (HCL), Mineral Exploration Corporation Ltd.( MECL) and National Aluminium Corporation Ltd. ( NALCO); Maximizing apprenticeship training; Implementation of Skill Development Plan; Implementation of MoU between Ministry of Mines and MSDE and Skill Gap study; training imparted by Geological Survey of India (GSI), Indian Bureau of Mines (IBM), NALCO, HCL and MECL in different discipline; Establishment of National Skill Corporation for Training and Skill Development by MSDE; Non Resident Indian Skill Development Scheme launched by MSDE; Labour Market Information System established by Skill Exchange; etc.

4. The Members raised various issues and sought clarifications from both the Ministries on the subject which were responded to by representatives. Further, the Chairperson directed the representatives of both the Ministries to furnish the replies to the queries raised by the Members which could not be responded to within a period of 15 days.

A verbatim record of the proceedings of the sitting of the Committee has been kept.

#### The Committee then adjourned.

#### MINUTES OF THE SITTING OF THE STANDING COMMITTEE ON COAL AND STEEL HELD ON 3 AUGUST, 2017 IN HON'BLE CHAIRPERSON'S CHAMBER, ROOM NO. '210', B-BLOCK, PHA EXTENSION BUILDING, NEW DELHI.

The Committee sat from 1530 hrs. to 1600 hrs.

#### **PRESENT**

#### Shri Rakesh Singh - Chairperson

#### Lok Sabha

- 32. Shri Godam Nagesh
- 33. Dr. Banshilal Mahato
- 34. Shri Kamalbhan Singh Marabi
- 35. Shrimati Riti Pathak
- 36. Dr. Ravindra Kumar Ray
- 37. Shri Chandu Lal Sahu
- 38. Shri Janardan Singh "Sigriwal"
- 39. Shri Pashupati Nath Singh
- 40. Shri Rama Kishore Singh
- 41. Shri Sunil Kumar Singh
- 42. Shri Sushil Kumar Singh
- 43. Shri Krupal Balaji Tumane

## Rajya Sabha

3.

- 44. Shri Ranvijay Singh Judev
- 45. Shri Ram Vichar Netam

#### **SECRETARIAT**

- 1. Shri U.B.S. Negi Joint Secretary
- 2. Shri Ajay Kumar Garg Director
  - Shri Arvind Sharma Additional Director
- 2. At the outset, Chairperson welcomed the Members to the sitting of the Committee.
- 3. The Committee thereafter took up for consideration the following Draft Reports on:-
  - (i) "Skill Development in Mining Sector" relating to the Ministry of Mines;
  - (ii) \*\*
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     (iii) \*\*
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4. The Committee adopted the Reports without any changes/modifications. The Committee then authorized the Chairperson to finalise the Reports and present the same to both the Houses of Parliament.

# The Committee then adjourned.

<sup>\*\*</sup>Do not pertain to this Report.