

Name: Prof. (Dr.) S. M. Veerabhadrapa



Designation: Professor

Background Qualification:

- ❖ Ph.D - Geochemistry
- ❖ DIIT- Applied Hydrology
- ❖ M.Sc- Geology

Area of Research:

- ❖ Geology-Igneous and Metamorphic Petrology
- ❖ Terrain Assessment for Traffic-ability of all terrains using Remote Sensing
- ❖ Hydrology and Disaster Management
- ❖ Application of Remote Sensing in landslide, drought and Flood studies

No. of PhDs: Ongoing – 4 / Completed - 2

No. of PGs: Ongoing – 10 / Completed – 4

Memberships/Awards/Recognitions:

- ❖ *DRDO Technology Day Award -- for Best Techno-Managerial Services/Popular Science Communication Award 2011 conferred by Hon'ble Raksha Mantri on Oct. 01, 2012-*
- ❖ *India International Trade Fair (IITF)- 1998: Gold Medal for Defence Pavilion*
- ❖ *IITF - 1999: Gold Medal for DEFENCE Pavilion.*
- ❖ *IITF - 2001: Gold Medal for DEFENCE Pavilion*
- ❖ *A Mega National exhibition VCCI - 1999: DRDO, Pride of the Exhibition*
- ❖ *AGRASAR- 1998: Organized by DST, Best Pavilion-Visitor's Choice, A shield with citation was awarded to DRDO.*
- ❖ *Official Adviser on UPSC Board for Recruitment & Assessment for (i) Geological Survey of India (ii) Central Ground Water Board (CGWB)*
- ❖ *Expert Member: RAC Boards for Recruitment & Assessment*
- ❖ *External Member : Screening Committee for Assessment for Promotion of Scientist (i) Ministry of Non-Conventional Sources of Energy (ii) Ministry of Forest & Environment (iii) Ministry of Water Resource*
- ❖ *Chief Guest for inauguration of INNOVATE' 11 Exploring New Dimension of SRM University, NCR Campus, 2011*
- ❖ *Chief Guest to inaugurate " 2nd National Conference on recent trends in Information and Communication Technology" organized by SRM University, NCR Campus, 2013*

Positions held till date:

1981-1982- Geologist (JR) Gp 'A' Post through UPSC

Geological Survey of India Min. of Steel & Mines, Govt of India- Orientation course of GSI, Training Institute in 1981-82 on remote sensing mapping, geophysical, geochemical & other

exploration techniques, mapping & lab investigation methods. Practical experience in Remote Sensing techniques & mapping in Chattisgarh basin around Raipur, Pb-Zn. mines of Zawar, Rajasthan and coal mines of Kujju, Bihar and ore & exploration techniques. Undergone Management course on Human relations at HCM, State Institute of Public Administration, Jaipur.-

1981-1986- Scientist 'C' (UPSC) and 1986-1993- Scientist 'C' (UPSC)

Defence Terrain Research Laboratory (DTRL) DRDO, Min of Def-

- ❖ Preparation of Terrain analysis & evaluation reports of Areas Techniques used in Terrain evaluation include interpretation of aerial photographs map data & satellite imageries & mapping completed four projects as leader & a member in one for military user(Published).
- ❖ Developments of software for Terrain information system developed with 3D modeling of Terrain.
- ❖ A tunnel plan for all weather trafficability along Manali-Leh axis. Highway plan for Eastern Kashmir.
- ❖ Developed Map & Satellite Library of India. Monitoring and evaluation of grants in aid projects & field work in parts of Rajasthan and Shillong Plateau, Meghalaya.
- ❖ Study of geomorphology of NE Sectors. Preparation of IV Five Year Plan documents including budget & annual / half yearly reports for 1986-87.

1993-1994- Scientist 'D', 1994-2000- Scientist 'E', 2000-2005- Scientist 'F'

Defence Institute of Physiology and Allied Sciences (DIPAS) –

- ❖ Responsible for popularization of DRDO in National/ International forum.
- ❖ Co-ordination of DRDO participation in 48 National & International exhibitions, expositions and events including Indian Science Congress Exhibitions, India International Trade Fairs, Republic Day Parades & DEF EXPOS (Land & Naval Systems.. Dissemination of scientific achievements by preparation of publicity material for print and electronic media through multimedia, brochures and a video film on Defending Lifeline and won many awards for DRDO.
- ❖ Activities under Resource Generation Scheme of DRDO (C-TEC) - Resource generation to the tune of about Rs. 3.07 Crores during 2000-2005 by provision of personnel protection and riot control equipment for internal security.
- ❖ Six Technical Brochures were compiled & published (Annexure 3) HOD Management Services of DIPAS.

2006-2007- Scientist 'F'

Human Resource Development DHRD, DRDO-HQ

- ❖ Brought a significant change in HR planning, allocation and development by schematic planning of flexible & dynamic rationalized manpower allotment to Labs/Estts and

encadred posts by various recruitment schemes of DRDS, DRTC, Admn & Allied cadres allocation through RE for all the 52 Labs and independent units.

- ❖ Introduced rationalization of HR based on type of Lab and workload by implementation of DRDS: DRTC: Admn & Allied ratio to make it a leaner and healthy department.
- ❖ HR development of DRDO by a fresh look on Training Need Identification & Implementation of Training Policy- Extensive Training of DRDS scientists at ASCI, IIM A, IIM K , IIT B, IISc, XIM B. • Introduced e-learning for engg subjects from IIT B to RCI and ANURAG. • Organised specially designed advanced leadership courses for DRDO scientists for leadership pipeline development for Sc 'G' & 'H' at XIM B (2 programs) , IIM A (3), IIM K (2) & ASCI (2) • Institutionalized mentoring in the organisation by introducing Training for Mentors & mentees in labs around Pune, Delhi, Bangalore & Hyderabad and introduced a monitoring system. • Review of syllabus for POINTS programme in DIAT, DU, Pune for newly inducted Sc.'B' and introduced field attachment with Services. • Introduced orientation program for new inductee scientists C at ITM, Mussoorie. • Established a Targeted Training Centre (TTC) at Dr. Raja Ramanna Centre, Bangalore to impart high end training for scientists with highly specialized faculty from abroad. Two courses were conducted. • Organizational training through CEP and Management courses were organized. • Revised R&T Policy for higher education courses and enhanced number of seats for M. Tech (from 75 to 100) & PhD at IIT's & IISc and our own DIAT, DU Pune.
- ❖ Mapping of Human Resources requirement for the XI, XII plan period and beyond upto 2020. A CCS paper for enhancement of DRDS, DRTC. and Admn. & Allied cadres was submitted. On extensive interaction across DRDO Labs submitted DRDO's Memorandum to Sixth Pay Commission and participated in presentations to the Commission. Initiative was taken to bring all the three strategic departments i.e. DRDO, DOS and DAE on a common platform and projected a combined demand to Cabinet Secretariat/Committee of Secretaries.
- ❖ Based on the combined effort, the following incentives have been sanctioned to the three departments: i) FCS in DRDS upto Sc 'H'/OS level. ii) Incentive increments to Sc. 'C' to 'F' at an enhanced rate. iii) Special Pay of Rs.4000/- Sc. 'G' (enhanced) iv) Professional update allowance (enhanced) v) A scheme of variable increments at the time of promotion upto six increments to DRDS and three increments for DRTC has been introduced w.e.f. 01.01.2009 as individual PRIS. vi) Cases initiated for award of Organisational & Group PRIS and Professional Update Allowance for all cadres/ personnel of DRDO. (vii)13 posts of Hindi Officers and 23 Assistant Hindi posts were created for DRDO which were sanctioned by Department of Expenditure, MoF. Carried out Cadre review/cadre restructuring of DRTC- • Introduced TO 'D' level • Enhanced promotions by 10% for PB-I and II and by 5% for TO 'A' and above levels in DRTC. • Evolved policy for one time induction of erstwhile tradesman 'E' into DRTC. Carried out Cadre review for ALS cadre, Ernstwhile Gp 'D' & fire fighting staff. Initiated Cadre review proposal for Admin, Stores, Personal Staff, Accounts & security cadres. As Member, DRDS Standing Committee, Member, DRTC Standing Committee and Member Secretary of HR Consultative body contributed to HR policy revisions. Carried out amendments to RRs of DRDS. To bring transparency all Recruitment Rules and SROs have been placed on website. Industrial relations of DRDO was maintained cordially by interaction with JCM,Unions & Associations and participating in Corporate Review

Committee meetings at 52 Labs of DRDO.. As a single window for Defence Institute of Advanced Technology , a Deemed University DIAT (DU) Pune, was responsible for formulating statutes, structure, Rules & Regulations and Grants -in-aid for DIAT DU and issue of Govt. letters for its formulation in April 2006. Carving out of DIAT DU and MILIT was also done. As a Technical Director taken care of all issues of ITM Mussoori and DIAT (DU), PUNE.

2006-2007- Scientist 'G' & Director

Directorate of Planning & Coordination DP&C, DRDO HQ –

- ❖ Evaluation & Processing of new project proposals for sanction and monitored the progress of ongoing DRDO projects by reviews & participation and enriching the Project Information System (PIS) a data base with a redesigned format.
- ❖ Carried out a thorough revision of Procedure for Project Formulation & Management (PPFM) document in view of revised financial power which was submitted. Revision of Decision Aid for Technology Evaluation (DATE) Document undertaken.
- ❖ Coordinated visits and meetings of Parliamentary Standing Committee for Defence and Consultative Committee. Ensured timely submission of replies to starred and un-starred questions raised in Parliament and follow-up actions. For the first time, System Engineering has been introduced to review with new norms. Revised allocation of Business Rules (AOB rules 1961) and has submitted considering the relaxation of Man Power Management and project handling issues. Made a XII Five Year Plan outlay document for DRDO & Deptt. DR&D for 602 Projects, grants-in-aid schemes, special schemes and strategic programmes and submitted to MOD (Finance).
- ❖ Long Term Technology Perspective Plan (LTP) for DRDO has been initiated forming a Committee. Member Secretary, Corporate Review Committee, Revived Corporate Review forum after a gap of two years.
- ❖ In the year-2011-12, Corporate Review of 16 labs were completed and remaining labs review planned & scheduled for completion. Third R&D Board Meeting was organized wherein Vice Chiefs of Tri-Services, CISC, CIDS, Sec (DP) Sec, Defence Acquisition for better appreciation and independent view of system engineering of project & prepares for better under standing & execution. Three experts from academia with all CCs R&D were member of the committee.

2013 - Scientist 'G' & Director

Defence Terrain Research Laboratory (DTRL) Metcalfe House, Delhi –

- ❖ Reshaped XIIth FYP for DTRL. Applied midcourse correction for ongoing MM projects viz, GIM, THAR & PISTA and other TD & S&T projects .
- ❖ Developed implementation strategy and provided effective leadership and created conducive R&D environment. Ensured regular User interaction with Defence Services Users. Landslides & terrain conditions on Leh-Manali axis was studied for all weather assessment for tunneling vulnerability for land slides was studied. Assessment of a unit site in Indus valley for vulnerability due to natural hazards was carried out. Interaction

with GOC 14 Corps led to their interest in assessment in Himalayan Region. Field investigation to study landslide status and setting up of two monitoring stations at sites of dangerous landslides and Tangni monitoring site was undertaken along Rishikesh-Badrinath-Mana axis of Himalaya.

- ❖ ARMOL has been established for monitoring of dynamics of landslide and prediction modelling with data link from field station to lab workstation on real time. This study is one of its kind in the country and in lines with global trend. Two additional sites at Kaliasur on Rishikesh-Badrinath-Kedarnath area & near Rishikesh on Rishikesh-Yamunotri-Gangotri axis have been identified as most dangerous landslide locations.
- ❖ To improve the reliability of Geo-Intelligence, T&D projects on Soil-Wheel interaction. Ground water investigations of Thar desert have been taken up through remote sensing techniques. Thermal mapping through remote sensing & Hyperspectral mapping for exploration.
- ❖ New mapping strategies planned and a preliminary study an exercise of vehicles was conducted for trafficability around Roorkee. A comprehensive GeoINT data base is being developed..
- ❖ A setup of 3D visualization and simulation facility relevant to terrain was planned to strengthen Validation & Verification process and strong initiative for knowledge management.

Publications

- ❖ *Technical Reports Published: Principal Investigator in 04 projects of DTRL and Member in 01 Project during 1982-90. Departmental Publications of Ministry of Defence.*
- ❖ *Geochemistry and genesis of archaean meta-anorthositic rocks from southern part of the Holeparsi schist belt, Karnataka, South India - B Bhaskar Rao and SM Veerabhadrappe *Neus Jahrbuch Fur Mineralogie (West Germany) PP 133-144, March 1982.**
- ❖ *Geochemistry and genesis of magnesian rich metavolcanic rocks from southern part of Holeparsi schist belt, Karnataka. - B Bhaskar Rao and SM Veerabhadrappe *Bull. Indian Geologist Association, Vol 16, No.1, pp 21-31 1983**
- ❖ *Meander characteristics of the River Ganges. - AP Rama Rao and SM Veerabhadrappe *Presented at the symposium on Quaternary episodes in India . Neotectonics, Eustasy and Palaeoclimates held at Baroda in 1983.**
- ❖ *Geochemistry and tectonic setting of the amphibolites from southern part of the Holeparsi schist belt, Karnataka. - SM Veerabhadrappe and Bhaskar Rao *Presented at Indian Geological Congress held at IIT Bombay (December 17-19, 1988)**
- ❖ *Some aspects of wind drift potential of Thar Desert, Rajasthan. -AP Rama Rao and SM Veerabhadrappe *Presented at the Symposium on challenges of desert environment (Decem 1985)**
- ❖ *Geographic data base system for defence applications. - SM Veerabhadrappe and AP Rama Rao *Presented at An appreciation workshop on Data Base for Terrain Evaluation, held at Delhi (November 17-21,1986).**
- ❖ *Landslide Mapping and Vulnerability Assessment : Presented in TROPMET-2012 : National Symposium on Frontiers of meteorology with special reference to the Himalaya,*

-SM Veerabhadrappe, presented as planery paper at IIRS, Dehradun, Uttarakhand (21 Nov. 2012)

Technical Brochures:

- ❖ *Carbogen: A prophylactic and therapeutic approach against noise induced loss: 2000, A Technical Catalogue by DIPAS.*
- ❖ *In the Service of the Solider: A Technical Brochure of products 2000.*
- ❖ *How to be safe a high altitude: Dos & Don'ts at High Altitude, A user's guide for Armed forces personnel posted at extreme high altitude, 2001 12 Pages, being used by Army. (Released at A DRDO- Army Commanders (NC) meet at Leh).*
- ❖ *Indo- US Workshop on Enhancing Human Performance in military Environment : Organized by DIPAS in November 2003 ,06 Pages*
- ❖ *Promoting human performance in extreme environment : DIPAS technical brochure, 2005 08 Pages*
- ❖ *Life Sciences in the Service of Soldier: A Technical brochure 2005, 38 Pages. Released by Honorable President of India at AFMC, Pune.*

Additional Information:

Experience: 20 years

Training Undergone:

Managing R&D Innovation- Tata Management Training Centre, Pune – 2006

Advanced Management Programme - ASCI Hyderabad, Visit & Study of various Organisations in European Union. – 2007

Selection of Consultants and Client Consultant Agreement - CDC, New Delhi -2008

Advanced Leadership Course - IIM – Ahmedabad – April 2009

Innovative Training Practices - ISTD, New Delhi – July 2009

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