

Preliminary Meeting for Evolving a Comprehensive Database on Deccan Volcanic Province

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Following the successful and well attended conference, “Deccan-Next” in October 2023 (Sheth, 2023, *Curr. Sci.*, v.v. 125, pp.1171 – 1172.; Krishnamurthy et al., 2024, *JGSI*, v.100, pp.139-142), an informal exchange of ideas on the possibilities of evolving a comprehensive database on diverse studies in the Deccan Volcanic Province had been ongoing amongst the participants. A meeting of locally available experts on this concept was convened on 12th February 2024 and hosted at the Department of Geology, SPPU by Satish Sangode (SPPU) and Vivek Kale (ACWADAM).

Prof. Sangode welcomed those present. Dr. Kale gave a brief outline of the scope of the meeting.

Dr. Anne Jay (Open University, UK) outlined the need for such a database, that can be accessed by researchers in diverse fields thereby enabling an ease in exchange and compilation of information. Her proposal was to include:

- fundamental geological + geochemical + volcanological + chronological + geophysical data that is already published / in the public domain.
- unpublished data (including but not limited to (i) field notes from previous workers (ii) research (doctoral & masters) theses from the universities and research institutes (iii) other open-source data sets.

She suggested that the data should ideally be geotagged, stored in conjunction with a geospatial platform and could be continually updated by dedicated contributors.

Dr. P. Krishnamurthy (formerly Sagar University, AMD and now Geological Society of India) welcomed the suggestion of such a database. He added that speedy action and concerted efforts will be required to make this a reality as an apt follow-up of the deliberations during Deccan-next 2023. His suggestions included:

- Repository of samples that can be accessed and studied by future workers [with examples of the samples collected during Indo-US (1986-1990) program led by Dr. Gopalan of PRL, Ahmedabad; Indo-USSR (988-1992) at NGRI; collections of Prof. West and his team at Dr. Harisingh Gour Vishwavidyalaya Sagar; multinational collaborations coordinated by Prof. Subbarao and more recently by Prof. Kanchan Pande at IIT-Bombay with Prof. K. Cox, U.K., Dr. McDougall and Dr. Mahoney at Scripps Institute of Oceanography, USA.; and amongst numerous others, not to mention the drilling programs at Killari and Koyna by GSI]. There is a serious fear that these

samples will be lost to future generations unless care is taken for their appropriate preservation.

- Collection of field photographs, microphotographs and other petrographic data which largely remains unpublished, with appropriate source tagging.
- Collection of minerals (primary and secondary) that are unique to the Deccan, including data on their mineralogy, chemistry and mineral structures.

He further opined that the importance of such a database is required to be communicated to the decision-makers and funding agencies to ensure that the same is financially sustainable.

Dr. K.S. Mishra (formerly GSI and ONGC) pointed out the importance of remote-sensing and aeromagnetic data and its integration into such a database. Besides highlighting his experiences in the study of the DVP, he noted the importance of the basaltic province in groundwater, oil-and-gas potentials that is critical to the economy.

Dr. Makarand Bodas (formerly member of the IIT, Mumbai-Oregon State University, Oregon, USA and Indo-UK project on the DVP during the 1980s & GSI) highlighted the relevance of such a database in primary academic and scientific studies of:

- Flow stratigraphy on the whole of the province.
- Reconciling and updating the existing classifications across the province by integrating volcanological, chemical, isotopic and magnetic properties.

He suggested that the Western Regional office of GSI and the Pune University are ideally located and perhaps the most apt agencies to work in collaboration in building up such a database.

Dr. Shyam Mude (Ferguson College, Pune) highlighted the heritage of Ferguson College in pioneering the studies in the Deccan Traps, and also pointed out that the potential Geoheritage sites and their information should be included in such a database.

Prof. Shyam S. Rai (IISER, Pune), Dr. Bibhas Sen (GSI, Pune), Dr. Himanshu Kulkarni (ACWADAM) amongst others had been invited to the meeting but could not attend in person due to prior commitments. They, however, communicated their serious interest and support for such a database.

Post Deccan-Next Workshop

The post-graduate and research students of the Department of Geology were also appraised of the current status of knowledge on



Group-photo of the post-Deccan-Next workshop participants.

the DVP by Dr. Vivek Kale, Dr. Makarand Bodas, GSI (Retd.), Dr. P. Krishnamurthy and Dr. Ashish Dongre (SPPU) discussed potential areas of research in the DVP for future researchers. Dr. Manish John, Director, GSI, Western Region, Pune provided an exhaustive overview of the GSI's activities in the DVP.

There was unanimous agreement as to the Department of Geology, SPPU, Pune being the central place for creating the Centre for coordinating this program along with the GSI, Western Region with several officers and projects on the DVP. This Department had been part of the DVP studies for a long time, since its inception. Pune is geographically an ideal destination for embarking on studies in the Deccan with easy accessibility and heritage of knowledge and culture.

It was also suggested that active participation from the thriving IT industry (including in geospatial technology) could be an important pillar for this effort in large-data development, management and

dissemination. While planning the database, due care to ensure that no copyright violation occurs, and that the usage of the database adheres to all geo-ethical standards. It is recognised by all present that such a database (needing significant funding for its inception) will need to be planned to be financially sustainable, without being a burden on the users of the database.

This was a very preliminary meeting, and this report is being shared, with the intention of seeking views and suggestions from workers in the Deccan. It is planned that a more definitive meeting with a wider (national and international) participation to crystallize the proposal for a multifaceted, multidimensional, user-friendly database of the Deccan Volcanic Province. Towards this effort, it is requested that workers on the DVP (besides the participants of Deccan-next) may please send their comments and suggestions to: *deccan-next@gmail.com*.