

International Dune Atlas Meeting — H.S. Saini, Luminescence Dating Laboratory, Geological Survey of India, Faridabad, Nilesh Bhatt, M.S. University of Baroda, Vadodara and Pradeep Srivastava, Wadia Institute of Himalayan Geology, Dehradun (*Email: nilesh_geol@yahoo.com*)

An International Dune Atlas Meeting and an International workshop on Desert Dune Systems: Past Dynamics and Chronology was convened by Singhvi from 25th March to 2nd April 2012 with financial support from Ministry of Earth Sciences, Geological Survey of India and Physical Research Laboratory.

The workshop began with an interaction session at Regional Remote Sensing Centre of the ISRO, Jodhpur on 25th March, wherein M.M. Roy, the Director, Central Arid Zone Research Institute (CAZRI) introduced the participants to various activities of the CAZRI. Former director of CAZRI, R.P. Dhir presented an overview on the Thar Desert with special emphasis on its natural resources, management and environmental issues. S.K. Wadhawan, Dy. Director General, Geological Survey of India (Western Region) presented stratigraphic, tectonic and sedimentological and geomorphic variability within the Thar Desert. Wasson reviewed the present understanding on Thar Desert and brought into focus the idea of sensitivity of dunes to wind dynamics and a need to build independent proxies for palaeoclimate studies in deserts. The National Remote Sensing Centre, Hyderabad has built the web enabled Water Resource Information System (WRIS) that provides immense database on water resources of India at various scales to the users free of cost. This was introduced by J.R. Sharma, Chief General Manager, NRSC, Hyderabad. The day was concluded with the visit to an exhibition about the history and various activities of CAZRI. Geological field excursion was a prime attribute of this International meeting. During 26th to 30th March the participants visited various well

studied geological sections around Pokran, Jaisalmer, Pabupura, Khimsar, Nagaur, Sambhar Lake and Jaipur. This was led by R.P. Dhir who provided vital information on geological and geochronological aspects of these sections along with highlighting the long pending research issues. Geological sections of alluvial, aeolian and lake deposits around Jaipur were explained by officers of Geological Survey of India led by R.S. Raghav. Several sites where sedimentological and chronological studies are published were visited e.g. first site near Shergarh trijunction where intercalated aeolian and colluvial sequences are exposed along with the cover of modern sand dunes, a need of GPR studies was emphasized by Lancaster to understand the dune substrates and internal architecture. A variety of calcretes associated with fluvial aggradation plains extends the antiquity of Thar to more than 200 kyr age and importance in building the geological history of the Thar Desert was emphasized by Dhir at many sites like Phalodi, Chamu, Nagaur etc. Similarly the significance of Bhojka gravel spread, Chamu section, Kuldhara river section, Pabupura dune section, Budha Puskar, Amarsar dune section, Chandvaji river section etc. was well realized by the scientists and could ignite discussion and idea of further research.

On 31st March, an interactive session at GSI, Jaipur was organized where N. Lancaster, Bob Wasson, X. Yang, L. Scuderi gave talks on dust storm, soil erosion, desertification and hydrological processes. It was attended by around 80 scientists of GSI. Wadhawan, chaired an interactive session in which following impressions/suggestions were given by the delegates.

i Source of dusts in Thar and

surrounding areas is not known (Wasson).

- ii Chronology of dunes and sensibility of landscape is to be understood (N. Lancaster).
- iii Fluvial, lacustrine and aeolian processes around Budha Pushkar to be worked out (Rajaguru)
- iv Water cycles dynamics, modern dune dynamics and human adaptation to climate change in Thar should be evaluated (X. Yang).
- v Human impact on Thar desert is very high which should be understood (L. Scuderi)
- vi Hydrological system, GPR studies, past river system in Thr to be examined. (P. Srivastava)
- vii Study on past hydrological system of Bhojka gravel, Phaludi palaeochannel and re-examination of sand sheets for ascertaining their origin, provenance of dune sand and dune stratigraphy should be initiated (H.S Saini).

The delegates reached Ahmedabad on 31st evening and resumed a technical session on 1st April at PRL, Ahmedabad. The opening session began with the address of J.N. Goswami, Director, PRL. This was followed with presentations by delegates that covered a wide range of topics related to geological importance of dune studies (K.W. Glennie), dune dynamics (B. Wasson), desertification in china (X. Yang), palaeoclimate in Magnolia (D. Hülle), Sambhar lake (Pralay Mukerjee), Saurashtra (N. Bhatt) and Quaternary Geology (H S Saini). The Chinese group showed interesting modeling of dune formation and advancement. On 2nd April, discussions and talks on problems of dune atlas formation were carried out.