Hydrology should become an important part of earth science studies and the efforts of Prof. Eagleson in changing the existing mental image of hydrology should become widely known and appreciated. The cycling of water on a continental scale should be clearly understood and taught in schools and colleges.

As recently emphasized in an editorial in *Groundwater* (July-August 1997, p.561) 'communication is vital. We need people who can transfer research findings to the field and who can also communicate water-users needs to the researchers.' The atmosphere of secrecy prevailing in our research organisations and denial of information to user agencies is deplorable and should be given up in favour of free exchange of ideas aimed at improving our understanding of the nature and complexity of our natural resources.

B.P. RADHAKRISHNA

CORRESPONDENCE

MALANI IGNEOUS SUITE OF ROCKS

Professor Naresh Kochhar deserves to be congratulated for drawing our attention to a very significant plume related, Later Neoproterozoic thermal event in the northwestern part of Indian shield (vide "Correspondence" on Malani Igneous Suite of rocks in the Journal Geological Society of India, v.51, p.120). The note is thought provoking. I felt that some additional input in this direction may not be out of place. Hence this appendix.

One disturbing aspect of the Malani rocks is the multiplicity of nomenclature used by different workers. The geological literature abounds with names like Malani Igneous Suite, Malani Volcanic Suite, Malani Volcanic Series, Malani Igneous Complex, Malani beds, Malani volcanics, Malani Rhyolites or simply the Malanis. The plurality of terms seams to highlight the prevailing confusion and uncertainty in regard to the lithological character as well as stratigraphic status of the rocks. Most of the terms imply that the components comprising the rock group are primarily acid volcanics. This is contrary to the fact that there are also mafic volcanics, granitoid plutons as well as some sedimentary beds in the rock associations called the Malani rocks. Recently available isotope data (Basu et al. 1993; Rathore et al. 1996) indicate presence of some Phanerozoic components within what has been described by different workers as the Malani rocks. Truly speaking, it is not clear to many workers as to what could be the precise criteria for describing the rocks as the "Malani Igneous *Province*" (Srivastava, 1988). The aerial extent also seem to be in the mind of Kochhar when he talks about things like "..... if a new area is to be included in the Malani Suite ....", etc. The problem with the Malanis is that the outcrops occur like 'inselbergs' surrounded by piles of desert sands. Widely spaced disparate outcrops of the rocks make the understanding of stratigraphic status as well as inter-outcrop correlation extremely difficult. The criteria of metamorphism and deformation cannot be applied to these trans-Aravalli rocks, as the rocks belong to the phase of stable continental, plume related anorogenic activities (Kochhar, 1984). Even the epizonal (subvolcanic) field setting as suggested by Kochhar would not be of any help in view of the known occurrences of very young Mesozoic-Cenozoic volcanic rocks exhibiting similar settings. We are thus left with two alternatives, the detailed geochemistry or geochronology. Srivastava's approach (Srivastava, 1988) appears to be quite appropriate under the circumstances. Based on major element data, he had been able to discriminate four distinctly different suites of rocks that have been traditionally described as Malanis. Srivastava, however, made it clear that all the geochemically discriminated suites might not belong to the same cycle of magmatism. Presence of four or five phases of igneous activities has also been described by

Bhushan (1985) from Sankra Hill region near Pokaran. Geochronological data of Crawford and Compston (1970) flaunt a wrong signal about the emplacement age of the volcanics at one stroke (at 745±10 Ma). Apart from the presence of younger Mesozoic-Cenozoic rocks, recent data (Rathore, 1994) show that even the Late Proterozoic (Pan-African) magmatism in this region spanned over 100 million years (from 780 Ma to 670 Ma).

Kochhar's reservation, about the inclusion of Tavidar volcanics within the ambit of Malani rocks is understandable, as these are likely to be related to Deccan activity (Rathore et al. 1996). However, the Diri and Gurhapratap Singh ensembles occur in the same hill ranges which include the Manihari (or Miniari). The rocks of the latter hills have been correlated as Malanis by the classical geologists (La Touchie, 1902). The recent geochronological data also confirm their late Neoproterozoic age (Rathore, unpublished thesis).

I would suggest use of the term **Malani Group** (a term noncommittal to the rock types) as a distinct lithostratigraphic unit for the ensemble of rocks that occur as an unconformity bounded sequence of dominantly bimodal volcanics with minor interbedded sediments and peralkaline metaaluminous to peraluminous granites. The lower and the upper surfaces of the Malani Group are limited by the Sirohi Group (with ca. 850 Ma closing age) and the Marwar Supergroup (dominantly pre-Palaeozoic in age) respectively. It may be advisable not to consider the Sewaria and Mt Abu "granites" (used in a very loose sense!) as equivalents of Malani Group, because of the strong possibility that the younger ages (ca. 750 Ma) could be the age of isotopic resetting.

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ANNOUNCEMENTS

XV CONVENTION OF INDIAN ASSOCIATION OF SEDIMENTOLOGISTS: November 18-20, 1998, Venue: Department of Geological Sciences, Gauhati University. Last date for abstract submission: 15 July, 1998, Notification of accepted abstracts: 30 July, 1998, Registration of Delegates: 18 Nov., 1998, Last date for submission of full paper: 30 Sept., 1998. For details write to: Dr. P.K. Das, Convener, IAS XV Convention, 1998, Department of Geological Sciences, Gauhati University, Guwahati - 781 014, Assam, India. **Phone:** (Off) (0361) 570220 (Res) 571221; **Fax:** (0361) 570133.

INTERNATIONAL WORKSHOP ON THE ROLE OF MANTLE-ROOTED STRUCTURAL DISCONTINUITIES IN THE CONCENTRATION OF METALS - A 3-DIMENSIONAL APPROACH: 24-26 August 1998: University of Ballarat, Victoria, Australia; For submission of papers, please contact either Ingrid Campbell at Suite 6,560 Lonsdale Street Melbourne, Victoria, Asutralia 3000. **Fax:** 61-39-602 3827; **Email:** whitehorse@baltel.com.au