

consideration of the following issues regarding computation of seismic hazard assessment:

- Probabilistic or deterministic approach for seismic hazard assessment.
- Maximum credible earthquake or most probable maximum magnitude earthquake.
- Area or linear or point source zone.
- Well-constrained source zone depth or a generalized shallow/deeper depth.
- Directional dependence of earthquake attenuation.

The workshop concluded with a recommendation for

three Indo-Italian collaborative projects, under the umbrella theme of 'Seismic Hazard Assessment, Microzonation and Risk Evaluation' of mega cities of India. The details of project programme for the duration of 3 years are to be planned in due course. NGRI, GSI and BMTPC (Ministry of Urban Development, Government of India) from the Indian side, and University of Trietse (Department of Earth Science), and University of Rome "La Sapienza", from the Italian side, will function as coordinators.

*National Geophysical Research Institute,* S.C. BHATIA  
*Uppal Road,*  
*Hyderabad - 500 007*

## CORRESPONDENCE

### NON-PUBLICATION OF GEOLOGICAL MAPS – A FORCED POLICY OR INDIFFERENT ATTITUDE?

Government of India's policy in imposing restrictions on the publication of geological maps is lacking in logic, as elaborated by Srikantia (1995, 1999). Besides denying the basic geological information to various user agencies, this restriction has also caused a steep fall in the standard of geological mapping. The Geological Survey of India (GSI), which in the pre-Independence period brought out excellent maps, can no longer boast of producing reliable geological maps. It is natural that the lack of public gaze and peer scrutiny, make a mapper so complacent that he no longer feels accountable. Effort of Srikantia (1999) which was followed by a group discussion at the Indian Academy of Sciences (Srikantia, 2000), elicited no response from the Government. What I narrate here further exposes the futility of this illogical policy, which is detrimental to good science.

In the early eighties, when I was mapping in the Spiti Valley, access to toposheets No.52L/12.16 and 53I/13 covering Sumdo, Kaurik, Chango areas was denied to the GSI by the Survey of India (SOI) with the comment that these sheets have not been printed for civilians' use. Consequently, the mapping had to be carried out on enlargement of old and inaccurate hachured degree sheets. Even now these topographical sheets are not available for public use. During the summer of 2000, I had an opportunity to revisit the Spiti Valley, which has of late been opened to the foreign tourists. I met several foreigners who possessed detailed topographical maps of all the areas, including the

Kaurik-Chango stretch. There are at least three agencies, which have published these maps based on satellite data, viz. U.S. Navy (Fig.1), Russia (Fig.2) and Switzerland. These maps are as accurate and detailed if not more, than those of the SOI. Is there any logic in denying maps to our own geologists and also suppressing their publication when detailed maps of these areas are freely available to those outside India? But it is not always that the SOI or the Ministry of Defence (MOD) stands in the way of publication of geological maps. For example, the geological maps of Spiti-Kinnaur areas, published in the GSI Memoir 124, were cleared by the SOI and the MOD, though after deletion of the names of localities, rivers etc. No doubt, it required a tenacious pursuance by a committed person like A.K. Raina, who at that time headed the Delhi Office of the GSI. If the maps of strategic areas of Spiti and Kinnaur could be cleared by the MOD, there is no reason why other maps cannot be cleared for publication. Most of the time it is the lack of will and commitment due to which the maps remain unpublished. The best examples are the geological maps on 1:50000 scale of the Jutogh Group, extending from the outermost klippe to its root zone and of the Tal Group (Nigali Dhar and Korgai Synclines) on 1:125000 scale. These maps were cleared for publication by the SOI and MOD on 14<sup>th</sup> December, 1990, but still remain unpublished. In this case the SOI and MOD are not to be blamed for the non-publication of maps, and the

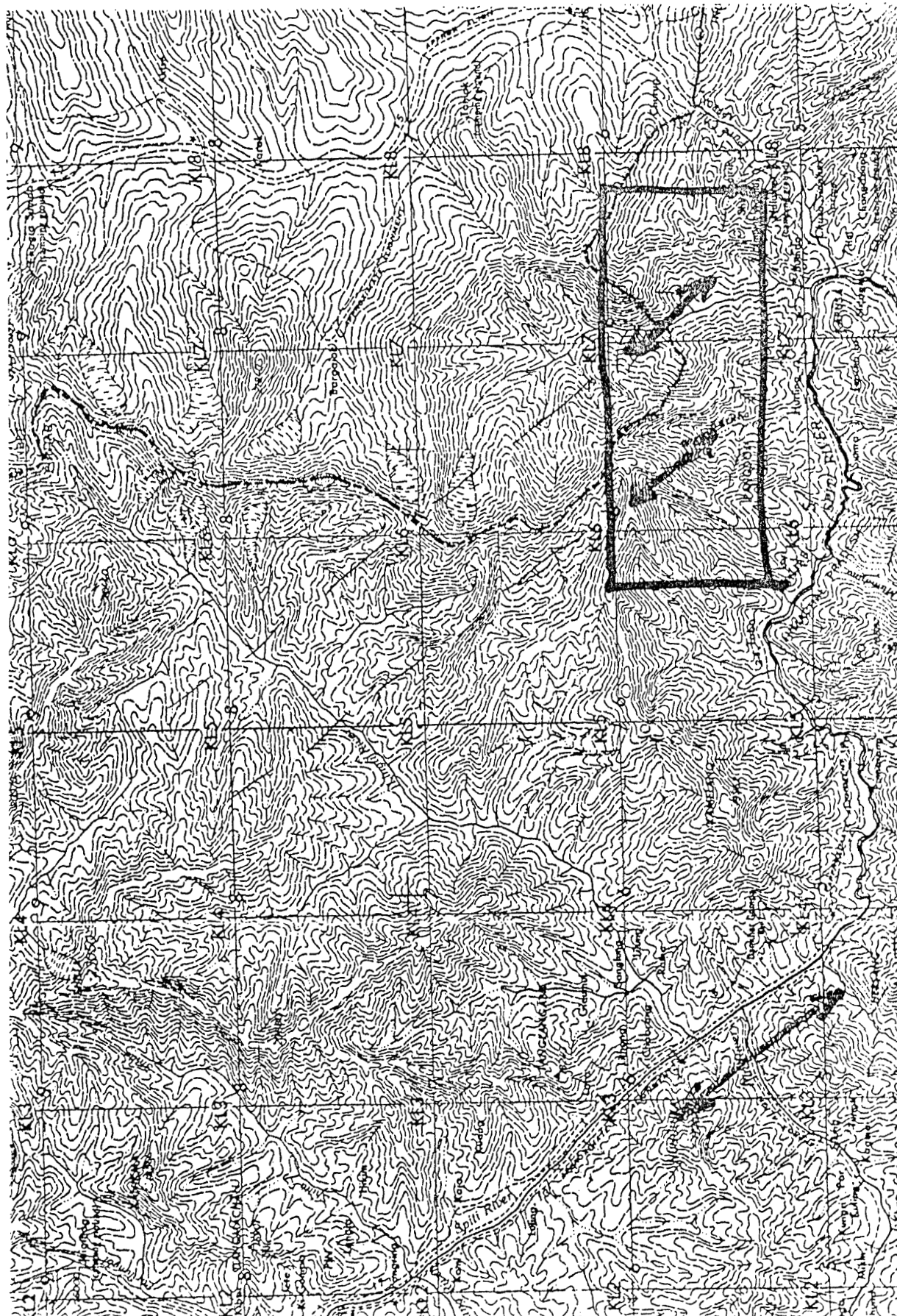


Fig.1. Photocopy of topographic map of the Sumdo - Kaurik area (US Navy).

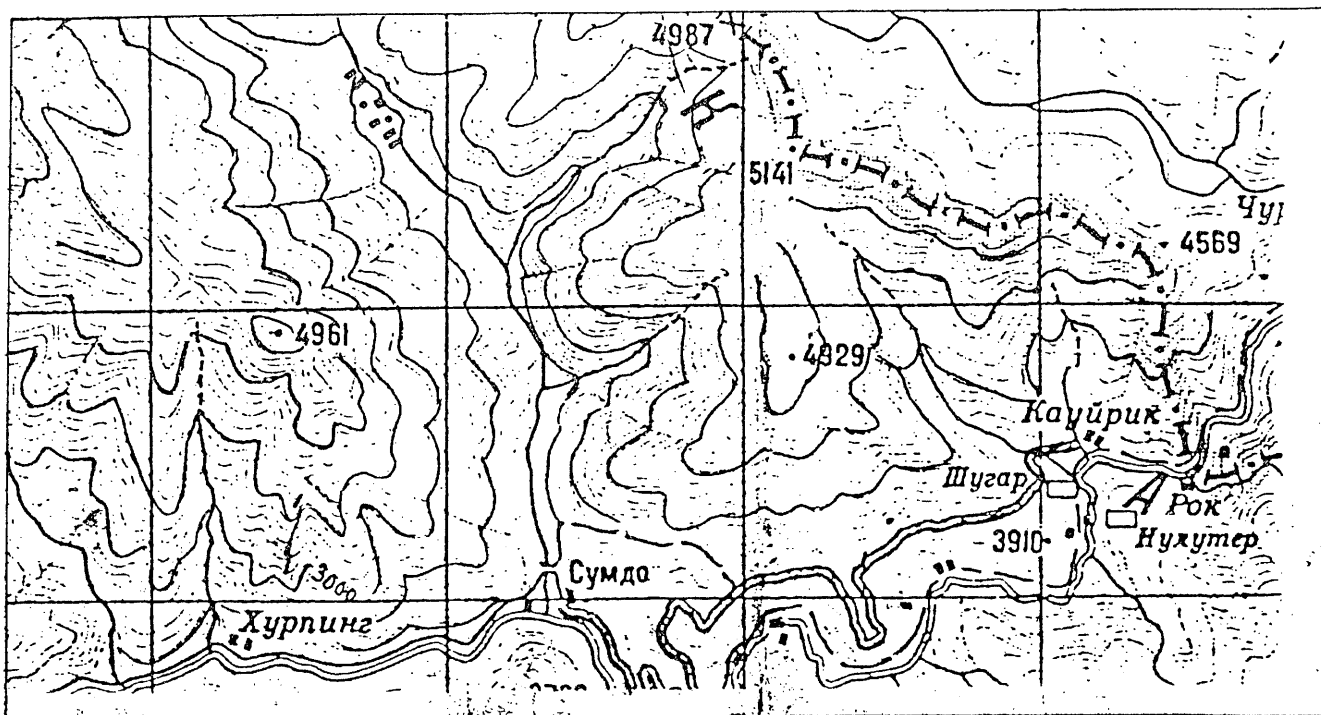


Fig.2. Photocopy of topographical map of the Sumdo-Kaurik area (Russia). Poor reproduction is due to a defective photocopies at Kaza.

fault lies elsewhere. Of course, the ideal situation would be to remove the need for mandatory clearance by the SOI/MOD and permit free publication of all the maps with various geographical details. This is something for GSI to ponder on the occasion of its 150<sup>th</sup> anniversary.

103, Sector 7  
Panchkula - 134109

O.N. BHARGAVA

#### References

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### SUBBA RAO MEMORIAL LECTURE

The Geology Department of Government Autonomous Science College, Jabalpur, was established in the year 1947 by the late Dr. G. Subba Rao. The first memorial lecture in his honour was delivered at the college on 15<sup>th</sup> February, 2001 by Prof. K.L. Rai on Precambrian Metallogeny in relation to Crustal Evolution - Evidences from the Bastar and Singhbhum Cratonic Domains and Environs. Prof. Rai proposed that the Precambrian cratons of Singhbhum and Bastar constitute a metallogenic province par excellence that hosts some of the richest repositories of metals like iron, manganese, copper± molybdenum, uranium, tungsten,

tin±tantalum etc. He provided a broad picture of regional metallogeny in relation to Precambrian crustal evolution in three stages, viz. Early Archaean Stage (~3.8-3.0 Ga). Archaean Proterozoic Transition Stage (~3.0-1.6 Ga) and Late (Meso-proterozoic to Neoproterozoic) Stage (~1.6-0.5 Ga).

Department of Geology  
Govt. Autonomous Science College  
Jabalpur - 482 001

V. K. KHANNA