

Saving the natural springs in the mining hilly tracts of Joda–Badbil–Koira area of Orissa

A number of perennial springs such as Thakurani, Khandadhar, Gudguda, Gonasika and Bolani are present in the hilly tract of Joda–Badbil–Koira area of Keonjhar–Sundargarh District, Orissa. The area is densely forested with rich deposits of Fe and Mn, which are mined using the opencast method of mining.

The discharge of a spring is controlled by rainfall, land use, vegetation, grazing incidence and geomorphology of the recharge zone in a mountain watershed. Also, geohydrological studies suggest that the lineaments produced by joints, fractures and faults play a significant role on the hydrogeological regime of a catchment. Springs located in these areas have high discharge (more than 20 l/s) like a small stream, controlled by the geology such as faults, lineaments, shear zones and bedding planes. Rainfall is recharged in these fractures and discharged in the form of springs and seepages along the major fault planes formed by major tectonic

movements, joints and permeable layers forming a spring.

As mineral deposits are mined using the opencast method of mining, there is huge excavation and the overburden is dumped, resulting in deforestation and slope instability along the hill slopes. The overburden dumps carried by rainwater choke the drainage channels. As a result, there is decrease in recharge of rainwater, which is manifested in the decrease in discharge of these springs.

The water from the springs is potable, except for the leaves and soil particles that are present. Electrical conductivity varies from 10 to 60 $\mu\text{S}/\text{cm}$. This water is also the lifeline of the local tribal people living in the hilly forested areas. As the hills act as recharge areas, there is acute shortage of water after December. People travel for several kilometres to collect drinking water. In the Thakurani and Bolani mining colony, spring water is supplied directly from the hilly spring as

the groundwater potential in these areas is poor. People use water from the Bolani spring for rabi cultivation, as the spring is perennial in nature.

It is the responsibility of the different mining agencies to conserve the hilly springs. The discharge potential of the springs could be enhanced through construction of rainwater-harvesting structures for artificial recharge at suitable locations on hilltops. Soil erosion has to be checked. Afforestation programme has to be taken up in a scientific manner, which will enhance recharge of rainwater. Otherwise all these springs will become dry in future, causing a lot of damage to the biodiversity. It is time that the Government takes some initiative to conserve these springs.

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Need for including more journals from India in *SCI-Expanded*

Garg *et al.*¹ have presented a case for the journal *Mausam* to be included in the Thomson Scientific *Science Citation Index Expanded (SCI-E)* in the *Web of Science*. The *SCI-E*, as on 29 January 2008, covered a total of 6822 S&T titles, including 52 from India². However, the other product of the Thomson Scientific, the *Journal Citation Reports (JCR)*, Science Edition, 2006 covered 45 journals from India and the *JCR* provides, among others, the impact factor (IF) of journals³. It simply means seven Indian S&T journals though covered in *SCI-E*, they do not have IF 2006! These are: (a) *Himalayan Geology*, (b) *Indian Journal of Experimental Biology*, (c) *Indian Journal of Paediatrics*, (d) *Indian Journal of Pharmacology*, (e) *Indian Paediatrics*, (f) *Journal of Function Spaces and Applications*, and (g) *Journal of Postgraduate Medicine*.

The good news is that one of these seven journals, *Indian Paediatrics* is scheduled to appear in the forthcoming 2007 *JCR*, which will be released this summer².

Now the point is whether it is only *Mausam* as advocated¹ or many more journals have to be considered for inclusion in the *SCI-E*. I personally feel that Indian journals covered in databases like *Medline* as also *Scopus* need to be considered, as all of them have equally stringent inclusion criteria^{4–6}. This number may be close to 150 Indian S&T journals!

1. Garg, K. C., Sharma, P. and Kumar, S., *Curr. Sci.*, 2008, **94**, 557.
2. Testa, J., personal commun.; james.testa@thomson.com
3. *Journal Citation Reports 2006*, Science Edition (CD-ROM), Philadelphia, Thomson, 2007.

4. Fact sheet, MEDLINE[®] journal selection, Available from <http://www.nlm.nih.gov/pubs/factsheets/jsel.html>; accessed on 5 February 2008.
5. The Thomson Scientific journal selection process, Available from <http://scientific.thomson.com/free/essays/selectionofmaterial/journalselection/>; accessed on 5 February 2008.
6. Scopus Info. Available from <http://www.info.scopus.com/detail/what/>; accessed on 5 February 2008.

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