

should be cleared off to restore the original state/course of the rivers. The uncontrollable usage of polythene and plastic products which prevent percolation of water into the soil is responsible for depletion of water table. This non-biodegradable material deposited in river bed made perennial rivers dry for most of the year. Use of biodegradable plastics should be encouraged.

Excessive sand extraction from the rivers made them clayey and silty. To control the flow of water, sand-binding plants should be raised. These plants avoid soil erosion (*Vetiveria* grass, *Rhizophora* and *Avicennia* – all man-

groves). These plants saved the life of people during tsunami. To prevent damage to dams, outlets should be constructed to discharge the excess water. This excess water could be used for cultivating fallow land and also for developing aquaculture. Global warming and climate change is the cumulative effect of environmental pollution due to increase in CO<sub>2</sub>. Mixed cropping in plains could absorb more CO<sub>2</sub> as crop diversity may convert CO<sub>2</sub> more efficiently to organic form during photosynthesis.

Lastly, the causal factors are almost the same wherever there is flooding hit. At the same time, solutions are also the

same. So let us practise a pollution-free life by adopting natural ways and means to solve this problem in a planned manner.

- 
1. Sharma, P. D., *Ecology and Environment*, Rastogi Publications, New Delhi, 1975.
- 

SILAR MOHAMMED<sup>1,\*</sup>  
MOHAMMED GHOUSE<sup>2</sup>

<sup>1</sup>*Department of Botany and*

<sup>2</sup>*Department of Zoology,*

*Osmania College,*

*Kurnool 518 001, India*

*\*e-mail: silarmohammed@rediffmail.com*

---

## For the cause of geology

As goes the Darwinian dictum of survival of the fittest, subjects that mutate in time and keep them relevant in the competitive world flourish at the cost of others that are late to respond. Over the years I have seen diversification in a number of subjects together with their becoming increasingly important. There was a time when zoology–botany–chemistry (ZBC) and physics–chemistry–mathematics (PCM) used to be the two most popular combinations in most science faculties across the nation. Since then, ZBC has diversified immensely and has become almost interdisciplinary at the postgraduate level. Passouts from these courses have good demand in the market and so these courses are the most popular amongst the students of science faculty. Compared to the subjects that have diversified according to the emerging and practical demands the others that failed to do so are not that much in demand. These subjects are however no less important.

Geology is one such subject that has failed to keep pace with the changing scenario in most of the Indian colleges and universities. It is still being taught the same way it used to be in the 1960s. This does not imply that the courses have not been revised. There have been some additions and deletions but these have

failed to make a perceptible positive impact.

Geographic information system (GIS) and remote sensing have been the latest additions to the geology curriculum of many institutions. These are no doubt the two most important aspects of the present times but the importance of these is being overemphasized at the cost of other basic elements of the subject. These have thus resulted in deterioration of the essence of the subject to the extent that fieldwork has almost vanished. This is evident from the deteriorating quality of the geological maps themselves. The passouts of present times know how to determine their location using a global positioning system (GPS) and plot the same in maps created in the GIS environment but are unable to do the same using topomaps and compass/clinometer. To them, compass/clinometer and geological hammer are things of the bygone days.

It is hard to imagine a geologist who is not competent enough to measure dip and strike of a simple bedding plane, but there are many around who cannot. The passouts are not really to be blamed. They learn what they are taught. If they cannot appreciate the importance of compass/clinometer or topomap, perhaps the importance of the same has not been stressed upon them in a meaningful man-

ner. It is the system and academia that are to be blamed really.

All this has led to decreasing importance of such an important subject; the subject that affects our routine lives in a big way and if put to use effectively can make the difference felt. Geological advice in landslide restoration works or geotechnical feasibility reports have already been reduced to a mere formality and engineers dominate the show at the cost of geologists. Lack of effective geological advice at the right time is adversely affecting the whole developmental process and things are required to be set right; sooner the better.

And the stalwarts of the subject would be the best persons to herald this process. It is high time that the ones proudly carrying the mantle of geology as a subject made serious attempts to see that this interesting subject does not become extinct.

PIYOOSH RAUTELA

*Disaster Mitigation and Management  
Centre,*

*Uttarakhand Secretariat,*

*Rajpur Road,*

*Dehradun 248 001, India*

*e-mail: piyooshrautela@gmail.com*

---