

A WORKSHOP (AND OTHER THINGS) IN SLOVENIA

- Elery Hamilton-Smith.

Sustainable Mining?

I was recently invited to be a keynote speaker at a NATO Workshop on sustainable Mining in Karst Areas. Seeing that the workshop was held in Slovenia only served to increase the importance of the occasion in my eyes! There was an excellent attendance from the United States, Canada, China and many European countries - Albania, Britain, Bosnia, Croatia, Czech Republic, Estonia, Greece, Hungary, Italy, Lithuania, Macedonia, Netherlands, Poland, Russia, Slovakia, Slovenia, Spain, Turkey and the Ukraine. It was a wonderful opportunity for not only new ideas, but also a much wider knowledge of karst areas.

The Workshop was indeed a very valuable occasion. It served to elucidate how the term sustainability might be conceptualised and implemented for an extractive industry like mining - namely, *not just the continuing viability of industry (or of any one company's) productivity and profitability, but that this must be balanced by the extent to which any mining / quarrying operation either maintains or enhances the economic, social and environmental sustainability of its host community.*

My own paper reviewed what we have learned from experience in both South-East Asia and Australia and the directions in which we are now moving. Later in the program I found myself presenting a further paper at somewhat short notice on the biological dimensions of karst - something that was not covered adequately by the planned program. Both seemed to be well received.

Some of the presentations, in addition to the basic understanding of approaches taken to sustainability, included papers on hierarchical systems analysis as a tool for site and regional assessment; issues in water extraction and draw-down; use of environmental indicators; the role of ISO standards in achieving better environmental management; and a number of local or regional case studies. The proceedings will be edited into the appropriate format for a book. More news later.

Skocjanske World Heritage Area

During the week or so prior to the workshop I was a guest at the Karst Research Institute and did various other tasks, including a re-visit to Skocjanske World Heritage Area. They have made great progress since my last visit in 1998. The church, which looked almost about to collapse in 1998, has been totally restored and is truly a lovely building; the village is progressively being restored, and instead of a glossy visitor centre, there will be a series of small museums and other displays in the restored homes and other buildings of the village. Two of these were already developed - one on the farming lifestyle of the region and the other on the coal-mining period. There is an extension to the park boundaries that takes in the contact zone of the limestone, some important archaeological sites and two more great caves. The park also won the gold medal for its spectacular poster at a marketing exhibition in Japan! I was able to assess the new addition to the park, and to help with deciding how to deal with a falling rock problem at one point in the park.

Interpretation of the highest quality

One of the real highlights was visiting a little village (Dolenje Jezero) near the famous Cerkniski Polje. The owner of a bar there has used his back room to set up an interpretive model of the Polje. It is about the size of a full billiard table and electric pumps simulate the flooding and drainage of the Polje that occurs with the changing seasons. The full cycle takes about 40 minutes; with some interpretation from the owner supported by a CD-ROM in the visitors' own language. It is a totally professional display - one of the finest I have seen anywhere - but was established by the owner on his own initiative as a service to visitors.

Environmental Protection

The country gives a very high priority to environmental protection and although at present only some 4% of the country has been set aside as protected areas, this will be at least quadrupled with the implementation of the parks master plan. There is a major

program of natural re-forestation to restore previously over-exploited lands.

And to Idrija

Another visit of immense interest took me to Idrija - the site of a mercury mine that has operated continuously since 1480 but which is now in the process of a 20-year planned shutdown. It now offers an excellent underground tour through one of the upper levels, together with a great museum located in the castle above the mine. This displays the technology of the mine over its more than 500 years of operation, the social history of the town and the superb lace-work of the women of the region. Again, this is an award-winner as the finest technological museum of Europe. And, back to karst issues, on the outskirts of the town is a magnificent Vauclusian karst spring that has been dived to 180 metres but not yet bottomed.

Two New Books

The research institute team have just produced two new books:

Shaw, Trevor R. 2000. *Foreign Travellers in the Slovene Karst 1537-1900*. Ljubljana: ZRC

and Postojna: Karst Research Institute at ZRC SAZU. 244 pp.

Trevor, known to many Australians from his visits here, and without any question the cave historian *par excellence*, now spends some 3 months every year as a research fellow at the Institute and this is one of the many results of his labours. It provides an exciting account of the ways in which the karst has been perceived by some 93 visitors over the previous four centuries.

Gabrovsek, Franci, 2000. *Evolution of early karst aquifers: from simple principles to complex models*. Ljubljana: ZRC and Postojna: Karst Research Institute at ZRC SAZU. 150 pp.

Franci has recently completed his PhD with Wolfgang Dreybrodt and these book presents the findings of his work. It is a truly pioneering effort, examining the processes of karst genesis from the perspective of a physicist and will make a considerable contribution to our understanding of that process. Even more, although some if comprises mathematical modelling presented in great detail, the plain language text is relatively easy reading even for a mathematical ignoramus like myself.