

## **Mining risk spot is safe again**

### **Successful rehabilitation of the Novat tailing pond at the Baia Borsa mine in Romania removes the site from the list of accident risk spots**

**The Novat tailing pond is one of the riskiest industrial installations in the Tisza basin. Thanks to Austrian support funds, long needed rehabilitation works was completed last autumn and a major pollution risk spot is safe again.**

On 10th March 2000, the dam of the Novat tailing pond (11 ha large and up to 26 m high) broke after excessive rainfalls in the Northern Romanian mountains (800 m asl.). 100,000 tons of tailings loaded with lead, zinc, copper and cadmium spilled into the Vaser valley, a nature-protected valley, and then further downstream via the Viseu valley into the Upper Tisa of Ukraine and northern Hungary. It was the second major environment disaster after the cyanide spill from the Aurul tailing pond at Baia Mare only a few weeks before. In spring 2000, Mr Zinke was asked by UNDP Romania to coordinate the international response.

The Baia Borsa-Novat spill, however, did not immediately kill all living organisms. Most of the tailings (inert ores) settled right downstream the dam but they contained loads of heavy metals. Though no immediately impacting health, heavy metals are serious contaminants. Some tailings were washed away and deposited on agricultural land and near drinking water wells of the Upper Tisa region.

It is the chronic impact of heavy metals that can deteriorate health because, different to most organic compounds, heavy metals do not decompose but tend to accumulate in the food chain (algae, macrozoobenthos, fish), in soils (vegetables and animal fodder) and in drinking water. Having in mind that mining regions often host hundreds of heavy metal sources (leaking old and active mines, tailing deposits, pipelines, industrial plants etc.) and that first contamination started centuries ago, it is evident that any spill must be prevented and regional monitoring upgraded.

As a first response, ICPDR published in July 2000 with the countries of the upper Tisza region an "Inventory of 42 Potential High Accident Risk Spots", the Novat pond being one of 16 high risk tailing deposits. *ZINKE ENVIRONMENT CONSULTING* compiled this inventory for ICPDR.

In autumn 2001, Greenpeace prepared a campaign on industrial water pollution and was advised by *ZINKE ENVIRONMENT CONSULTING* to contact the state mining company REMIN: They hold several risky and polluting installations needing urgent repairing, including the Novat pond, but lack own funds and international support even after March 2000. The discussions, also involving local environment and water authorities, concluded in October 2002, in an Investment Portfolio for 7 pollution reduction projects (2.7 mio. €) that Greenpeace and Zinke presented to international donors. The Austrian Ministry of Foreign Affairs chose the Novat rehabilitation project and signed in December 2003 contracts with the Romanian Ministry of Economy and Trade and REMIN.

#### **Small action – big effect**

The project was realised from February to October 2004 and supervised by *ZINKE ENVIRONMENT CONSULTING*, involving Prof. Dan Stematiu from the Bucharest technical university and Prof. Karl Lorber from the Leoben mining university in Austria who are both familiar with the Novat pond.

The technical works at Novat included the replacement and upgrading of the pumps evacuating the water from the tailing pond (their insufficient capacity caused the spill in 2000) back to the plant, the rehabilitation of the dam drainage and of the downstream pond for exfiltrating waters (destroyed in 2000).

Since November 2004 these exfiltrating waters are not discharged anymore into Vaser creek but recycled into the main pond. The Austrian support added a new generator as independent energy source to ensure control of pond water levels even at extreme events. Other works improved the road

access to the pond in the remote and badly accessible mountain forests. The total investment of only € 280,000 has a lasting benefit because - even after the mine closure in 2007 - the water balance of the tailings deposit will have to be managed.

Gheorghe Mois, head of the REMIN environment department in Baia Mare, stressed: “The Austrian support that allowed us to complete our works and triggered almost 30% in-kind contribution we would not have invested otherwise.” Karin Holzer from the Austrian Development Agency (ADA), the operational unit of the Austrian Cooperation with Eastern Europe, was pleased to see that the combination of local technical capacity with international expertise allowed a very efficient and low-cost project. “We wanted to make the step from assessing to solving this environment problem.”

As a result of this pilot action, ICPDR and Greenpeace now can delete the first major risk site from their international inventories and concentrate on securing funding to reduce the threat of pollution from other accident risk spots in the region.

*Alexander Zinke is a management consultant for environment, based in Vienna. He is involved in various water management and nature protection projects in the Danube basin (e.g. Sava, Tisza, Balkan) and the Technical Support of the ICPDR Ecology Expert Group. See: [www.zinke.at](http://www.zinke.at)*

Photo: The Baia Borsa-Novat tailing pond is located in a remote mountain valley in northern Romania (© Zinke)



Photo: The Novat tailing dam has now a better drainage and a gentler slope (© Stematiu)