



*This project  
is supported by:*

The NATO Science for Peace  
and Security Programme

Project fiche

9 July 2009

## Monitoring System to Counter-manage the Risks of Infrastructure Collapse in Tuzla (Bosnia)

(ref. 983305)

Tuzla is one of the densely populated urban areas in Bosnia and Herzegovina that has a long history of coal and salt exploration leaving behind abandoned mines. These mines are a hazard to the infrastructure and the population in this area due to ground deformation and sink holes. Many of the historical buildings simply collapsed and disappeared during the last 50 years.

The project will bring together the huge amount of historical data on mining areas, their geotechnical and hydrogeological features, and integrate and produce an actual real picture of the situation by updating the existing geographical information system (GIS).

The end-result will be detailed hazard maps for endangered areas that will provide the basis for a long-term planning to monitor and mitigate the risk. The research will be done together with the communities in Bosnia and Herzegovina (representatives of the Tuzla Canton government and ministries, as well as the municipality of Tuzla) in order to increase their understanding of the problems and their feeling of ownership.

### Project Co-Directors:

- Prof. Giovanni Gabbianelli, University of Bologna - CIRSA, Ravenna, Italy (NPD)
- Prof. Abdullah Basic, University of Tuzla, Tuzla, Bosnia Herzegovina (PPD)
- Dr.Sc. Mustafa Burgic, Tuzla Canton Government, Tuzla, Bosnia Herzegovina
- Eng. Rusmir Salihovic, Municipality of Tuzla, Tuzla, Bosnia Herzegovina
- Dr. Francesco Mancini, Technical University of Bari, Bari, Italy

**Approval Date:** 14 November 2008

**Effectived Start Date:**

9 March 2009

**Duration:** 2 years; expected completion by April 2011

**Web site:** <http://www.demos.ba>



Photo SMic/NATO.

Abandoned salt mine "Tusanj" near Tuzla.



Photo SMic/NATO.

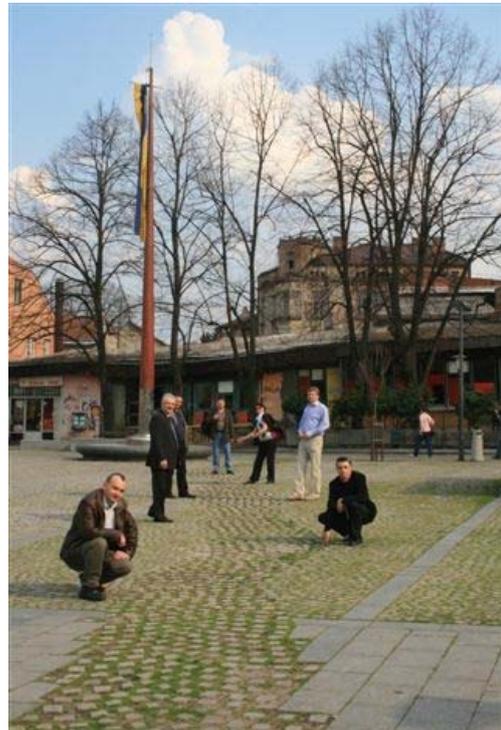


Photo SMic/NATO.

The centre of Tuzla shows various damage to the infrastructure caused by abandoned salt mines, like these "scars" in the pavement.