



## **Pollution and partial rehabilitation of a karst system**

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The project describes a hydrocarbon pollution accident, partly rehabilitated, happened more than 30 years ago, that is still persisting even at a reduced rate.

The Forame spring is located at the foothill of a karst area of 12 sqkm, in NE Italy. The hill is highly forested and its surface topography is characterised by dolinas and blind valleys. More than 100 caves have been inventoried. The source is the most important in the area and discharges from 60 to 1500 lt/sec. After the II World War, 15 military fuel deposits have been built in the dolinas, upslope the spring. Their capacity ranges between 1500 and 2000 tons, each. In 1973 one of the reservoirs was destroyed during a severe storm, from two lightnings, losing its entire content of 1900 tons. Since then the hydrocarbons were slowly released via the spring, located 400 m SW. After a preliminary hydrogeological study, the underwater tunnels was surveyed as far as 150 m from entrance. During the exploration stage, the cave divers found the main sources of hydrocarbons. In a second stage by means of special air pumps, more than 7 tons of fuel were extracted, still leaving inside an unknown percentage. Further drillings in the above area, close to other reservoirs, proved that different pollution episodes took place in the past, contaminating the underground (fractured conglomerate), down to 20-30 m at least. All water of the aquifer infiltrates from surface runoff and becomes polluted while flowing under the military deposits. The oil spill is going on from many years, but due to bureaucracy, and military secrets is difficult to get the real extension of the case. The investigations showed that after crossing the rock formations, several tons of polluted fluid entered the big alluvial aquifer, where thousands of public and private wells abstract water for potable use. After a preliminary reconstruction of the hydrogeological basin, we are now applying for a new support, to ascertain the real pollution hazards for people and aquifers. Sponsor Institutions: Administration of Treviso Province (Environmental Dept.); Military Corps of Engineers; Municipality of Giavera del Montello; Environmental Protection Agency