

Hydrogeological characteristics of the Croatian Dinaric karst

BIONDIC, B., BENČEK, D., MATIČEK, D. and BIONDIC, R.
Institute of Geology, Sachsova 2, HR-10000 Zagreb, Croatia

The Dinaride megastructure is located along the eastern coast of the Adriatic sea (Mediterranean region) in the southern part of the European continent. It is a geologically mobile area situated within the subduction zone of the African and European plates characterized with tangential structural forms degraded by younger tectonic activity. The structure mainly consists of carbonate rocks (limestone and dolomite) in a sedimentation sequence spanning from the Paleozoic to the Tertiary. An important hydrogeological lithological feature is the occurrence of impermeable clastic rocks of Paleozoic and Tertiary age. The southern, coastal Adriatic part of Croatia completely belongs to this karst complex of rocks. Along the Adriatic coast numerous important cities developed (Pula, Rijeka, Split, Dubrovnik) as industrial centers and more what is important, as major tourist resorts, which need well organized watersupply systems. The karst is characterized by springs of high yield during rainy seasons (up to $150 \text{ m}^3/\text{s}$) and a considerably low discharge and even disiccation during dry seasons. This paper will present the study methods applied for the protection of vulnerable karst aquifers. The importance of hydrogeochemical studies in defining of natural systems is stressed as well as the criteria for the determination of the degree of protection of karst aquifers. During these studies the experiences of the joint project of European hydrogeologists within the EU Cost 65 will be applied. All data and interpretations are performed by GIS technology (ARC/INFO).