

and within-plate basalts, while the majority of Middle Jurassic ages have been found in sediments associated with basalts that geochemically are related to an intraoceanic convergent margin setting. Middle Jurassic radiolarites and radiolarian mudstones are also associated with ophiolite mélanges that are allochthonous with respect to the continental margins. Late Middle to Late Jurassic ages are found in synorogenic deepwater pelagic and ophiolite-bearing detrital sediments that stratigraphically overly marginal series. These deposits formed during the obduction of the ophiolites onto the adjacent continental margin. Exposure/erosion and emplacement of the ophiolites is largely diachronous along the Pelagonian-Korab-Durmitor margin and in part synchronous with an ongoing formation of Vardar (suprasubduction) oceanic crust. Westward younging of ophiolite detritus on the Pelagonian margin implies an eastern (Vardar) origin of the ophiolites in Eastern Greece.

In our simplest geodynamic scenario the Triassic ophiolite components are interpreted as remnants of the Maliac-Meliata Ocean that formed NE of the Pelagonian microcontinent, during the detachment of the latter from Eurasia. During the Middle Jurassic an intra-oceanic subduction zone developed in the Maliac-Meliata Ocean outboard of the Pelagonian-Korab-Durmitor-Drina-Ivanjica margin. Pieces of Triassic Maliac-Meliata ocean floor and seamounts became ripped off the lower plate and accreted in this subduction zone together with very young (0-10 my, supra-subduction) oceanic basalts of the upper plate attributed to the Vardar (backarc) Ocean. When the subduction zone reached the Pelagonian- Korab-Durmitor-Kuci margin, the latter became the lowermost unit of the accretionary wedge. The intraoceanic arc collided with the trench and was overthrust by the young back-arc Vardar crust just before subduction ceased. Further westward thrusting (mostly during Late Cretaceous-Early Tertiary) emplaced this composite ophiolite unit onto the more external Pindos-Cukali zones.

OneGeology-Europe – a general overview, data specification, and an example of a contribution from Slovenia

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OneGeology-Europe is a project which originated in the global initiative OneGeology. It started in September 2008 and will conclude in October 2010. It is a truly multilateral and multinational project with 29 partners from 20 European countries. The aim of this EC-funded project is to make geological spatial data held by surveys and national geological institutes discoverable and accessible. It will do this through a uniform data model, and create dynamic digital geological map data of Europe. The results of the project will allow researchers, consultants, environmentalists, construction and water industries, planners and local, regional and central governments, to make more informed decisions about the resources and hazards in Europe. It will also provide a means of seeing just what lies beneath your feet!

Major objectives and achievements for OneGeology-Europe include:

- A web-accessible, interoperable, geological spatial dataset for the whole of Europe at 1:1 million scale.
- Accelerating the development and deployment of the emerging international interchange standard language for geological information (GeoSciML).
- Removing barriers and making it easier for a wide range of both public and private sector organizations to use geological data through codes of practice on licensing.
- Creating a common language that helps to acquire geological knowledge and move it closer to end-users for a greater public impact.
- Making substantial progress in the implementation of the INSPIRE European Directive in the geoscience domain.

In addition to the work in the field of informatics, a challenging and important task was the development and agreement of a common geological data specification. The project is delivering a specification for geological spatial data and an interoperable 1:1 million scale dataset for the whole of Europe - an essential platform for the whole project. This foundation includes at its core a vocabulary to describe lithology, age and genesis of the rocks and the tectonic structures and term definitions and their relations. Generic and specific geometric and semantic harmonisation issues were identified. Existing national datasets were then “reworked” to make significant progress towards a harmonised dataset – a crucial step towards INSPIRE goals. The standards, architecture and framework developed by the project can then be “upscaled” to more detailed levels and progressively deployed for higher resolution geological data. The Geological Survey of Slovenia is one of more than 24 data providers in the project. To deliver the Slovenian contribution an existing geological map at a scale of 250000 was edited and simplified to fit the requirements of 1:1 million scale target map. The spatial data were mapped into the common data model and were also partly harmonized with neighbouring countries. An additional benefit of Slovenia’s participation in the project will be a new printed geological map of the country in scale 1:1.

Hydrogeological investigation of the Beysehi Lake and surrounding area

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The Beysehir Lake, which is one of the largest freshwater lake reservoirs in Turkey, is the most important drinking and irrigation water source for Central Anatolia. The lake has an area of approximately 656 km² with an average depth of 5 meters. The most important creeks discharging to the Beysehir Lake (Sarisu, Ustunler, Ebulvefa, and Eflatun) and their drainage area form the southeast basin of the lake. The rocks in these basins and their hydrochemical relation with surface and subsurface water will be given briefly in this study.

The Lower-Middle Cambrian Caltepe Formation comprising dolomite, crystallized limestone, and nodular limestone, occurs at the basement and has reservoir rock characteristics. The Upper Cambrian-Lower Ordovician Seydisehir Formation overlies conformably the Caltepe Formation and comprises schist, phillite and shale-bearing limestone and quartzite lenses in places. The Anamasdag Formation, which is the most important reservoir rock in the study area, has widespread outcrops around the lake and rest unconformable on the Seydisehir Formation. It is composed of conglomerate, marl, sandstone, ferric bauxite, dolomite, limestone and is Upper Jurassic-Upper Cretaceous in age. The Hoyran complex comprising serpentinite, pyroxenite, harzburgite, dunite, diabase and chromites emplaced tectonically over the abovementioned units. This unit has outcrops starting from northern part of the Beysehir Lake extending approximately in the NNW- SSE direction up to the Yesildag town located at the south of the lake. Besides, the Eocene Buyukkopru Formation comes unconformable on these units and, begins at the bottom, with the red marl and continues with mudstone – claystone – turbiditic sandstone. The Topraklı Formation is made up of partially consolidated pebble, sand and clay and, covers all the above mentioned units.

The Landsat 5 TM satellite image was used in the interpretation for providing the important hydrological data and individual pollution source in the Beysehir Lake, with its drainage area, which is one of the important water resources in the area. The lineaments and drainage characteristics of the study area have been determined by developing a Digital Terrain Model using filtering methods such as single banded Fast Fourier Transformation and Convolution methods of image enhancement methods. Besides, composites obtained through hue enhancement and combination in differing ratio of data, in the three visible and three reflected infrared wave lengths occurring of the Thematic Mapper image, give very promising results in differentiating the hydrogeological units and determining pollution spreading in the surface waters. The interpretive linearity and geological maps prepared by supervised and