

1. ***Dubrovnik – Ombla - Popovo polje (Vjetrenica) (BiH) – HE Trebinje (BiH) – Grahovsko polje (MNE) – The Boka Kotorska Springs and Kotor Old town (UNESCO heritage site) (MNE) – Dubrovnik – 2 days (1 night)***

**Day 1 - 30<sup>th</sup> September, 2017.**

08:00 departure from Dubrovnik. 15 minutes drive to the first stop -the Ombla spring, which is the largest karst spring in the southern Dalmatia region of Croatia (Fig.1.1). It is a typical contact spring, developed on the contact of Mesozoic carbonate rocks overthrust onto thick Eocene flysch deposits which represent a total hydrogeological barrier to groundwater flow from hinterland. Source of recharge of limestone aquifers is precipitation in the hinterland, which dispersedly infiltrates the underground in the areas where karstified limestones are present at and near the surface. Average discharge rate of the spring is 24 m<sup>3</sup>/s, with a minimum of 3 m<sup>3</sup>/s and a maximum of 138 m<sup>3</sup>/s.



*Fig. 1.1 The Ombla spring (photo by N. Ilijanić)*

Afterwards, 1:30 hour drive to Vjetrenica and Popovo polje (Bosnia & Herzegovina). The Popovo polje is a specific example of karst phenomena. The Vjetrenica cave (Windy cave) is located in the south-western rim of the Popovo polje (Fig.1.2). Investigation of the Vjetrenica cave started in 1858 and the length of surveyed channels has reached 7,503 m. Some 1,250 m has been adapted for tourist visits. Continue drive to Trebinje (1 hour drive). Stop in Trebinje and lunch. After lunch, sightseeing of the Trebišnjica Hydrosystem (HE Trebinje) which is one of the most complex development projects in the Dinaric karst area. In this area, water is the only important and valuable natural resource. It's large hydroelectric power potential, as the basis for the advanced economic development of this region, was recognized long ago. In the evening sightseeing of the town Trebinje - overnight.



*Fig. 1. 2. The Vjetrenica cave (<http://herzegovina.travel/blog/listings/vjetrenica-cave/>)*

**Day 2 – 1<sup>st</sup> October, 2017**

08:00 departure from Trebinje. Drive to the Grahovsko polje is one of the smallest poljes within the highly developed karst of the Montenegrin Mountains (1 hour drive). It is a small depression of some 6.5 km<sup>2</sup> located close to the border with Bosnia & Herzegovina. The polje is 7 km long, with a maximum width of 1.5 km, and situated at an average altitude of 750 m. Afterwards, 1h drive to Boka Kotorska springs. There are several springs in Boka Kotorska bay which are used for water supply of surrounding settlements. At this stop hydrogeology and management of these springs will be presented. Departure to Kotor Old town. The Old Town of Kotor is one of the best kept mediaeval towns in this part of the Mediterranean. It has managed to keep its structure typical of towns from the XII to XIV century. The asymmetric structure of narrow streets with medieval monuments contributed, among other beautiful buildings, to Kotor being entered into the UNESCO Registry of World Cultural Heritage and Natural Beauties. Lunch and after departure to Dubrovnik. End of tour.



Fig. 1.3 The Kotor Old town ([www.panoramio.com](http://www.panoramio.com))

**Price of the tour:** 175 EUR

**Price includes:** bus transportation, tour guide, meals as mentioned in the program (2 lunches, 1 dinner, 1 breakfast), overnight in Trebinje in single room, bottle of water (0,5 l) organization of the tour, VAT.

*Price does not include: drinks with meals, tips.*

*\*Price is based on 40 paying passengers. In case that number is not met, price will increase.*

**\*\* Please check if you require visa to enter Bosnia & Herzegovina and Montenegro!**