22 АПРИЛ 2024 – МЕЖДУНАРОДЕН ДЕН НА ЗЕМЯТА

ЗНАЧИМИТЕ КАРСТОВИ ИЗВОРИ В БЪЛГАРИЯ

Проект MIKAS

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Geological Institute - BAS

Евелина Дамянова

Национален институт по Метеорология и хидрология

National Institute of Meteorology and Hydrology

Karst Commission

Most Important Karst Aquifer's Springs – MIKAS

United Nations Educational, Scientific and Cultural Organization

International Hydrological Programme

Проект на Карстовата комисия към Международната асоциация на хидрогеолозите – КС – IAH

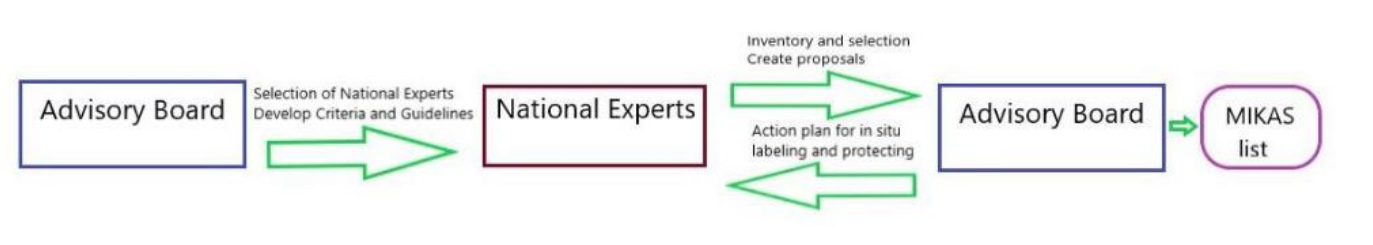
ЦЕЛИ НА ПРОЕКТА

1. Разработване на критерии за подбор на най-важните карстови извори;
2. Изготвяне на Глобален (MIKAS) и Национални (NIKAS) списъци на изворите;
3. Създаване на Кодекс на добрите практики за използване и защита на изворите;
4. Популяризиране на тези извори на място и в интернет пространството.

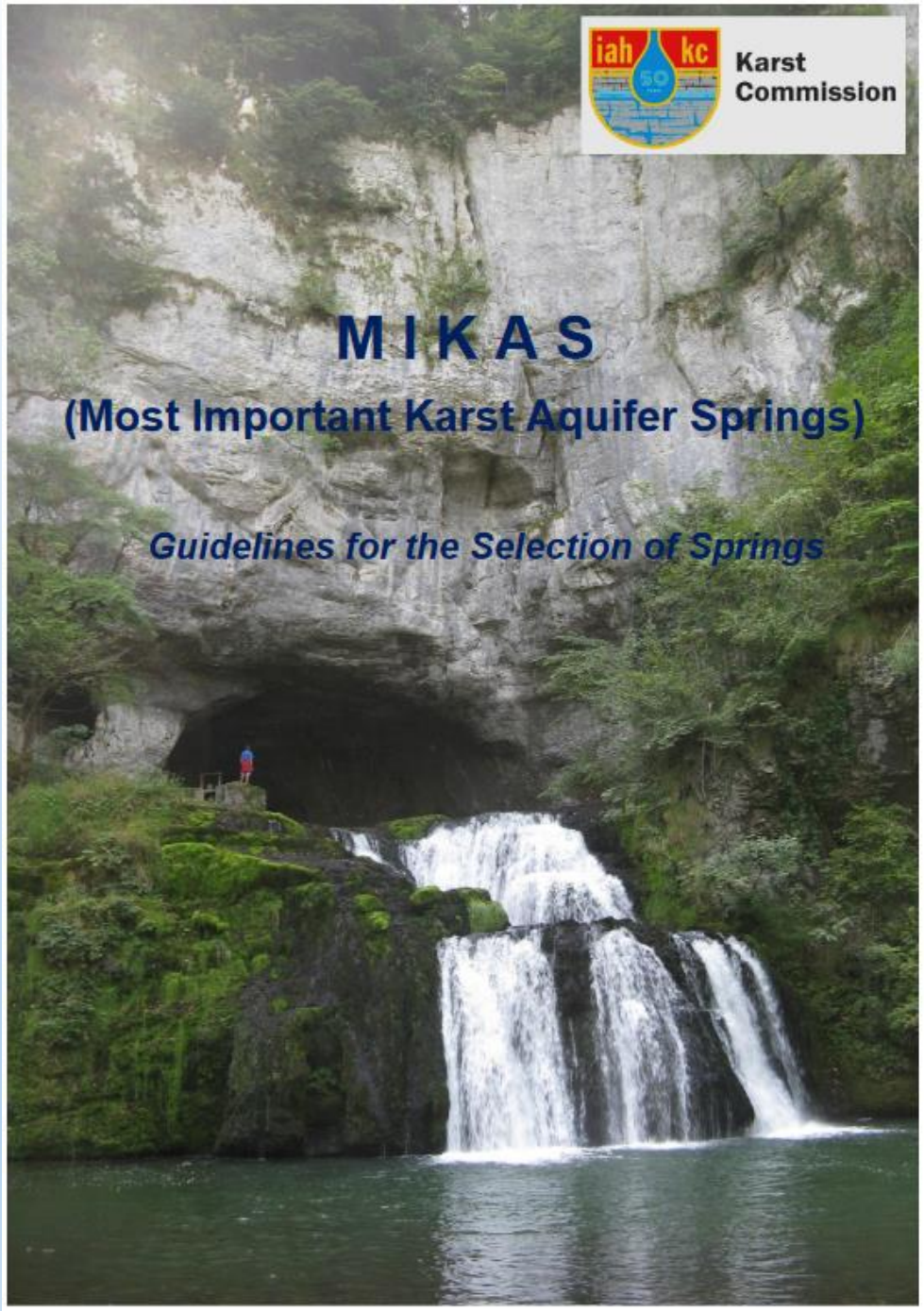
Координатор на проекта - **Зоран Стеванович**

Над 120 участника от 80 държави

Начин на подбор и критерии



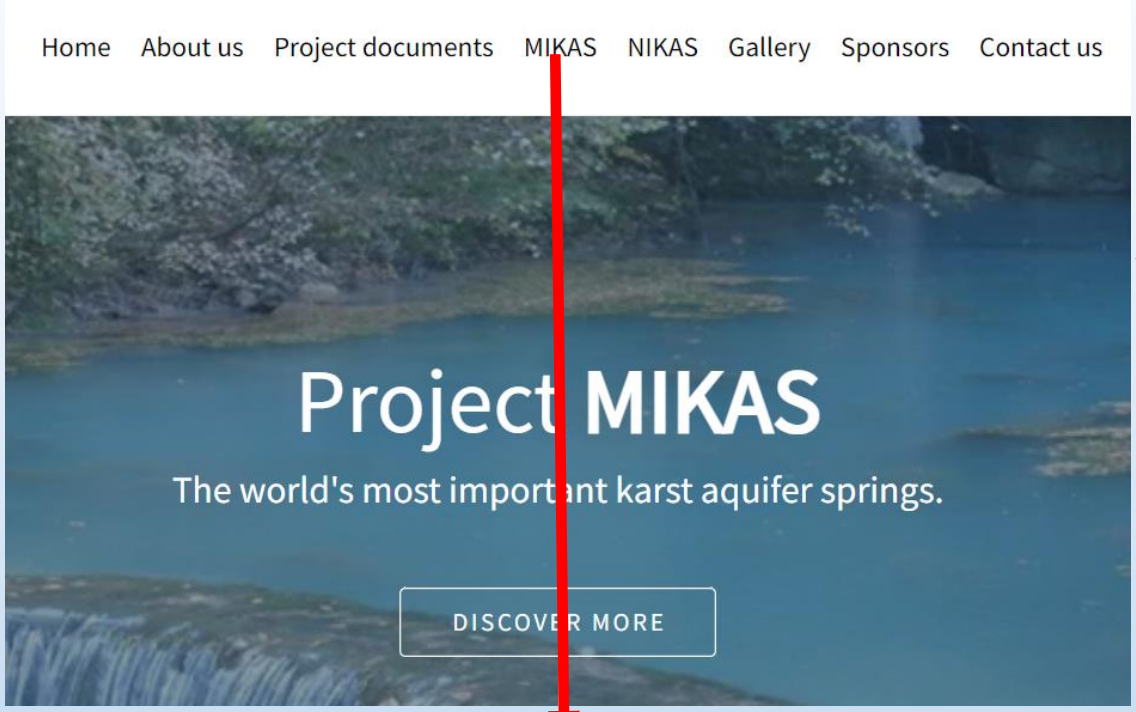
- Исторически (H);
- Естетичен(A);
- Икономически (E);
- Научен (S);
- Екологичен (Es).



https://mikasproject.org/

ДОСЕГА СА ПРЕДСТАВНИ И УТВЪРДЕНИ КАРСТОВИ ИЗВОРИ САМО НА ОКОЛО 30 ДЪРЖАВИ

91 в MIKAS и 58 в NIKAS



Albania
MIKAS springs:
1. Blue eye (Syri i Kalter)
View more details

Austria
MIKAS springs:
1. Fürstenbrunner Quelle
2. Kläfferquellen (Kläffer spring)
3. Pießling-Ursprung
4. Kaiserbrunnen
View more details

Bolivia
MIKAS springs:
1. Chiflonqaqa
View more details

Bosnia & Herzegovina
MIKAS springs:
1. Vrelo Bune
2. Vrelo Bosne
View more details

Brazil
MIKAS springs:
1. Baía Bonita
2. João Baio
3. Pratinha
View more details

Colombia
MIKAS springs:
1. Manantial de Cañaverales
2. Ventanas de Tisquizoque
View more details

Ecuador
MIKAS springs:
1. Jumandy Cave
View more details

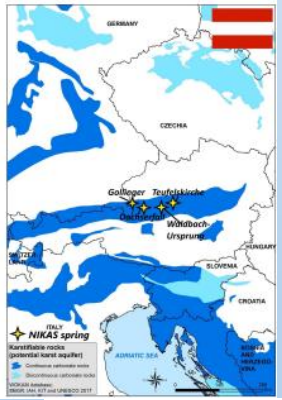
Estonia
MIKAS springs:
1. Lavi
View more details

Greece
MIKAS springs:
1. Almyros
2. Aggitis river Springs (Maaras

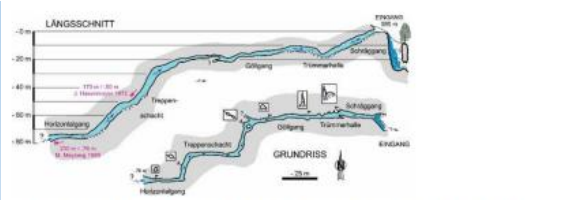
India
MIKAS springs:
1. Achabalnag
2. Kokernag

Iran
MIKAS springs:
1. Sasan
2. Sheshpeer

Ireland
MIKAS springs:
1. Cong Spring
2. Shannon Pot



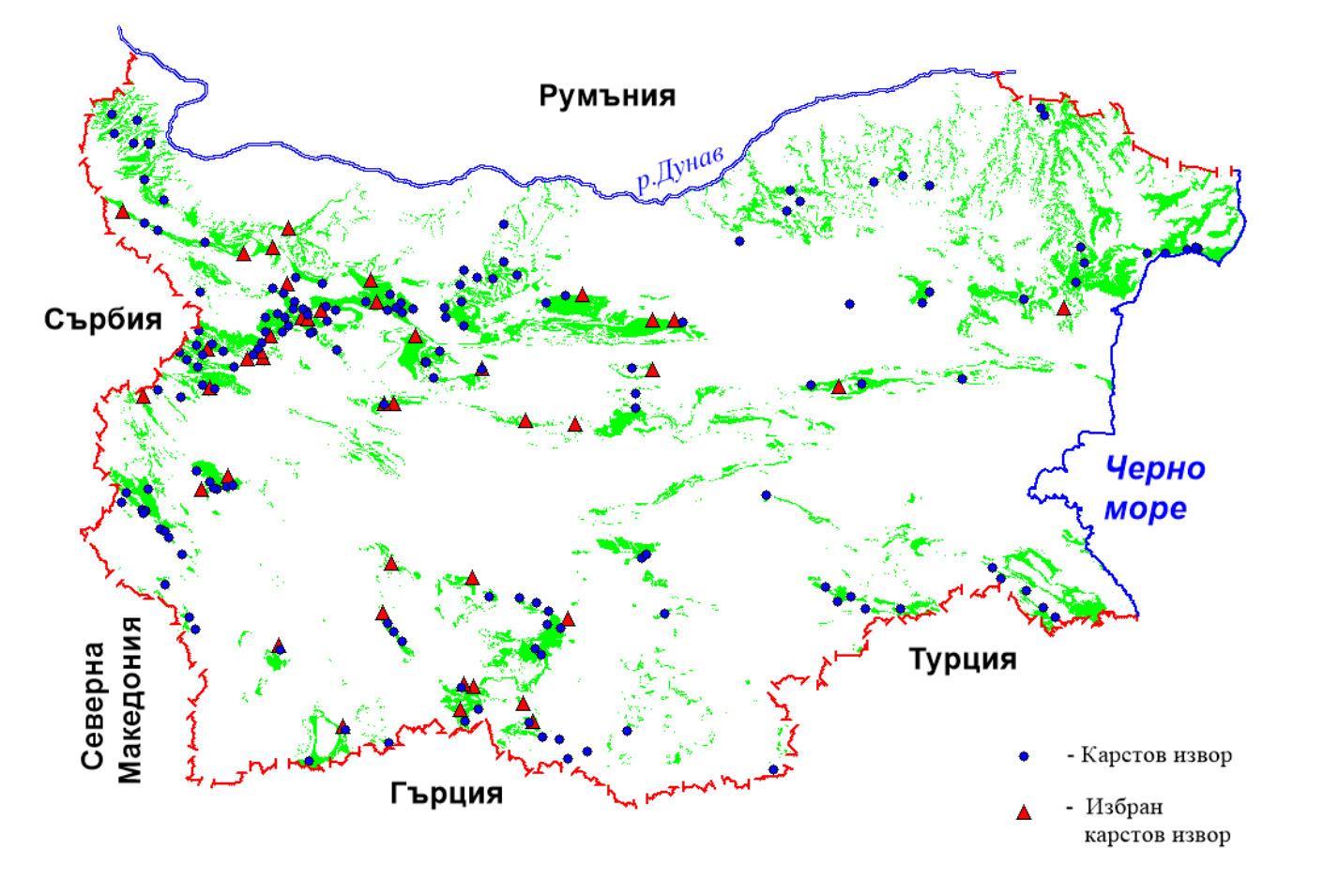
Dachserfall outlets (Photo: R. Benischke)



Plan view (bottom) and longitudinal section (top) of Gollinger Wasserfall (Schwarzbachfall Cave) to a depth of 76 m (from Spötl et al. 2016; Sketch Meyberg & Rinne 1995, drawing R.Seebache)

Country	MIKAS springs	Coordinates / Nearby City	Spring discharge (Q in l/s,min/av/max / tapped or not	Criteria* in order / Main justification */ H-historic, A-aesthetic, S-scientific, E-Economic, Ec-ecologic	Data collected by
Austria	1. Dachserfall	N 47° 32' 43'' E 13° 19' 56'' Z= 710 m asl Tennengebirge Abtenau	221/983/8153 Not tapped	*A, E, S, H, Ec* Due its aesthetic significance the Dachserfall is attractive to tourists. Not tapped but remains one of the strategic water resources of the Salzburg province. Several tracing tests conducted by use of fluorescent dye and spores. Spring is situated inside nature conservation area and ecologically is significant due to large population of Niphargus species.	Ralf Benischke, Lukas Plan
	2. "Gollinger Wasserfall (Schwarzbachfall)"	N 47° 36' 06'' E 13° 08' 15'' Z = 580 m asl Golling	28/245/42616 Tapped by pipe for local use	*A, H, S, Ec, E* Beautiful waterfall spring (about 80 m high) as the outlet of Schwarzbachfall Cave. Between 1798 and 1805 the spring and its waterfall was made accessible, and was since this time a motif for painters of romanticism. Today it is a popular destination for tourists. The siphon at the outlet dived to a depth of 76 m. The spring and its surroundings were declared 1985 as natural monument.	Ralf Benischke, Lukas Plan
	3. Teufelskirche	N 47° 47' 15'' E 14° 12' 22'' Z = 555 m asl St. Pankraz, Windischgarsten	12/995/41462 Not tapped	*S, A, H, Ec, E* The spring water issues from a picturesque cave ruin, formed by rock arches, and is not permanently active at the outlet (in low season flow appears a few tens meter from outlet. The discharge mechanism is intermittent, as result of complex hydraulic siphon system. The pulsation (2 – 5 cm) periodicity occurs within approx. 1 and 2.5 hours. The site, a scenic spot, is easily accessible for tourists. Spring declared as natural monument.	Ralf Benischke, Lukas Plan
	4. Waldbach-Ursprung	N 47° 32' 35'' E 13° 36' 25'' Z = 915 m asl Hallstatt	9/3124/18973 Not tapped, more downstream part of water used for generating electricity	*S, E, A, Ec, H* The Waldbach-Ursprung spring drains much of the Dachstein plateau, including the two glaciers. Spring is connected to the adjacent Hirlatzhöhle cave, some of the water can be observed inside the cave, while in extreme high-water season flow emerges at the orifice of the cave.	Lukas Plan, Ralf Benischke

Предварителен подбор на извори



Среден дебит над 200 l/s
и /или
максимален дебит над 1000 l/s

Подбрани извори официално приети от Консултативния съвет на Проекта преди 2 седмици ПРЕДСТОИ КАЧВАНЕТО ИМ НА ОФИЦИАЛНАТА СТРАНИЦА НА ПРОЕКТА

Глобален списък

MIKAS

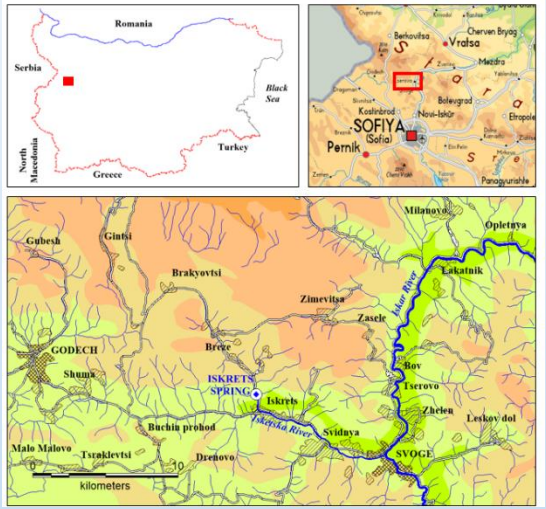
1. Искрецки извор (Пещта)
2. Девненски извори
3. Извор Мусина

Национален списък

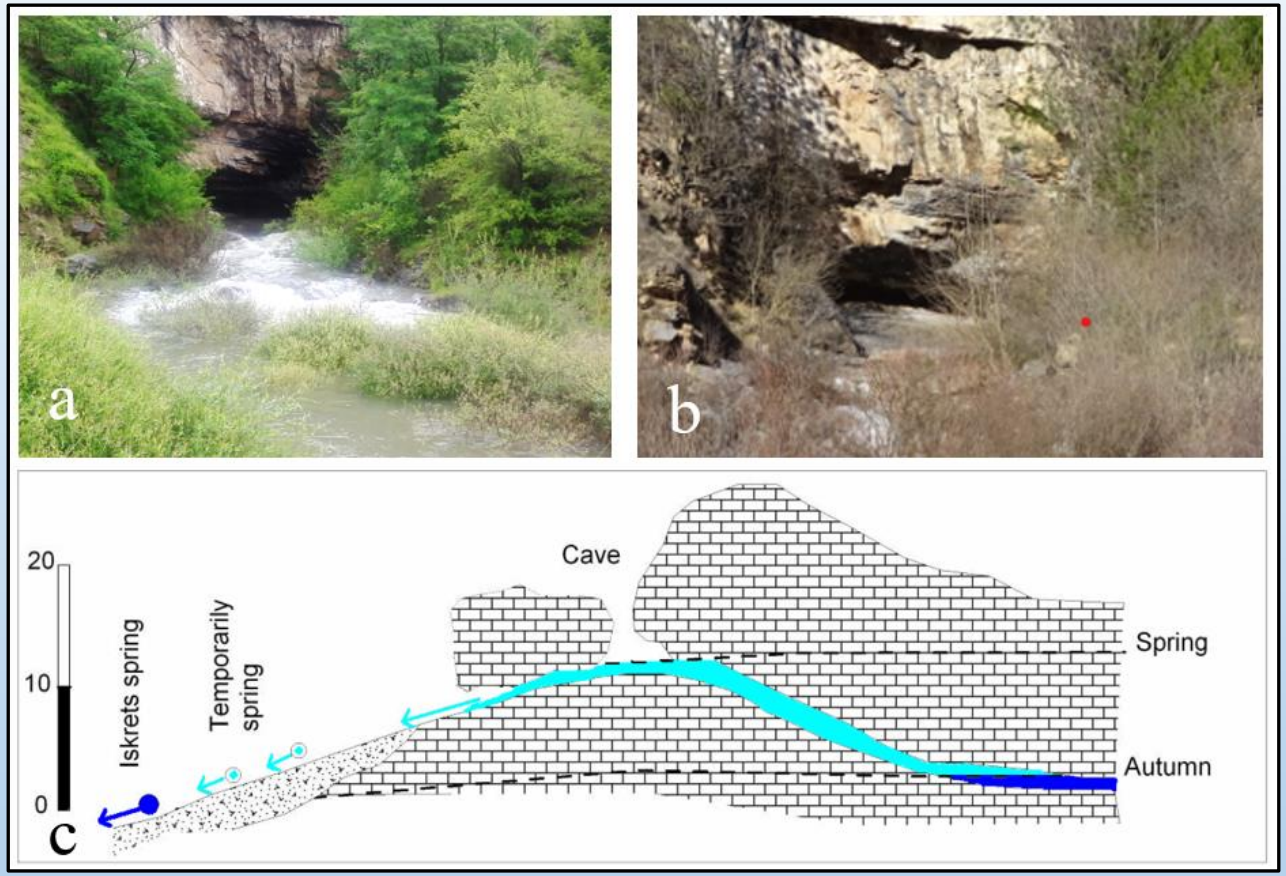
NIKAS

1. Лакатнишки извор (Житолюб)
2. Глава Панега
3. Изворите Язо и Къошка
4. Клептуза
5. Котелски извор

ИСКРЕЦКИ ИЗВОР (Пещта)

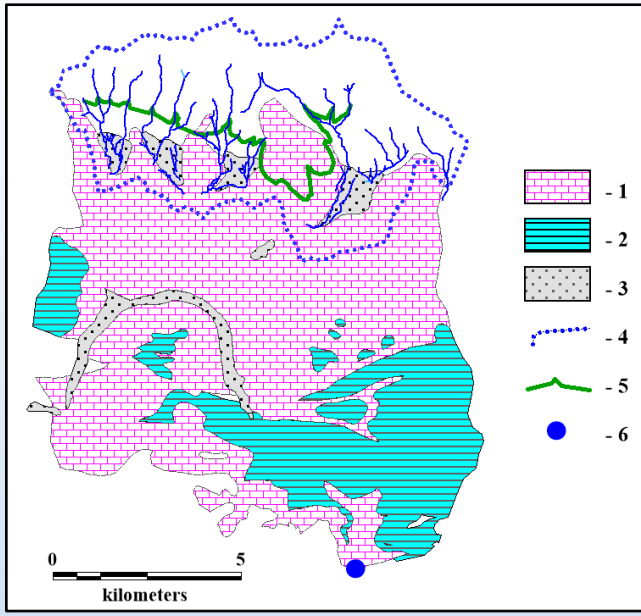


Местоположение

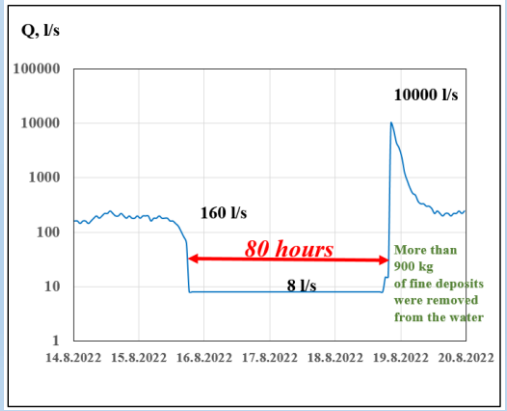


Входът на пещера Душника

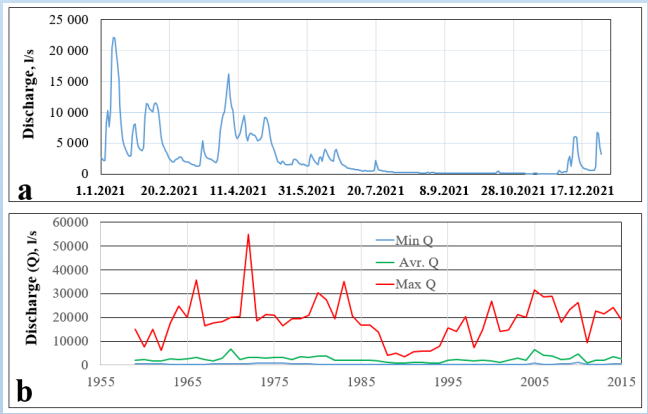
а – пролет ; b – есен; с - напречен разрез на извор Искрец и пещерата с амплитуда на водното ниво



Водосбор на извора

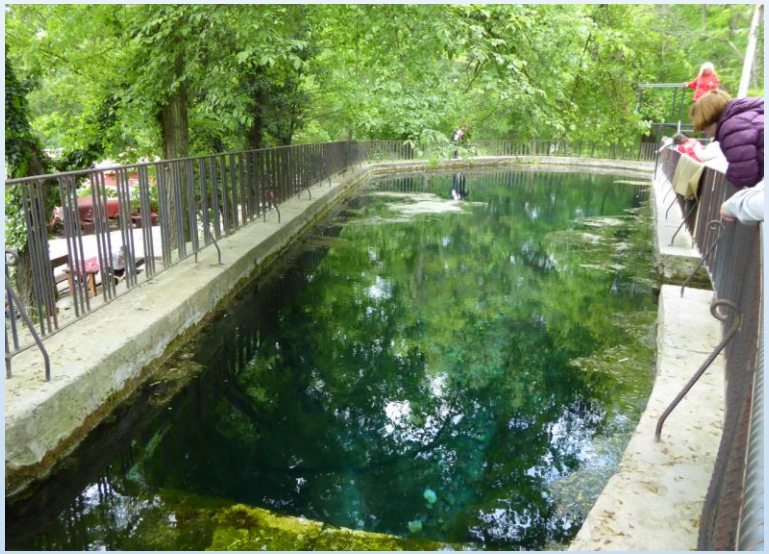


Последно прекъсване на оттока на извор Искрец от 16 до 18 август 2022 г. (по Benderev et al., 2022)

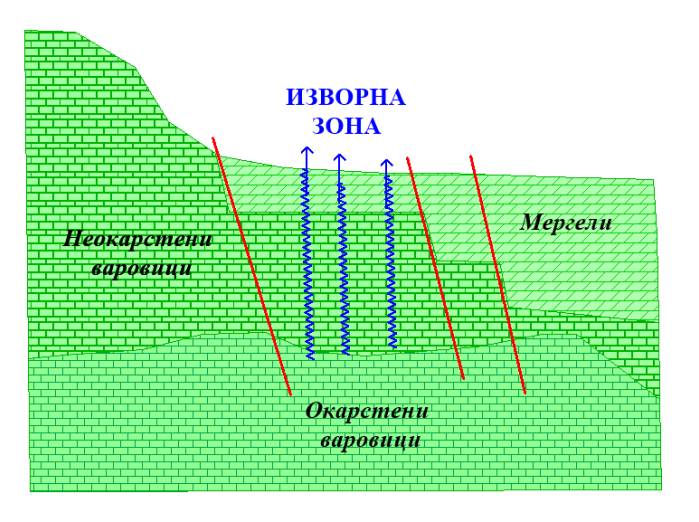


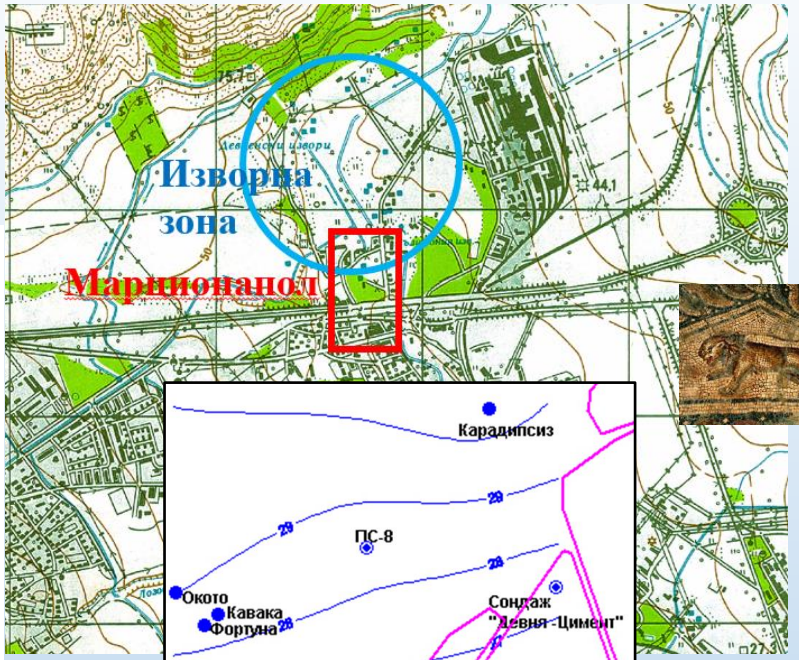
Максимални и минимални водни количества – от 200 до 54790 L/s)

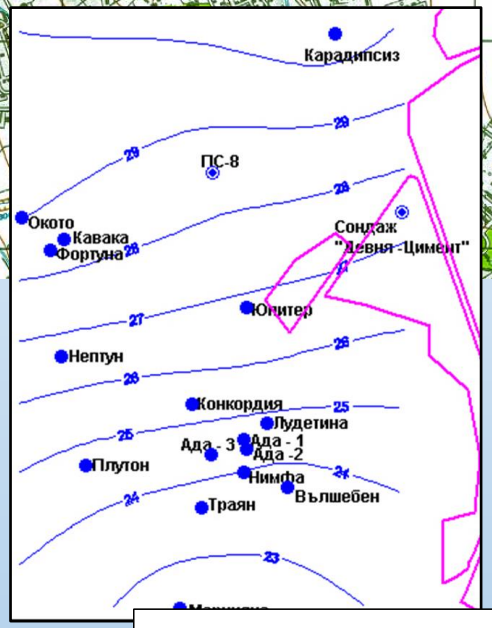
ДЕВНЕНСКИ ИЗВОРИ

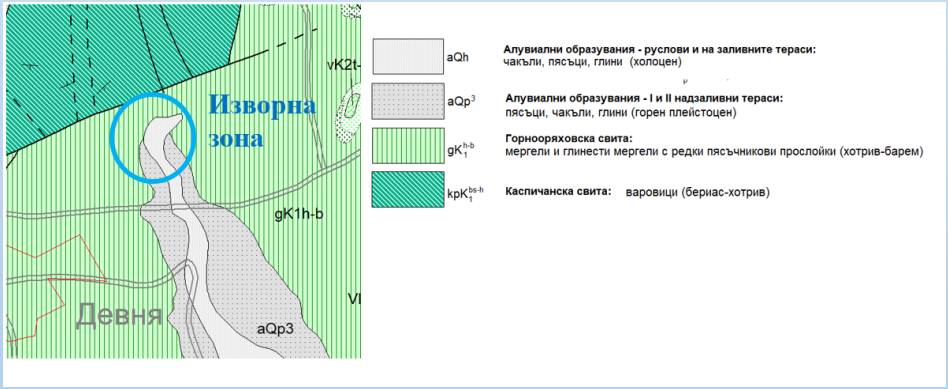


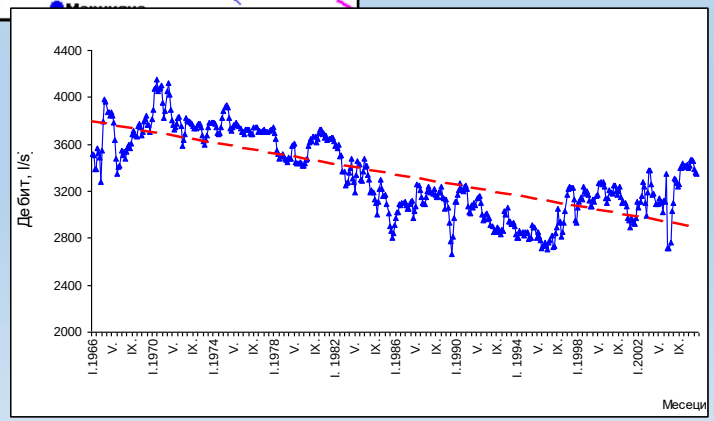
Вълшебният извор





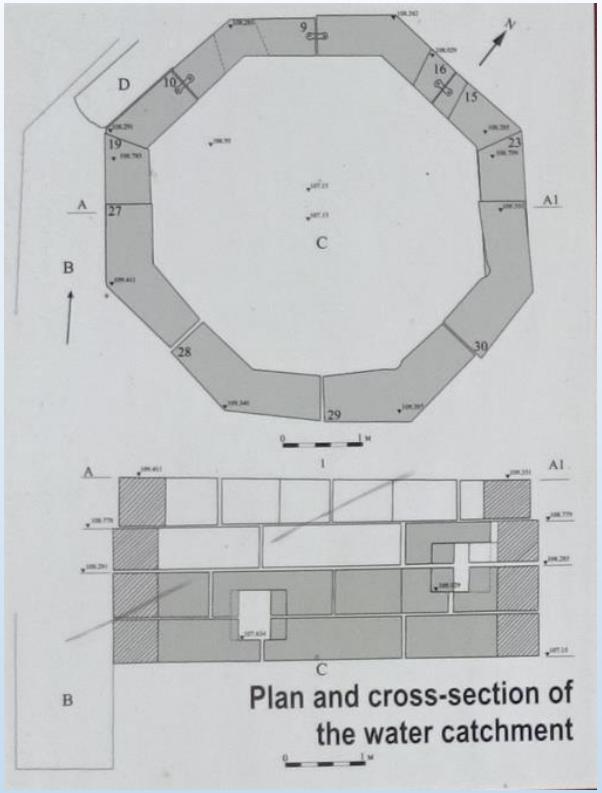




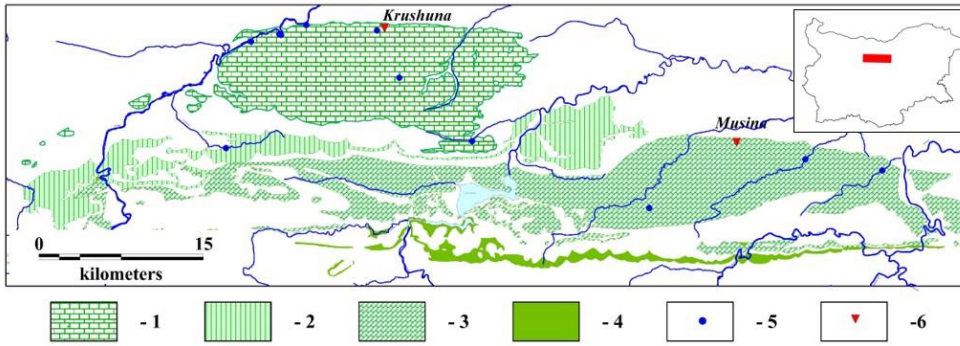


Максимални и минимални водни количества – от 2343 до 4270 L/s)

ИЗВОР МУСИНА



Римски каптаж



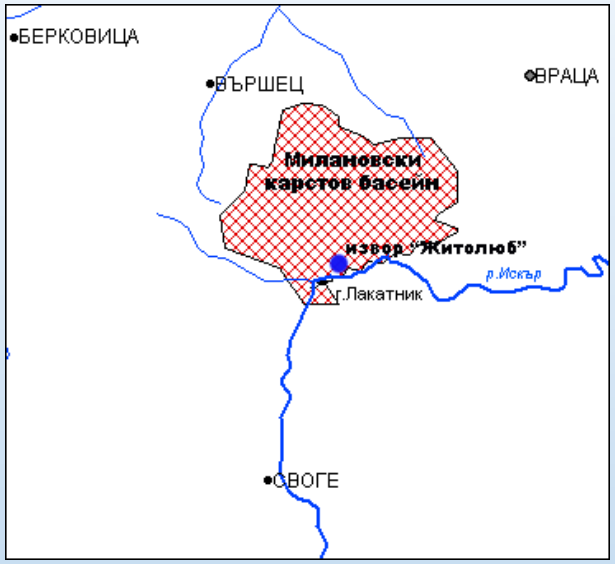
Ловешко -Търновски карстов басейн

Резервоар за Никополис ад Иструм

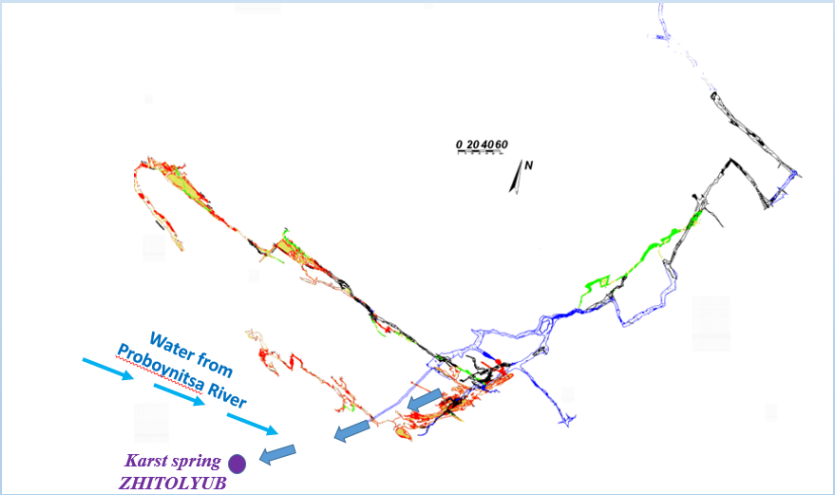
Максимални и минимални водни количества – от 25 до 10000 L/s)

Мусинска пещера - *Природна забележителност от 1972 г.*

ИЗВОР ЖИТОЛЮБ



Обзорна карта на района



Nifargus

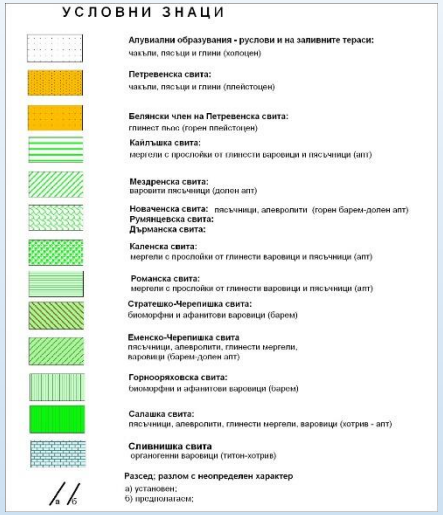
Схематичен профил на извор „Житолюб”

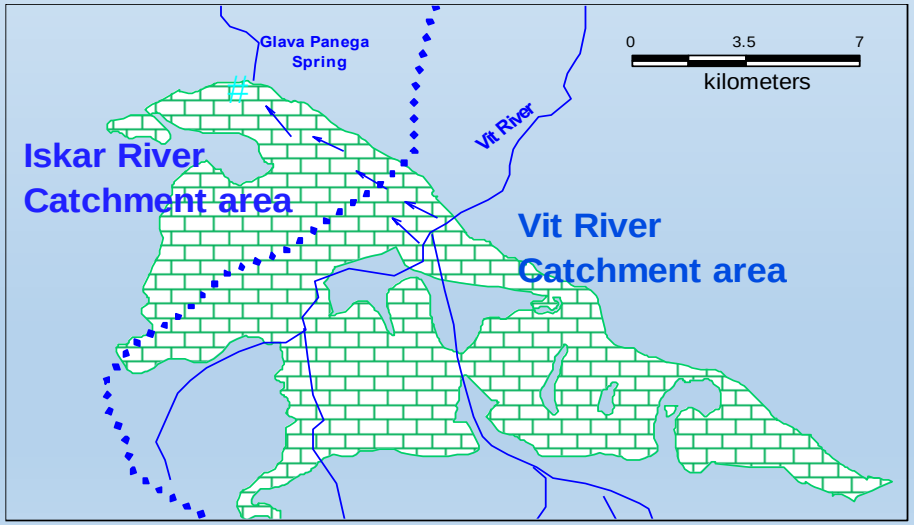
Максимални и минимални водни количества – от 9 до 23470 L/s)

ГЛАВА ПАНЕГА

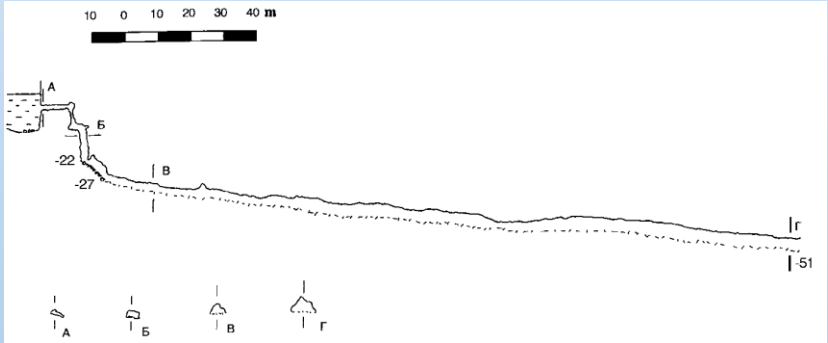
Горното езеро

Долното езеро



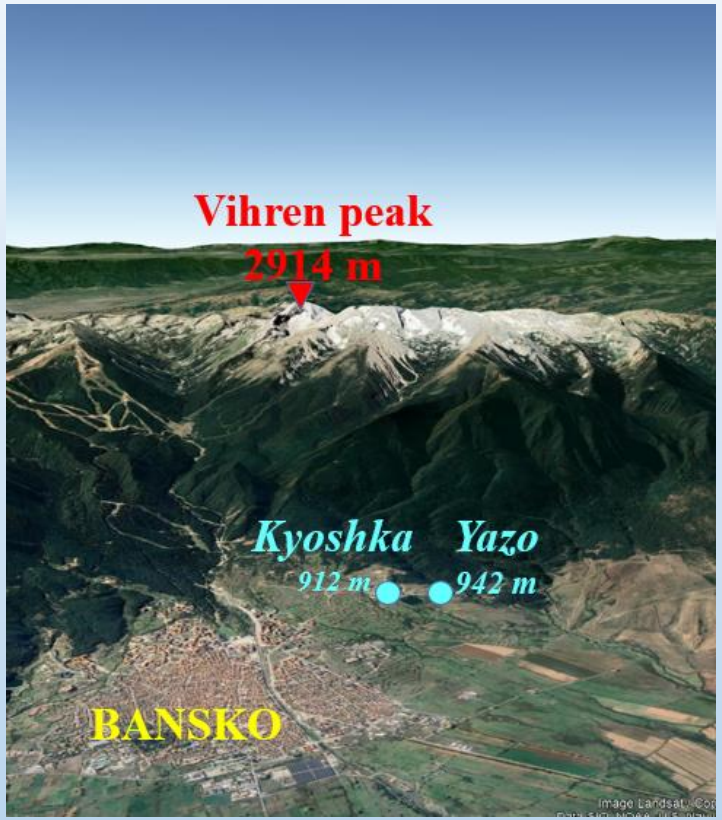


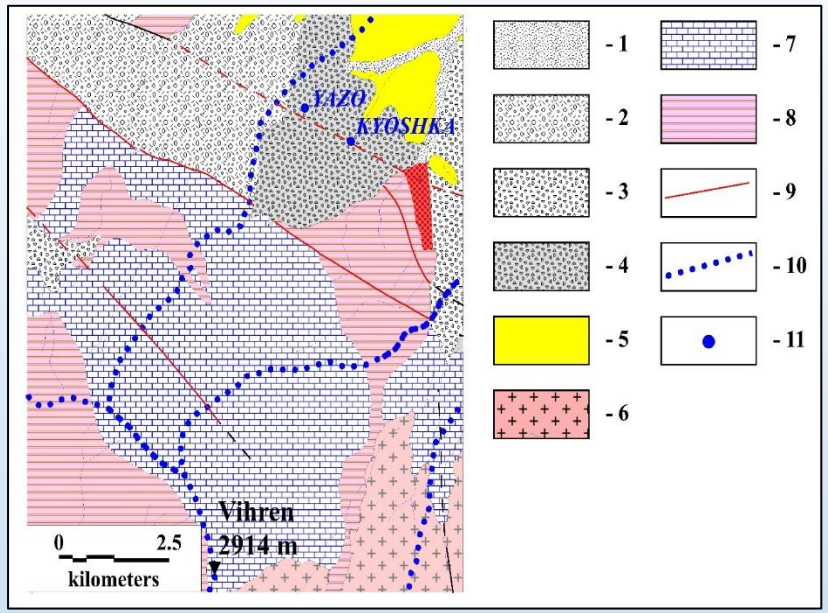
Природна забележителност от 1966 г.



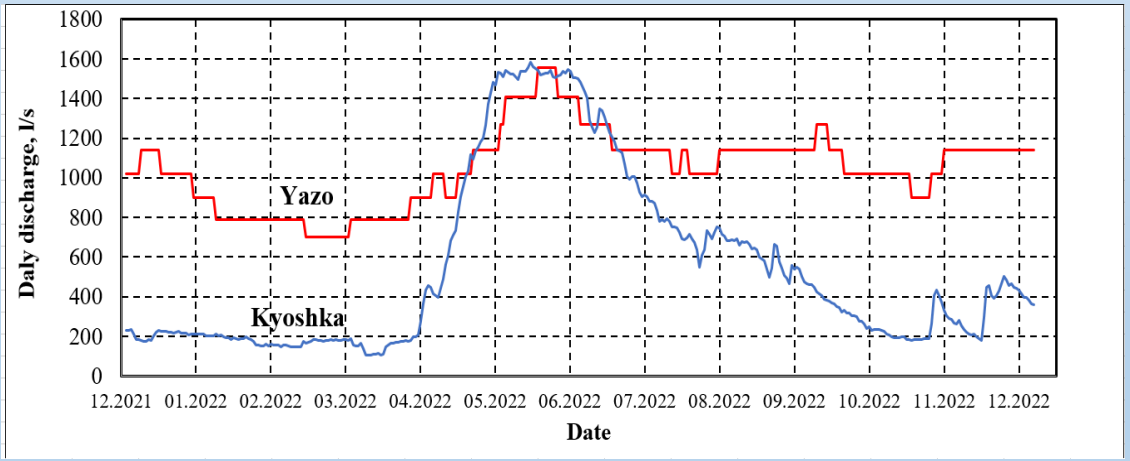
Максимални и минимални водни количества – от 260 до 35700 L/s)

Извори ЯЗО и КЬОШКА





Геоложка схема на Разложки карстов басейн

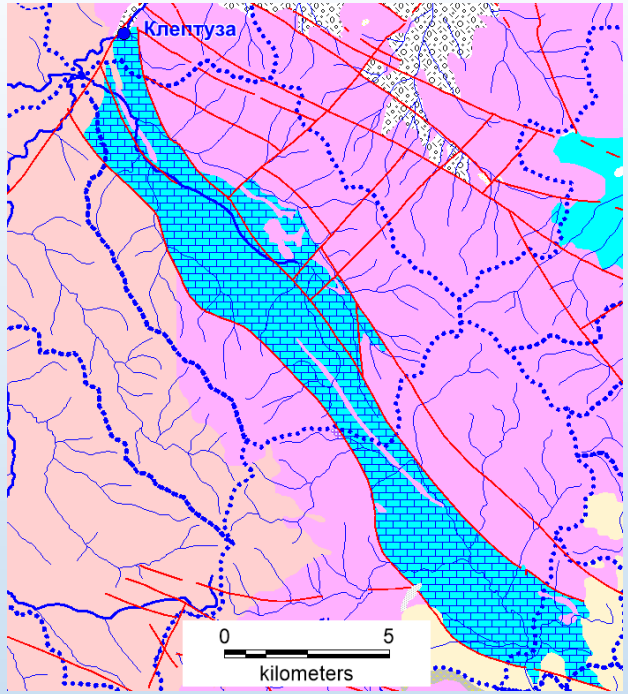


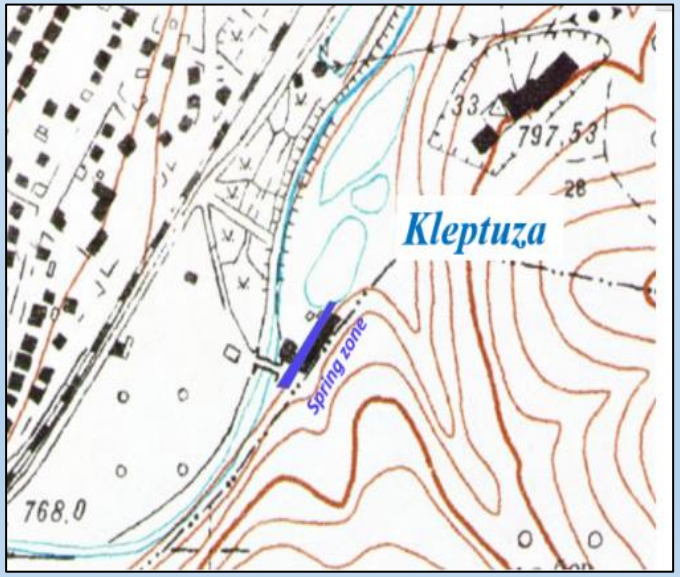
Максимални и минимални водни количества

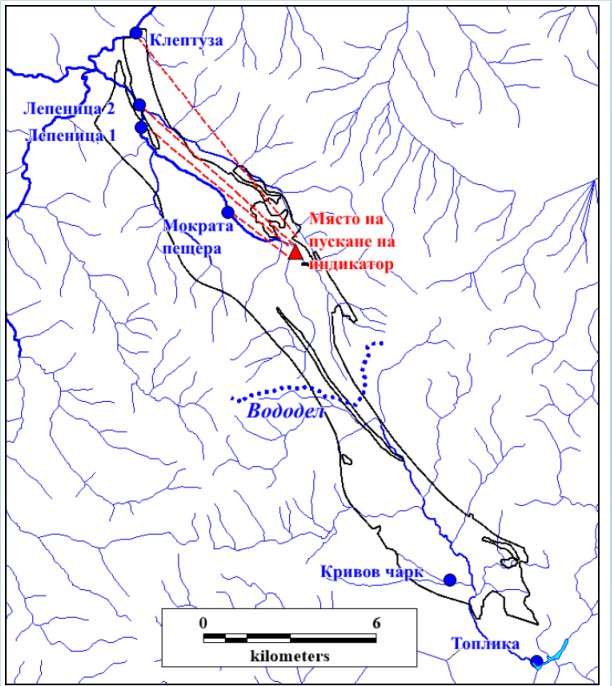
Язо - 380 - 2725 L/s

Кьошка - 14 - 2071 L/s

КЛЕПТУЗА

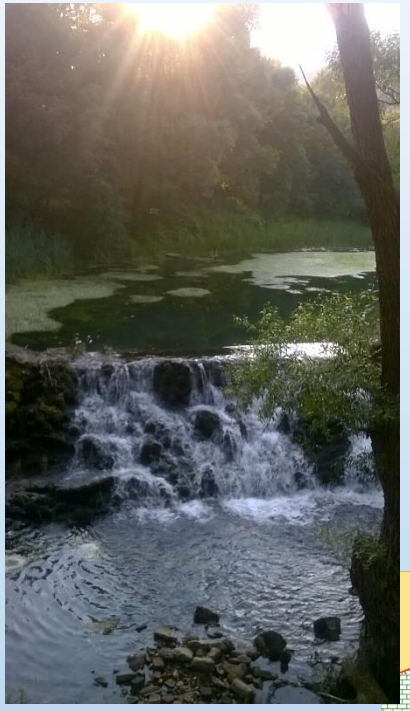


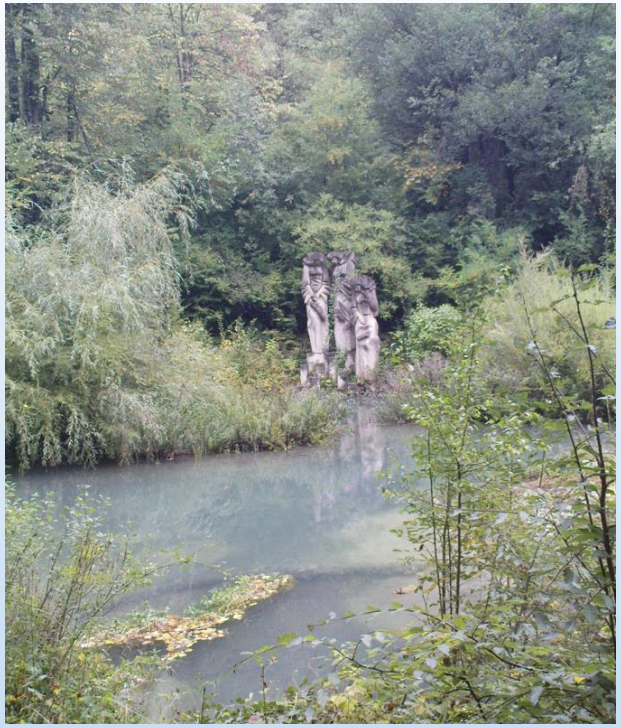


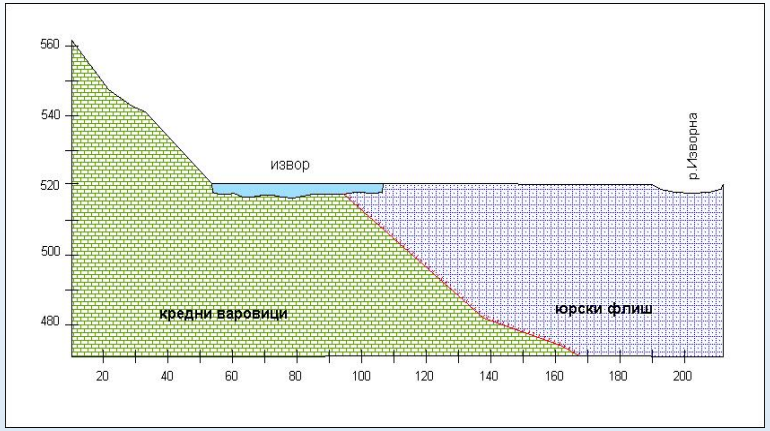


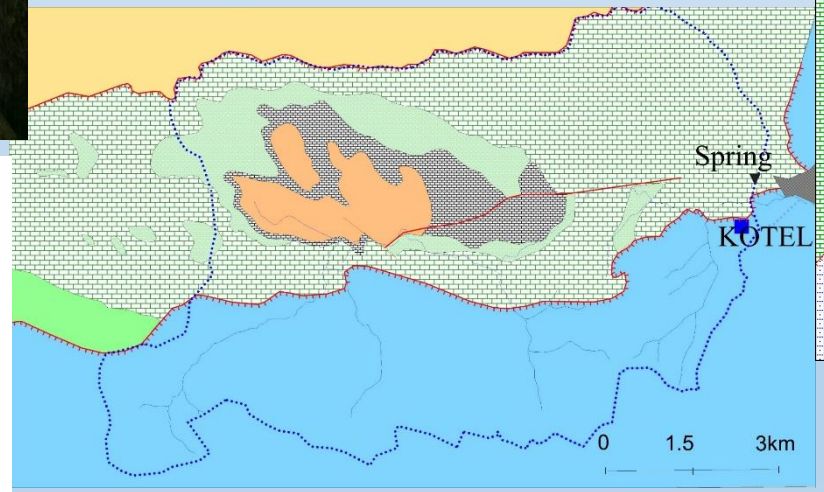
Максимални и минимални водни количества 56 – 1424 L/s

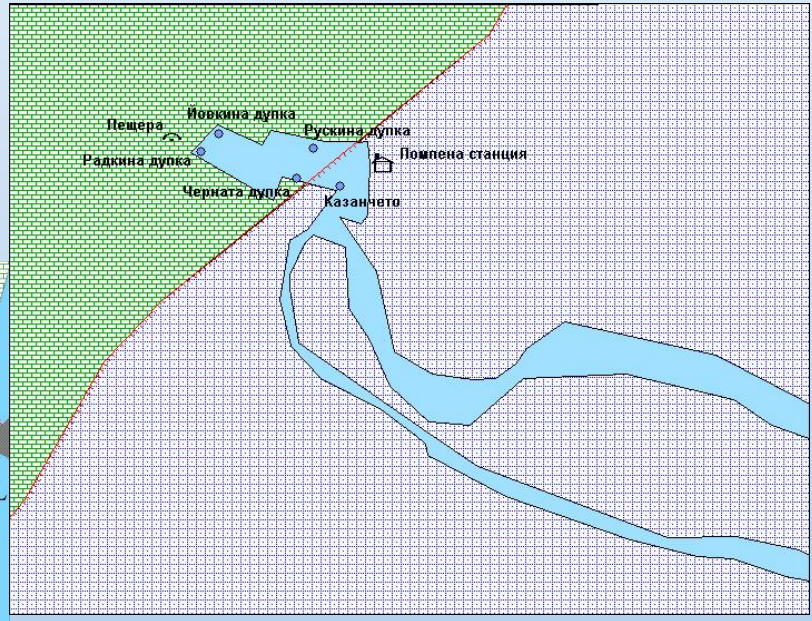
КОТЕЛСКИ ИЗВОР

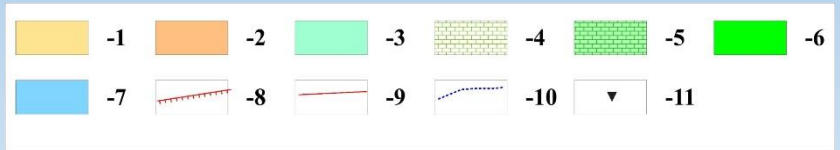












Максимални и минимални водни количества 40 до 20061 L/s

БЪДЕЩИ ДЕЙНОСТИ

- Изготвените материали ще бъдат предоставени на заинтересувани ведомства като Министерство на околната среда и Районните инспекции, на Министерството на туризма, Министерството на благоустройството и регионалното развитие, на общини, на територията на които са избраните извори, на фирми и юридически лица, ползващи водите от тях с цел тяхното опазване и популяризиране;
- Подготвеният илюстративен материал към съответните формуляри може да послужи за изготвяне на информационни табла в районите на съответните извори;
- На основата на направените обобщения може да се предложи обявяването на карстови извори за защитени територии (Искрецки, Девненски)
- Охарактеризиране и популяризиране на национално ниво и други извори не включени Списъците на Проекта MIKAS

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