
RUSSIAN FEDERATION
Mchishta
Deidzakhi
Ghrudo
BLACK SEA
GEORGIA
AZERBAIJAN
ARMENIA
TURKEY
IRAN
Karstifiable rocks
(potential karst aquifer)
Continuous carbonate rocks
Continuous carbonate rocks
Continuous evaporite rocks
WOKAM database;
©BGR, IAH, KIT and UNESCO 2017
- MIKAS
- NIKAS
N
W
E
S
0
137.5
275
Km

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
Georgia 	1**. Deidzakhi**	N 42.64986° E 42.206376° /* Z = 296 m asl Mukhuri village, Samegrelo-Zemo Svaneti region /* Coordinates of nearby Shurumbu cave	800 / 1200 / >1500 Not tapped	***S, A, Ec, E, H*** *Five springs issuing from Barremian limestone aquifer, form a frontal discharge zone extending for 150-200 m. The group of springs are linked to one of Georgia's largest underground rivers, with a presumed multi-kilometre cave system. The catchment of c. 30 km² verified by tracer tests, and an unusually rapid and extreme hydrological response. The springs are of high ecological importance for eco system of Khobistsqali River basin. There is also substantial water-resource potential due to high discharge rates (in extreme flooding case some estimates indicate Q even over* 30000 l/s*), while exceptional aesthetic and tourism value resuts from five spring outlets, nearby Shurubumu Cave and the Deidzakhi erratic boulder which showing possible traces of ritual use (requires further Investigation).*	Nino Kapanadze, Ivane Javakhishvili, (TSU), *compiled from published literature Lezhava et al (2022)*
	2. **Mchishta** (Shavtskala / Black Water)	N 43.23753° E 40.49920° Z = 85 m asl Abkhazia	3000/ 9500 /120000 Used for drinking water supply and for trout farm ponds	***E, H, Ec, S*** *One of the largest karst springs in the Caucasus' Upper Jurassic and Lower Cretaceous carbonate formation . Dye tracing confirmed a hydraulic connection between Mchishta Spring and the Snezhnaya–Mezhennogo–Illyuziya cave system. This system contains one of the world's deepest cave systems. Water flows from the cave with The Mchishta flows out of the karst cave with an underground lake (siphon), which depth reaches 46 m. The spring large discharge (9.5 m³/s in average) is of high ecological importance: it sustains the Mchishta/Black River aquatic ecosystem and provides substantial baseflow. Its high aesthetic value results from a powerful cave-river resurgence in an exceptional karst landscape. The names Mchishta and Shavtskala ("Black Water") form part of local identity.*	K. Tsikarishvili *Z. Lezhava*

MIKAS – Deidzakhi



Deidzakhi group of springs flow Source: https://primetime.ge/



Figure A3. Deidzakhi outlets during contrasting hydrological conditions (reproduced from Lezhava et al., 2022, Fig. 11).



Figure A4. Deidzakhi during a major flood event; photograph credited in the monograph to Roman Tolordava (Lezhava et al., 2022, Fig. 14).

During intense rainfall the underground water level may rise by 15–25 m, activating higher former siphon passages and numerous fractures. Reported flood discharge commonly reaches 20–30 m^3/s and may occasionally exceed 50 m^3/s.

MIKAS – Mchishta



Mchishta springflow (Source: https://madloba.info/en/blog/nature-of-georgia/mchishta/)



Mchishta springflow (source: Google Earth Pro)