




| Country (NIKAS) | NIKAS springs | Coordinates / Nearby City | Spring discharge (Q in l/s,min/av/max) / tapped or not | Criteria* order / Main justification */ H-historic, A-aesthetic, S-scientific, E-Economic, Ec-ecologic | Data collected by |
|---|---|--|--|--|-------------------|
| Poland  | 1. Lodowe spring (Lodowe Źródło) | N 49°15'21`` E 19°52'22`` Z = 974 m asl Zakopane - Kiry | 150 /700/>1000 Not tapped | S, A, Ec, H <i>In the 18th-19th centuries, water from the spring powered industrial equipment related to the extraction and processing of iron ores exploited in the Western Tatras. Spring's regime observations have been carried out since 1980. Water from the spring belongs to group of springs characterized by the best parameters of biological purity in Poland. Since 1955, The Lodowe Spring has been located within the Tatra National Park and is subject to all the rules of inanimate nature protection in Poland. The source is one of the main tourist attractions in the Kościeliska Valley (Polish Western Tatras). In December 2013, a catastrophic hurricane passed over the Western Tatras. It caused the destruction of vegetation in large areas, including Lodowe Źródło spring. The launched natural erosion processes affect its hydrogeological regime.</i> | Grzegorz Barczyk |
| | 2. Bystra Spring (Wywierzysko Bystrej) | N 49°15'19`` E 19°58'06`` Z = 1180 m asl Zakopane - Kuźnice | 90/350/>1000 Not tapped, stream water used downstream | S, Ec, H, E, A <i>Since 1955, the source has been located within the Tatra National Park and is subject to all the rules of inanimate nature protection and is located outside the area available for tourist traffic. Since the 1970s, the catchment area is subject of conducted periodic research. Water from the spring belongs to group of springs characterized by the best parameters of biological purity in Poland.</i> | Grzegorz Barczyk |
| | 3. Chochołowskie spring (Wywierzysko Chochołowskie) | N 49°15'21`` E 19°48'57`` Z = 1010 m asl Zakopane - Kiry | 200/400/>1000 Not tapped | S, A, Ec, H, E <i>The source "for centuries" has been used as a watering place for sheep grazing nearby. According to historical records, in the 17th/18th century, the bottom of the spring outflow was covered with boulders by highlanders due to numerous cases of cattle drowning while watering. Since 1955, Wywierzysko Chochołowskie has been located within the Tatra National Park and is subject to all the rules of inanimate nature protection applicable in legally protected areas in Poland. The source is one of the main tourist attractions in the Chochołowska Valley (Polish Western Tatras). Water from the spring belongs to group of springs characterized by the best parameters of biological</i> | Grzegorz Barczyk |

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| | | | | <p>purity in Poland. In December 2013, a catastrophic hurricane passed over the Western Tatras. It caused the destruction of vegetation and changes in spring's hydrogeological regime.</p> | |
| | <p>4. Olczyskie spring (Wywierzysko Olczyskie)</p> | <p>N 49°16'01`` E 20°00'07`` Z = 1070 m asl Zakopane - Jaszczurówka</p> | <p>190/800/>1000 Not tapped</p> | <p>S, A, Ec, H Since 1955, Wywierzysko Olczyskie has been located within the Tatra National Park and is subject to all the rules of inanimate nature protection applicable in legally protected areas in Poland. The source is one of the main tourist attractions in the Olczyska Valley (Polish Western Tatras). Water from the spring belongs to group of springs characterized by the best parameters of biological purity in Poland.</p> | <p>Grzegorz Barczyk</p> |
| | <p>5. Błękitne Źródła</p> | <p>N 50°45'53.53" E 19°28'50.08" Z = 245 m asl Julianka - Sygontka</p> | <p>150/500/>900 Not Tapped</p> | <p>S, Ec, H, A, E This area is of historical and economic value. In 1911, the Potato Processing Factory was established in Julianka, which used water from Błękitne Źródła for production (it no longer exists). Currently, there are numerous fish farms in this area. Since the 1960s, universities and nature conservation institutions from Upper Silesia have been conducting periodic research and monitoring. The springs are characterized by high biodiversity. In the niche of the spring, the following were found: 5 species of flora, 34 species of diatoms, 9 orders of invertebrates. The spring is located in the buffer zone of the "Eagles' Nests" Landscape Park.</p> | <p>Dorota Okoń,</p> |
| | <p>6. Źródło Hydrografów</p> | <p>N 50°18'05.48`` E 19°51'46.98`` Z = 325 m asl Imbramowice</p> | <p>50/88/150 Not Tapped</p> | <p>S, Ec, A, H, E The spring and its surroundings have great landscape values, the spring niche has a diameter of 25 m. The spring forms a pond, next to a built-up area; in the past, there was a mill powered by water from the spring - the common name of the spring - "Bielny Młyn"; The spring is characterized by high biodiversity; in the niche of the spring, the presence of: 8 species of flora, 23 species of diatoms, 10 orders of invertebrates. There is a large population of coldwater species and due to the size of the niche, the spring is characterized by a high share of crenophytes. The spring is located in the "Dłubnia Landscape Park"; monument of inanimate nature (since 2002); location within a partial conservation protection zone and within the ecological corridor of Dłubnia.</p> | <p>Jacek Różkowski</p> |

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| | 7. Niebieskie spring (Niebieskie Źródła) | N 51°30'37.98" E 20°01'28.08" Z = 154 m asl Tomaszów Mazowiecki | 21/87/240 Not tapped | S, Ec, A, H, E <i>Źródła Niebieskie are a unique occurrence of karst water in the Polish Lowlands. The springs were already studied in the 1920s as a source of water supply for the city of Łódź. The springs region is characterized by high biodiversity - the occurrence of 75 species of birds (mainly water birds), several species of fish, beavers, over 400 species of vascular plants. The spring and their surroundings have great landscape values located in the buffer zone of the Sulejów Landscape Park. The Natura 2000 site "Niebieskie Źródła" (established in 1961, with an area of 28.70 ha), located on the terrace of the Pilica valley, includes a complex of karst springs, broads, surrounded by old channels with an area of 5 ha and a depth of up to 4.5 m, as well as riparian forests.</i> | Jacek Rózkowski |
| | 8. Winiary spring (Źródło Winiary) | N 50°26' 14.01" E 20°37'0.02" Z = 215 m asl Winiary | ?/?/35 Not tapped | A, Ec, S <i>Research on the spring began in the 19th century. In 1882, the spring was described as: „... an abundant spring of cold, clean, but very hard and tasteless water. It flows from a gypsum cave and forms a stream on which a mill is built a dozen paces below”. The mill was liquidated and the ceiling of the cave collapsed. The spring is located within the borders of the Nadnidziański Landscape Park, the Natura 2000 area: Ostoja Nidziańska. Winiary is the spring with the largest discharge flowing from gypsum rocks (the gypsum cuesta) in Poland. Landscape values are tourist attraction. On the southern slopes of the gypsum hills (the spring is at the foot of the northern slope) there are species of xerothermic plants. Below the spring, there is a pool that transforms into a stream flowing through the gorge valley, at the foot of the gypsum cuesta.</i> | Anna Chwalik-Borowiec |
| | 9. Zimne wody (Źródło „Zimne Wody”) | N 50°28' 50.81" E 20°43'59.68" Z = 256 m asl Busko-Zdrój | ?/2/? Not tapped | A, Ec, S <i>The spring is located at the foot of a series of gypsum hills. On their slopes there are xerothermic plant species. The spring and its immediate surroundings have great landscape values and are a tourist attraction, with developed facilities in its vicinity. The spring together with the exposure of gypsum has been protected since 2002 as a natural monument „Geological exposure - Cold Waters”. Monument is formed by a rock threshold built of crystalline gypsum, the so-called glass shapes developed in</i> | Anna Chwalik-Borowiec |

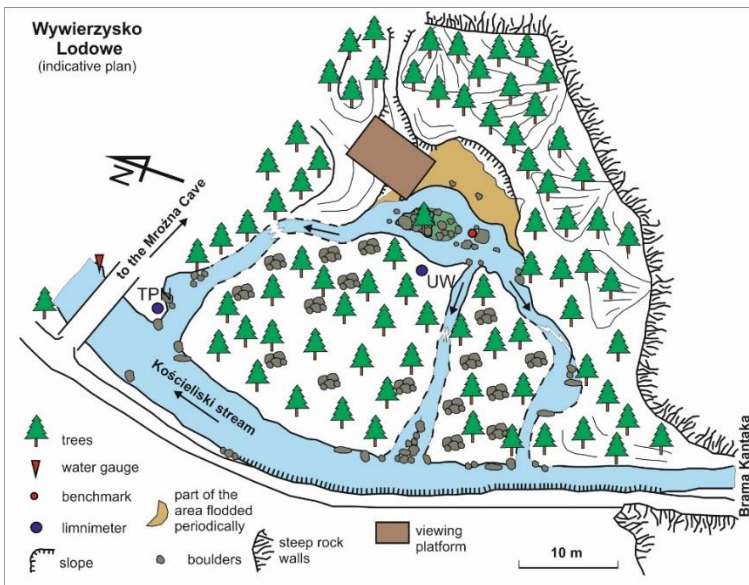
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| | | | | <p><i>the form of „swallow tails”. At its base flows a spring, giving rise to a stream. The entire area is located within the limits of the Szaniec Protected Landscape Area, Natura 2000 area: Ostoja Szaniec-Solecka.</i></p> | |
| | <p>10. Krasnobród spring (Krasnobród Kapliczka Podlasztor)</p> | <p>N 50°32'33.93" E 23°14'17.93" Z = 261 m asl Krasnobród</p> | <p>0/71.4 /216.6 (main spring) Not tapped</p> | <p>S, Ec, H, A, E <i>The main spring has been considered miraculous with healing water since 1640. In later years the spring attracted numerous pilgrims who experienced healing. They hung numerous votive offerings and pictures on the surrounding trees there. The site was destroyed in 1648. A year later, an inhabitant of Krasnobrod found one intact picture of the Virgin Mary and placed it in a wooden shrine by the spring. The image and spring became famous due to the healing of Maria Kazimiera, the wife of King John III Sobieski. Out of main spring site there is the second outflow, located about 20m away under the chapel, where water flows out of a six-meter niche made of debris from cracked rocks. A shallow well was drilled under the chapel, from which water is taken by pilgrims during spring breaks. Krasnobród Podlasztor spring is protected within Krasnobród Landscape Park and Special Protection Areas for Birds Natura 2000 Roztocze. It is also established Natural Monument Springs in the Chapel on the Water.</i></p> | <p>Stanisław Chmiel</p> |
| | <p>11. Wąwolnica</p> | <p>N 51°17'50.16" E 22°8'34.86" Z = 155 m asl Wąwolnica</p> | <p>50 /92,4/150 Not tapped</p> | <p>S, H, Ec, A, E <i>It is the largest spring in the Bystra River basin and one of the largest in the Lublin Upland. The spring is located below the sanctuary in Wąwolnica and it is one of the holy springs, which is emphasized by the little shrine set up on the slope above the outflows. The water is believed to have miraculous properties. As a result of damming up the water with a concrete casing reinforcing the roadway, all the pulsating outflows and some of the fissured ones were submerged. This partially reduced the landscape value of the spring. The spring in the past supplied a farm nearby, occasionally the water was used by travellers and pilgrims. The spring is located in the buffer zone of the Kazimierski Landscape Park.</i></p> | <p>Stanisław Chmiel</p> |
| | <p>12. Zaporze</p> | <p>N 50°46'17.67" E 22°49'4.851" Z = 206 m asl Zaporze</p> | <p>218 /276 /354 Not tapped</p> | <p>S, Ec, A, H, E <i>Zaporze is the most abundant spring in Roztocze and Lublin region. The spring consists of several big niches connected to each other. To describe spring valley in the form of sinkholes,</i></p> | <p>Stanisław Chmiel</p> |

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| | | | | <p>the folk name "betk" was used in the past, which meant a bottomless water chasm. Zaporze spring is protected within borders of the Szczepreszyński Landscape Park as natural monument.</p> |
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NIKAS - Lodowe spring (Lodowe Źródło)



Lodowe Źródło (photo Grzegorz Barczyk)

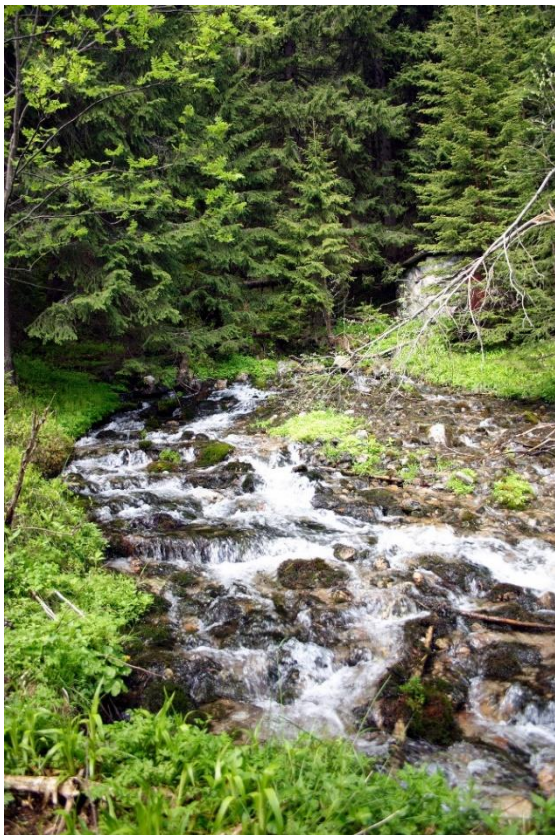


Lodowe Źródło schematic map (after Barczyk 2008)

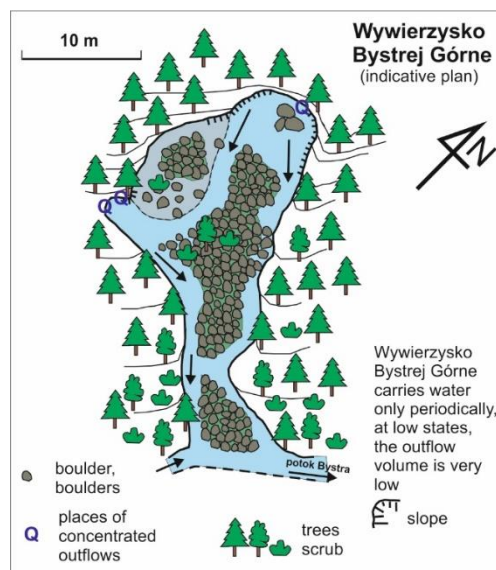


Lodowe Źródło during winter 2023 (photo Grzegorz Barczyk)

MIKAS - Wywierzysko Bystrej



Wywierzysko Bystrej Górne (photo Grzegorz Barczyk) and schematic map (after Barczyk 2008)





Orifice of Bystra Cave connected to Wywierzysko Bystrej (photo Grzegorz Barczyk)

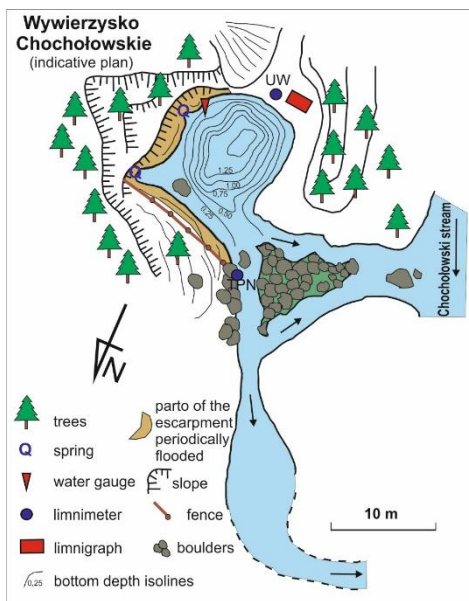
MIKAS - Chochotowskie spring (Wywierzysko Chochotowskie)



Wywierzysko Chochotowskie (photo Grzegorz Barczyk, December 2013)



Wywierzisko Chochotowskie (photo Grzegorz Barczyk, November 2019)

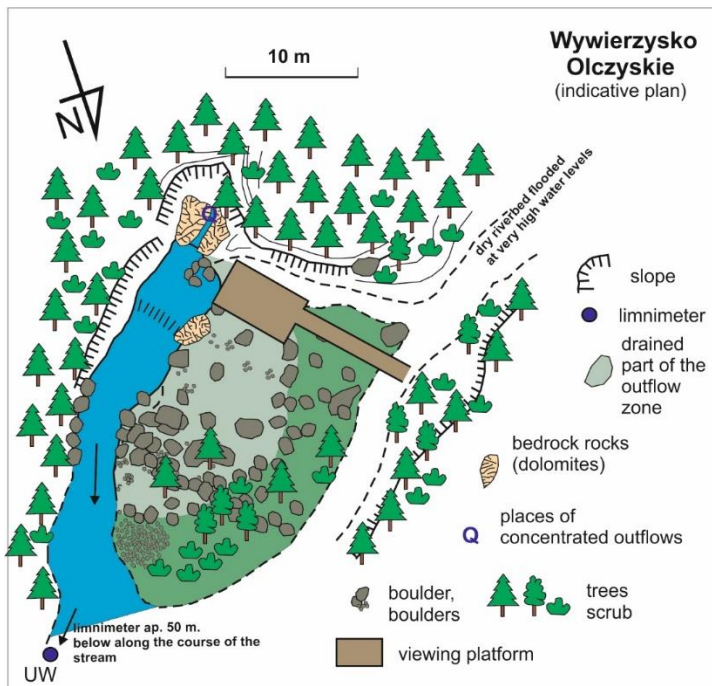


Plan of the Wywierzisko Chochotowskie (after Barczyk 2008)

MIKAS - Wywierzysko Olczyskie



Wywierzysko Olczyskie (Photo by Grzegorz Barczyk)



Plan of the Wywierzysko Olczyskie
(after Barczyk 2008)

MIKAS - Błękitne Źródła

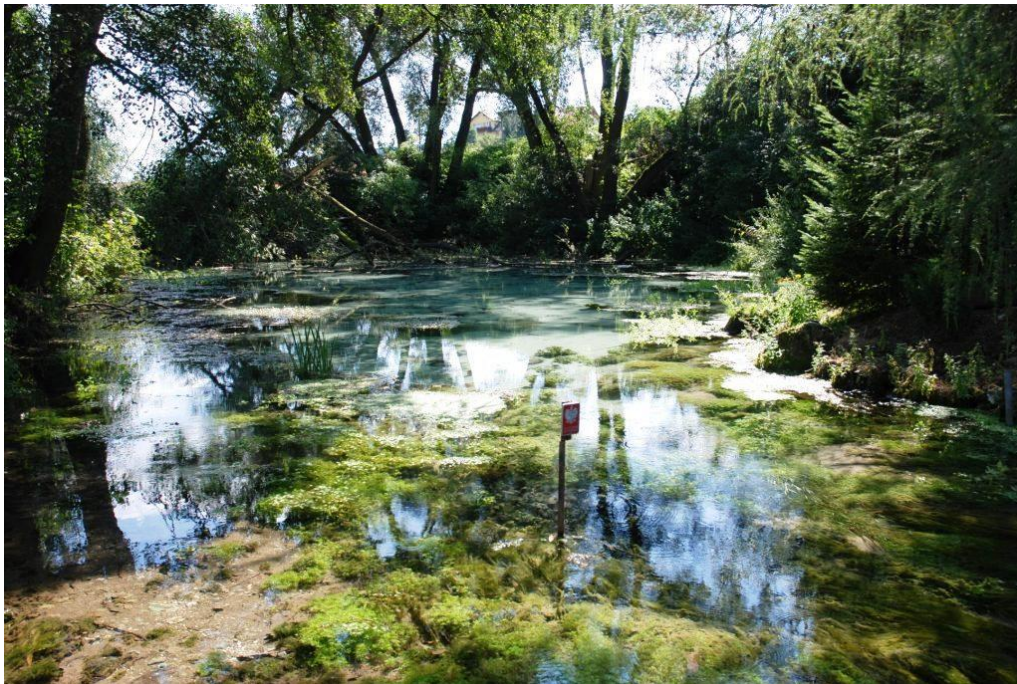


Błękitne Źródła spring (photo by P. Kokoszka)



Błękitne Źródła spring (photo by P. Kokoszka)

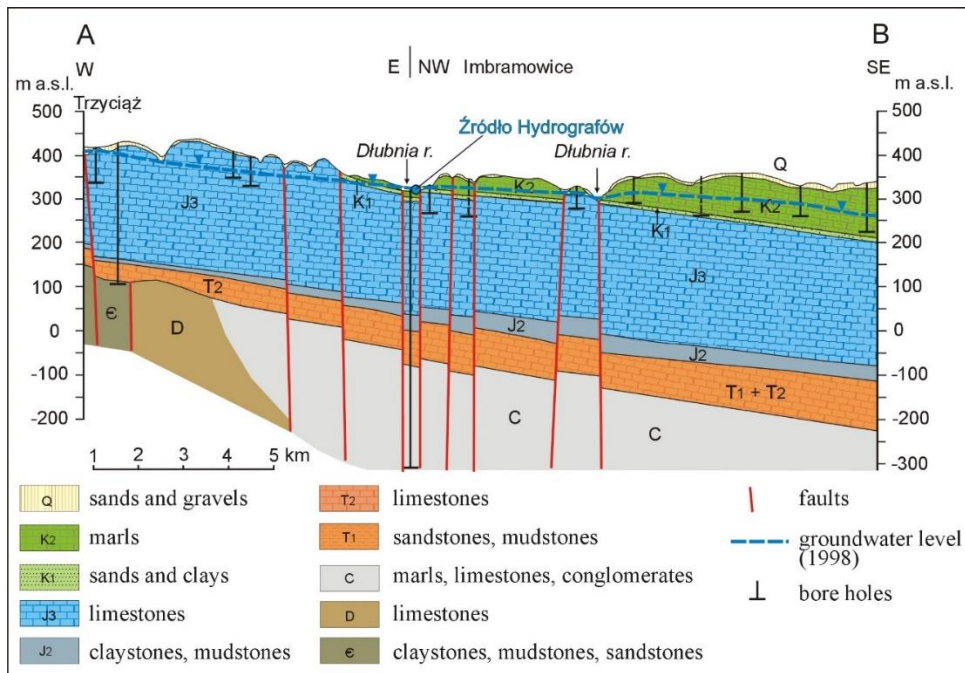
MIKAS - Źródło Hydrografów



Źródło Hydrografów (Photo by Dorota Okoń)

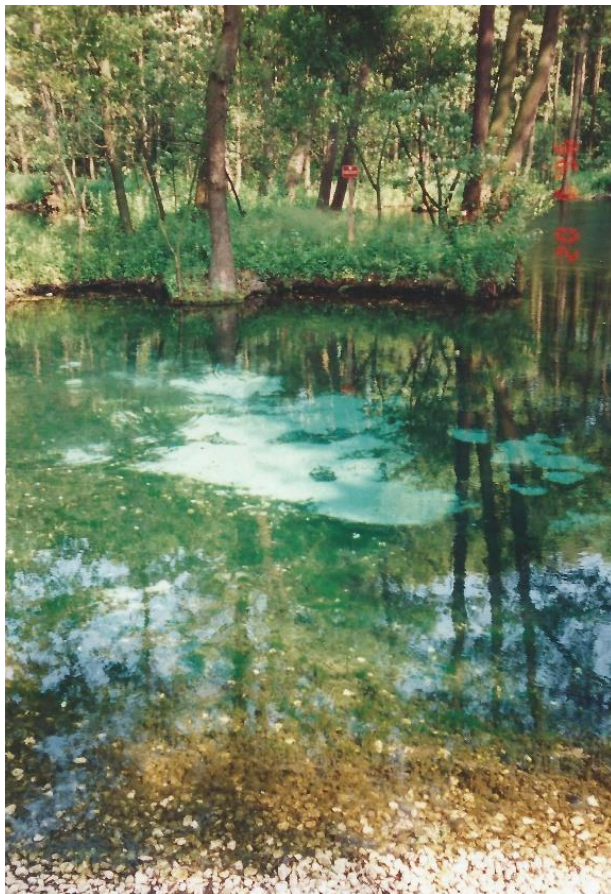


Źródło Hydrografów (Photo by Jacek Rózkowski)



Geological cross-section with the location of the Źródło Hydrografów (after Lewandowski, 2004)

MIKAS – Niebieskie Źródło



Niebieskie Źródła (Photo by J. Małeki)



Niebieskie Źródła (Photo by Jacek Różkowski)

MIKAS – Winiary



Winiary spring (Photo by M. Borowiec)



Winiary spring (Photo by A. Chwalik - Borowiec)

MIKAS – Zimne Wody



Zimne Wody (photo A. Chwalik - Borowiec)



Zimne Wody (photo A. Chwalik - Borowiec)

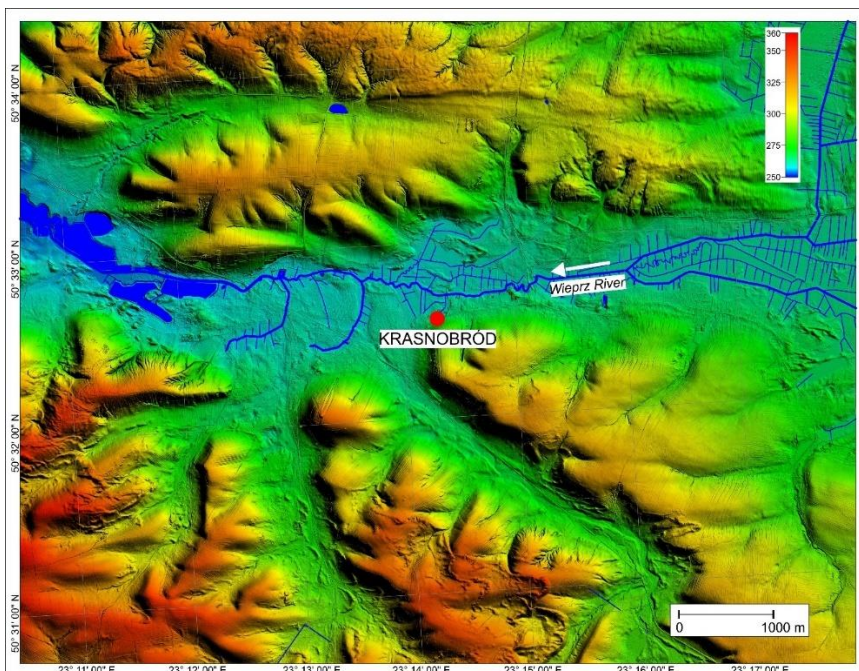
MIKAS - Krasnobród Kapliczka Podlasztor



Krasnobród spring – chapel on the water (Photo by Stanisław Chmiel)



Krasnobród spring (Photo by Stanisław Chmiel)

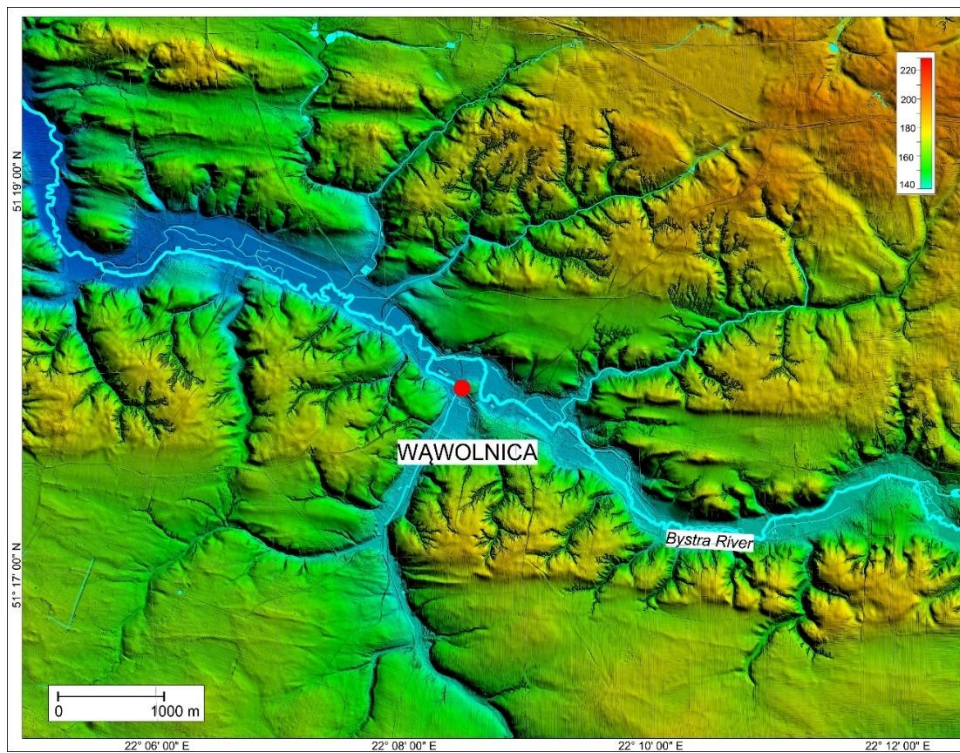


Surface relief of the Krasnobród spring area

MIKAS – Wąwolnica



Wawolnica spring (Photo by K. Stępniewski)

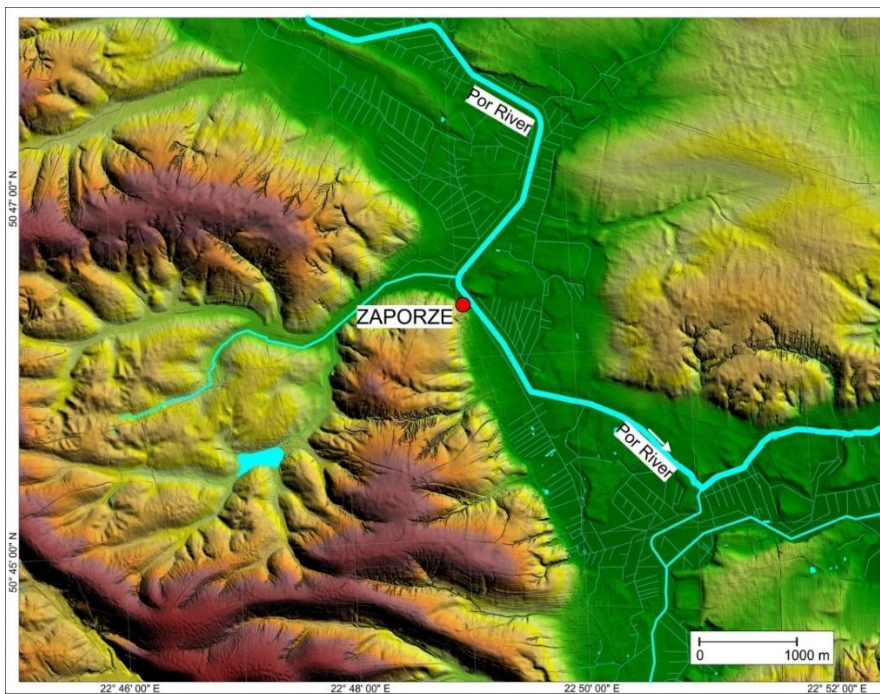


Surface relief of the Wawolnica spring area

MIKAS – Zaporze



Zaporze spring (Photo by Stanisław Chmiel)



Surface relief of the Zaporze spring area