

Table S1 - All used data and its characteristic

Name	Level of detail	Accuracy	Data type	File Format	Acquisition time	Publisher	Processing	Original coordinate system or projection/ellipsoid (EPSG code)
DTM ISOK	1m ⁽¹⁾	0.5m (xy) 0.15-0.30m (H)	Raster	GRID	2013	GUGiK/GGK	Compared to cross section profile survey, hillshaded	PL-1992 /WGS84 (2180)
DTM ONP	0.5m ⁽¹⁾	0.25m (xy) 0.30m (H)	Raster	GeoTIFF	2012	ONP	Compared to cross section profile survey, hillshaded	PL-1992 /WGS84 (2180)
ISOK point cloud	4pts/m ² ⁽²⁾	0.25m	Point cloud	.las	2013	GUGiK/GGK	Compared to ONP point cloud	PL-1992 /WGS84 (2180)
ONP point cloud	20pts/m ² ⁽²⁾	0.2m	Point cloud	.las	2012	ONP	Compared to ISOK point cloud	PL-1992 /WGS84 (2180)
Corss section profiles survey	Profiles measured app. every 110 m	0.043m (xy) 0.013m (H)	Points	ESRI Shapefile/ DBF/ XLSX	2019	Own work	Measured, calculated, drew, compared to DTMs	PL-2000 zone 7/WGS84 (2177)
Orthophotomap 2003	0.25m ⁽¹⁾	0.75m	Raster	GeoTIFF	2003	GUGiK/GGK	Vectorised	PL-1992 /WGS84 (2180)
Orthophotomap 2009	0.25m ⁽¹⁾	0.75m	Raster	GeoTIFF	2009	GUGiK/GGK	Vectorised	PL-1992 /WGS84 (2180)
Orthophotomap 2017	0.05m ⁽¹⁾	0.25m	Raster	GeoTIFF	2017	MWM	Vectorised	PL-1992 /WGS84 (2180)
Orthophotomap 2019	0.25 ⁽¹⁾	0.75m	Raster	GeoTIFF	2019	GUGiK/GGK	Vectorised	PL-1992 /WGS84 (2180)
Josephine map of Galicia	1:28,800 ⁽³⁾	Accuracy in relation to contemporary data is around	Scan of printed map	PNG	1779-1783	Administration of Archduchy of Austria	Georeferenced, vectorized, compared to ONP _w	NaN

		100 m and maximum 170 m						
Ojców Bazaar map	1:100,000 ⁽³⁾	Accuracy in relation to contemporary data is around 50 m and maximum 100 m	Scan of printed map	JPG	1907	Ojców Bazaar	Georeferenced, vectorised, compared to ONP _w	NaN
Russian and Soviet "two-verst"	1:84,000 ⁽³⁾	Accuracy in relation to contemporary data is around 30 m and maximum 50 m	Scan of printed map	JPG	1914	Administration of the Russian Empire	Georeferenced, vectorised, compared to ONP _w	Muffling polyhedric projection
WIG 25k	1:25,000 ⁽³⁾	Accuracy up to several meters	Scan of printed map	TIFF	1935	WIG	Georeferenced, vectorised, compared to ONP _w	Borowa Góra 1925/Bessel1841
Godfryd Ossowski map	1:10,000 ⁽³⁾	Accuracy is on the level of several meters	Scan of printed map	Raster, JPEG	1885	PAU	Georeferenced, vectorised, compared to ONP _w	NaN
MPHP	1:50,000 ⁽⁴⁾	Accuracy depends on source maps; above a dozen or so meters	Vector	ESRI Shapefile	2010	PGWWP	-	PL-1992 /WGS84 (2180)
ONP _w - ONP watercourses	1:10,000 ⁽⁴⁾	Accuracy of object vertices 0.5-1 m	Vector	ESRI Shapefile	2012	ONP	-	PL-1992 /WGS84 (2180)

BDOT10k - SWRS	1:10,000 ⁽⁴⁾	Accuracy of object vertices up to 1m	Vector	GDB	2006 (geometry) 2013 (attributes)	GUGiK/GGK	-	PL-1992 /WGS84 (2180)
Topo10k92	1:10,000 ⁽³⁾	Theoretical accuracy at 1m, practically lower	Raster/Vector	GeoTIFF/ES RI Shapefile	1996/2002	MWM	Vectorised	PL-1992 /WGS84 (2180)
Topo10k65	1:10,000 ⁽³⁾	Theoretical accuracy at 1m, practically lower	Raster/Vector	WMS/ ESRI Shapefile	1978-1979/ 1983-1986	GUGiK/GGK	Vectorised	PUWG 1965 zone I/Krasowski (3120)

Level of detail:

⁽¹⁾ – raster resolution, ⁽²⁾ – density of point cloud, ⁽³⁾ – map scale, ⁽⁴⁾ – vector data, map scale with corresponding level of detail

Publishers:

GUGiK - Head Office of Geodesy and Cartography (pol. Główny Urząd Geodezji i Kartografii)

GGK – Surveyor general of Poland (pol. Główny Geodeta Kraju)

MWM – The Marshal of the Małopolska Province (pol. Marszałek Województwa Małopolskiego)

PGWWP - "Wody Polskie" National Water Holding (pol. Państwowe Gospodarstwo Wodne Wody Polskie)

ONP – Ojców National Park (pol. Ojcowski Park Narodowy)

PAU – Polish Academy of Arts and Sciences (pol. Polska Akademia Umiejętności)

WIG - Military Geographical Institute (pol. Wojskowy Instytut Geograficzny)