

# User evaluation of the Polish geohistorical platform “Atlas Fontium” – preliminary results

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## Abstract:

“Historical Atlas of Poland. Detailed Maps of the Sixteenth Century” (AHP) is an effect of 70 years of researchers' work. The AHP shows settlements and administrative units at the scale of 1:250,000 for each of the palatinates of the Polish Crown in the Early Modern Period (Słoń & Słomska-Przech, 2021). “Historical Atlas of Poland 2.0” is a follow-up project aiming to develop a schema for visualizing historical data collected for the AHP in an attractive and accessible way for both researchers and the general audience. Within the framework of the project, we explored possibilities for effective data-sharing *via* the geohistorical portal called the “Atlas Fontium” (AF, Panecki & Borek, 2016). The ultimate aim of the AF is to assist in collecting, analysing, and publishing geohistorical data (Figure 1). The portal consists of publications (e.g. “Atlas of Sources and Materials for the History of Old Poland,” “Studia Geohistorica”) and a GeoNode spatial data repository (“Data Atlas Fontium”). We intend to make the portal available to as many researchers as possible and ensure that it addresses the needs of the scientific community.



Figure 1. Example of the visualization from the “Atlas Fontium”: settlements from “Tax registers of the Polish Crown in the second half of the 16<sup>th</sup> century” on the OSM basemap.

The re-design of the AF website was preceded by two workshops (October 2020, and March 2021) which enabled the setting of the outline of the website (Słomska-Przech et al., 2021). To evaluate the developed solutions, we employed a mixed-method approach. The first stage was designed as a survey (January–March 2023), and the second – as a focus group interview (May 2023). All participants signed the GDPR consent. The survey aimed at improving the AF functionalities and helping us gain insight into the needs of its end-users. The target group encompassed researchers of history and geography from Poland and abroad. The invitation was disseminated by email and advertised on the AF website. The survey was available both in Polish and English and consisted of two parts: 1) a video presentation of the AF (<https://vimeo.com/790467380>, ca. 5 min); 2) 11 questions about the opinions and subjective ratings concerning solutions applied in the AF and 14 questions in the questionnaire (ca. 20 min). In total, we received 118 responses, of which 117 were valid. We analysed data in reference to, *inter alia*, the discipline represented by participants. The group consisted of 60 historians and 57 geographers. We tested the consistency of participants' agreement on twenty-five statements measured on the Likert scale. Historians and geographers expressed their opinions coherently in 72% of cases. We found seven statistically significant differences in answers between participants from different disciplines (Table 1).

Questions		Geographers	Historians	U Mann-Whitney	p	
1. To what extent do you agree with these statements [1 = I strongly disagree; 5 = I strongly agree]	Q 1.1	AHP 2.0 is a system for professional researchers (e.g. academic staff)	M = 4.21 SD = 0.818	M = 4.48 SD = 0.813	U = 1340.5	0.025
	Q 1.3	AHP 2.0 is a system for people who work with Geographic Information Systems (GIS)	M = 3.86 SD = 0.915	M = 4.23 SD = 0.890	U = 1290.0	0.014
5. To what extent are these AHP 2.0 functionalities needed by researchers interested in your scientific domain [1 = completely unnecessary; 2 = completely needed]	Q 5.1	downloading ready cartographic works (*.pdf/*.jpg)	M = 4.19 SD = 0.854	M = 4.40 SD = 0.924	U = 1376.0	0.044
	Q 5.2	viewing data at the “Data Atlas Fontium” website in the form of an interactive map	M = 4.30 SD = 0.706	M = 4.57 SD = 0.593	U = 1355.5	0.030
	Q 5.4	using external services with spatial data (WMS/WFS)	M = 4.19 SD = 0.766	M = 3.82 SD = 0.873	U = 2135.5	0.013
	Q 5.5	downloading data as tables/GIS files	M = 4.51 SD = 0.504	M = 4.15 SD = 0.840	U = 2093.0	0.020
	Q 5.7	compiling interactive maps based on “Data Atlas Fontium” data	M = 3.88 SD = 0.847	M = 4.20 SD = 0.732	U = 1368.5	0.045

Table 1. Statistically significant differences between Geographers and Historians

After analysing the survey results, we proceeded with the second phase of the study – focus-group interviews (FGI) in Polish and English (two rounds). The interviewees were selected by purposeful sampling among experts at the stage of developing the research project proposal. The FGIs were led by an external moderator and allowed participants to engage in a detailed discussion about the AF, aiming to delve into their experiences and identify common themes through the interactions within the group. An in-depth analysis of the FGI recordings is planned as the next step of the project.

In conclusion, the study considered here draws together themes on atlases and usability. We hope that discussing the preliminary results in the international milieu will improve the analysis of the data, provide new insights, and thus contribute to the improvement of the AF. The results of the survey have already influenced the development directions. In 2023, we launched the “PastMaps” application and added the datasets with settlements and administrative units for the turn of the 19<sup>th</sup> and 20<sup>th</sup> centuries.

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