Name and surname:	**Anna Karczewska**
Academic Degree:	prof. dr hab. inż. (Prof.)
Institute/Department:	Institute of Soil Science, Plant Nutrition and Environmental Protection
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UPWr Base of Knowledge - link:	https://bazawiedzy.upwr.edu.pl/info.seam?ps=20&id=UPWr78599776ae6844018c22307835928c76&lang=en&pn=1&cid=358035
Researchgate:	https://www.researchgate.net/profile/Anna-Karczewska-3
Personal website / Working group website:	
Participation in projects in last 5 years (chronological; with distinction into PI (kierownik) and RF (wykonawca)):	2015-2019: Project NCN 2014/13/B/ST10/02978 : Antimony speciation in soils of selected areas in Lower Silesia, as related to environmental risk – PI; 2017-2020: Project NCN 2016/21/B/ST10/02221: Bioavailability and ecotoxicity of arsenic in heavily contaminated soils in the sites of historical ore mining and processing - as related to environmental risk assessment - PI
PhD topic:	Speciation and bioavailability of metals and metalloids in contaminated soils subject to remediation
Research discipline in Doctoral School:	Agriculture and Horticulture
Short description of the research problem to be solved in the PhD (minimum 1000 characters):	Various kinds of human activities, such as ore mining and processing, were in the past, and are presently, the main sources on environmental pollution with heavy metals and metalloids, such as copper, lead and arsenic. Human health risk and environmental risk associated with soil contamination depend on total concentrations of pollutants and on their speciation in soils. In particular, the solubility of metals and metalloids in soils and their bioavailability and ecotoxicity can be modified by remediation measures based on application of various amendments. The effects caused by soil treatment with common materials used for remediation has been in general well recognized, however, the problem arises there where soil contamination involves various contaminants that behave differently and differ in their reactions to remediation measures applied. In such cases, the optimum solution should be found that can minimize all adverse effects and reduce the environmental risk. The main purpose of the study proposed for PhD project is the analysis of speciation, extractability, bioavailability and ecotoxicity of metals and metalloids in co-contaminated soils treated with various amendments. Soil material will be representative of sites contaminated by historical or present ore mining and processing – situated either in Poland or in the student's country.
Professional skills for PhD candidate (e.g. master program, specializations, softwares, language, analytical techniques, minimum 500 characters):	Graduation in chemical, biological, agricultural or environmental sciences. Good command of English language in reading, writing and talking. Basic knowledge in the field of soil science (in particular soil chemistry), botany and environmental microbiology; experience in work in a chemical laboratory, basic skills in chemical analyses. The ability to use MS Office package, and basic statistical tests. The knowledge of Statistica software, as well as graphical software (eg. Corel, Photoshop) will be welcome. Inquisitiveness and analytical mind will be necessary. Candidates that have experience in the issues of soil contamination and remediation will be preferred.
a) Project title:	
b) Agreement number:	
c) Number of months in the project to support PhD (in months; starting from 1st of October 2022):	
Project website:	