Name and surname	**Katarzyna Szopka**
Academic Degree	dr hab. inż. (DSc.)
Institute/Department	Institute of Soil Science, Plant Nutrition and Environmental Protection
e-mail address	katarzyna.szopka@upwr.edu.pl
ORCID	https://orcid.org/0000-0001-9280-2972
UPWr Base of Knowledge - link	https://bazawiedzy.upwr.edu.pl/info.seam?id=UPWr8c35d9435ada46cbb778a19af3065254
Researchgate	https://www.researchgate.net/profile/Katarzyna_Szopka
Personal website / Working group website	website of leading research team AgrEn
Participation in projects in last 5 years (chronological; with distinction into PI (kierownik) and RF (wykonawca))	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 - RF
Do you plan to engage support of second supervisor or auxiliary supervisor?	NO
PhD topic	**Application of selected ecotoxicological assays to assess soil pollution**
Research discipline in Doctoral School	Agriculture and Horticulture
Short description of the research problem to be solved in the PhD (minimum 1000 characters)	Environmental risk assessment and Human health risk are important issues that should be included in the assessment of soil pollution. Ecotoxicity of contaminants is therein a crucial constituent, and ecotoxicological assays are the main tools used for this purpose. The main purpose of the study proposed for PhD project will be determine the factors affecting the uptake of arsenic and other trace elements by plants, which is important in the context of health risk assessment. In the areas of the former mining of arsenic, antimony and other polymetallic ores in the Sudetes and their foreland (SW Poland), soils contain significant amounts of trace elements. In these areas, plants are often grown for consumption in allotment gardens and home gardens, meadows and arable fields and toxic elements can be included in the biogeochemical cycle. Arsenic and some other trace elements are poorly soluble in soils, but in some conditions they can be mobilized to the soil solution. There are some factors that increase metals solubility and their bioavailability and ecotoxicity in soils. In the context of health risk assessment, it is also very important to determine the factors affecting the release of trace elements into groundwater used for crops irrigation. Groundwater strongly enriched in trace elements pose the environmental risk. Arsenic and heavy metals can also affect soil edaphon and shape the biological processes of living organisms- significant element in the assessment of ecological risk. The use of ecotoxicological tests to assess soil pollution are the first of this type of research conducted in the areas of former ore mining in Lower Silesia
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 (A graduate of natural science studies). Good command of English language in reading, writing and talking. Experience in work in a chemical laboratory, basic skills in chemical analyses. The ability to use MS Office package, and basic statistical tests. Inquisitiveness and analytical mind will be necessary. Opportunities to participate in international conferences or internship trips. Features that will be appreciated: openness, ease of contacts, ability to work in a team.
Details of the project to support PhD research	
a) Project title	none
b) Agreement number	none
c) Number of months in the project to support PhD (in months; starting from 1st of October 2022)	0