

Theme 6 „Environment”
Offer for the participation in the project that will be prepared for the 4th call for proposals
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Is interested in the participation in a project that will be prepared and submitted in the following topic:	
Number and title of the area	Area 6.2.1.1 Integrated resource management
Number and title of the topic	ENV.2010.2.1.1.2 Integrated resource management based on land and land-use management
<p>Short description of the organisation: (including area of activity, scientific staff, expertise, equipment, collaboration, etc...)</p> <p>The Silesian University of Technology is a research organisation, as well as Higher Education Institution. It has the scientific experience in resource management and environmental impacts of exploitation (relating to soil, water quality, waste management), definition of environmental models.</p>	
<p>Proposed contribution to the project:</p> <p><u>Object:</u> Methodology of analyzing human-environmental synergies and feedbacks. Improving interaction between industry and society, as well as understanding of complex human-environment interactions. The analysis could enable sustainable land use transitions and integrated resource management. Promoting multifunctional and sustainable land use, especially in urban environment.</p> <p><u>Description of offered participation:</u> Within the project activities there will be performed detailed analysis of the impact on the environment of the exploitation of mineral resources (coal mining). The environment components taken into account are: soil, air, water, as well as the society. The examination will be conducted basing on the existing monitoring data and environmental analysis of the areas being under the influence of raw materials exploitation. The constructed data basis will be completed by actual field and laboratory analysis, performed by research team. The field of the research will be urbanized area and industrial agglomeration of Upper Silesia Coal Basin. The research activities:</p> <ul style="list-style-type: none"> - Assessing resources management economic policy in the region of interest, predicting the scale of exploitation of raw materials (the amount, the mineral, the mining method), - Predicting changes in land use in urbanized areas, which is connected to future decreasing role of hard coal mining, - Predicting socio-economic and environment changes, as a consequence of mentioned above alteration, - Assessing policy of land use in highly degraded environment, taking into account: ground subsidence, waste material dumps, industrial infrastructure, - Land transformation projects, including: land reclamation, soil remediation, post-mining reclamation, - Developing sustainable land use policy, which enables protection and proper use of mining heritage, - Assessing social expectations as to the future development of industrial agglomeration. <p>The research will lead to work out methodologies and models for analyzing human-environmental interactions. The expected impact of the program is promoting multifunctional and sustainable land use and effective pathways of land change.</p>	
<p>Chosen references (publications, others):Some bibliographic positions:</p> <p>Wiechuła D., Jurkiewicz A., Kwapuliński J., Loska K.: Arsenic content in femoral head spongious bone of the habitants of Southern and Central Poland. Materiały 41th Congress of the European Societies of Toxicology – EUROTOX 2003 “Science for Safety” Florence (Italy) 28.09-1.10.2003, Toxicol. Lett., 144, Suppl. 1, 142[530].</p> <p>Wiechuła D., Fischer A., Kwapuliński J., Loska K., Fischer T., Kurpas P., 2006. Multivariate statistical analysis of metal concentrations in teeth of residents of Silesian Region, southern Poland. Arch. Environ. Contam. Toxicol., 51, 314–320.</p> <p>Loska K., Wiechuła D., Korus I., Pelczar J., 2005. Application of various methods for assessment of background arsenic concentration in farming soil. Bull. Environ. Contam. Toxicol., 74, 4, 732-739.</p> <p>Labus K., Grmela A., Rapantova N., 2008, Groundwater in the overburden of the Upper Silesian Coal Basin. W: Rapantova N., Hrkal Z. (eds.): Proceedings 10th International Mine Water Association Congress. June 2-5. Karlovy Vary. Czech Republic. pp:285-288.</p> <p>Labus K., 2002, Mining drainage and Medicinal Waters in The Upper Silesian Coal Basin (Poland). Proc. Symposium on intensive use of groundwater - SINEX. Valencia Spain. 10-14 December.</p> <p>Labus K., 2002 - Modeling of salty waters migration towards a therapeutic peat deposit - a case study. Terra Nostra. schriften der Alfred wegner Stiftung Nr 4. pp 469-473. 8th Annual Conference of the IAMG, Berlin</p>	