

**Challenge 5 „Climate actions, environment, resource efficiency and raw materials”**  
**HORIZON 2020 (8th Framework Programme EU)**  
**Offer for the participation in the project that will be prepared for the 1<sup>st</sup> call for proposals**

<b>The institution</b>	<p><b>Name:</b> Mineral and Energy Economy Research Institute of the Polish Academy of Sciences (MEERI)</p> <p><b>Address:</b> 31-261 Cracow, Wybickiego 7 Str., Poland</p> <p><b>Represented by:</b>  name: Joanna Kulczycka  e-mail:kulczycka@meeri.pl  tel: +48 12 632 22 45  fax: +48 12 632 22 45</p>
<b>Is interested in the participation in a project that will be prepared and submitted in the following topic:</b>	
Number of the open topic and Title (from Work Programme)	<ul style="list-style-type: none"> <li>• <b>Enhancing SME innovation capacity by providing better innovation support</b></li> <li>• <b>Secure, Clean and Efficient Energy,</b></li> <li>• <b>Climate action, environment, resource efficiency and raw materials,</b></li> </ul>
<p><b>Short description of the organisation:</b> (including area of activity, scientific staff, expertise, equipment, collaboration, etc...) MEERI (www.meeri.pl) was established in 1986 in Krakow as a constituent unit of the Polish Academy of Sciences. The Institute employs 101 persons. The Institute has particular experience in research on the effective mining and engineering geology, power and heat generation, environmental engineering and management, geology and cartography, geophysics, use of mineral resources, geothermal energy, energy policy, planning and forecasting in the energy and minerals sector, environmental protection and the underground storage of hazardous wastes. Within these areas, the scientific activities of the Institute are as follow: assessment of efficiency and profitability of new investments in the mineral resources economy and waste management; assessment of the possibilities and economics of unconventional energy sources use; life cycle assessment and life cycle cost analysis, waste management; analysis of risk; legal and economic aspects of industrial waste storage. The Institute take part in many EU projects, e.g. FP-5: LICYMIN; CLOTADAM (2000-2004), LIFETIME (2000-2004); EU LIFE: OSELCA (2005); FP6 – CO2SINK, CO2ReMoVe, FP7 – LAGUNA, INTERREG III C: European Waste Management – (2004-2007), Ramea Regional NAMEA (2006-2007), INTERREG IV C – Sigma for water, E-mob, Timer, Foresight - UE Scenarios of technological development for copper mining industry in Poland (2006-2008); JRC Ispra Regional Risk Assessment of Mining Sites and Contaminated Sites in the Upper Silesia Region (2006-2007)</p>	
<p><b>Proposed contribution to the project:</b></p> <ul style="list-style-type: none"> <li>• Analysis and assessment of cost-effectiveness and financial feasibility of investments, verifying the legitimacy of the planned investment in terms of its profitability;</li> <li>• Analysis and assessment of investment risk - identify the most significant risks that may be crucial to the success of the investment opportunities and an indication of active methods to control them, in particular the risk of technical and technological feasibility;</li> <li>• Analysis the impact on the investment of product, service environment: performing a full analysis of the potential environmental impact using the Life Cycle Assessment method (LCA), verifying the LCA analysis for compliance with ISO 1404x, eco - design;</li> <li>• Market analysis (selected industry in the country or abroad) - conducting market research on customers, competitors, products, and other issues occurring in the industry;</li> <li>• Implementation of technological expertise in the field of opportunities for established technical and operational parameters;</li> <li>• Finance in the mining industry: prices, hedging transactions, taxes , etc.;</li> <li>• Develop strategies and policies for sustainable development and environmental management of the mining and energy industry.</li> </ul>	
<p><b>Chosen references (publications, others):</b></p> <ol style="list-style-type: none"> <li>1. A. Generowicz, J. Kulczycka, Z. Kowalski, M. Banach, Assessment of waste management technology using BATNEEC options, technology quality method and multi-criteria analysis, Journal of Environmental Management 92, 2011,</li> <li>2. B. Bieda, A. Henclik, J. Kulczycka, Life Cycle Assessment in the energy generation process – variant analysis in metallurgical industry, Archives of Metallurgy and Materials, Volume 55 2010 Issue 4, ISSN 1733-3490.</li> <li>3. E. den Boer, A. Jędrzak, Z. Kowalski, J. Kulczycka, R. Szpadt, A review of municipal solid waste composition and quantities in Poland, Waste Management, 30 (2010) ,</li> <li>4. J. Kulczycka, Life cycle thinking in Polish official documents and researches. The determination of discount rate for green public procurement, International Journal of LCA, vol. 14, no 5, 2009,</li> <li>5. Kowalski Z., Kulczycka J., Wzorek Z. - Life cycle assessment of different variants of sodium chromate production in Poland JCLP1234 Journal of Cleaner Production, Vol. 15 issue 1, 2007,</li> <li>6. Kulczycka J., Góralczyk M., Włodarczyk B. Cost of waste management versus competitiveness of mining – the example of non-ferrous metal industry. Minerals and Energy Vol 18 no 4 Taylor&amp;Francis 2003.</li> </ol>	
<b>Other information (if relevant):</b>	