

<b>Program</b>	<b>Sectorial Ministerul Economiei Si Finantelor, contract 41/2007</b>
<b>Project Leader Institution (CO)</b>	<b>INCD ECOIND</b>
<b>Project title (ENG):</b>	<b>Identification of technical alternatives for the mitigation of pollution generated by mine waters with heavy metals</b>
<b>Project title (RO):</b>	<b>Identificare soluții tehnice de reducere a impactului de poluare a componentelor de mediu (sol, apă) generat de apele de mina/deșeuri cu conținut de metale grele</b>
<b>Duration</b>	2007-2008
<b>Team Leader CO</b>	chim. Margareta Nicolau dipl.eng. Dinu Laurentiu
<b>Summary</b> (short description) ENG	<p>Identification and characterization of mine water in four mining areas in Romania - non-ferrous metal ore mining.</p> <p>Research on characterization and inerting sludge from the treatment of mine waters.</p> <p>Research on the conventional treatment of mine waters from various sources.</p> <p>Research on advanced treatment of mine waters with sulfate ion removal - precipitation processes, membrane separation and biological reducing.</p> <p>Technology for the precipitation of calcium, magnesium, sulfate.</p> <p>Technical proposal and detailed design for passive bioreactor pilot (revamping of an existing passive limestone beds plant).</p> <p>Detailed design for modular pilot plant for mine water treatment and basic processing of chemical sludge.</p>
<b>Summary</b> (short description) RO	<p>Domeniu: identificare, caracterizare si epurare ape de mina.</p> <p>Identificare si caracterizare ape de mina din patru regiuni miniere din România - exploatari minereuri metale neferoase.</p> <p>Cercetari privind caracterizarea si inertizarea namolurilor de la tratarea apelor de mina.</p> <p>Cercetari privind tratarea conventionala a apelor de mina din surse variate.</p> <p>Cercetari privind tratarea avansata a apelor de mina cu indepartarea ionului sulfat - procese de precipitare, separare cu membrane si reducere biologica.</p> <p>Tehnologie de precipitare calciu, magneziu, sulfat din ape de mina.</p> <p>Propunere tehnica si proiect tehnic Amenajare pilot bioreactor pasiv prin conversia unei statii de tratare in sistem pasiv existente (canale cu calcar).</p> <p>Proiect tehnic pentru instalatie pilot modular de epurare avansata ape acide de mina si prelucrare primara namoluri chimice.</p>
<b>Dissemination of results</b>	
Full-paper ISI	A. Mihaly Cozmuta, L. Mihaly Cozmuta, C. Varga, Recuperarea electrochimică a cuprului din ape reziduale folosind catod volumic de grafit, Revista de Chimie, 58 (12), p.1232-1239.
Conferences (platform, poster, abstract / full-paper)	Margareta Nicolau, L. Dinu, , Cristiana Cosma, Lucia Popa, I. Denut, Closed mining sites in Romania - Mine water chemistry and some relationships with the treatment alternatives, International ESTROM Conference – Environmental Research and Mitigation of Water Pollution in Romania and in Lower Danube Region, 3-5 September 2008, Romanian Academy, Bucharest, in cadrul sectiunii I-Heavy metal pollution by mining and metal producing industries Impacts on rivers, soils and humans

<p>Conferences (platform, poster, abstract / full-paper)</p>	<p>L. Mihaly Cozmuta , C. Varga, A. Mihaly Cozmuta Recovery of copper ions from acid mine wastewaters using ionic exchange method Capacity Building On The Ecomining Principle, International Seminar, Ecomining –Europe in 21th Century – the 2nd edition, 24-26 Oct., Sovata &amp; Praid, 2007, p. 413-423, ISSN 978-973-741-071-9</p>
	<p>Nicolau M., L. Dinu, Cosma C., L. Popa, Traista E., Badulescu C., <i>Evolutii ale cercetarilor privind chimia apelor de mina si epurarea acestora</i>, Workshop proiect sectorial, <i>Identificare solutiilor tehnice de reducere a impactului de poluare a componentelor de mediu (sol, apa) generat de apele de mina/deșeuri cu conținut de metale grele</i>, INCD ECOIND, 08 Septembrie 2008</p>