

Program	Program NUCLEU PN 09 13 04 04
Project title (ENG):	New methodology for the assessment of ecologic risk based on Rough Set Theory with applied example on the Olt river.
Project title (RO):	Metodologie noua de evaluare a riscului ecologic bazata pe Teoria Multimilor Rugoase cu exemplu de aplicare pe raul Olt
Duration	2009-2012
Team Leader	Senior Research Eng. Georgeta Madalina Arama
Summary (short description) ENG	The project applied the Rough Set Theory in applications for the assessment of environmental impact/risk for the water bodies using information selected from the INCD-ECOIND Bucharest monitoring databases. The development of the general conceptual model has been done for the water bodies as they are defined in the national and European legislation. Specific conceptual models have been derived from the general one for the environmental impact/risk assessment brought by hazardous substances discharged in the sewage systems. The project realized also the automated calculus spread sheets with data for the Olt river (five consecutive monitoring years) and for the sewage system of Bucharest city (two consecutive monitoring years). Procedures and user manual for methodology application have been realized. The methodology is able to assess the increase /decrease of the premises of the negative consequences of pollution and consequently of the environmental risk.
Summary (short description) RO	Proiectul a urmarit aplicarea Teoriei Multimilor Rugoase in aplicatii de evaluare a impactului/riscului de mediu pentru corpurile de apa folosind informatii selectate din bazele de date de monitorizare existente in cadrul INCD-ECOIND Bucuresti. Dezvoltarea modelului conceptual general s-a facut pentru corpurile de apa asa cum sunt ele definite in legislatia Europeana si nationala. S-au realizat de asemenea modele conceptuale particulare deduse din cel general pentru evaluarea impactului/riscului de mediu adus de substantele periculoase deversate in canalizari. Proiectul a cuprins realizarea fisierelor de calcul automat cu date pentru raul Olt (monitorizare cinci ani consecutivi) si pentru canalizarea municipiului Bucuresti (monitorizare doi ani consecutivi). Au fost realizate proceduri si manuale de utilizare pentru aplicarea metodologiei. Metodologia este capabila sa evalueze cresterea/scaderea premizelor consecintelor negative produse de poluare si in consecinta a riscului de mediu.
Dissemination of results	
Conferences (platform, poster, abstract / full-paper	Aramă, M., Nicolau, M., “ <i>Rough Set Theory Decision Support Instrument in the Environmental Risk Management of Water Bodies in Romania</i> ”, full paper, SIMI 2009 - The International Symposium Environment and Industry, Bucharest, 28-30 October 2009 , p. 80-87, vol II, ISSN: 978-973-7681-65-2.
	Aramă, M., Nicolau, M., “ <i>Water Body Impact/Risk Assessment Methodology</i> ”, full paper, SIMI 2009 - The International Symposium Environment and Industry, Bucharest, 28-30 October 2009 , p.87-93, vol II, ISSN: 978-973-7681-65-2.
	Aramă, M., Nicolau, M., “ <i>Epistemic and Measurement Uncertainty in Environmental Impact Assessments</i> ” SIMI 2009- The International Symposium Environment and Industry, Bucharest, 28-30 October 2009 , p.72-79, vol II, ISSN: 978-973-7681-65-2.

<p>Conferences (platform, poster, abstract / full-paper)</p>	<p>Aramă, M., Nicolau, M., Criste, V., Anghel A, Serbanescu, C., <i>“Presence and identification Screening of priority/priority dangerous substances in municipal sewer discharges of Romanian economic agents-program’s actions implementation instrument for meeting environmental quality standards by 2027”</i>, SIMI 2011- The International Symposium Environment and Industry, Bucharest, p.335-34, vol I, ISSN: 978-973-7681-65-2.</p> <p>Arama, M., Gheorghe, A. V., Radu, C., Stanciu, R. D, Nicolau, M. <i>“Basic concepts and pollution causal chain in environmental risk assesment”</i>, (2010) Revista de Management si Inginerie Economica 9.2., p. 37- 46, ISSN:1583-624X.</p> <p>M. Arama, R.Stanciu, M. Nicolau, <i>“Assesing and managing the water quality risk – a way to attend sustainability</i> Proceedings at 3rd Review of Management and Economic Engineering International Management Conference: A new dilemma: between East and Vest 13th-15th September 2012, p.8-1.</p>
<p>Patents (approved or proposal)</p>	<p>Cerere de Brevet „a 2013 00392” cu data de depozit din 23.05.2013 si cu titlul „METODA SI SISTEM DE EVALUARE A IMPACTULUI/RISCVLUI DE MEDIU AL CORPURILOR DE APA DE SUPRAFATA-Georgeta Madalina Arama, Margareta Nicolau</p>