

CEEX (Research of Excelency) Project MARAVAL
Contract no. 743/2006



PROGRAMME	RESEARCH OF EXCELLENCE (CEEX)
Contracting Authority	Politechnical University Bucharest – Energetics Faculty – MENER Programme (Environment, Energy & Resources)
Contract no.	743 / 2006
Starting date	September 11, 2006
Ending Date	September 15, 2008
Project Title	Ecological rehabilitation and sustainable management of areas having terrains deteriorated by deep soil erosion and/or landslides in Moldova (MARAVAL)
Research Areas	2.1 Sustainable production and management of biological resources from land, forest, and aquatic environments 2. 3 Life sciences and biotechnology for sustainable non - food products and processes 6. Environment (including Climate Change) 6.1 Climate change, pollution and risks 6.2 Sustainable management of resources 6.3 Environmental Technologies

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Budget of project	1,499,800 RON (~ 400,000 EURO)
Year 2006	142,464 RON
Year 2007	446,992 RON
Year 2008	910,414 RON
Webpage	www.cesperieni.ro
Partners	
Partner 1	„Stefan cel Mare” University, Suceava Subproject coordinator: Prof.dr. Maria Radoane
Partner 2	National Institute for Biological Research Bucharest Biological Research Centre „Stejarul”, Piatra Neamt, Subproject coordinator: Dr. Maria Bucuresteanu
Partner 3	Research and Development Centre in Agriculture, Forestry Science, Sustainable Rural Development and Environment Protection, Sendriceni, Botosani County Subproject coordinator: Dr. Dorel Pujina
Partner 4	Forestry Science Research Institute Bucharest Research Centre Focsani Subproject coordinator: Dr. Cristinel Constandache
Brief description of Project	<p>The relief of Romania, the geological structure and climate conditions suggest that approximately 70% of the territory is theoretically prone to landslides. According to Law 575 / 2001, 987 administrative units (34 municipalities, 78 cities and 875 communes) are threatened by landslides in different levels of risk. Most of them (32% of municipalities, 31.17% of cities and 59.88% of communes) belong to high risk category. Some districts in Eastern Romania are among the most affected when it comes to risk due to landslides.</p> <p>Within the Moldavian Plateau, 9000 gullies were inventoried. Gullies, not only result in soil losses but also do imply gravitational bank failures, losses of agricultural land, discontinuing of communication means.</p> <p>Both landslides and gullies have important social, economical and ecological implications and give the landscape a deserted aspect. Their effects may be immediate, when they result in human and material losses, and also they may be annoying for a long time because the rehabilitation of environment and resources is generally costly and slow.</p> <p>Causes of occurrence, triggering factors and evolution of these degradation processes include geological background, relief, climate change and pollution phenomena, and almost always involve a certain level of natural risk.</p> <p>The most important aspects will be approached: landslides and gullies inventory, natural and anthropic causes, actual extent, economical and social impact. Landslides and gullies will be inventoried and studied in different</p>

	<p>degrees of detail: the large territory of Moldavian Tableland, the territories of some entire counties, at the scale of three watersheds having sizes of 10,000 hectares and finally, the level of detail of two pilot perimeters.</p> <p>Ecological rehabilitation plans, ultimate solutions – environmental technologies - adapted to conditions</p> <p>Keywords: ecological rehabilitation, sustainable management, deep erosion (gullies), landslides, GIS</p>
<p>Objectives (Contribution to the EU or regional policy)</p>	<ul style="list-style-type: none"> • Acquiring information regarding the extent of gully erosion and landslides in Eastern Romania (Moldova) between Siret and Prut rivers. • Acquiring information regarding the economical and social implications of gully erosion and landslides processes on environment. • Contributions to a better knowledge and understanding of processes and mechanisms triggering landslides, and also the control factors which are influencing the morphology and dynamics of gullies, using by GIS techniques. • Realization of forecast models of rhythm of expansion of deep erosion processes and landslides. • Realization of planning (strategies, methodologies, environment technologies) of ecological rehabilitation and sustainable management of areas having terrains deteriorated by gullies and landslides.