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Guest Editorial for Special Issue on Environmental Legislation, Safety Engineering and Disaster Management (ELSESEDIMA 2014)

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Environmental Safety and Disaster Risk Reduction. The challenges induced by complex environmental processes, disaster crises included, require a multidisciplinary approach to achieve sustainable development and mitigate the natural and technological risks.

The current Romanian territory, especially the industrial sites, is exposed to a wide range of natural hazards whether directly or indirectly (Ozunu et al 2011). These need to be addressed and integrated in the current hazard and risk maps. Recent studies performed by Romanian researchers provide relevant data on the landslide susceptibility in Romania, which require stabilization works for the protection of the local communities and infrastructure (Bălțeanu et al 2010; Costan et al 2010).

Considering that in past disasters, communities were always the first responders (Shaw 2012), the community participation to all stages of disaster management - prevention, mitigation, response and recovery - is of crucial importance. Therefore, a good assessment of resources (be they human, physical, social or cultural) available to the local communities in the event of a disaster, is a useful tool for disaster managers, researchers and practitioners. Building community resilience by preparedness and education in a world affected by an increased number of natural and technological disasters represents an essential component of Disaster Risk Reduction (DRR) and needs to be integrated in national and regional DRR plans.

Adding to these the current needs for the decontamination of heavily polluted soils and waters with hydrocarbons, heavy metals, brine, runoffs from municipal landfills, nitrates and other pollutants, environmental safety becomes a challenge that can only be overcome by an integrated, multi-disciplinary approach. In this context, scientific events represent necessary networking activities for scientists, decision-makers, policy-makers, authorities and practitioners to engage in active discussion and debate for the purpose of achieving environmental safety.

The International Conference on Environmental Legislation, Safety Engineering and Disaster Management (ELSESEDIMA). The main objective of the conference is to encourage cross-disciplinary discussions between the various fields of environmental sciences. The conference brings together international representatives from industry, academia, and authorities in the area of environmental engineering and management to discuss current research results, review progress of research in specific areas, initiate future research and identify development needs.

The 10th ELSESEDIMA 2014 Conference focused on the following main topics: Disaster Management and Disaster Risk Reduction; Aerosols and Remote Sensing; Infrastructure – Risks and Safety; Lifelong Learning (LLL) in Disaster Risk Reduction; Wastewater Treatment Technologies; Sustainable Development and Environmental Protection; Water Management; Environmental Chemistry and Physics; Climate Change and Renewable Energies; Waste Management.

About 220 participants from 9 countries, 29 universities, 16 research institutes and 10 public authorities were faced with 8 invited lectures, 84 oral communications, 133 posters, 1 *Profesor Honoris Causa* award and 1 field trip. The event also attracted young researchers including PhD students and postdoctoral fellows, who were encouraged to work in the field, communicate their research and improve their knowledge.

In recent years, the scientific outcomes of the conference were published in International Scientific Journals, due to a fruitful cooperation between the ELSEDDIMA Organizing Committee and the editorial boards of such journals, which have hosted special issues dedicated to this conference (Ozunu 2012; Ozunu 2011; Ozunu 2010).

For this Special Issue, 18 participants were selected to prepare their conference presentations as original research articles and reviews on topics such as those presented above. These papers reflect the diversity of topics addressed by the conference participants. This special issue is a good opportunity not only to publish the research results, but also to develop and maintain effective communication among the researchers working in this field.

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