The role of stakeholder attitudes in managing contaminated sites: Survey of Romanian stakeholder awareness – preliminary results

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Since the second half of the 19th century, in particular, industrialisation decline and migration associated with economic change, has generated many contaminated areas all over Europe (CLARINET, 2002; EEA, 2005). Today the reduction in the use of 'greenfield' sites through contaminated site regeneration plays a key role in European sustainable development strategies (EC, 2006a; EC, 2006b; EC, 2006c; EC, 2006d). The dilemma is that, although much progress has been made during recent decades, especially in the EU member states, Central and Eastern European countries still have to deal with many unresolved challenges as regards large-scale areas of contaminated land (World Bank, 2010; ICCL, 2011; Stezar et. al., 2011).

The process of decision-making for management of environmental resources is multifaceted and complex and merits research (Cihakova Aguilar, 2009; Marcomini et. al., 2009). As noted in the work of Kiker et al. (2005), effective environmental decision-making demands the right consideration of (multi) criteria derived from environmental, ecological, technological, economic, financial and socio-political factors. Thus, from an environmental management perspective, it is critical to understand which issues are considered most important. At the same time, a crucial aspect of a decision-making process for generally sustainable management is that of participation by relevant organisations and people. In fact, such participation is cited by UNDP (1997) and the European Commission (2001) as one of the characteristics of good governance. As reported by the OECD (2004), some important benefits derived from the involvement of public stakeholders in the decision-making process, such as offering more socially acceptable choices, widening the range of choices considered, better conflict-management, increased legitimacy of the decision-making process, and better information to stakeholders and/or public. Moreover, Charles Barstch (2005) often referred to as the "father of brownfields," stresses the importance of stakeholder involvement.

To date, these research and policy-making activities have mostly concentrated on realizing the first part of McCarthy's challenge (2002), namely reduce the primary barriers to redevelopment of contaminated land. On the more technical side, much research has focused on devising effective remediation approaches and technologies (Bonano et. al., 2000; Bardos, 2001; Khan et. al., 2004; Marcomini et. al., 2009). Also, several researchers (Alberini et. al., 2005; Burger, 2002; Morio et. al., 2011) acknowledge the importance of the human dimension of economic growth. In the context of contaminated sites redevelopment and economic growth, the broad issue to be addressed is the human dimension of stakeholder engagement in rebuilding urban communities (Greenberg and Lewis, 2000; Thomas, 2003).

Romania is a South-Eastern European Country where the domain of contaminated sites management started to develop at the regulatory level in 2007 (GR, 2007a; GR, 2007b). Since there is, as yet, no "one-for-all" worldwide solution to support the enhancement of contaminated land regeneration, even at European Community level, success can be expected only if improvements specifically consider the social, economic and political contexts that govern the entire process of

regeneration. These contexts include socio-economic possibilities such as economic, cultural and even site-specific attitudes of stakeholders towards risks, coherent with the acknowledgement of ignorance and the legal appropriations for adaptive possibilities. According to the Romanian National Environmental Agency, 2580 questionnaires from economic agents, as well as local councils, were received in 2011 for the national inventory of contaminated sites, whilst in the proposed strategy for the management of Romanian contaminated sites, 1856 such sites were stipulated (Baceanu, 2011; MMP, 2010). Even though there are expressly developed approaches, methodologies and tools available in literature to support experts, stakeholders and decision-makers to deal with specific phases of the contaminated sites regeneration process, the knowledge and awareness survey of different stakeholders is a necessity in Romania. The paper presents an inventory and comparative analysis of different stakeholders' opinions (whether engaged in education, research, regulatory authorities, contractors, site developers, or environmental experts) by means of an attitude survey, in order to have an overview of the situation at national level.

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