

## Environmental Insurance for Brownfields Redevelopment Activities and Feasibility Study as an basic part of Complex solution

Michal Cehlár<sup>1</sup> and Štefan Kuzevič<sup>1</sup>

### *Environmentálne zabezpečenie revitalizačných aktivít a prípravná štúdiá ako súčasť komplexného riešenia*

*Príspevok je venovaný problematike environmentálneho zabezpečenia ako nového nástroja používaného pri realizácii environmentálne zameraných projektov. Environmentálne zabezpečenie poskytuje komplex postupov ktoré tvoria súčasť komunitných ekonomických rozvojových iniciatív. Komplexné riešenie environmentálnych problémov, medzi ktoré patria revitalizačné a rekultivačné práce oblastí postihnutých priemyselnou činnosťou sa v súčasnosti nezaobíde bez dôsledne pripraveného projektu s ekonomickými a environmentálnymi analýzami ich dopadu na životné prostredie a analýzami nákladov na jeho realizáciu, ako aj kladného vyjadrenia dotknutých strán. Environmentálne zabezpečenie ako efektívny nástroj môže byť súčasťou komplexného riešenia environmentálnych problémov a jeho základnej časti – prípravnej správy.*

**Key Words:** brownfield redevelopment, environmental insurance, feasibility study, complex environmental solution, redevelopment of contaminated sites.

### Introduction

Since the past century own knowledge has become increasingly specialised. This specialisation has resulted in tremendous intellectual and technological gains, but it has also led to the increasing fragmentation in the modern research enterprise. Many of the important issues in society simply cannot be addressed adequately by a single disciplinary perspective. This is particularly apparent for issues with an environmental component, such as the watershed protection, sustainable development, and the climate change. These issues demand for an integrated view; they are essentially systems problems. To address systems problems effectively requires us to connect perspectives and disciplines and deal with complex interacting processes that operate at different temporal and spatial scales. Integrating and synthesising the knowledge from disparate domains, the emerging field of integrated assessment attempts to accomplish this goal. Within Integrated Assessments, simulation models are commonly used for synthesising the disciplinary knowledge. They are by no means new tools for scientists, and since the early 1970s, the results of such models have often been made accessible to the general public as well.

### Integrated system models and environmental insurance

Integrated system models offer three extremely useful advantages for interdisciplinary researchers. First, systems models provide a way to codify the knowledge from different disciplines into a unified and coherent framework. Second, they encourage the focused and disciplined thinking about causal relationships in a system. Third, they allow researchers, ecosystem managers, and stakeholders to explore how their system may respond to a variety of scenarios so that responses can be formulated and management actions can be implemented. However, system models can achieve these advantages if they are developed and used deliberately and thoughtfully.

In other words, this paper examines two questions. In addition, it offers recommendations regarding possible municipal actions, dissemination and research activities that could be undertaken to completely determine the role of environmental insurance in stimulating the accelerated redevelopment of urban brownfield sites. There will be special emphasis on the pooled environmental insurance as a form of group insurance.

Information on the emerging mix of environmental insurance products was gathered through interviews with a senior staff from three insurance companies that dominate the market. This was complemented by data from recent studies examining barriers to the reinvestment in urban brownfield redevelopment efforts. Also, Interviews with economic development and environmental management officials from cities across the nation operating with Brownfield Pilot Project grants from the Environmental Protection Agency provided data on local awareness of environmental insurance products and beliefs about their potential contribution to urban redevelopment.

<sup>1</sup>doc. Ing. Michal Cehlár, PhD and Ing. Štefan Kuzevič, Faculty BERG, Technical University of Košice, Department of Business and Management, Park Komenského 19, 043 84 Košice, [michal.cehlar@tuke.sk](mailto:michal.cehlar@tuke.sk) and [stefan.kuzevic@tuke.sk](mailto:stefan.kuzevic@tuke.sk)  
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## Brownfield redevelopment problems in praxis

Primary findings that include the next application of urban brownfield redevelopment problems are:

- environmental insurance has the potential to reduce the uncertainties associated with brownfield redevelopment projects. Environmental insurance policies that limit cleanup cost exposures provide a strong basis for the quantification of risk that is often demanded by lending institutions as a condition for the investment,
- the contribution that Environmental insurance products can make to the urban redevelopment may vary with local economic conditions, most particularly the strength of the local real estate market; in weak markets even minor reductions in the risk and uncertainty can enhance the competitive position of brownfield sites, professional Liability Coverage, mainly for “errors and omissions” by public and private parties dealing with or managing There are at least five major types of environmental insurance, each playing a somewhat different role in the limiting uncertainty and quantifying risk at different stages of the redevelopment process but public agencies charged with the urban redevelopment have limited knowledge of the products and services available.

The broad types are:

- Contaminated land issues;
- Owner/Operator Liability Coverage, for the firms or agencies actually working on the site, whether doing business or engaged in cleanup operations;
- Cleanup Cost-Cap or Stop-Loss Coverage, which places an upper limit on the costs of cleanup which site redevelopers may have to pay;
- Legal Defense Coverage, for lawsuits associated with liability claims made by enforcement agencies or third parties (injured private parties); and,
- Re-opener or Regulatory Action Coverage, for costs associated with any future government actions that require further site cleanup, including the costs associated with the loss of use of the improvements on the site.

While the preponderant majority of the city officials contacted in the course of this study are actively pursuing brownfield redevelopment, they were either unfamiliar with environmental insurance, or were sceptical that environmental insurance would help their proposed or ongoing redevelopment efforts.

There is now a substantial array of environmental insurance products available, and both underwriting fees and coverage premiums have fallen significantly in the five years environmental insurance has been readily available. However, the industry has not communicated this information effectively to potential purchasers in the public and quasi-public sectors.

Private sector demand for environmental insurance is growing rapidly and speculative redevelopment of even heavily contaminated sites is now being undertaken by venture capital pools using the insurance coverage as a risk management and loss prevention tool.

Private sector demand is attracting most of the attention of the insurance agents, brokers and consultants with the expertise in environmental insurance; hence, there is a little incentive for the industry to attempt to market to local community and economic development agencies.

At the same time, it appears that even the cities that are most innovative and creative in brownfield regeneration efforts have not pursued the potential link between their economic development efforts with environmental improvement approaches. Consequently, there are few examples of local governments using EI in support of their economic development efforts.

In addition, public sector purchasing procedures, especially requirements for multiple bids prior to purchase of any services or products such as the insurance coverage, create obstacles for insurance providers when they attempt to design the tailored coverage to meet municipal brownfield redevelopment needs. In fact, depending on the legal status of the multiple bid requirements, this issue may not be addressable at the municipal level. The state law mandating particular purchasing requirements may have to be changed.

While the public sector experience is limited, there are some examples of a creative use of the environmental insurance coverage by municipalities and states to stimulate the brownfield redevelopment and reuse.

Some examples can represent demonstrations of how the environmental insurance could contribute to the urban redevelopment. They illustrate ways in which the coverage can be used by public sector agencies to promote the reuse and reclamation of potentially contaminated sites. However, they provide no reliable data on the cost-effectiveness of environmental insurance as a redevelopment subsidy.

Recommended actions by local development organisations may be derived from these findings, specifically, municipal governments and other local economic and community development organisations can promote the urban redevelopment on difficult-to-regenerate small sites through their ability to create pools of potential projects that could be covered by a common environmental insurance policy.

In assessing the desirability of such efforts, local officials need to take a variety of factors into consideration, notably:

What type of pool of insurable sites (number of parcels, characteristics of ownership, intended use, location, etc.) can be created in a city?

How much could a municipal pool reduce the costs of insurance coverage for individual parcels by spreading the risk and reducing the site-specific underwriting effort, and how do those costs vary with the characteristics of the pool?

Can pooling reduce the cost of needed coverage to levels that make the coverage economically efficient from a private investment perspective?

What is the relative value of publicly-financed insurance coverage to would-be developers and their financial backers, compared to other, more direct, financial subsidy?

Given this relative value and costs for the publicly-provided insurance, what is the relative cost-effectiveness of public provision of insurance relative to other subsidies?

What reorganization of purchasing practices or other restructuring of public sector decision-making is necessary to improve the workings of the market for the public acquisition of environmental insurance?

A municipality interested in creating insurance pools in order to provide coverage for developers of small-scale brownfield sites could take two different approaches to making the coverage available:

- Municipal governments and other local economic and community development organizations could make a significant contribution to a more systematic examination of environmental insurance and its potential value as an urban redevelopment tool through the increasing local public sector awareness of changes in environmental insurance products, services, availability and costs.
- The Department could develop the capacity to provide the information needed by utilizing its extensive communications with local governments and agencies that apply for and or receive grants for their urban redevelopment efforts.

Municipal governments, grant applicants and recipients could be surveyed to determine their experience in examining and utilising environmental insurance products and services.

Finally, an additional research is warranted before any formal position on the advisability of urban development agencies' investment in the environmental insurance can be articulated. There is a need for systematic studies of the impact of a various economic development on the brownfield redevelopment. Where examples of local use of environmental insurance to promote the economic development are identified, detailed case studies describing the coverages purchased and their impacts on rates of site redevelopment could assist decision-making and policy development.

Key issues to be addressed should include the following testable relationships between the value of environmental insurance and other factors affecting the brownfield viability:

- In states with Voluntary Cleanup Programs (VCP) that protect brownfield redevelopers from reopeners (reopeners are legal demands for an additional mitigation which could arise long after the completion of the approved cleanup), does the reopener insurance actually fall or is it lower than in states without the VCP protections? If the insurance is still in demand, it suggests that the state assurances are not believed or not seen as sufficient protection.
- How does a municipality or metropolitan area size affect the value that the insurance can provide to brownfield sites? Does a local real estate market grow to such size that the differences in amenities and infrastructure between the central city and suburban sites become so great that the subsidy that environmental insurance can contribute to promoting investment in depressed areas becomes insignificant?
- Does the environment insurance make a difference by providing access to the capital that would not otherwise be available? That is, can the insurance enable a developer to get a loan that would not otherwise be available? In this case, the extent to which the insurance changes the cost of the project is not the important factor.
- How does the role of environmental insurance change with the strength of the local real estate market? Since the insurance protects against risks and uncertainties, it should be more valuable in weak real estate markets, when other uncertainties are present, than in stronger markets or in real estate boom conditions, when the environmental risks are the only aspect of a project that does not appear to be virtually certain.

## Conclusion

If local government could provide municipalities with answers to these questions, or if cities, towns and mining or other companies could figure out partial answers for themselves, the capacity to make economic efficient decisions on the use of environmental insurance as a tool for subsidising private redevelopment of urban brownfields would grow.

In this paper a new tool, known as environmental insurance, which can be used to help promote the redevelopment of at-risk urban sites as a part of community economic development initiatives is described. Environmental insurance is intended to limit liability associated with the discovery and cleanup of contamination after mining and intensive industrial activities on brownfields.

There is a growing number of types of environmental insurance now available. Specifically, the study examined the potential of environmental insurance products as stimuli for increasing brownfields redevelopment investment and the extent to which such policies could be targeted towards particular regions, metropolitan areas or cities of particular sizes, or urban centres in particular economic conditions.

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