

# **FACILITATING BROWNFIELD REDEVELOPMENT IN CENTRAL EUROPE: OVERVIEW AND PROPOSALS**

Jirina Jackson B. Arch, RIBA, ARB and Yaakov Garb, Ph.D.

IURS - sdruzeni pro udrzitelny rozvoj sidel o.s, Minska 6, 100 00 Praha 10, Czech Republic  
Tel ++420 2 7172 4572, mob. ++420 603 370 176, [jjackson@volny.cz](mailto:jjackson@volny.cz)  
Institute for Transportation and Development Policy, 115 W. 30<sup>th</sup> St., # 1205, New York NY 10001  
United States of America, Tel ++1 212 629 8001, [ygarb@cc.huji.ac.il](mailto:ygarb@cc.huji.ac.il)

## **Abstract**

This paper will summarize our findings on the barriers to brownfield redevelopment in Central Europe, and the measures and policies necessary to overcome these. It is drawn from two extensive overviews of the subject (available at [www.brownfields.cz](http://www.brownfields.cz) and [www.itdp.org](http://www.itdp.org)), in which we discuss the spatial, institutional and economic dimensions of brownfield rehabilitation in a Central European context, and present recommendations to lead to a faster, more economic and better understood and accepted process for the rejuvenation of such areas.

Paper will discuss the following:

- 1) The scope, nature, distribution, and reasons for economically underused and brownfield urban land in the CEC, and the difficulties in obtaining reliable data about these
- 2) The main barriers to reuse of brownfield land, with an emphasis on the Czech condition
- 3) Some of the main avenues for overcoming these barriers, amendments of the legal and tax frameworks, cross-institutional and cross-disciplinary cooperation, and the emergence of institutional leadership within the governmental or para-governmental apparatus

Appendix 1 will illustrate the kinds of changes of legal framework to accelerate reuse of under-performing urban land.

Appendix 2 will illustrate a consistent methodology to enable local communities to audit their underused and under-performing urban land, and assess the likelihood of such land being redeveloped commercially if recovered.

## **Introduction - BROWNFIELDS IN CEC - CAUSES, SCALE AND DATA AVAILABILITY**

Brownfields are formerly developed land that is underused, and sometimes vacant, derelict, or may be contaminated. Brownfield properties are “stuck,” somehow, in this underused state: the market, left to itself, will not recycle them into more active use, often because the perceived cost and risk of bringing them back into use exceeds their benefits to owners. Yet the broader urban and social costs of these “holes” in the urban fabric are great, and often do justify the necessary expenditures. Thus, some kind of public sector intervention is often necessary to bring such land back into productive use.

The circumstances of former socialist countries and of the transitions these countries have undergone in the last decade or so, have, on the one hand, left a legacy of an exceptionally large amount of these brownfields in urban areas; yet, on the other, they resulted in a weakened capacity for the interventions needed to recycle this land. This paper discusses these circumstances, emphasizing the Czech Republic, but also of other Central European countries, whose experience is similar in many ways. In a previous essay on brownfield leadership (available from [www.itdp.org](http://www.itdp.org)), an analysis of the current and potential roles of various stakeholders in the brownfield development task pointed to the pressing need for brownfield leadership: imaginative coordinated, cross-institutional and cross-disciplinary efforts. We discuss the leadership issue more briefly here, and present some other necessary elements of such an effort: an auditing methodology that allows towns to assess their

brownfield holdings, a system to rank these according to the likelihood of their development, and some of the national legislative changes needed to facilitate this development.

### **Extensive brownfields as a post-socialist legacy**

In addition to the brownfields produced as a regular outcome of industrial restructuring in any country, the dynamics of socialism and the circumstances of transition from a socialist to a market economy, both described below, left Central European countries with an exceptionally large burden of brownfields. This burden was initially fairly invisible as a policy issue, until the privatisation process, and especially the reluctance of foreign investors to purchase sites that were or might be contaminated. These brought home, often for the first time, the scale and seriousness of the brownfield problem in Central Europe.

An exceptional feature of Central European brownfields is their abundance in urban settings. This is the result of shared socialist heritage. With no real estate or capital markets to speak of, state companies did not consider the cost of land or of money when making construction or operating decisions. Thus production facilities were situated in what would otherwise have been prime sites in central locations. Additionally, plans and quotas regulated raw goods allocation and production. Inflexibility, and bad predictions about demand and supply led to setting aside of large areas for the storage of raw materials and finished products, often for extended periods. As companies were not responsive to the spatial and financial inefficiencies of these build-ups, their premises were often much larger than their counterparts in capitalist economies, and sometimes over-equipped.

Central European cities (even those that are not heavily industrial), have 2 to 3 times the amount of space devoted to current or past industrial uses than their western counterparts. The portion of land devoted to industrial uses is even higher in industrial cities, and these face massive brownfield and restructuring problems with the demise of their indigenous industries.

With the change in regime in the late eighties, much CEE industry found itself rapidly redundant, unable to compete in terms of its efficiency and the products it offered. A spiral of decline commenced. The physical degradation of these sites was accompanied by a degradation of their ownership status and integrity. Through the privatisation process, and because owners and bankruptcy administrators tended to dispose of properties in small individual lots, they often became less viable purchases for redevelopment. Other sites were unsellable as they were securities for mortgages, often valued at hundreds of percent their actual value.

In addition to post-industrial brownfields, additional brownfields arose through demilitarisation: the emptying or disuse of large bases in and around CEE cities. Extensive railway lands and siding areas, often quite polluted, are also drastically underused in many Central European cities.

### **The lack of data, and the absence of CEE-wide brownfield networks**

With brownfields such a dominant feature of the Central European urban landscape, there is a surprising lack of shared awareness and networking on the issue, and a lack of reliable data. While inventories and measures of greenfield development are possible through satellite imagery, brownfield inventories require a more intimate knowledge of the current use and status of sites. Thus, even the capital cities of Prague and Budapest currently lack a comprehensive inventory of the a real extent of their brownfield sites, much less on prioritised by degree of contamination or the economic feasibility of rehabilitation. Country-wide figures for the scope of the brownfield problem are similarly lacking, with the exception of Poland, which offers a figure of 8,000 square kilometres<sup>3</sup> though little information on what kinds of land this figure includes, or how it was derived.

The Country Reports of international financial institutions, such as the IMF or World Bank, sometimes estimate the overall cost of environmental liabilities of countries, though brownfields does not figure as a separate category.

Site counts of contaminated sites are easier to come by. **Hungary** lists 19,000 locations thus far in its official registry of sites needing remediation, though local NGOs estimate the actual number to be more than double that, closer to 40,000. The **Czech** registry has 3000 contaminated sites, of these 830 critically so.<sup>4</sup> And the **Polish** registry contains 100,000 locations (!) of pollution to ground water.<sup>5</sup> In **Slovakia** there are several registry lists. There is a database of environmental damages (ŠGÚDŠ) compiled by the Informatics Department of the Ministry of Environment containing 8,349 items, and a

database of old mining works with 16,379 locations, of which 500 are listed as having substantial environmental damage, and twenty with extremely serious risks that are monitored ongoingly.

Of course, these figures are highly dependent on the definitions and degrees of contamination; and beyond sites contaminated and feared contaminated, there are many additional brownfield sites that are simply derelict and underused. And, in all these countries, more sites will be discovered as proper environmental audits are done for the first time during property transfers.

The cost of environmental remediation is only part of the cost of bringing a property back into use: clearance and redevelopment costs can be much higher. Also, many of the sites on contamination registries are not urban, and thus have almost no development potential.

A more extensive brownfield registry is a prerequisite for several parallel processes. It is an important spur to awareness. The production of aggregate figures also forces the consolidation of various site registers into a single framework. Once this has been done, the systematic prioritisation of the sites can be developed, using an overlay approach: what are the derelict sites, which have actively health-threatening contamination problems, which are in desirable enough locations for the real estate market to pick up once they have been unlocked from their stuck state, etc.

The gap in systematic brownfield information is striking given not only the importance of the issue, but the progress that has been made on other environmental indicators and information, supported in large part through technical assistance from the EU, US AID, and the GEF over the last decade. This assistance has focused on air, water and coastline quality—i.e. on media that could potentially travel across the CEC borders. In these spheres, watchdog bodies and monitoring systems, that produce regular data, have been established. But registers or analyses of potentially polluted urban land and buildings have not received the same kind of assistance, despite their importance for urban redevelopment.

Beyond the task of inventory and prioritisation of sites, there is a pressing need for networking and the exchange of experiences and best practices within and between the Central European countries that share a similar legacy and predicament regarding brownfields. There are no national-level groups or even web pages devoted to brownfields in any of these countries, nor a regional one. In Czech Republic some policy guidance and information exchange has been given by overseas organizations (notably the OECD, the US EPA, the Welsh Development Agency, and Pittsburgh University), but this has not yet left a legacy of networks and institutional capacity on the ground. A few technical assistance projects focus on brownfields, but on a purely per-project basis.

## **Analyses - BARRIERS TO URBAN LAND RECYCLING – EMPHASES ON CZECH SITUATION**

### **Municipal leadership is not up to the task**

Most cities and their communities lacked the wherewithal to discern and respond to the rather sudden formation of a massive brownfields problem in the years following the transition. Brownfield sites are a form of market failure, where the cost of rehabilitation exceeds the benefits of use to an individual owner, freezing sites into disuse. While visual blight is immediately evident, and sometimes the devaluation of adjacent properties, the more subtle damages to urban economies are harder to spot. These include lowered densities, longer travel distances, and the under use of support infrastructure resulting from large pockets of unusable urban land, even as the need for development sites drives investment beyond the city's edge. It takes a competent strategic planning and urban administration to recognize the costs of this disuse and respond creatively to it. They also need to have the financial and legal knowledge and instruments for carrying out their strategies.

It takes a proactive, creative, cross-organizational effort and funding to “bump” such sites out of their stagnation. Public leadership must provide a range of coordinated inputs (policies, instruments, planning, funding, training) to begin to increase the attractiveness of these sites to the point that the market can take hold of them and use the potential inherent in their centrality. But amidst so much change, CEC planners and administrators were not until recently aware of the extent and larger implications of the dereliction of urban land, which had “Swiss cheesed” Central European cities. Nor

were the capacities for public intervention up to the task. Local administrators and governors often find themselves unprepared by their training or experience to address the urban land rehabilitation task; indeed, until recently, they often do not discern it as an identified and central task.

City managers should have a strong motivation for improving their brownfield understandings and capacities. Brownfield investments can improve the quality of life when they replace dilapidation and “holes” in the urban fabric with functioning urban land uses. And, because development that cannot occur on brownfields typically leaves the city for greenfield sites, outside of the city’s jurisdiction and revenue base, any development not captured for brownfield sites will work in direct competition with city interests.

### **Inadequate understanding by communities and NGOs.**

Pragmatically, community involvement is necessary to achieve buy-in and support of brownfield rehabilitation programs, both at the site and at the neighbourhood level. At a deeper level, the community voice is critical in answering the question: what are the purposes to which recycled land will be put?

A range of environmental and community-based NGOs and initiatives operate in all the CEC countries. Unfortunately, the majority of NGOs who might be relevant on the issue also lack the understandings mentioned for municipal leaders. NGOs are only now beginning to realize that the brownfield issue is the inverse of the sprawl and conversion of peri-urban agricultural land, on which they have been active for some time. And they have yet to fully link up the brownfield issue with issues of environmental health, community development, social equity, and public participation.

### **Private investors in a dilemma**

Given the difficulties described above that face a developer interested in a brownfield site, and the absence of public support, a principled developer associated with a high profile bank or institutional investor will have little motivation to tackle a brownfield site, even a centrally located one. This is especially true when a greenfield project could probably be completed in half the time (1.5 to 3 years). Less careful investors, however, might be attracted to the potential of high yields from such sites, and attempt to develop the site locally by cutting corners; they are greatly assisted in this by the lack of know-how (and sometimes conflicted interests) of permitting authorities.

The barriers that legitimate investors face in developing even brownfields at prime locations, underscore the need for orchestrated package of public sector measures and inducements.

### **Lack of integration, leadership, and strategy at the state level**

In Central European countries, the responsibilities and competencies for brownfield rehabilitation are divided among several state institutions. There is little history of cross-institutional, cross-departmental and cross disciplinary cooperation in these countries. In our opinion, the most promising model for brownfield leadership at this point is of a powerful and proactive ministry with planning, development and environmental responsibilities to set the tone and orchestrate activities by other partners. Such a model has not yet emerged in any of these countries, though in the Czech Republic a governmental agency has taken on some degree of leadership role on the issue.

Central European brownfield agencies have not yet internalised the sensibility that for many less polluted sites, where treatment is not dominated by environmental or health hazard considerations, brownfield decision-making must be integrated with considerations of a site’s commercial viability. This requires knowledge of real estate markets and property development processes often lacking among most CEC agencies.

## **Findings- SUMMARY OF THE KEY BARRIERS**

A key theme emerging from this review is the need for brownfield leadership at national, regional and local level that can coordinate the many measures, policies, and administrative linkages necessary to get more urban brownfield properties “unstuck,” and into productive use. From our knowledge, the Czech situation is sufficiently similar to that in other Central European countries to allow many of the

findings and suggestions here to be mapped onto these countries. By way of summary, the following are some of the key barriers to reusing brownfields.

#### ***Know-how, coordination, and motivation***

- Inadequate understanding of the scope of the brownfield problem, and of its financial and social implications in all levels
- Low levels of political commitment to brownfield reuse in all levels
- Absence of an overall brownfield strategy mainly in national level, but also in the lower levels
- Inadequate cooperation and knowledge-transfer among disciplines, institutions, and departments within institutions
- Inadequate know-how across the full range of potential brownfield stakeholders, including private investors, local authorities, regions, and ministries

#### ***Tools and policies***

- Lack of clear-cut policies and strategies
- Insufficient transparency and enforcement in the legal system in several areas that impinge on brownfields planning, purchase, and use
- Lack of means to insure or cap environmental liabilities
- Inadequate tools for land assembly
- Inflexible planning tools
- Insufficient fiscal instruments and incentives
- Overly uniform and insufficiently discriminating cleanup standards
- Lack of a unified registry of sites and their critical parameters
- Lack of analytic tools and principles for prioritising site investment
- Lack of benchmarking of the technical and other costs and procedures against international best practices

#### ***Broader market milieu***

Even with adequate knowledge, coordination, technical tools and policies, brownfield rehabilitation on a sufficient scale is unlikely unless the following prevails

- A vibrant expanding market
- Local public sector finance (for the less prime and heavily damaged sites, and to match private sector or EU funding even for prime sites)
- Greater restrictions on the ready availability of greenfield sites. (This availability represents hidden subsidies to greenfields, in the form of infrastructure extension, and, in the long term, support for inefficient spatial structures. Thus this item could be rephrased as “removal of greenfield subsidies.”)

## **Conclusion - OVERCOMING BARRIERS TO URBAN LAND REJUVENATIONS**

### **The big picture**

Given the various barriers to brownfield rehabilitation described here and in our “Brownfield Leadership” essay, it is clear that brownfields constitute a major societal task. While single well-placed sites can be assembled and cleared on an ad hoc basis by the private sector, the multitude of other sites requires a strategic and integrated approach. These must be identified and prioritised, and bringing them back into use cannot occur without changes in the legal and tax frameworks, and an entire apparatus and know-how for sophisticated cooperation between the private and public sector. The necessary governmental and para-governmental efforts demand substantial financial resources, focused integrated strategy, leadership, and political will.

**The main barriers now are not fiscal, but issues of awareness, coordination, and administrative and legal changes to channel existing resources properly. This said, there still a massive scope of financial resources needed. Decades of environmental negligence must be paid for, and a massive restructuring of land use to serve current economic patterns is needed, and this will burden the taxpayers for decades to come. It will be cheaper in the long**

run, however, to do this job right, and to do it fast. Right, so that scarce funds are not wasted on the wrong rehabilitation or the wrong sites, and that maximum private sector funds are leveraged. Fast because it can cost more to do many of these sites in the future; because the lost capacities of brownfield areas are already invisible draining away the economic vitality of cities; and because the finite volume of local, EU, and global investment in coming years will go to sites that are easiest and fastest to develop: the towns and countries that are able to gear up in time to channel this onto brownfield rather than greenfield sites will be more efficient and competitive in the long run. Against this background, we see the following as priorities for accelerated treatment of brownfields

## **Conclusion - PRIORITIES FOR ACCELERATED TREATMENT OF BROWNFIELDS**

- **Government commitment.**
  - The government must express its political will in the form of a short sharp policy, for example stating the percentage of investment that is to go into the already urbanized area.
  - The government must get the actors to talk with one another, and ensure they fund and implement proposals towards these ends.

A need for a strong ongoing coordinating role in this process is obvious
- **The emergence/establishment of a clear-cut brownfield leader**

While there is a need for increasing the brownfield awareness and competencies of all stakeholders (including non-governmental ones), there is a need for a strong orchestrating entity. This could take one of several forms.

  - A strong governmental steering commission or a cross-ministerial commission
  - An existing ministry with an existing large role related to brownfields (typically the ministries governing finance, planning, development, and environment)
  - A specialized brownfield agency formulated specifically to have a broad clearance, development and coordination remit
  - Another body—as long as it is empowered to lead and coordinate, and has the funds for the job.
- **An approximate assessment of the scope of the problem**
  - Steps, strategies, and policies need to be based on a rough estimate of the problem's size, cost, and consequences.
- **A mapping of the brownfield approaches and experiences of other countries**
  - An initial mapping must be followed by more detailed consultations with those abroad that use and administer the most relevant models.
  - Central European countries should use to the full the available EU resources, such as technical or twinning assistance, to increase local know-how and understanding.
- **Education at the Ministerial, municipal, and regional level**
  - It is important that staff, especially at the middle levels, have an appreciation of the costs of inattention to brownfields, and the measures and strategies available for recycling them
  - A PR and education program must also be directed toward elected representatives, who will eventually vote on the legislation under-girding brownfield programs.
- **Establish and support regular forums, networks, and channels of communication**

Exchange and discussion should be

  - international
  - inter-agency,
  - inter-disciplinary,
  - and inter-departmental.
- **Prepare a National Brownfields Strategy indicating the priority areas, and identifying goals, dates and financial means**
  - Site treatment should be based on economic, environmental, and urban criteria overlays
  - Institutional competencies, responsibilities, and coordination procedures must be outlined
  - The necessary policies, programs and legislative changes should be sketched. These should include the fiscal measures and incentives and legislative improvements mentioned in this report: short depreciation of cleanup expenses, tax breaks, improved land consolidation procedures, etc.

- A concrete implementation plan, including funding and timeline for its achievement, must be specified.
- **An integrated vision of vital city centres must drive the entire initiative**

Throughout the above measures, an urban perspective committed to the long-term public interest and to a broad definition of urban vitality must be employed. Such a perspective goes beyond the question of reuse of derelict land, and inquires, “reuse for what end?” Beyond making a site “available” there is the question of the social and economic life that will draw the site into use, so that the project becomes one of community redevelopment. There are old factories in Prague that have been converted into award-winning office spaces, but they all empty out at 5 PM, still leaving a large (if lesser) hole in the urban fabric. Clearly then, the question of what use is one that requires considerable public engagement.
- **Pilot projects**

Pilot projects (such as the Ostrava project now under preparation) should be implemented and their lessons made available in information and education packages. The prioritisation of projects should keep in mind the considerable added value of a visible quick “win.”
- **The “green light” given to brownfields, should be supplemented with a “red light” for greenfield development.**

The planning and administrative loopholes that allow irresponsible greenfield site development should be closed, and the hidden subsidies for this kind of development removed (greenfield developments should pay the full cost of their infrastructure, for example).

## APPENDIX 1

### Recommendations - POTENTIAL AMENDMENTS OF THE LEGAL AND TAX FRAMEWORKS

In order to enable effective brownfield rehabilitation, broad amendments of the legal framework are necessary in all of the Central European countries. In each, local legislators need a comprehensive sense of the rationale behind these changes, and several state institutions would be involved in negotiating the amendments.

As a first pass, and a spur to action, ITDP has been circulating a sample list of the kinds of amendments needed in the Czech law to Czech strategic advisors and ministries. This is clearly not a thorough analysis, but a rough first pass, meant to elicit discussion. The list of changes is grouped by the Ministry of most relevance, though clearly some of the suggested changes reverberate across ministerial boundaries, and some may demand the establishment of a new authority, or the reallocation of competencies. The main suggestions include the following

#### Ministry of Regional Development

##### The planning and construction law

- Amendments necessary to allow the Ministry to designate “Brownfield Action Areas” in which unique planning, fiscal, and grant regimes pertain, and can be acted on by other institutions.  
A precedent for this kind of special area exists in the Historical Monument Legislation, which designates special areas for tax breaks and grants for conservation purposes from several institutions.
- Amendments to allow special purpose “development corporations” to act in the areas thus designated, and specifying the scope of their responsibilities and powers.
- Amendments empowering the Ministry to issue directives on how brownfields should be recorded and monitored.
- Amendments enabling individual local authorities or a consortium of local authorities to approve a flexible “Development Brief” for such brownfield areas, which would direct development of the site
- Amendments that allow greenfield development only to the extent that sites in already urbanized areas have been exhausted, and specify guidelines for such demonstrations.

##### Cadastral law

- Amendments that would ensure that a site’s contamination and clearance history were entered
- in its cadastral entry, and made publicly available.
- Amendments to make the areas described in 1.1.a visible in cadastre.
- Amendments enabling local authorities to register claims against property tax debtors.

##### New institution

Possible new laws establishing a Brownfield Redevelopment Institution that could take a central national role in a brownfield clearance and reuse program

- **Obtaining government approval for programs for brownfield sites that will not have an industrial use**
- **Grants and special Investment Funds for brownfields rejuvenation and also funds to match possible EU funding**
- **Education programs orientated onto local authorities and NGO**

## Ministry of Environment

### Amendments to laws dealing with ecological damages

- Amend law so as to provide a solution for all old environmental damages, inclusive of those not covered by the environmental clearance guarantees arising from privatisation.
- Amend the law so as to clearly identify the transfer sequence of environmental clearance guarantees arising from the privatisation process, and lays out the extent and limits of the environmental responsibilities of new owners
- Amendments creating or enabling insurance products that would limit the liability of owners and future owners for environmental damages and the costs of clearance.
- Amendments of the law referring to the ground water in such a manner so that in certain well specified cases, the natural clearing processes of a closed site can be considered a viable method of remediation after the necessary period has elapsed.
- In certain well specified cases, containment of pollution by well recognized best practices may be considered a sufficient remedy once approved by the appropriate authority.
- The legal basis for creating a division (or augmenting the powers of an existing one) that will take the lead in the environmental and technical aspects of remediation and clearance.
- Administrative arrangements for establishing a national database of clearance and remediation unit costs, to increase transparency and prevent inflated costing
- Amendments requiring that the results of all environmental audits and surveys be submitted to a central repository, and that those above certain thresholds be entered into the cadastre

## Ministry of Finance

- Decrease the depreciation period of brownfield environmental clearance and demolition costs from 30 years to a more preferential rate. (The long depreciation horizon is a considerable disincentive for potential investors in brownfields.)
- Revise official property valuation procedures so that environmental damages are subtracted from the value of the real estate.
- Gradually increase property taxation to levels on par with EU countries
- Strengthen the treatment of non-payment of property taxes, including registration of non-payment in cadastre, and strengthening the enforcement powers of local authorities to collect the incomes due to them.
- Programs and tax incentives for direct investors in Brownfield Action Areas.
- Enabling creation of specialised investment funds offering cheap loans and grants for environmental clearance.
- Enabling creation of specialised investment funds offering risk capital for Brownfields development.
- Tax breaks for indirect investors investing in these specialized brownfield funds.
- Specifying financing for the state institutions responsible for implementation of state brownfield programs.
- Amendment to law assuring public access to the Environmental Clearance Contract of the National Property Fund.
- Legislation enabling environmental liability insurance products.
- Preparation of regulative guidance for brownfield public-private partnership programs.
- Providing a system of guarantees for EU co-financed non commercial projects

## Ministry of Industry

- Creation of programs and institutions promoting reuse of industrial brownfields
- Possible new laws governing a special purpose Brownfield Redevelopment Companies (if these do not fall under another Ministry), which would govern the property rights and duties of the owners in brownfields Action Areas

### Ministry of Interior

- Creation of forms to be used to establish indicators and benchmarks related to brownfields and their clearance, and establishing duties by public and private sectors to return these
- Amendments to law obliging local and regional administrations to monitor local brownfield situations in on a regular (say 5 year) basis.
- Provide brownfield related education programs for the regional and local administration

### Social and Employment Ministry

- Provide incentives for job creation on rehabilitated brownfield sites, and in the work of brownfield rehabilitation.
- Provide retraining packages for those formerly employed in abandoned industries that are now brownfields

### SUMMARY

The above list, as provisional as it may be, underscores several features of the brownfield challenge. **First, the extent and interlocked nature of the changes in the planning, fiscal, and environmental protection regimes. Second, the large and often unsuspected role that finance ministries must play.<sup>6</sup> Finally, that while cleanup and development costs are large, they are not currently the main bottleneck for brownfield rehabilitation in Central Europe; the main barriers are the cross-departmental and cross-ministerial efforts, lack of clear-cut policies and strategies, and a needed extensive and complex revision of various items of enabling legislation.**

### Recommendations - EMPOWERING AND MOBILIZING LOCAL AUTHORITIES THROUGH A BROWNFIELD AUDIT METHODOLOGY

#### Why local authority self-audits?

Ultimately, brownfields reside in local communities, and local authorities are key stakeholders in addressing the problem. In Central Europe, there is often lack of awareness of the issue at the local level, and even informed and willing authorities are often stymied on several fronts:

- o It is the national government and legislators that must formulate and approve necessary amendments in the legal framework;
- o Finances are in the hands of private financial institutions and state agency programs;
- o Properties are in the hands of private owners.

Thus, until the national capacity on brownfields has matured, it only those local authorities with high initiative, and the capacity for rapid learning and creative use of very limited tools and resources, which can effectively regenerate their brownfields. These agile and informed few have been able to access international grant and aids packages. As the 2004 EU accession approaches, more funding will be from EU sources, and especially Cohesion and Structural funds. However, because even a relatively straight-forward brownfield project takes three or four years to put together, it is likely that only those authorities that have already started preparing such projects will benefit from the first years of such funding. Competition among local authorities will be fierce, not only for funding to rehabilitate sites, but for the investments and activities that must inhabit these sites if the market is to take them up.

Local authorities can greatly expand their understanding of and capacities for action on brownfields by conducting their own brownfields audit. The audit has a twofold goal: to identify the amount and kinds of brownfield land in useful terms, and to use this process as tool through which local authorities learn about the environmental, market, and development aspects of brownfield rehabilitation. These include the following.

- o The environmental dimension: what were the past activities on the sites, what are the legacies and risks associated with these, what guarantees were issued for cleanup and what is their status.
- o The real estate dimension: they will be required to assess the local real estate market.
- o Prioritisation: they will need to clarify their rationale for brownfield rehabilitation, and select the project most likely to succeed, in order to focus their planning and support on this site.
- o Capacity for proactive and strategic planning.
- o Literacy and networking on the topics of brownfields and local redevelopment as they need to access the information and practitioners.

An audit of this kind requires shared methodological guidelines to provide a systematic framework to the local authorities about what to look for and collect, and how to analyze this, and to ensure information that is comparable across authorities as far as possible.

#### Three levels of audit

The brownfield audit can be done at a basic, intermediate, or advanced level, as described below.

##### ***Basic level***

This provides a fairly accurate inventory very quickly. A local map is marked up with brownfields locations, and then the following is recorded:

- o the total number of brownfields
- o the main categories of these brownfields (industrial, rail, etc.)
- o where each falls (central, intermediate, or off-center locations)

- the total area of brownfield land, and breakdowns by category and location
- This information can then be combined with other local measures (built up area, planned area, etc.) to create local indices that allow towns to be compared and are persuasive to decision-makers (see the box below).

### ***Intermediate level***

This level takes longer to do and is more involved, requiring greater technical expertise.

Two types of information are produced here:

- ❖ Considering the realistic prospects of the community being able to market any rehabilitated brownfields. This requires surveying the location, infrastructure, and the socio-economic status of the community. This will inform a community about what kind of end use should be planned for (office space, a park, etc.)
- ❖ Basic information on individual brownfield sites, including
  - Environmental situation
    - Environmental damage analyses (likelihood, type)
    - The existence of environmental guarantees
    - Initial estimate of clean-up costs
  - Basic Property Ownership Analyses
  - Basic employment and companies operating in the area analyses
  - Current land use designation

### ***Advanced level***

This provides deeper information on the individual sites, constituting virtually a due diligence assessment of environmental hazard, ownership, debt load, real estate matters, infrastructure, liability, etc.

## **Implementing the audit**

ITDP is currently soliciting partners to develop a more refined version of the audit, together with a users manual and teaching packet and assistance hot-line. And we are in discussion with several potential partners to help move from the pilot to a broader use of the audit.

Our estimate is that only about 400 Czech local authorities are currently able to cope with the technical demands of a brownfield audit, hence the utility of the tiered approach described above. Many local authorities could provide the basic total figures and indices of the "basic brownfields audit;" a more select group could be given an intermediate training, allowing them to collect and analyse the information necessary to make an initial ranking of the sites for more focused and immediate brownfield attention. And an "advanced brownfields audit training" would be available for some authorities that needed the knowledge to do full site evaluation and planning.

### **Mobilizing brownfield action through simple objective indicators**

While brownfields are sometimes defined as land that is contaminated or suspected to be contaminated, a broader more useful definition is all previously used sites that are currently significantly underused. In working with local authorities, we were immediately posed the question of how to determine in some objective manner whether an area fell under this description, and how one could more readily scan municipal lands to identify such sites.

An rather direct indicator of under use would be tax yields per unit area, within classes of similar land use. Under-par sites would stand out. However, while it is technically possible to produce such data, at least in the Czech Republic, local authorities face administrative and legal barriers in obtaining this. Presently, they obtain aggregate data for the entire area of their jurisdiction, but cannot obtain a finer resolution, even were it to be resolved to a group of say 10 taxpayers, to respect the privacy of individuals. Perhaps, as the value of such indicators becomes more apparent to the authorities, they may lobby harder to obtain it, but for now, this is a dead end. Other fiscal indicators are publicly available, such as the number and volume of real estate transactions, or of construction permits, or the registration and deregistration of companies, but none have the directness and bite that the tax data might.

In the absence of tax yield information, we worked with local authorities on a more subjective and rapid way of identifying and measuring their brownfield holdings. After a brief sensitisation to the range of sites other than the typical abandoned industrial site that might be brownfields (abandoned institutional buildings, army barracks, railway sidings, etc.), several local authorities were able to map the location and extent of lands, with varying degrees of sophistication. Some used pencils on a town map, while others conducted more extensive and expensive surveys.

With this data in hand, we began to prod these authorities to construct various indices that display the severity of the problem in terms comparable between towns. Most local authorities have three declared boundaries: their administrative area (**AA**), the area included in their local master plan (**PA**) if this exists, and the extent of the actual built up area (**BA**). Whereas jurisdiction and local plan areas (AA and PA) are precisely defined, built up area is somewhat more subjective. We asked authorities to express their brownfields as a percentage of their planned area, and of their built up area. We also asked for an index of PA/BA: an indicator of the authority's "growth ambitions," if you will. A town that has planned 1.3 times its current built up area has, literally, designs for 30% more land that it currently occupies.

The growth ambitions can be tested by taking the difference between planned and built up area (PA-BA), and dividing this by the actual increment in built up area (averaged over the last 3 years, for example). This indicates how many years of current growth rate would be required to "fill up" the planned area through greenfield conversion. Now, if one takes the total of areas identified as brownfield (**TB**) and divide this by the recent average annual growth increment, we get an indication of how many years growth could be accommodated in brownfields. This poses starkly the extreme scenarios of zero and full brownfield utilization. This leads readily into a discussion of the costs of a sprawled out-fill scenario, and its attendant costs of infrastructure extension and abandoned holes in the central urban fabric, versus the brownfield regeneration in-fill scenario, with its attendant costs of land rehabilitation.

Also persuasive to public officials are brownfields as expressed as a percentage of built up or planned or industrial areas. (In Sternberk, for example, it was discovered that 63% of their industrial area was brownfield). These ratios—the knowledge, for example, that 10% of a town's built area is under-performing—seems to have a galvanizing effect on City Hall, especially once we demonstrate the lost development potential represented by this underused land. The standard CzechInvest figures (though these must be modified to suit different settings) are 50 jobs per hectare, or 40 housing units. We also asked local authorities to break down the planned volumes proposed for the PA-BA greenfields into sectors (industry, commerce, housing, etc.), so as to sharpen their awareness of how much of each could be accommodated within their existing brownfields.

In our work in the Czech Republic we have noticed how these simple indices have a strong education, advocacy and coalition-building function, and help generate pressures on the state system to accelerate the legal framework and tools to help recover these underused lands. They basically help redirect an automatic outward greenfield perspective on development, toward one more attentive to the potentials for inward regeneration. As we near the end of the pilot stage of developing this brownfield audit methodology, we are exploring the appropriate platforms and partners for delivering a finished core packet of materials in the Czech Republic, and localizing versions in other Central European countries.

## NOTES

- 1 Jirina Jackson is Regional Coordinator for ITDP in Central Europe. She can be reached at Jjackson@volny.cz.
- 2 Yaakov Garb is Director of ITDP's Central European and Middle East programs. He can be reached at ygarb@cc.huji.ac.il.
- 3 Ryszard Jankowski, Marek Korcz, "The financing and cost of redeveloping of post- industrial sites in Silesia," Institute for Ecology of Industrial Areas, Katowice, Poland. Paper presented at the NICOL conference in Budapest, November 2002
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- 6 David Adams, Alan Disberry, Norman Hutchison, and Thomas Munjoma, "Mind the gap! Taxes, subsidies and the behaviour of brownfield owners," *Land Use Policy* 17 (2000), pp. 135-145