

Bohumil FRANTÁL, Stanislav MARTINÁT
BROWNFIELDS: A GEOGRAPHICAL PERSPECTIVE
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Bohumil FRANTÁL, Josef KUNC, Eva NOVÁKOVÁ, Petr KLUSÁČEK, Stanislav MARTINÁT, Robert OSMAN

LOCATION MATTERS! EXPLORING BROWNFIELDS REGENERATION IN A SPATIAL CONTEXT (A CASE STUDY OF THE SOUTH MORAVIAN REGION, CZECH REPUBLIC)

In this paper the authors attempt to answer the question of which location and site-specific factors have a decisive influence on the successful regeneration of brownfields. Using data from the South Moravian Region (Czech Republic), we analyze the spatial and functional distribution of brownfields, and test the correlation between the development potential of municipalities and the distribution of the brownfields that have already been regenerated. We then compare the structure and characteristics of existing and regenerated brownfields to identify significant drivers and barriers in the regeneration process. The findings indicate that regenerated brownfields are more likely located in municipalities with a higher local development potential (represented by the rate of local business activities, spatial peripherality –proximity to the regional centre and the main road network, and the quality of local infrastructure). It is also demonstrated that the large size of brownfields, their previous industrial use and the existence of contamination are not determinative barriers for regeneration if the brownfields are located in attractive areas and their ownership relations are not complicated.

Robert KRZYSZTOFIK, Iwona KANTOR-PIETRAGA, Tomasz SPÓRNA
A DYNAMIC APPROACH TO THE TYPOLOGY OF FUNCTIONAL DERELICT AREAS (SOSNOWIEC, POLAND)

The increasing number of wastelands in East-central European countries is primarily a consequence of functional transformations and movements in the structure of employment. Taking into account such a challenge in this article, the authors propose an approach in which the basic category is a typological proposal with reference to areas with derelict functions, which in turn refers to research within the scope of human geography. In their methodological proposal, the authors consider such variables as: (i) the diversification of management and use of space; (ii) time; (iii) economic functions; and (iv) the scope of geographic research. The effect of including these variables is an attempt to dynamically depict the evolution of land use, with particular attention paid to wasteland: original state – transitional state (derelict areas) – present state. The typological depiction of the emergence and transformation of areas with derelict functions is presented for the case of Sosnowiec.

Jiří NOVOSÁK, Oldřich HÁJEK, Jana NEKOLOVÁ, Pavel BEDNÁŘ
THE SPATIAL PATTERN OF BROWNFIELDS AND CHARACTERISTICS OF REDEVELOPED SITES IN THE OSTRAVA METROPOLITAN AREA (CZECH REPUBLIC)

Differences between brownfields and redeveloped sites in the Ostrava metropolitan area are subject to analysis in this paper. Environmental burden and former functional use were identified as statistically significant characteristics of such differences. In addition, relations between selected attributes of brownfields and redeveloped sites were analyzed using the “if-then” decision rules of the rough set method. In this way, the research demonstrated the significance of spatial aspects and identified two fundamental types of brownfields in the model area. The first type is represented by agricultural brownfields in the hinterland zone, that are characterized by a complicated ownership structure. Brownfields of the second type are located particularly in the inner city morphogenetic zone, and are characterized by potential problems with environmental burden. In this context, brownfields and redeveloped sites differ respectively in the combination of these characteristics

Jan SKÁLA, Jarmila ČECHMÁNKOVÁ, Radim VÁCHA, Viera HORVÁTHOVÁ
VARIOUS ASPECTS OF THE GENESIS AND PERSPECTIVES ON AGRICULTURAL BROWNFIELDS IN THE CZECH REPUBLIC

Abandoned agricultural objects from the period of large-scale agricultural production in the socialist era represent a peculiar topic in the former communist countries of Eastern Europe, surpassing the experience of the EU15 countries or USA that have extensive and long-standing practice in brownfields redevelopment. The question of brownfields resulting from the transformation of the agricultural sector during the transition period of the Czech Republic is presented in this paper. Agricultural brownfields are the most frequently occurring brownfields in the Czech Republic (especially in some regions), but their area share is much lower, indicating their spatial disposition in the landscape. Some aspects of agricultural brownfields regeneration, including possibilities of its funding, are discussed in the paper. We also deal with geographical, environmental and historical aspects of the existence of these localities in the Czech Republic in the context of potential financial resources and possibilities for funding their revitalization.

Wenjie SUN, Brendon JONES

USING MULTI-SCALE SPATIAL AND STATISTICAL ANALYSIS TO ASSESS THE EFFECTS OF BROWNFIELD REDEVELOPMENT ON SURROUNDING RESIDENTIAL PROPERTY VALUES IN MILWAUKEE COUNTY, USA

Brownfield redevelopment has gained support in the U.S. as an essential ingredient of urban revitalization. Assessing the effects of such projects is important as government budgets tighten recently. Through multi-scale spatial and statistical analysis, this study shows the spatial patterns of residential property values and their changes, and investigates linkages to the presence of different types and sizes of nearby brownfield redevelopment projects, as opposed to neighborhood demographics and property characteristics. While the results of this study suggest brownfield redevelopment does play a positive role on the surrounding residential property values in general, there are quite different statistical significances found at the two levels of analysis and the type of redevelopment found to determine the direction of this effect.