

## REVITALIZATION PROCESSES OF OLD INDUSTRIALIZED REGION IN THE CONTEXT OF FUNCTIONAL URBAN AREAS

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**Abstract:** Functional urban areas (FUA) have become an important component of polycentric settlement structure of all European countries. FUAs have been defined as labour market basins, composed on large city and its surrounding areas (commuting zones). The very spatial and economic concept formed the foundation of old industrial regions. Old industrialized regions with all the spatial challenges and economic problems could be also perceived as a specific type of functional urban area. In Poland, National Spatial Development Concept 2030 (NSDC 2030 2013) describes restructuring and revitalization of degraded areas and cities in terms of spatial policy measures addressed to the supporting of cohesion in problematic areas. That is why integrated revitalization programs of functional urban areas may become key instrument of regional spatial policy and urban strategies. In response to the problems of degraded land and related land-use conflicts, it can significantly help in establishing valuable solutions, as well as ensuring connections between environmental, social and economic needs in the development of functional urban areas.

**Keywords:** functional urban areas; revitalization; land-use conflicts

**JEL codes:** R52, R58

### 1. Introduction

According to the definition by the European Spatial Planning Observation Network (ESPON 2011), functional urban areas (FUA) are labour basins of the Metropolitan Urban Areas that are defined as densely populated areas, not dependent on national, political or administrative influence, but based on statistical information. This definition has been used for identifying these areas in all European countries. FUA's are economic and spatial units with a population of over 50,000 inhabitants that is characterized by densely inhabited "urban cores" the population of which

exceeds 15,000 inhabitants (ESPON 2011) and “hinterlands” whose labour markets are highly integrated with the cores.

FUA in Poland is a new category in spatial planning, resulting basically from the territorial aspect of regional policy presented in strategic documents including National Spatial Development Concept 2030 (NSDC 2030 2013) and National Strategy of Regional Development 2010–2020. Regions, cities, rural areas (NSRD 2010).

As introduced to these documents, functional urban areas can be divided into four sub-types:

- voivodeship (including metropolitan areas),
- regional,
- sub-regional,
- local centres.

This typology refers to the functions of urban centres in the settlement system of the country. Functional urban area is a spatially continuous settlement system consisting of units separated from administrative terms. It covers a compact urban area with a functionally linked urbanized zone. Poland has well balanced urban structure with several large FUAs (the biggest are Warsaw agglomeration and Upper Silesian conurbation) and many medium-sized cities. Based on National Spatial Development Concept 2030, “functional areas have been designated with delimitation on different levels of management (national, regional, functional). They can be divided into four basic types:

- defined in relation to the entire settlement system, delimited on the basis of the degree of urbanization, covering urban areas : core cities and their functional zones and functional rural areas,
- delimited on the basis of the type of development potential which is related to the presence of a particular spatial management phenomenon and conditions for development policy on the macro-regional scale,
- delimited on the basis of the possibility of spatial conflicts related to the way in which their environmental and cultural potential is utilized,
- requiring transformation and development of new functions with the use of regional policy instruments. Those are the areas where socio-economic problems accumulates and barrier of achieving spatial cohesion of the country arise.” (NSDC 2030 2013).

FUAs can also be defined as a “travel-to-work area. Functional urban areas are therefore seen as the agglomeration of work places attracting the workforce from surrounding areas” (Antikainen 2005). A functional definition, based on the daily home/work commuting trips between core area and surrounding municipalities. It is visible, especially in old industrialized regions, where coal mines, foundries or steel works create local centres surrounded by housing development and its infrastructures.

## **2. Could we perceive old industrialized region as an example of specific archetype of FUA?**

Old industrialized regions have been at the core of theoretical and analytical literature in the 1980s and 1990s. Since then, the term “old industrialized regions” (OIR) largely disappeared from the scientific literature. This is partly a result of the dominant themes and concepts of knowledge economy, learning regions, and the “new regionalism” (Tödtling & Trippel 2013). The largest of old industrialized regions can be found in the UK, France, Germany, Belgium and Poland. In the 1970s and 1980s in European countries, the decline of old industrialized regions could be observed. Many current problems of these regions are rooted in the past. Reconversion and restructuring processes in old industrialized regions are related to severe environmental problems, derelict areas and infrastructure, as well as to social problems like unemployment. In many countries restructuring and revitalization of degraded and post-industrial areas and cities are underlined in description of spatial policy measures addressed to the supporting cohesion in problematic areas.

There are several old industrialized regions in Europe that have gone through a similar history and nowadays are facing the same challenges. In these regions, an intensive development of industry in 19th and 20th century created new urban structures – built up areas based on mixture of production, services and residential functions. They formed integral, usually compact functional areas that could be defined as a specific archetype of FUA (regional or sub-regional).

Upper Silesian conurbation could be perceived as an example of this kind of functional urban area. It is the largest urban and industrial structure in Poland. Its urban system is the result of industrialization processes. Mining and metallurgy industries were among the key factors that intensified development of this region. Large scale hard coal extraction industry developed in the second half of 18th century. Since 19th century development of heavy industry in Upper Silesia has progressed in such a scale that it could not be reported in any other part of the country. The development of industry and job opportunities attracted new incoming workers. The coal mines or steel mills became surrounded by densely built up structures: residential houses, public utilities and municipal facilities. Now, the sectors of heavy industry are in decline stage in this region, however industrial heritage still plays important role in this area. Historically Upper Silesian conurbation consists of 14 cities, characterized by industrial background. The total surface of this area is approx. 1,300 sq. km with a population of 2.0 mln citizens. However, the latest regional strategic document – The Silesian Voivodeship Spatial Development Plan 2020+ (The Silesian... 2016) enumerates 23 towns of this conurbation, whereas the industrial core is defined by 14 cities situated in the central part of this area.

Due to vast number of post-industrial premises and sites (brownfields), post-industrial legacy is an urgent and meaningful issue of this area. All cities with an old industrial heritage face similar development problems as many other cities. Those are in particular: the need for renewal and rehabilitation of the old housing stock,

the challenges related to the changes in economic activities and creation of new jobs. Nevertheless, these industrialized cities need specific strategies focused on revitalization's process. The degraded urban areas need revitalization because many of them are technically damaged. That is especially true for the historical inner-city districts or worker's dwelling units, as well as former industrial sites (Gorgoń 2016). From the perspective of spatial planning terminology, Upper Silesian conurbation could be defined as "a compact spatial system consisting of functionally linked territories, characterized by shared conditions and anticipated uniform development objectives" and belongs to group of "cities and other areas losing their current socio-economic functions" (NSDC 2030 2013). Socially, economically and environmentally degraded areas of this conurbation are identified in Voivodeship Spatial Development Plan and in Voivodeship Development Strategy, which allows to define this old industrialized region as specific functional urban area characterized by the functionally integrated spaces which are bound by strong internal bonds of economic, social relationships.

### **3. Post-industrial functional urban areas within the Upper Silesia conurbation**

The Upper Silesian conurbation is the historical heart of this industrialized region, and creates its Metropolitan Urban Area (MUA). The central part of this area has been strongly connected with the beginning of heavy industry monoculture. Nowadays we can observe numerous results and impacts of industrial past on the environment, urban structure and economic condition of its population. Many mine landfills-heaps which can pose hazards, emerged in the result of hard coal production. Lots of abandoned post-industrial premises and derelict sites are situated here and creates new context of agglomeration space.

Brownfields often play great social and economic role, because of its strategic location and economic value. That is why revitalization became an important issue facing local and regional authorities. In fact, it should be seen the key factor of MUA development. For this reason it has been crucial to distinguish the scale of these problems and specify objectives related to the each single city and its vicinity. It has been clear that some of MUA's cities share the same problems, furthermore there are no visible borders among brownfields situated within their space. This aspect creates a good co-operation platform for neighbouring communities and helps to shape a particular functional urban areas within broader regional urban structure.

There are some relevant and interesting examples of such a co-operation. One of them is the three cities of Chorzów, Ruda Śląska, Świętochłowice that established such a platform. The main goal of this agreement has been to enable the delimitation of specific FUAs based on the identification of related problems. Despite the fact that this area does not correspond to strict classification proposed by NSDC 2030, this idea has been supported and co-financed by the Ministry of the Regional Development (Fig. 1).



Fig. 1. Delimitation of FUA

Source: Integrated Revitalization Program for FUA of Chorzów, Ruda Śl. and Świętochłowice, IETU, 2015.

In response to the problems of degraded land and related land-use conflicts, local authorities of these cities decided to elaborate integrated revitalization program that applies to their FUAs. The total area of these three cities is 124.19 sq. km and the population equals 300,000 inhabitants, but total area of degraded and post-industrial land is 20.04 sq. km, which represents 16.14% of this functional urban area surface. The corresponding data for respective cities are: Chorzów – 11.09% (degraded or post-industrial areas) of city's surface, Ruda Śląska – 18.62%, Świętochłowice – 14.31%. The area of these cities has been divided by two main national (A4 motorway) and regional (DTŚ – central highway) transport corridors. It created three inner zones characterized by different spatial distribution of degraded sites.

#### 4. Methodological approach

The data analyses has been the principal approach, that allowed the basis for elaboration of integrated revitalization program of the functional urban area. Scope of analyses has been related to local and regional planning documents and strategies. The other important part of the analyses refers to the specific needs, weaknesses and existing tools that could be used in revitalization activities and to delimited existing post-industrial sites as well as an urban degraded areas with social problems. Identification of the main groups of important urban areas and related conflicts has been outlined (Fig. 2).

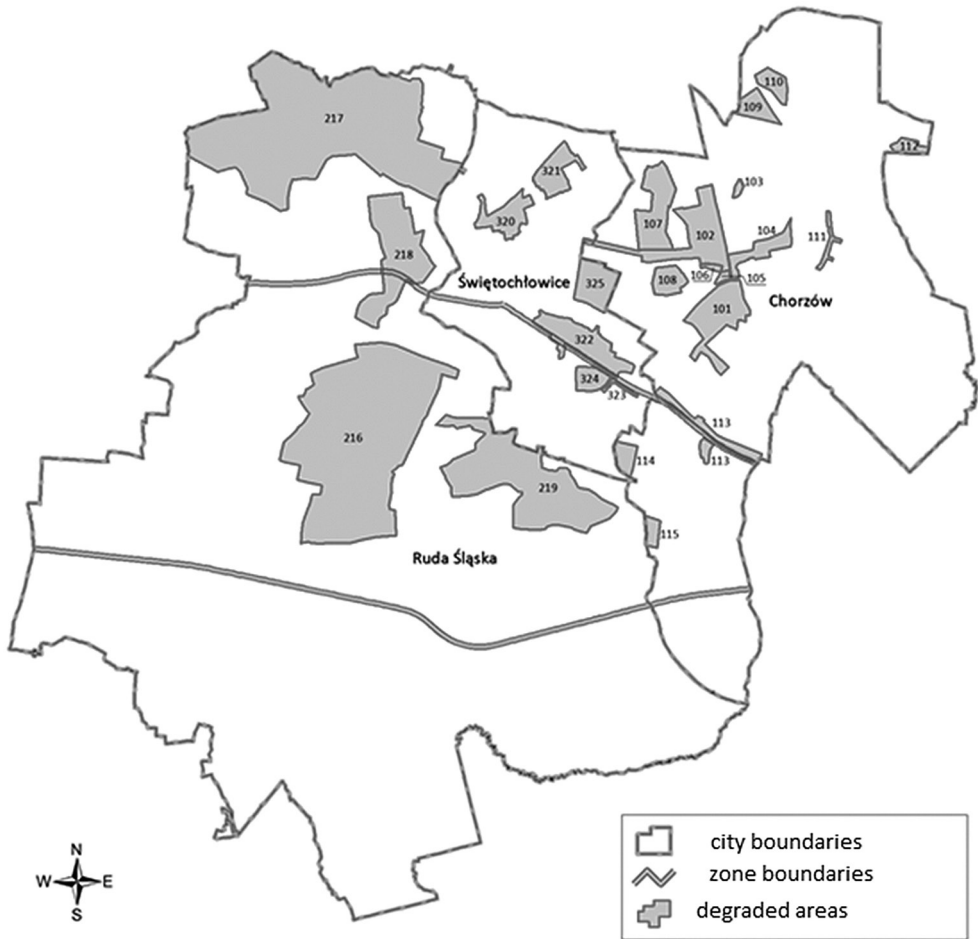


Fig. 2. Identification of the degraded and post-industrial sites

Source: Integrated Revitalization Program for FUA of Chorzów, Ruda Śl. and Świętochłowice, IETU, 2015.

The basic assumption taken for the Integrated Revitalization Program has been to make possible the synthesis of the three local revitalization programs (LRPs) that have been prepared within the framework of the project and financed by the Ministry of the Regional Development. The city of Chorzów played the leading and coordinative role in the preparatory process. Recently, the evaluation of local and integrated revitalization programs is carried out. The main goal of the program is based on objectives that are ensued from documents prepared at the local level (by participating cities). Figure 3 presents, how the integrated revitalization program has been built-up. The methodology follows the cross-sectoral and multidisciplinary approach that is reflected in the program structure based on two main pillars: first related to environmental-spatial aspects and second one related to socio-economic

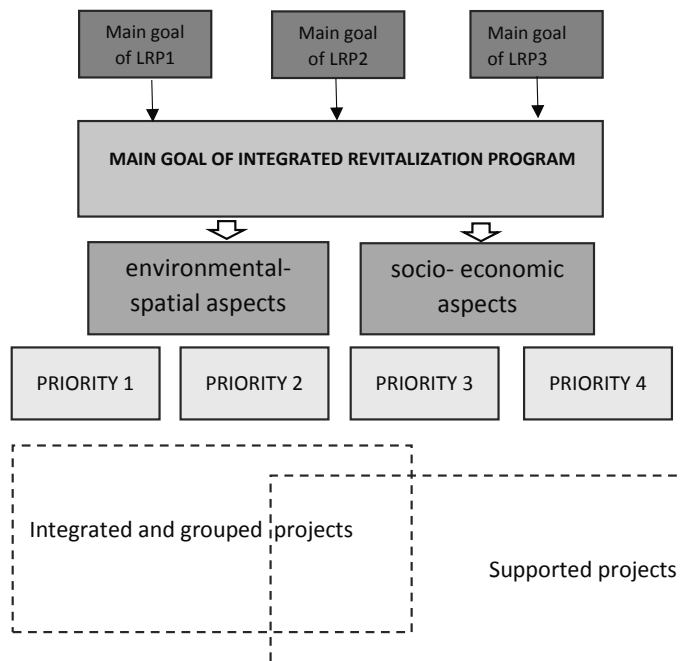


Fig. 3. Scheme of Integrated Revitalization Program

Source: Integrated Revitalization Program for FUA of Chorzów, Ruda Śl. and Świętochłowice, IETU, 2015.

aspects. This approach allows revitalization program to evaluate current state of spatial conflicts and to identify the common problems and challenges.

The most important challenges related to this functional urban area are:

- arranging urban structure according to the principles of spatial order,
- reinforcing the economic base by processes of restructure,
- reducing social exclusion.

The main challenge of the integrated revitalization program is to find way to balance the needs and pressures of urban growth with the opportunities and constraints of the environment, as well as to create the efficient system of conflicts' resolution.

The delineated goal of this integrated program is to strengthen processes of revitalization in functional urban areas. This objective highlights the importance of regeneration processes as a factor of urban renewal. Creation of new functions for abandoned sites is a response to market economy challenges. Furthermore turning degraded land into new functions is one of the milestones of the circular economy approach. In response to problems of degraded land and related land-use conflicts, this program would help to established an appropriate solution and minimize its costs by common projects as well as ensure connection between environmental, social and economic needs in functional urban areas development.

The analysis of the identified, degraded areas in these three cities, shows that due to the scale and similarity of problems, as well as their spatial scope, they



should be seen and treated in close relation. Therefore, it is appropriate to indicate measures that will support the objectives of revitalization programs on a FUA's scale. Proposed actions and projects will be focused on the creation of new instruments and development of existing ones like: legal organizational, financial and other, which would support the revitalization processes.

## 5. Conclusions

Strategies for cities and regions, especially those with a historic legacy of old industries, need to promote diversified development, without over-fragmenting policy goals and investment. The keys to the success, however, lies in the ability of these areas to foresee and shape their future, building on the post-industrial heritage and inter-municipal co-operation. The process of delimitation of those problematic areas should be prepared on the regional or local levels. Integrated revitalization programs at the level of functional areas could be the key instruments of regional spatial policy and strategies. The program presented in the paper is a case of FUA's experiment that refers to the needs of transformation and the development of new functions with the use of regional policy instruments. Still, the integrated revitalization program for functional urban areas is an example of integrated policy approaches in territorial dimension. The main role of this program in the context of regional development should be seen as the strengthening of the economic, environmental and social dimension of policy and by establishing functional urban areas to reinforce regional policy actions.

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