

SPATIAL CONFLICTS BETWEEN THE SHAPING OF OPEN SPACES AND THE SOCIO-ECONOMIC DEVELOPMENT IN THE METROPOLITAN AREA OF WARSAW

BOŻENA DEGÓRSKA

Introduction

The openness of Polish space to the new challenges of civilisation causes that the historically shaped spatial structures are currently undergoing dynamic changes. These changes result both from the contemporary world-wide trends, primarily globalisation, metropolisation, development of the information civilisation, as well as the widespread introduction of the principles of free market, development of car transport, changes in the lifestyles, and the process of European integration. All these processes exert an essential influence, both on the socio-economic activation and on environmental protection.

Among the metropolitan areas developing in Poland the most important spatial changes are taking place within the Metropolitan Area of Warsaw (*Furman, 2001*). The reach of this area is estimated at some 30–40 km from the centre (*Chmielewski, 1996*). It is the sole Polish metropolis that is perceived in Europe, ranked at the end of the third ten of the European metropolises (*Jałowiecki, 2000*).

During the recent years the rate of landscape degradation within the Metropolitan Area of Warsaw significantly increased. It can be supposed that the contemporary spatial processes will lead to the lowering of life quality.

The currently observed manner of managing space might be called “unsustainable” within many areas. This fact is reflected, in particular, through (*Degórska, 2002*):

- decrease of the surface of the open spaces and interruption of their continuity, as well as worsening of their natural, leisure and climatic functions,
- chaos of the functional-spatial and architectural forms, and frequent lack of aesthetic feelings with respect to the harmonious composition of landscape,
- inadequate investments in the domain of sewage and water treatment systems, lack of a comprehensive system of solid waste management, while the volume of liquid waste and municipal waste is on the increase,

- enormous shortages in terms of investments into road infrastructure, and especially into the construction of thruways and passageways, in conditions of a dramatic increase of the car numbers and the resulting pollution,
- possibility of appearance of extraordinary hazards, mainly originating from transport, the energy sector, and floods,
- the activity of the local communities, aiming at the decrease of the areas encompassed by the legal protection of nature and the negative attitude towards the establishment of new such areas.

Landscape degradation is definitely enhanced by the neglect having taken place in the recent period in the domain of spatial policy. These destructive factors of spatial organisation may annihilate the internationally unique natural dispositions of the developing metropolitan area.

The improper composition of space is subject to the process of petrification. The changes within the confines of the developed spatial structures are therefore very difficult to implement from both social and economic points of view. Hence, it is necessary to rationalise and optimise the spatial and functional structure, as well as the use of space at the stage of planning.

As I have already mentioned, the problems of space management remain to a large extent in opposition to the concept of sustainable and equilibrated growth.

The majority of activities and the biggest financial outlays in Poland are directed towards the protection of nature against the effects that have already occurred (the so-called *ex post* protection). It seems, on the other hand, that the so-called active protection, consisting in prevention of emergence of hazards is underestimated. An important role in this respect is assigned the spatial and physical planning.

The determination of the open space systems and the ultimate achievement of the goal of elaboration of the spatial development plan for the Metropolitan Area of Warsaw, within which open spaces would be considered equivalent to the settlement network as the structure-forming element, may constitute an important step in the realisation of the concept of sustainable development of this area.

The present report devotes most attention to problems associated with the formation of the open space system within the Metropolitan Area of Warsaw, and determination of the main fields of spatial conflicts between the socio-economic development and shaping of open spaces.

The prerequisites for the development of the open space system

In the domain of formation of the spatial order within the Metropolitan Area of Warsaw it is especially important that this plan of the functional area encompass open spaces, treated as elements of the development of space equivalent to the overbuilt areas or the ones meant for construction development.

In physical and spatial planning the term of open space refers to areas with no structures and not meant for construction purposes, or meant only for very extensive construction, existing between the intensively overbuilt areas. The main components of open spaces are green areas (encompassing agricultural land, forests, meadows, pastures, parks, urban greenery, isolating greenery, etc.), as well as waters, fallow lands and other areas characterised by the little transformed or not transformed landscape, retaining the properties of the natural environment, resulting from geographical location. The fundamental feature of the spatial setting of open spaces is preservation of their continuity. In the concept of sustainable development the open spaces constitute an element of development of space that is equivalent to the overbuilt areas and the ones meant for construction development. They require appropriate shaping and protection in order to preserve or improve the conditions of human life, which is of special importance within the intensively urbanised areas, and in particular in the metropolitan regions and large urban agglomerations. The maintenance or preservation of the ecological effectiveness of the open space system is influenced, in particular, by such characteristics as their adequate magnitude, preservation of natural linkages (continuity), protection of the priority areas, natural resistance of biotopes, proper use, and land ownership.

The essential types of open spaces are the regional chains (sequences), local systems, and priority areas.

As indicated already, the basis for the development of the system of open spaces is constituted by the preservation of spatial continuity. The main issue consists in the maintenance of natural connections of the open spaces within the metropolitan area and their association with the surrounding areas. The model taken for the development of space assumed that the strongly urbanised areas, with domination of the anthropogenic landscape, be separated by open spaces, which, at the same time, penetrate deeply into the urban tissue.

There is currently an opportunity for a correct design of the open space system within the Metropolitan Area of Warsaw in view of a significant reserve of surfaces that had not been subject to the construction pressure. These surfaces account for close to 40% of area within the confines of Warsaw itself.

The primary belts of the open space systems of the Metropolitan Area of Warsaw must be associated with the valleys of large rivers (Vistula, Narew and Bug rivers), and large forest complexes (Kampinos Forest, as well as Otwock-Garwolin,

Rembertów, Pomiechówek, Legionowo, Chotomów and Chojnów wooded areas). Such a setting constitutes the basis for the regional system of open spaces. The belts mentioned allow for the preservation of the supra-regional natural linkages.

Location of Warsaw on both sides of Vistula River, and especially the high density of structures in the downtown, cause that the ecological corridor associated with the valley of Vistula may shrink down to the very riverbed in the perspective of just a couple of years. This perspective is highly probable, given the attractiveness of the riverside areas within the commune of Centre-Warsaw. That is why a very important objective of spatial policy is constituted by the development of an alternative belt of open spaces. This belt would be constituted by the forest complexes along some 50% of the circumference, and by the agricultural areas with low intensity of production. A very valuable feature of this belt would be the association of the functions of nature protection, leisure and aeration.

The wooded complexes existing within the Metropolitan Area of Warsaw, such as Otwock-Garwolin, Rembertów, Pomiechówek, Legionowo, Chotomów and Chojnów wooded areas can be considered its “green lungs”. The Kampinos Forest, protected as the National Park, might, on the other hand, be regarded as the “green heart” of the region.

The entities included in the NATURA 2000 system, as well as the remaining existing and planned national and landscape parks, and nature reserves, are considered priority areas in the open space system. They constitute the nodes, which, complemented with the network of ecological corridors, build up the system of open spaces on the metropolitan area of Warsaw. This system would penetrate into the inside of towns, preserving the connections in the remaining part of the metropolitan area, as well as a continuation outside of it.

The main areas of conflict

The essential spatial conflict takes place between man and natural environment. Humanity has for centuries tended to subjugate space, and during the industrial-technological revolution this activity had usually a robbing character. It was only the period of the so-called scientific revolution that ultimately brought, at the end of the 20th century, the awareness of the need of securing development without the destruction of the environment. The resulting approach was called sustainable development.

The spatial planning process always intervenes into the natural environment, modifying natural settings, and sometimes leading to their significant degradation. That is why the drive towards the minimisation of the areas of spatial conflicts is

an important goal in the framework of the sustainable and equilibrated spatial planning.

High concentration of population and attractiveness occurring within the Metropolitan Area of Warsaw generate enormous demand for new construction surfaces, which is conducive for the emergence of new spatial conflicts.

The primary conflict is deployed between the socio-economic development and protection of natural surfaces. It encompasses three main planes of conflict, namely:

- the conflict between the increase of the overbuilt areas on the one hand and the protection of natural surfaces on the other,
- the conflict between the development of linear infrastructure, mainly roads, on the one hand, and preservation of natural linkages on the other,
- the conflict between, on the one hand, the lack of consent of the local communities and some businesses to the establishment of new, or increase of the existing, protected areas, and, on the other hand, the initiatives aiming at creation of such surfaces.

The struggle taking place, involving influences, and first of all – money, is the confirmation of the deficiency with respect to sustainable development, and the effect is often negative for the environment.

Assuming that the socio-economic side to the conflict wins, one can expect the following changes (*Figure 1*):

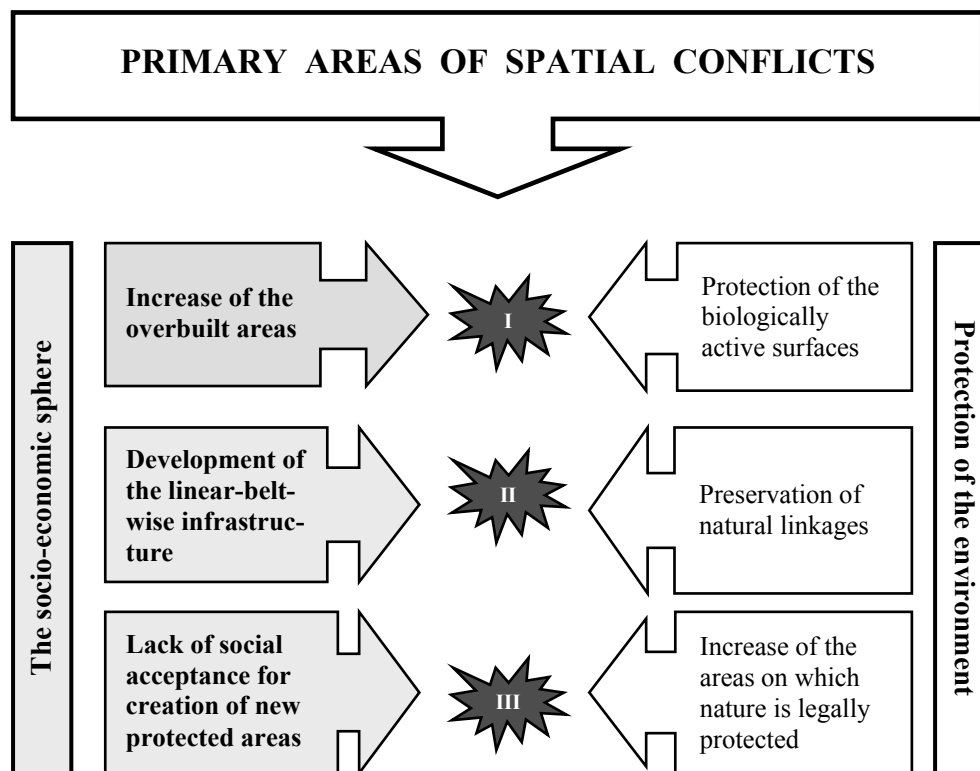
- 1) In the first case the respective activities will lead to the decrease of the biologically active (natural) surfaces. It is frequent – like in Warsaw – that the aerating wedges, or the green spaces functioning as public leisure areas, are being taken over for construction. One can expect that in the perspective of the coming dozen or so years the majority of agricultural land on the suburban areas, owned by private proprietors, would get divided up into smaller or bigger construction plots. The development strategies of some of the suburban communes of Warsaw have abandoned already the agricultural function (the cases of Jabłonna, Piaseczno, and the like). Hence, a unified urbanised space might appear, devoid of natural and landscape elements. The inhabitants might get deprived of the leisure places in the neighbourhood, and the objects essential for their cultural identity. The frequent robbing land management is usually not conducive to ordering of space, neither in terms of spatial structure, nor functionally, nor with respect to architectural forms. The spreading urbanisation, in the form of urban sprawl, constitutes a great threat for national and landscape parks, considered to be priority areas in the system of open spaces. The Kampinos Forest National Park (KFNP) and the Masovian Landscape Park (MLP) are the examples of the victories of the local lobbies. Thus, licences were obtained for the encroachment of

construction into the protective zone of the KFNP and for the continuation of construction in a part of the MLP. The direct contact with a large town makes the actual protection of even the areas encompassed by the formal legal protection very difficult.

- 2) Coming back over to the second case one can forecast the breaking of the continuity of the natural stripes and corridors. Their environmental performance and the ecological effectiveness of the system are impaired, along with the aerating and recreational functions. The continuous system makes it possible to trace the bicycle paths surrounded by nature. Currently, many located decisions lead to the disappearance of the aerating function of even the primary belts, due to the spread of construction. It should be mentioned that Warsaw has been characterised until quite recently by a model system of the aerating belts, being at the same time the ecological corridors. Another important threat is constituted by the road construction projects, and in particular – the ones connected with the construction of the planned motorway and the thruways. This kind of development is necessary, taking into account the fact that the area in question has been included on the map of the European metropolitan areas. The proposed variant of the route of the A2 motorway may lead, though, to the fragmentation of the important natural areas. Thus, breaking of the continuity of the KFNP can be expected along the line Leszno-Kazuń, since this route would constitute the most convenient connection of the motorway with the Warsaw-Gdańsk road, as well as the fragmentation of the MLP. Another element accelerating the process of fragmentation of the natural structures is the development of construction along the roads, usually ending up with formation of continuous strips of settlements. An example to the point is provided by the road segment Warsaw-Zakroczym. It is highly probable that soon a continuous strip of urbanised space would be established, which would cut off permanently the KFNP from the Vistula River.
- 3) Finally, as we consider the third field of conflicts, we can expect that the areas featuring high natural value, but not legally protected, will get developed in terms of construction, or degraded, rather than to continue to improve the quality of life in town. The currently elaborated physical development plans usually respect only the borders of the protected areas. These plans frequently do not observe the stipulations concerning the natural system, in force in the plan of Warsaw. The pressure from the side of local self-governments of the communes located in the confines of the Warsaw Area of Protected Landscape brought about the decrease of its surface magnitude by about 15%. The isolating strip between the forests and the overbuilt areas was brought down from 100 metres to 30 metres.

Figure 1

The primary areas of spatial conflicts between the socio-economic development and shaping of the open space system as well as the environmental protection



Source: edited by author.

It should be very strongly emphasised that the shortcomings observed with respect to the well-prepared and effective instruments of spatial planning are conducive to such processes. The contemporary trends in spatial development do not always respect the requirements of environmental protection, and hence also of the sustainable development principles.

Conciliation of the activities aiming at the socio-economic development and nature protection is, however, exceptionally difficult, and it requires:

- a well prepared toolbox of instruments and an effective system of spatial planning,

- an effective system of laws and regulations concerning environment, encompassing all the domains of human endeavour,
- environmental code of conduct in the managerial processes,
- high ecological awareness of the local communities.

The present trends in spatial development of the Metropolitan Area of Warsaw entail, therefore, shrinking of the open spaces, taking place to the advantage of appearance of overbuilt areas.

Conclusion

Establishment of the system of open spaces is one of the most important tasks in the domain of spatial policy for the Metropolitan Area of Warsaw. This area encompasses, on the one hand, surfaces, which are very valuable in terms of nature assets, and which still remain open spaces, and, on the other hand, is the stage for dynamic transformations of the environment, threatening the surfaces mentioned. It appears, therefore, that the issue of determination, introduction into the plans, and thereafter protection against construction development, with simultaneous maintenance or improvement of the natural, as well as recreational and climatic functions, of these areas, will make a very difficult domain of spatial policy.

The biggest threat for the preservation of open spaces comes from the urban sprawl process and the pressure from construction, associated to the shortage of free construction space within the locations featuring the highest investment attractiveness.

The shaping of the green belt of the Metropolitan Area of Warsaw ought to account for:

- preservation of the cohesion of the natural system inside the metropolitan area and of the ecological linkages with the open spaces in its surroundings,
- preservation of the biologically active areas between the surfaces characterised by the high density of structures,
- inclusion of the priority areas into the system; strengthening of the protection status of the most valuable areas of protected landscape; improvement of the effectiveness of nature protection within the already existing surfaces, and mainly in the landscape parks and nature reserves,
- protection of the aerating belts and the areas of air regeneration,
- securing of the ecological function of the valley of Vistula River,
- establishment of generally accessible, well developed recreational areas in the open spaces.

The most dangerous consequences of the unsustainable open space management include, first of all:

- decrease of the open spaces, fulfilling the function of the public recreational spaces,
- decrease of the open spaces encompassed by the legal protection of nature,
- decrease of the internal and external natural linkages and the isolating strips,
- decrease of the areas fulfilling the functions of aerating wedges and the areas of air regeneration.

Despite the numerous negative impacts on the environment, brought by the socio-economic development and the contemporary spatial economy, there is a potential for the correct formation of the system of open spaces within the Metropolitan Area of Warsaw. The most pressing task in the domain of spatial policy is elaboration of the spatial development plan for the Metropolitan Area of Warsaw, in which open spaces would be treated, as elements of the plan, on a par with the overbuilt surfaces and the ones meant for construction development.

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