THE OUTDOOR RECREATION URBAN SPACE AND ALLEVIATION THE NEGATIVE INPUTS OF CITY CLIMATE CHANGE (WARSAW)

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Summary: Warsaw natural environment is constantly being transformed due to the process of urbanization. It brings both positive elements to the socio-economic city’s development (economy growth) and negative (climate degradation). For last decades Warsaw has remained the most attractive area in Poland for investments. The land-use structure in the city is highly differentiated (housing developments, industrial and productive services, the transport network and agricultural areas). The agriculture lands (meadows, pastures, orchards) together with other green areas (forest parks, allotments) are treated as potential urban investment land. Unfortunately also sport and recreation areas (as urban parks) are treated as such. In consequence the gradual shrinkage of green areas led not only to higher pollution, to specific features of the climate conditions but also to poor provision of outdoor sport and recreation areas. What are direct and indirect relationships between public green area and life quality?

Key words: urban climate, outdoor recreation areas, urban greens, sustainable planning, local community
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I. INTRODUCTION

1. Objective of the paper

The subject matter of this paper is a sustainable city development, especially concerned with the process of structuring outdoor recreation public space. Accordingly to the most recent National Census in Poland (2002), the proportion of people living in the urban areas in Poland is about 65%. The largest city in Poland (with about 2,000,000 inhabitants) is Warsaw Metropolitan Area, followed by 17 others - with more than 200,000 inhabitants (CSO GUS, 2008). Therefore, urbanization is one of the most important civilization processes taking place in Poland and it is vital that we understand both the impact of this urban growth on people and environment, and requirements (possible solutions) of sustainable development - the crucial agenda in urban design. A lot of scientific work has been done to investigate Warsaw natural environment, which is constantly being transformed due to the process of urbanization. It brings positive elements to the socio-economic development (economy growth) and negative - as climate degradation. Several studies have dealt with recent fluctuations and changes of climate in Warsaw. Well-known are changes in temperature, air pollution observed in the case of Warsaw which are similar to those noted in Central Europe as a whole (Gutry-Korycka, 2005). What are direct and indirect relationships between public green area and life quality?

Figure no: 1. Park Skaryszewski, Warsaw. The prime location of this park in urban space has been the cause of its size gradual reduction (due to the several developers’ projects): from about 110 ha (1990) to less than 65 ha (2009)

Source: Anna Pawlikowska-Piechotka, 2008
Our research was aimed to study the evolution and the present state of the sports and leisure infrastructure in the open urban space (field studies in ‘Citadel Park in Warsaw), viewing this problem as the significant question of present and future spatial planning policy (aspect of climate quality, life quality, ‘sport for all’ projects, sustainable housing development). Moreover we were interested in the outdoor recreation urban facilities, for summer and winter “active leisure” (with an attention paid to children, disabled and elderly needs, reflection on how people engage with their environment, their sense to belonging, functional conflicts) in the urban parks and gardens, pocket gardens, allotments, linear green space - were also the matter of concern during our surveys conducted in Warsaw. There is an acknowledgement that this study, based on Warsaw case, can be generalised to some extent to other Polish cities, although it might require a more comprehensive study (as each town is of a very unique, individual spatial character).

2. Diagnosis of specific issues and their components

2.1 Warsaw spatial development in 1949-2009
For the last two decades Warsaw has remained the most attractive area in Poland for investments (Chmielewski, 2006). Today the boundary of Warsaw takes an area of 492.28 km². The land-use structure in the city is highly differentiated (housing developments, industrial and productive services, the transport network and agricultural areas). The agriculture lands (meadows, pastures, orchards) together with other green areas (forest parks, allotments) are treated as potential urban investment land. Unfortunately also sport and recreation areas (as urban parks) are treated as such. In consequence the gradual shrinkage of green areas led not only to higher pollution and specific features of the climate conditions but to also poor provision of outdoor sport and recreation areas.

2.2 Climate and bioclimatic changes in 1950-2000
Warsaw is located in temperate warm transitional zone. The microclimate of Warsaw is influenced by various factors: solar radiation, air circulation, geographical location and local features. In Warsaw some of the climatic characteristics are visibly different from those of the surrounding natural environment. Like other large cities, Warsaw stands out from the surrounding areas:
- In the intensive emission of different forms of pollutions (transport, power generation plants)
- Radiation of ‘artificial heat’
- Weakening of air exchange
All these factors led to disturbances in the natural environment balance. The consequences are seen, for example, in modification of the thermal conditions. Air temperatures measurements in Warsaw started in 1779, providing the basis for the studies of climate changes and the assessment of the warming progressing in recent decades. The increase in the average annual air temperature between years 1950-2000 amounted to 1.1 oC (in downtown districts). The warming appeared especially clearly in the winter and spring months - as January-May (Gutry-Korycka, 2005). Especially for winter months there is a greater increase in temperature, during the half-century considered - as much as 4.1 oC in February. During the year the ground in Warsaw receives on average only 40% of the solar radiation registered at the upper boundary of the atmosphere and this is the effect of changes of the atmosphere transparency and cloudiness – another consequence of rapid urbanization (Gutry-Korycka, 2005).
2.3 Urban green areas – their environmental functions

Urban green areas have a variety of environmental functions. It is widely recognised fact, that greens extending from the suburban area play a significant role in ameliorating the disadvantageous conditions associated with the intensive urban development (Moughtin, Shirley 2005). The inflow of air along the wedges stretching between the peripheries and the downtown area alleviates the thermal conditions, reducing pollutions – improving the aero sanitary conditions. As climatic factors they improve hygienic conditions, acting as wind barriers, affect temperature, humidity content, and heat radiation. Temperature is higher in winter and lower in summer between plants than between buildings (for example: Łazienki Royal Park and the downtown of Warsaw). Greens reduce bacteria and mechanically filtering out dust and other atmospheric pollution, diluting gases produced by traffic – could physically, chemically and biologically improve the environment. Green areas reduce airborne dust by preventing surface dusting and by absorbing dust carried by the wind. Together with dust, urban vegetation also counteracts fog formation. In addition, greens absorb noises, improving soundness comfort. Furthermore urban vegetation has important aesthetical means when help to ‘shaping’ space, pointing buildings, monuments, opening and closing views – enhancing townscape (Moughtin, Shirley 2005), (Thompson, Travlou 2007).

Unfortunately we can observe in the recent decades the gradual shrinkage of valuable green areas, especially those of important public functions: urban parks, children’s playgrounds, allotment gardens.

3. Traditional and present sustainable spatial planning approach

3.1 Urban planning tradition and green belts founding

Being critical to present state of Warsaw environment, we should not forget the ecological aspects of planning, undertaken in the last hundred and fifty years - as a result of well thought out, highly professional concepts prepared by town planners: William Lindley (1859), Sokrates Staryniewicz (1886), Tadeusz Tołwiński (1916), Stanisław Różański (1930), Jan Chmielewski and Szymon Syrkus (1933), Marian Spychalski (1938), Zygmunt Skibniewski (1945-47), Jeremiasz Rosciszewski (1992). As and effect, for the last 150 years Warsaw had better conditions for environment protection than other Polish cities (having planned special air exchange corridors). For example the advantageous role of greens was described as early as in 1916 in the Master Plan of Warsaw, elaborated by architect Tadeusz Tołwiński, one of the promoters in Poland the famous concept for developing garden-cities, proposed by Howard (Chmielewski 2006). One of the most important elements of his Warsaw Master Plan was the revolutionary idea of vast green spaces entering the city from the east, from the north-west and south–west. At the downtown district vast green public space - Park ‘Pole Mokotowskie’ of area of 140 hectares was designed (now registered as urban historic park). Undoubtedly these traditional green belts, which still influence on the improvement of local climate in Warsaw, today also cannot be overestimated by urban planners.

3.2 Present approach to urban environment protection

Today Warsaw as a capital city, must respond to requirements posed by developing capital functions and metropolitan status. Warsaw is growing now in size as well as in its population (now has population of 1 697 000) and during our lifetime probably it will grow further, perhaps its space will be rebuilt and restructured, all of these mean dramatic changes (Chmielewski
The present growth is less by natural increase (births) more by migration (as people move into Warsaw attracted by advantages and opportunities). Many negative consequences of rapidly growing cities are associated with urban unlimited expansion into green areas (also into historic urban parks). Although the matters of environmental protection are the subject of numerous discussions, unfortunately it is not always perceived how it is important to care for urban greens. Although town growth is an irreversible process it is believed that through the sustainable spatial planning we can alleviate some of the negative inputs (Moughtin, 2005). If we follow the ‘smart urban growth’ and its ecological rules (Town Natural System) and apply these ideas to planning practice - we may have a sustainable ‘vital city’.

II. RESEARCH STUDY AND FIRST RESULTS

1. Methodology, analysis and studying concrete cases (Warsaw)

1.1 Research background
In Warsaw one of the most negative signs of contemporary urbanization - is the urban sprawl process. It often means chaotic and even poorly controlled expansion of town buildings. In consequence its growth into the open green areas is observed, mostly into areas in the past used for sport and leisure (as town parks and gardens, linear green space, urban farmlands, allotments and children’s play grounds). These areas are part of TNS system (opened areas biologically active, free of buildings or build up in a small percent, covered with vegetation, including corridors ventilating the city) and play a crucial role to ensure a biological diversity of town nature. Protection of TNS should be one of the main conditions for Warsaw ecological equilibrium (healthy environment). As it is widely known, the deprivation of natural resources together with insufficient infrastructure important for active, everyday recreation can result in physical and mental health problems of cities inhabitants. Studies of these urbanization process and founding compensation for the local community in form of better (more intensely provided with sport and leisure infrastructure) organization of town open space and green areas – seems to be important, both for cognitive reasons and for applied reasons (Ward, 2007), (Thompson, 2007).

1.2 Research aims and methods
The foundation of urban design is rooted in social necessity and in order to help town planners understand and apply ecological rules in practice the research on green urban space present usage and its meaning for the local community members - has been undertaken by AWF University of Warsaw (TS-114/AWF, 2008-2011).

We used secondary data analysis (as Warsaw historic urban and spatial plans), statistics on public green areas, information covering demographic changes, climatic conditions, all to examine and understand correlation between these factors. An important part of our research on this stage were individual, semi-structured interviews with members of the local community (outdoor recreation space users of Citadel Park in Warsaw, 2007/2008). The interviews were structured around seeking answers to four basic questions: what people like about local green space, what activities they prefer to undertake there, how often they visit the site, what they would like to see changed and what would like to stay the same. We believe that on the basis of
the above material analysis it would be possible to set some rules for local (regional) spatial planning.

Figure no 2. Cytadela Park, Warsaw

Source: Anna Pawlikowska-Piechotka, 2008

Park Cytadela has been developed about 1946-1950, designed by architects: Krystyna Onitzch, Kazimierz Marczewski and Zygmunt Stępiński. It was founded on the base of the 19th century citadel, erected there by Tsarist authorities. Today park covers around 10 hectares, has a pond of 4000m2 (built on River Drna remains) and is still surrounded by the romantic, 19th century red-brick, stronghold walls. This historic complex consists of citadel, bastions and moat. Today the fortress contains three museums: two commemorating political prisoners and patriotic uprisings, the third is dedicated to ‘Child and Art’. The monument of communist heroes, built there in 1950s, was demolished in 1990 as a part of ‘Solidarity’ movement and political changes. Park Cytadela serves to inhabitants of Żoliborz District, district which was created in 1920-1930 and is one of the high points of Functionalists housing estate architecture in Poland (manifesto of Polish Modernism style).

We assumed that it should be vital that we could understand better the role and function of historic park and gardens, visitor’s behaviour, needs and expectations (opinions and comments on this public space facilities and management), possibilities of community partnership. As we hoped, field studies conducted in the Cytadela Park could encourage us to take account of the scale and pace of changes in contemporary use of public space of leisure functions. We planned to examine its social infrastructure, spatial arrangement, interview its visitors and on such a base draw some conclusions (with a great hope that some ideas eventually could be implemented). We were aware of methodological difficulties, when examining this historic park and during our field survey we focused on the very basic questions:

- cultural meaning/value the park represent, its functions, its role in the quality of urban life
- park as cultural ‘green’ heritage, local tradition, contemporary access to historic landscape;
- how the historic park is used today, who are its visitors
- today’s people’s needs and expectations; what they like and dislike about park, do they feel safe there, does the park reflect these expectations, what are the barriers to use (infrequent user’s opinions)
- how could the park be more oriented to meet general public demands, ways of its regeneration and protection;
- how can the park be more stimulating (active leisure, education, cultural events)
- local sense of ownership and understanding the advantages of community involvement and partnership
- how can the park enhance and support identity of the local community members

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Table no: 1. Research case study (combined strategy: historical, qualitative, implementation) in Warsaw (Cytadela Park)

<table>
<thead>
<tr>
<th>1</th>
<th>Historical analysis</th>
<th>Evolution of space arrangements, the old plans, the archives, literary sources, time of park origin and most significant phases of transformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Characteristic of the present state</td>
<td>Space arrangement (style, historical values, relation to historical events, architectural structures, meaning for local identity), landscape and aesthetic values, tourism potential value, park area, short inventory of recreation, sport facilities, children playground, analysis of the preservation grade of the historical arrangement (boundaries, buildings, composition), contemporary functions, the use of adjoin land; natural and ecological values, ecological significance (TNS: Town Natural System)</td>
</tr>
<tr>
<td>3</td>
<td>Park users</td>
<td>Who are contemporary users (local community, tourists), their comments and opinions</td>
</tr>
<tr>
<td>4</td>
<td>Suggestions of improvements</td>
<td>Mothers with children, senior citizens, teenagers, tourism, cultural and sport events, park zoning (dog free areas)</td>
</tr>
<tr>
<td>5</td>
<td>Local community participation</td>
<td>Communication, information, education, active collaboration, responsibility</td>
</tr>
</tbody>
</table>

Source: Field surveys in 2008, conducted by author in the Institute of Tourism and Recreation AWF University of Warsaw, on the base of the grant: DS-114/AWF (2008)

2. Spatial Development Plans for Warsaw

1.1 Revision of planning system after 1989
The Warsaw Agglomeration is delimited as the area comprising the capital of Warsaw and its 31 suburban gminas, all defined as the Metropolitan Area of Warsaw (MAW). The systematic political changes taking place after 1989 brought revision of the planning system, adapting principles of the local democratic system and market economy. The Act on Spatial Organization was passed by Parliament in 1994. The hierarchical character of the planning system was partly abandoned and the sovereignty of gminas established. In accordance to the Act, at a local authority level two approaches of planning documents are expected, differing as to their legal qualification. The first is elaborated for the entire territory (‘Study of Directions and Conditions of Spatial Development’), determines the main issues of spatial policy of the local authority. The second (‘Local Physical Development Plan’) is the instrument of policy implementation and determines land-use directions and principles of development. It need not have to be elaborated for the entire territory, however may be prepared for a group of gminas (in view of the procedure nuances and financial consequences, plans for parts of gminas – dominated).

1.2 Local spatial plans elaborated after 1995
Unfortunately only to a limited degree the city of Warsaw has been encompassed by valid local plans (elaborated after 1995). In 2007 there were 107 local plans of spatial development and further 265 in the course of being elaborated. The areas covered by the individual plans highly differentiated as to regard their size (however do not exceed tens of hectares). These local plans are distributed unevenly, dispersed across the entire agglomeration (Gutry-Korycka, 2005).
3. Green areas and sustainable urban growth

3.1 City development and urban parks future: local community involvement
The mentioned shortage of local plans of physical development in the Warsaw Agglomeration has a negative impact on the sustainable urban growth. Moreover under Polish law, lack of plan does not stop implementation of investment projects. It has disadvantageous impact on harmonious urban landscape, fatal consequences as green areas reduction (Kępa Potocka, Bulwar Stanisława Augusta). In response to protect urban parks against development, local communities have organised several protesting campaigns (for example “Day of Earth”, in 2000-2004 with as many as 60 000 participants), insisting on radical protection of greens. It was very successful and historic Park ‘Pole Mokotowskie’, which in 2000 was planned to be reduced in size and partially sold to developers, is now covered by protection programme. In January 2009 the determined local community succeeded in stopping investors to overtake historic Arkadia Park (Warsaw, Mokotów). Certainly it is most desirable to have the entire Warsaw Agglomeration covered by local plans as soon as possible. Now urban expansion of structures is mainly taking place at the expense of open urban recreation green spaces, valuable to local community and important to city ecosystems. Even if the changes in the land use of open green areas concern relatively small patches of land, their negative consequences might be significant (Szulczewska, 1996).

Table no: 2. Warsaw: changes of recreational total area and population (in 1990-2005)

<table>
<thead>
<tr>
<th>Year</th>
<th>1990</th>
<th>1995</th>
<th>2000</th>
<th>2005</th>
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<tbody>
<tr>
<td>Recreational area (ha)</td>
<td>1 855</td>
<td>1 908</td>
<td>1 760</td>
<td>1 756</td>
</tr>
<tr>
<td>Population</td>
<td>1 655 700</td>
<td>1 635 100</td>
<td>1 672 400</td>
<td>1 697 600</td>
</tr>
</tbody>
</table>

Source: Main Statistic Office in Warsaw (31 12 2006), Warsaw 2008

Unfortunately at present new land for buildings is designated in areas of high natural values (urban forests, urban parks, and recreation and sport areas). Highly valuable landscape features increase attractiveness for residential projects (‘Park Saski’, Park Royal Lazienki’). It means that in extreme cases residential construction is even being allowed in areas which should be protected against such development. Ceding the pressure from owners of such plots of land, the communal authorities allow the development of constructions in areas of particular natural value. Suffice it is to say that in consequence the total area of recreational function taken by developers in 1995-1999 - has amounted to almost 140 hectares. This brings us to a sombre assumption that very likely in future the expansion of construction activity into Warsaw open green spaces might intensify.

3.2 Green space compensation – is it always possible?
In recent years many Warsaw parks have been already reduced in size (Park Kępa Potocka, Bulwar Stanisława Augusta, Park Skaryszewski, Park Royal Lazienki) and unfortunately there is no statutory obligation to replace any green space which was taken out of use (‘green compensation’). It seems rational that when open spaces are sold for development, funds should be directed back into open spaces. For example Scandinavian countries are good examples of such a green policy. Unfortunately in Warsaw funds are often loaded into the general coffers and
open spaces have to compete with other important priorities (as education, health care). The examples presented are not isolated ones and certainly it is not a great comfort to mention that the expansion of structures into green urban space is common for the entire Europe (the differences only lying in the scale of the process in particular towns and ‘green compensation’ policy). Unquestionably this trend, visible in the contemporary urban landscape, has a negative influence on the quality of the residential environment (Szulczewska, 1996).

4. Newly planned green outdoor recreation areas

4.1 Planning policy in Warsaw and public greens

However, it is necessary to underline, that when our study was in progress, the planning policy in Warsaw came under pressure for changes, as a result of the ‘urban sustainability’, ‘environment first’, ‘vital city’ – an essence of EU spatial policy issues. The good news for Warsaw inhabitants is that in future the growing demands for sustainable development, (‘smart urban growth’) may be better understood by authorities. For example the recently issued (2007) ‘Spatial Planning Strategy for Warsaw’ encompasses the provision of more green open spaces, protection of existing and foundation of new parks in Warsaw:

- on the Western side of Vistula River: Park Bemowo, Park Pod Skocznią, Park Wyżyny
- on the Eastern side of Vistula River: Park Bródno, Park w Dolinie Gocławskiej

Hopefully the creation of new green spaces will be successful, if designers and sport/recreation managers take into account the needs of potential users, try to understand the function of open space in urban areas, its importance to users and respect what people really want. Sometimes the local community views on the parks are far from the popular stereotypes. For example also ‘unofficial’ green areas might be very important and appreciated by city residents. They often find some greens, even though badly kept, providing an excellent escape from stress, improve landscape and revive memories of childhood as ‘they have been always there’.

4.2 Smart urban growth and urban ‘green cultural heritage’ conservation

Today smart growth (green urbanism) (Moughtin, Shirley 2005) in Warsaw should mean protection of urban green areas and cultural heritage conservation, together with other principles: transportation alternatives, energy efficient buildings – which could promote more humane and sustainable future for Warsaw. Who will decide what these changes will be like? Who will take time to understand Warsaw and to dream of its new possibilities? Smart growth aims to make land-use planning democratic and public discussions allow communities to guide planners. Local community should be an active participant on the all stages of planning process. Smart growth approaches acknowledge that urban growth is inevitable; the aim is to direct Warsaw’s growth, to make pleasant spaces for us to live, to preserve accessible natural spaces for all to enjoy, promoting the safety and revitalisation of existing urban greens (historic parks and gardens). But it needs open communication between planners and the community to make urban expansion fair, predictable and cost-effective. And it is possible, as one of the fundamental changes that took place after the year 1990 was the establishment of local governments. Consequently local governments, supported by non-governmental organizations (representing the interests of various groups), brought emancipation of local communities. Hopefully in coming decades further decentralization will be the base of taking most important spatial decisions in Warsaw.
III. CONCLUSIONS

1. Action plan to deal with environmental issues

1.1 Public health and urban green space ‘for all’
The results of our research have uncovered some key findings that may be common, as we believe, to cities across Poland. The good understanding of connection between public health and the provision of free, publicly accessible, open green space – was obvious among the park users. However, as it was commented, poorly planned, badly managed and sometimes dangerous outdoor recreation space might contradict it. The provision of urban parks in Warsaw means also a symbolic and important commitment to the public good, especially historic parks and gardens are perceived as important landmarks, values crucial in shaping local identity. People often reported ‘I will continue to visit local park’, and no doubt today it is one of the essential needs in formation mental and physical well-being of urban community. It is clear that many members of local communities have some strong associations and identify closely with their local landscape. Therefore the broader perspective, than only economy or nature conservation strategies (as planning aims) should be considered and the local community expectations, their social and environmental well-being need to be included to the ‘integrated model’ for sustainable spatial policy directions (Moughtin, 2005).

1.2 The revitalization program of urban greens
The revitalization program of green urban space (TNS) may counteract the damage and climatic negative effects upon the citizens of Warsaw (Chmielewski, 2005). Nevertheless our research revealed, that one of the basic challenges for the spatial planning in the Warsaw Metropolitan Area urban system is the higher degree of community partnership, as it still occurs to be marginal and unsatisfactory. We are aware that a real implementation of our research results may start when the planning documents (in line with the law on physical development) will be worked out as:
- Studies on Predictions and Directions for the Physical Development of the Commune and Local Physical Development Plans
- Strategy and Policy for the Physical Development of the Commune and Local Physical Development Plans

<table>
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<th>Table no: 3. Historic Parks and Gardens as Urban Fabric – Regeneration combined strategy (Warsaw)</th>
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Source: Field surveys in 2008, conducted by the Institute of Tourism and Recreation AWF University of Warsaw, on the base of the grant: DS-114/AWF (2008)

### 2. Local scale spatial planning with local community participation

#### 2.1 Legal base of green areas protection
At present policy of sustainable urban development, including protection of the environment is fully supported by Polish legal acts and by EU and international legal regulations (Poland ratified the Convention of UN on climate change). Having a good legal base, hopefully in future Warsaw will explicit more optimal urban policy of land use, in view of green areas use and protection, shaped on the base of the local community active collaboration. This policy means not only revitalization program and protection of TNS but also remembering that when introducing new elements of built-up environment one should consider an efficient system of airflow - crucial for the improvement of climatic-health conditions (Chmielewski, 2005).

#### 2.2 Social role of public urban greens protection
Moreover, we also believe that a sense of belonging is central to shape a sustainable citizenship. In Warsaw outdoor recreation spaces (urban parks and gardens, informal recreation spaces, community gardens, pocket gardens, allotments) present a particular opportunity: they are spaces where people gather, take part in a range of activities (sport, cultural, social, and informal), meet and talk. What should be underlined, they often see in it a quality of life, benefits to urban landscape and satisfactory compensation for urban physical environmental (climatic) decline. Our research proofs that in Warsaw it is a wide public demand to set up a green ground layout for the sake of continuity in spatial pattern, treated as a key issue of present-day strategy of the urban sustainable development, biodiversity promotion and environmental protection (including climate protection), being often understood by the local community members as a rightful compensation for the loss of valuable habitat.
Table no: 4. Values of Historic Parks in Warsaw and Their Main Threats

<table>
<thead>
<tr>
<th>Historic urban parks values</th>
<th>Possible threats to historic parks</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Urban parks are part of Warsaw history, important source of local pride; cultural heritage; forming unique character of urban landscape</td>
<td>*The historic and cultural importance of parks is often underestimated</td>
</tr>
<tr>
<td>*They improve aesthetic attraction of urban landscape, introducing visual beauty, mitigating the poverty of poor architecture</td>
<td>*Many historic parks are subject to vandalism and neglect</td>
</tr>
<tr>
<td>*Parks, as other green areas, make an important contribution to the well-being of the urban population; alleviate negative effects of pollution, reducing climate changes, introducing vegetation diversity, possessing variety of habitats</td>
<td>*Many are recognised as unsafe and indecent areas</td>
</tr>
<tr>
<td>*Parks, as other public space, are an amenity for everyone (young and old, rich and poor)</td>
<td>*The historic character of parks is being eroded (numerous commercial activities as: cafes, pubs, restaurants are there established)</td>
</tr>
<tr>
<td>*Parks offer the opportunity for active recreation, ‘sport for all’, social contacts, community events</td>
<td>*Parks occupy land which is often of prime development value</td>
</tr>
</tbody>
</table>

Source: Field surveys in 2008, conducted by author in the Institute of Tourism and Recreation AWF University of Warsaw, on the base of the grant: DS-114/AWF (2008)

1. Final Conclusions

Green areas are coherent, public, serving for leisure, recreation; they improve the urban climate, prevent atmospheric pollution, and enhance aesthetic values of urban landscape. A contemporary urban space is unimaginable without green belts (Town Natural System), public parks, allotments, pocket gardens, promenades – channelling air in the town. It is obvious that the conservation of historical parks, gardens and landscapes, treated as elements of cultural heritage and segments of urban green belt system, should be concerned in terms of creative continuation of tradition, indispensable for the ecology equilibrium and townscape identity. After decades of reducing green areas now greens protection is imperative.

In the central Warsaw districts, where the price of land and associated rent is so high, it might be considered as logical to suggest progressive exclusion of greens. However for our wellbeing are equally important financial and environmental issues, the material and spiritual, emotional and psychological elements, including closeness of nature.
Figure no: 3. Frederick Chopin monument, Royal Łazienki Park, Warsaw. Public parks are one of the most important types of green public space in the contemporary cities. Their contribution to urban quality of life (considering its many aspects) is undeniable.

Source: Anna Pawlikowska-Piechotka, 2008

Figure no: 4. Family leisure time in Royal Łazienki Park, Warsaw. Today urban parks, children playgrounds and also suburban recreation and sport areas are put under threat. Planning sustainable growth of ‘vital city’ with healthy environment - means to save even the smallest area of public greens.

Source: Anna Pawlikowska-Piechotka, 2008

What are necessary now in Warsaw are stronger and more consequent protection of public green areas (not only those of historic values) against development and more efficient management of ‘natural resources’. In recent decades, as we are afraid, there has been too little statutory, legal protection and too often not adequate maintenance. As it was mentioned, in Warsaw only in 1995-1999 as many as 136 ha of recreation areas (mainly children playgrounds and sport spaces) were overbuilt. More strict and consequent protection of urban open spaces should be combined with local spatial policy, treated as priority by government and local authorities. Moreover all possible changes, when open spaces are put under any kind of threat, should provoke community campaigns intended to save even the smallest area of park land. Provision of public green areas is closely linked with the quality of the space. Not only historic parks, but also pleasure grounds, recreation grounds and sport areas require protection, efficient management and maintenance.
Both historic and contemporary founded urban parks, which are an illusion of countryside and natural amenity in the urban space and the idea of *rus in urbe*, should not be underestimated. They not only make a significant contribution to our needs by providing outdoor areas for rest and relaxation, these urban greens are also ecologically important (possessing variety of habitats and vegetation diversity). Furthermore what should be underlined - probably in future humans will need the deeper influence of nature to balance the negative effects of life in the modern cities, to rebuild their physical and psychological form, to alleviate high level of pollution and climatic changes. Openness of the green, integrated public space ‘for all’ is a condition of a healthy environment, ‘vital city’ - meant for the growing urban population.

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2. Spatial and Urban Plans