

URBAN SUSTAINABLE DEVELOPMENT AND GREEN AGENDA PERSPECTIVE (CASE STUDY IN WARSAW)

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Abstract

Urban greens have a variety of functions: as climatic factors they improve sanitary conditions, provide space for outdoor sport and recreation, cultural activities, enhance townscape aesthetic values. Urban parks, outdoor recreation grounds, pocket gardens, promenades and allotments should form cohesive green system, which protection and upkeep is important for the ecology equilibrium. Sustainable urban planning system should deal with major urban challenges, including environment quality and negative effects on climate change. That means that re-evaluation of our urban planning strategies focused more on “green re-think” is necessary as importance of green agenda (with a holistic approach to forthcoming urban planning strategies) should not be underestimated.

Streszczenie

Tereny zieleni miejskiej mają wielorakie funkcje: przyczyniają się do poprawy warunków klimatycznych, tworzą dogodne warunki dla codziennego, aktywnego wypoczynku, są miejscem imprez kulturalnych i sportowych, mają istotne znaczenie dla estetyki krajobrazu miasta. Parki miejskie, tereny sportu i rekreacji, skwery i ogrody działkowe, promenady i bulwary nadrzeczne powinny tworzyć przemyślany, spójny system, którego ochrona ma znaczenie dla równowagi środowiska miasta i jakości życia. Ponieważ zrównoważone planowania miasta powinno obejmować szeroki wachlarz zagadnień, jakość środowiska – w tym negatywne zmiany klimatyczne – powinny być bezwzględnie uwzględnione. Ponieważ w tym zakresie nasze działania są wciąż niedoskonałe, konieczne jest stałe poszukiwanie skuteczniejszych instrumentów prawnych i planistycznych ukierunkowanych na zrównoważone kształtowanie środowiska zurbanizowanego.

Keywords: Spatial planning; Sustainability; Urban development; Urban greens; Local communities.

1. INTRODUCTION

Urban planning is of course an art (Kostof, 2001)

1.1. Urbanisation and sustainability – global and European perspective

Today the vast majority of Poles, as other Europeans, live in town and cities. Hundreds of towns and cities are where we work, shop, play, and meet others. Our cities are growing in size as well as population. Demographers predict that by 2020, as much as 70 percent of Poles (and 80% of Europeans) may be urban as urban populations are growing faster than

total population (more by migration, less by birth rate) [1]. If development is sustainable, cities could be attractive, secure, quiet, clean, energy-efficient places to live; however, if the urban growth is chaotic, poorly controlled or carelessly planned, cities could even cause great environment degradation, including regional negative climate changes. As the clear links could be seen between environmental sustainability, quality of life and the future cities well-being, the World Health Organisation (WHO) considers urban planning an important determinant of health [2, 3]. The Brundland's definition of sustainability, strongly indicate its fundamental meaning to quality of life at present and in future: “Sustainable development

meets the needs of the present without compromising the ability of future generations to meet their own needs”, once *The World Commission on Environment and Development* (WCED) recognise sustainability as “A global process that minimizes the use of environmental resources and reduces the impact on environmental risks” [4, 5].

Recently issued *European Union and United Nation Human Settlement Programs* (UN HABITAT) reports on the quality of life in cities and towns, aim to raise awareness of various environment threats and to create manifesto for a new urbanity. The key concerns defining a vision of sustainable urban development, according to these documents, are: energy efficiency, climate safe technologies and urban greens protection [2, 4, 5]. In particular the following actions are underlined as crucial in new “green agenda” approach:

- a) restoring of urban environment,
- b) rehabilitation of city parks and open green spaces,
- c) protecting forests and ecosystems when city expansion is planned.

In 2009 *The European Union* adopted the review of Sustainable Development Strategy, underlying a special concern on negative climate changes and the promotion of low-carbon economy. It acknowledged that urban growth is inevitable, but promote environment protection and urgent need to create high living standards for present and future generations [2, 4]. At present *The European Union* supports many urban projects via Structural Funds and pan – European city networks (as Dresden – Prague), trying to implement sustainable approach to the future urbanisation, seen within five domains: society, economy, built environment, natural environment and governance. Making cities more attractive by enhancing social, cultural, economic and environmental factors by better governance is promoted through European Union recommendations and a series of grants have already supported projects creating urban sustainability (as URBACT) [2, 4]. Moreover *the European Union* is targeting several funds at researches related to a broad range of topics connected with sustainable urban growth (as for example the 7th Framework Programme 2007 – 2013), in hope to develop innovative approaches and high performance in urban planning.

Need for sustainable urban development is globally recognized, formulated by UN HABITAT vision of productive and inclusive cities, embracing social harmony, economic vitality and environment sustainabil-

ity. As the response to the twin, global major challenges (urban growth and sustainable planning) recently two initiatives of UN HABITAT have been launched: World Urban Campaign and Cities in Climate Change Initiative. Both projects are focused on supporting the efforts of adapting more holistic and participatory approaches to urban environment planning and management. These global initiatives to reduce negative impacts of climate changes include improving traffic flow, public transportation, energy efficiency, renewable energy, cleaner production, natural resources protection and improvement of architecture designs and urban planning. These documents underlined that all stakeholders must be involved in planning and implementation of sustainable urban strategies to strength public awareness and responsibility and stronger linkages between local government, national government, community groups and private sector need to be build [5].

1.2. Urban planning traditions and contemporary tendencies

Over the centuries in European countries we have had different styles, law regulations and approaches to the urban planning systems. Nevertheless these differences, today one can see clearly several similarities in attitude to sustainable spatial planning in EU countries. The modern origins of urban planning lie in the 19th and 20th century movements, in the need for urban reforms. Twentieth century has seen numerous successful experiments, for example “garden cities”, combining the best features of the rural habitats and the modern city (Letchworth, Welwyn Garden, Giszowiec, Milanówek, Podkowa Leśna). The Athens Charter produced in 1933 by the *Congres International d'Architecture Modern* (CIAM) included several design principles about urban planning, of timeless meaning and importance [6, 7].

After the Second World War different public participation models of urban planning have been developed. It was believed that active local community involvement could help planners to understand needs and preferences of common people and resulted in more creative designs. In 2003 *The European Council of Spatial Planners* elaborated new version of Athens Charter. It was meant as manifesto and guide for planning European cities in the 21st century, enhancing the quality of urban life in Europe and underlying the high responsibility of planners.

Today in planning theories and practices one can find a rich variety of environment – oriented urban

growth ideas. They constantly evaluate in search to improve planning strategies and instruments, but the main aim is the same: to secure high living standards, safety and well being, natural resources and cultural heritage protection. For example “smart urban growth” concept is aimed for efficient and effective land and infrastructure use to contradict uncontrolled urban sprawl. “Green planning” is a term to describe strategies important for sustainable redeveloping existing cities, successfully implemented in many European cities (Germany, Sweden, Denmark, Great Britain). “Integrated urban planning”, as holistic approach, is focused on several issues (economy growth, social well-being, natural and cultural heritage protection) and connected with hierarchy of planning (regional, local level). Regardless of the nuances in the contemporary sustainable urban development theories, their main principles are: limiting urban sprawl, preserving natural resources, energy efficiency, promotion of affordable housing, alternative transport (shared cars, bicycles, public transport), ecological building techniques (green roofs, passive solar energy use, solar water heating, wind turbines) and public participation in decision making. Not only practical implementation, but also planning policy and instruments should be individually adapted in the given area, depending on local community character, planners training, local law, government policy, planning context (as natural and cultural heritage), economy and political status, interactions between individuals and formal organisations. Therefore not each country but every city has to shape its individual policy of sustainable development [2, 5].

2. WARSAW DEVELOPMENT AND SUSTAINABILITY

2.1. Warsaw sprawl and environment quality

Warsaw is the capital and the largest city of Poland. Its population is estimated at 1,716,855 (in the Warsaw Metropolitan Area – as much as 2,631,902) and is considered the 9th largest city in the European Union by population [1]. Possibly during our lifetime it will grow further in its size and population. This growth is less by natural increase (births) more by migration, as people move into Warsaw attracted by advantages and opportunities. As a capital, Warsaw plays a significant role in Poland’s social and economical life, being a symbol of national identity, centre of political and social life, hub of culture and government administration, major transportation centre

and in consequence a focal place for foreign and national investments. Since 1990 Warsaw’s economy has been highly adaptable to our new market economy principles and it created in Warsaw a very promising “investment environment”. Despite the global economic difficulties, in the last two decades the city has been growing and Warsaw remains one of the most attractive areas in Poland for investing. The present strong potentials and rapid urban growth do not mean that there are no threats to the city sustainable development (as for example environment quality, transport shortcomings, affordable housing supply and provision of outdoor recreation grounds). Urbanisation and environment changes seem to be virtually inseparable. Today the boundary of Warsaw takes an area of 492.28 km² and the land-use structure in the city is highly differentiated: housing developments, industrial and productive services, the transport network and agricultural areas [1]. The agriculture lands (meadows, pastures, orchards) together with other green areas (forest parks, allotments) are treated as potential urban investment land. These are connected with a new approach to house planning. The newcomers to the market are private investors, whose offer is competitive, as they propose a shorter construction time, energy – solving solutions, full maintenance, comprehensive security and reasonable prices. Many recent projects are result of large scale developers, who purchase land, design the district and construct housing estate from scratch. Often the projects are promoted, unintentionally ironic, as “green estates” with particular emphasis on ecology-friendliness, energy saving and location in the healthy environment. However, especially for central locations, accessibility to urban greens, sport and recreation areas might be a problem and usually neighbourhood outdoor recreation grounds are reduced to minimum size and program. It is connected with the high cost of building land and costs of urban greens maintenance. The environment quality in new housing estates is not satisfactory, as an effect of greens shrinkage. The weaker inflow of air along the reduced wedges, stretching between the peripheries and the downtown area, could not effectively improve the environment conditions, help to reduce heat stress, reduce air pollutions, strong winds, alleviate noise.

Today Warsaw, like other European large cities, stands out from the surrounding areas in the intensive emission of different forms of pollutions (transport, power generation plants) and radiation of “artificial heat” [2, 9, 10]. In thermodynamic models of

the Warsaw atmosphere, one can see a “heat island”, as a consequence of the high density of concrete and asphalt, high energy consumption, high greenhouse gas emission and reduction of open green areas. Air temperatures measurements showed that the average air temperature between years 1950-2000 amounted in downtown districts to as much as 4.1°C. Health impacts of climate changes (heat waves, “tropical nights” with temperatures higher than 20°C, strong winds and rapid air pressure changes) are dangerous for vulnerable groups: infants, children, elders [2]. The major air pollutants in urban areas can cause respiratory disorders, aggravate asthma, impair development of lung function. At present impacts of air pollution, in particular ozone and nitrogen oxides, causes thousands of premature deaths each year, reducing the average life expectancy by almost two years in Warsaw [2]. Impact of noise exposure affects health and quality of life by interfering with sleep rest, study and personal communication. Chronic exposure to noise is associated with increased risk of heart disease, hearing impairment and impacts on mental health. In Warsaw majority of residents (60%) are living in areas with noise level of more than 55 dB [2].

2.2. Urban greens and environment equilibrium

History of green spaces is inseparable from the development of Warsaw and other European cities. For centuries green areas have been valuable illusion of countryside values in the urban space and exemplification of the eternal *rus in urbe idea* [7, 11, 12]. The ecological aspects of urban greens were carefully considered in the master plans elaborated during the last hundred and fifty years, treated as a significant factor of Warsaw sustainable development [13]. These deeply thought out, highly professional concepts were prepared by famous town planners: *William Lindley* (1859), *Sokrates Starynkiewicz* (1886), *Tadeusz Tołwiński* (1916), *Stanisław Różański* (1930), *Jan Chmielewski* and *Szymon Syrkus* (1933), *Marian Spychalski* (1938), *Zygmunt Skibniewski* (1945-47), *Jeremiasz Rosciszewski* (1992). As an effect, for the last 150 years Warsaw had enjoyed environment quality, having green air exchange corridors, neighbourhood outdoor sport and recreation grounds, public parks and green belt secured [6]. Today even more than in the past, urban greens could have civilized and humanized Warsaw urban space, as many negative consequences of rapid growth are associated with urban unlimited expansion into green areas and biologically active open spaces shrinkage. At present, with only 18% of green areas out of the total territo-

ry, Warsaw is considered as one of the most environmentally deprived towns in Europe (the recommended ratio is about 30%) [2, 15]. It has many negative consequences to health and life quality as urban greens conduct a variety of important functions substantial for the Warsaw environment equilibrium, covering a wide range of factors:

- a) As climatic factors they improve hygienic conditions, acting as wind barriers, affect temperature, humidity content, and heat radiation; 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; greens absorb noises, improving soundness comfort.
- b) Greens reduce bacteria and mechanically filter out dust and other atmospheric pollution, diluting gases produced by traffic – could physically, chemically and biologically improve the environment.
- c) Green areas extending from the suburban area play a significant role in ameliorating the disadvantageous conditions associated with the intensive urban development.
- d) Urban vegetation has also important aesthetical meanings “shaping” space, pointing buildings, monuments, opening and closing views – enhancing townscape.
- e) Outdoor recreation grounds are important for health improvement and pleasure, as sites of everyday leisure and sport activities.
- f) In the rapidly changing urban scene urban greens, especially these of historic values, are seen as a source of local identity, territory landmarks and as symbols of continuity and stability.

Growing public demand for environment quality is connected with better education and the demand for higher life quality, seen not only through material perspective. The role of environment equilibrium in healthy life style is widely recognised, what leads to the need of well managed, outdoor sport and recreation grounds. It is not a luxury or a caprice, but a scientifically proved fact that living in a neighbourhood with parks and other green spaces nearby may lower one’s risk of depression and other health problems (diabetes, heart conditions), encourage people to be physically active. Green areas help improve several skills in toddlers, their behaviour, social communication and attention. Children with good access to open space and more outdoor sport facilities are in better physical and mental condition [2, 3]. Sometimes the local community views on the local greens are far

from the popular stereotypes, for example also wild and unkempt green areas might be very important and appreciated by city residents. In the “concrete jungle” they find meaningful and dear each scrap of greens, as a chance for outdoor recreation, improvement of urban landscape and revival of childhood memories – as “these bushes have been always there” [14]. The above comments express not only authors’ reflections, but also numerous opinions of Warsaw citizens, who strongly believe that appropriate protection and maintenance of “their” local greens is fundamental to contribution of the healthier life.

Accelerating urbanisation of Warsaw and visible negative environment changes demand urgent re-formulation of spatial strategies, supported by good governance, urban planning and management, including new building codes and other appropriate laws. In these strategies urban greens should be considered as a significant factor to secure sustainable urban development. However, what must be underlined, it is not only total area of greens that is important, but also its layout and structure, richness of biodiversity, internal and external connections [9, 10].

3. FOCUS ON “GREEN AGENDA” PERSPECTIVE

3.1. Warsaw growth and law context

The political changes after 1989, brought revision of the spatial planning system, adapting principles of the local democratic system and market economy. The Act on Spatial Planning and Development was issued by *Polish Parliament* in 1994 and revised in 2003 [16]. The hierarchical character of the traditional planning system was replaced by the sovereignty of gminas (boroughs). At a local authority level two types of planning documents are expected, of various legal qualification:

- a) “Study of Directions and Conditions of Spatial Development”, determining the main issues of spatial policy;
- b) “Local Physical Development Plan”, the instrument of spatial policy, determining land-use directions and principles of development; it could be elaborated for the entire territory, for part of it or for a group of gminas;

In view of the procedure difficulties and financial consequences, only to a limited degree Warsaw has been encompassed by valid local physical development plans (elaborated after 1995), but under Polish law, lack of plan does not stop implementation of

investment projects [16, 17]. As a consequence, in Warsaw and its suburbs considerably demand for building lands led to the short – term and wasteful building policy. Investments are undertaken without broader context, when developer decides what and how to build. Urban expansion is taking place at the expense of green spaces important to city ecosystems and even if the changes in the land use concern relatively small patches of greens, the negative consequences are significant. Unfortunately in some cases even the formal natural resources protection could not ban building, once highly valuable landscape increase attractiveness for intended projects. It means that in extreme cases, having the pressure from investors, the local authorities accept construction projects in areas which should be strictly protected (for example historic parks and gardens in Warsaw). The scale is meaningful: the total area of high natural values taken by developers in 1995 – 2005 has amounted to almost 100 hectares [Table 1]. There is no statutory obligation to replace urban greens which were taken for investments. In response to protect urban parks against development, Warsaw inhabitants have organised several protesting campaigns (for example in 2004 “Day of Earth” with as many as 60 000 participants), insisting on radical protection of public greens. It was very successful and historic parks (for example Pole Mokotowskie) and some outdoor sport and recreation grounds, which were planned to be reduced in size and partially sold to developers, are now covered by protection programme. Naturally one can not contradict urban growth, but it seems rational to accept that not every green scrap of land must be developed and when open spaces are sold to investors, funds should be directed back into environment improvement (Stockholm and other Scandinavian towns are good examples of such a policy). Unfortunately in the case of Warsaw such funds are often loaded into the general coffers and public greens have to compete with other priorities (as education, health care). In the last two decades lack of master plan, extreme decentralisation, too liberate law regulations, investors pressures – have disadvantageous impact on harmonious urban landscape, consequences in green areas reduction, environment destruction, negative climate changes, several spatial conflicts. However, some of them could still be removed or decreased by appropriate spatial planning decisions.

Table 1.
Warsaw and open greens / population ratio

Year	1990	1995	2000	2005
Recreational area (ha)	1 855	1 908	1 760	1 756
Population	1 655 700	1 635 100	1 672 400	1 697 600
Population and recreation grounds ratio	892 people per hectare	856 people per hectare	950 people per hectare	966 people per hectare

Source: Statistic Office in Warsaw (GUS) [15]

3.2. “Green agenda” in sustainable development

The matters of environment protection, natural resources and green urban space creation – have been the subject of numerous discussions concerning the present condition and future of Warsaw development [20]. In the central districts, where the prices of land and associated rents are so high, it might be considered as logical to suggest progressive exclusion of greens. However for human wellbeing equally important are financial and environmental issues, the material and spiritual values, emotional and psychological elements. Possibly in the future, public greens will be even more necessary to balance the negative effects of urban growth, to alleviate high level of pollution, contradict negative climatic changes, crucial to rebuild physical and psychological form of local community.

Sustainable development acknowledge that urban growth is inevitable, the principle is to rational plan and carefully direct city expansion. Even without deep spatial and building law changes (what requires *Polish Parliament* involvement), Warsaw local authorities and city council could create more green spaces, improve existing sport and recreation grounds, protect town natural system (air exchange corridors and green belts) against developers’ plans. After decades of reducing green areas now “green agenda” should be fundamental and developers dictatorship no more tolerated. Urban greens forming coherent town natural system should be taken into account inseparable with other principles of environment sustainability: natural resources protection, pro-ecological transportation alternatives and energy efficient buildings. It seems that effort to form more humane and sustainable living urban environment, with intention to follow the EU and UN HABITAT recommendations, the several key actions both in Warsaw and its region should be considered [Fig 1]:

a) Intensification of natural resources protection, protection of natural vegetation, biodiversity, con-

sistent system of protected areas, rehabilitation and protection of air-ventilation channels, of green belt, of Vistula Valley

- b) Improvement of insulations against high noise hazard in centrally located housing estates, along transport routs (roads, railways, air corridors), improvement of air quality in centrally located housing estates, along transport routs (roads, railways, air corridors)
- c) Better waste and garbage treatment
- d) Satisfactory in regard to population ratio, neighbourhood outdoor recreation grounds, rehabilitation of urban parks, creation of sport and recreation areas with advanced amenities.

3.3. Barriers to sustainable development strategies

Sustainable urban development aim to make urban planning more democratic through decentralisation, public discussions and active community participation in all stages of planning and decision making process. In Warsaw (and other cities in Poland) theoretically present law regulations should not be a barrier for sustainable planning. One of the fundamental changes that took place after the year 1990 was the establishment of local self-governments and decentralisation of spatial planning process. On the base of present law regulation [16, 17, 18, 19] urban planning requires in depth studies of the existing natural resources, as localization, sensitivity to development – with natural, cultural and social implications, considered in the wide spatial context. According to present law, even barriers of development are recommended, when environment is not able to absorb any new investments. However, as everyday practice shows, present legal instruments to ban urban sprawl are not strong enough, regulations are too weak to protect urban sustainability and secure environment equilibrium. Moreover, although the law regulations oblige architects and urban planners to guarantee the

environment quality in housing estates, sadly there are no clear rules for planners about green areas provision and population ratio. The matters of environmental protection are the subject of numerous discussions, but it is not underlined strongly enough how important the master plan of the city for urban sustainable development is. At present in Warsaw the serious barriers to environment equilibrium are interests expressed by different stakeholders (local governments, land owners, city council, land developers, technical infrastructure providers), making unconnected decision. Fragmentation of responsibilities, too extreme decentralisation make a single project rational only from the given party perspective. Without the coordination guaranteed by master plan, urban development is chaotic, environment quality poor and satisfactory living standards not achieved.

Naturally it is not a great comfort to mention, that the expansion into green urban space and environment degradation are being observed in other Polish cities, the differences only lying in the scale of the process in particular towns. Once the local authorities found themselves facing serious problems concerning unemployment, insufficient jobs offers, health care shortages, the environment quality might be considered as less important. Urban sustainability means not only development of technical infrastructure, social services, but also care for “green infrastructure”, as it has a great significance for quality of life. Unfortunately self-governments and local communities are not always aware of it and count rather on short-term economy benefits. There are several factors that play a fundamental role in determining the character of urban development approach: constitutional law and government structure, responsibilities for spatial planning and the legal framework, culture and tradition of spatial planning, knowledge and training of urban planners, education level and character of local community [6, 21, 22, 23, 24]. As it seems, without legislation reforms, stronger local and regional partnership, promotion of environment friendly long term visions (embedded in the city regional context), new innovative spatial planning instruments and forms – it might be very difficult, if not impossible, to reach sustainable urban development.

4. CONCLUSION

Our environment, especially in densely populated towns, is subject to deterioration, natural resources are ruthlessly exploited, green areas reduced. Even

the cities once carefully designed as garden cities, now spread over the landscape, consuming green belts and urban greens. Green areas are coherent public space, used for leisure and relaxation, health and sport, social activities and education; they improve the urban climate, prevent atmospheric pollution, enrich biodiversity and last but not least – enhance aesthetic values of urban landscape. A contemporary urban space is unimaginable without neighbourhood recreation grounds, public parks, allotments, pocket gardens, promenades – all forming the efficient town natural system. Development of contemporary towns has proved that technology alone could not answer all our needs: man is a part of nature and needs healthy environment to survive. However, when it comes to environmental concerns, usually we have fragmented discussion on single buildings and witness rather focus on green architecture, meaning pro-ecologically designed individual homes and offices, than the broader context. It is forgotten that a holistic approach of “green agenda”, focused on several domains on regional scale, is necessary to achieve sustainability:

- a) Biodiversity and ecosystems, which make our cities green, healthier and pleasant places, but are extremely delicate and constantly threatened by urban development
- b) Urban environment noise, which is the most common source of stress for city-dwellers and cause a number of health problems
- c) Respect for green urban heritage as a document of rich history, tradition and culture
- d) Sustainable land and infrastructure use, to contradict urban sprawl, to monitor land use changes and rehabilitate “brown field” sites (as former industrial areas)

Sustainability and environment quality issues (such as clear standards and urban norms) should be included in all urban planning stages, financial management decisions and local development strategies. In Poland “green concern” should be integrated into statutory urban planning and development control systems on the ground of revised planning as well as building standards and regulations. Effective adaptation of green urban growth strategies require new approach to local and regional planning. For this to happen, as it seems not only law regulations and planning tool changes are necessary, but also a long-term financial and technological support will be important to strengthen the capacity of local authorities to initiate, formulate and implement sustainable urban development strategies [Table 2].

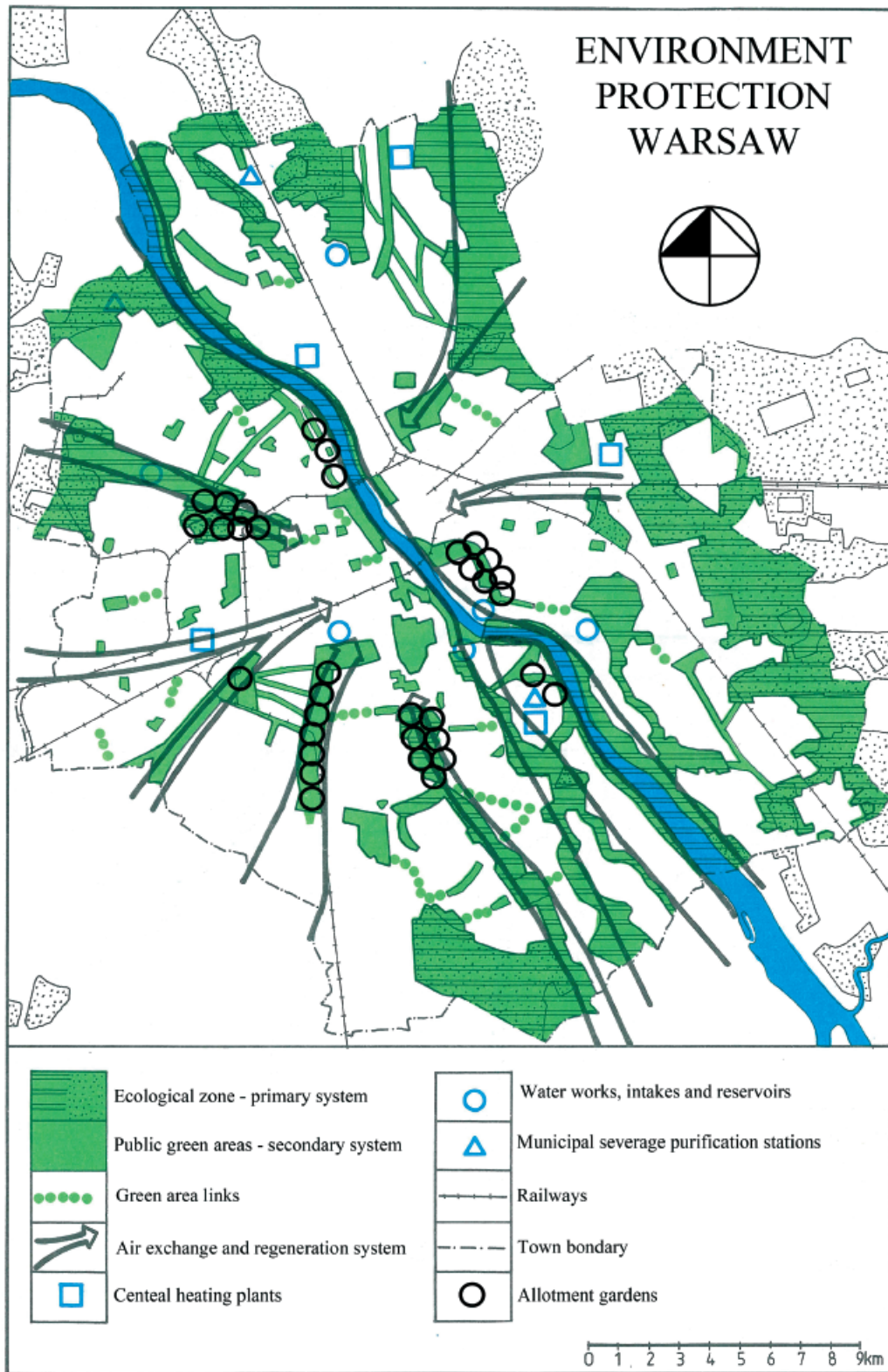


Figure 1. Environment spatial policy in Warsaw [source: on the basis of materials obtained from Warsaw Spatial Development Office, City Council archives, drawn by Maciej Piechotka, 2012]

Table 2.
Analysis and conceptual segments in sustainable urban development strategies

	Segment	Key considerations focused on urban environment equilibrium
1	Socio-economic transformations (analysis part)	<p>a) Present situation analysis: history, character, functions; social and technical infrastructure, public transport, natural resources and environment state, climate changes, energy efficiency and consumption, quality of life measured by different dimensions</p> <p>b) Social demands: housing, health care, education, outdoor recreation and sport areas, job places, technical infrastructure, public transport, culture</p> <p>c) Land development: environment quality, natural conservancy, cultural heritage, architectural qualities, need for housing, areas reserved for future development and limits of urban sprawl</p> <p>d) Public discussion with all stakeholders involved on needs, demands and expectations focused on local and regional sustainable development</p>
2	Development scenarios (analysis part)	<p>a) Demographic and economic forecast (statistic data; experts' analysis)</p> <p>b) Development scenarios: optimistic – moderate – pessimistic (experts)</p>
3	Sustainable urban development goals and implementation task (conceptual part)	<p>a) Future strategy development concept: principles of city's sustainable development strategy and objectives; strategic goals of "vital city" development; protection of natural resources, town natural system; regeneration and renewal of urban space, cultural heritage protection; energy efficiency, ecology-friendly technologies, reduction of energy consumption, technical infrastructure development; public transport system improvement (development of environment friendly systems); urban bicycle routes and pedestrian zones; public open space; pro-active regional policy (creation of job places)</p> <p>b) Operation goals: promotion of healthy life style; increase of housing standards; health care and education; better environment standards and natural resources protection (waste disposal solutions, water supply, sewage and waste treatment plants); responsible, pro-ecological land use management; "green infrastructure" with neighbourhood outdoor recreation grounds, public open spaces and greens accessible for all society groups</p> <p>c) Public discussion on strategies and operation goals</p> <p>d) Strategy of project implementation and results monitoring</p>

Source: On the basis of EEA, EC-EU and UN HABITAT recommendations [2, 4, 5, 25]

Certainly it may be very naive to dream about all sustainable urban plans to see day light at once, as reality might be very different from ideal planning theories. Especially now, when we face economy crisis and its severe consequences in housing industry, we can witness how strong by economy could influence idealism and academic theories in urban planning approach. Nevertheless all ideal conclusions of planning research and textbook concepts might be very easily overlapped by real life, it is still worth to struggle for sustainable planning and its decisions consequent implementation, hoping that spatial "chaotic epoch" will soon be over. Without this approach in the future it might be too difficult (if not impossible) to provide enough greens and secure high living conditions.

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