Problems and Prospects for Ensuring the Stable Development of the Moscow Capital Region

1 City of Moscow: capital of the Russian Federation, centre of the Capital Region, central federal district

According to the Constitution of the Russian Federation the City of Moscow is the capital of Russia. As of the beginning of 2000 the number of Moscow's population amounts to nearly 8.5 million people. The square area of Moscow is gradually growing: it made up 88,000 hectares within the administrative borders of the city in 1960, in 1980 it grew to 100,000 hectares and it totaled 109,000 hectares in 2000.

Moscow is divided into 10 administrative areas that are made up of 128 administrative districts.

The role of Moscow as the chief administrative centre of Russia is also rather significant. One tenth of the whole number of the country's administrative employees live and work here. The gross regional output amounts to more than 10 per cent from the Russian one. The total volume of industrial output is nearly 6 per cent from the Russian figure. Furthermore, the total volume of commodity circulation runs up to more than 25 per cent from the Russian one. The position and role of Moscow in the country's economy determine the specificity of the investment climate in the capital. Moscow stands out for both gross numbers of capital investments and investment sizes per capita which indicators are more than double the average Russia's figures. The size of foreign investments into the economy of Moscow for the past years amounts to some 16.5 million people. Based on the populated territory indicator (number of settlements per 1000 square kilometres) the region falls under the category of “high density settlements regions”. Therefore, the Moscow Region belongs to an urbanized area on the basis of formal indicators. However, town-like settlements are located unevenly throughout the territory of the region. Most densely populated areas are concentrated around the capital.

By the number of banks and their branches per 100 thousand of population Moscow exceeds three times the average Russian figure.

In the 1990s Moscow had greatly enhanced its significance as the world centre of foreign trade. The number of firms registered in Moscow as importers or exporters makes up about 90 per cent of their total number in Russia. The size of per capita foreign trade turn over in Moscow is 3.5 times more than that of the all-Russian average.

The availability of 11 radial railway links, 13 major highways, 4 commercial airports, 3 river ports fully covers the requirements of the city supporting outbound freight and passenger shipping which provides for enormous volumes of cargo delivery and passenger transportation. The existence of a well-developed network of all kinds of shipping makes Moscow very attractive for business.

Great scientific and cultural potential, most leading healthcare institutions of the country, higher education universities as well as many high-tech enterprises are concentrated in Moscow.

Moscow Region is a most dynamic capital region. Its future-oriented development assumes strict regulations and the cooperation of the federal, regional and municipal authorities.

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The economic and other potentials of the above settlements do not virtually differ from that of the capital as many of them are in fact the satellites of Moscow furnishing the premises for the federal-level scientific, technology and production enterprises.

Russia is a federal state. Its Constitution establishes 89 subjects of the Federation enjoying equal rights. At the same time, the population of the subjects ranges from several dozens of thousands (autonomous republics) to several millions of people – large urbanized territories including federal level cities such as Moscow and St. Petersburg.

In order to enhance the efficiency of the federal level state power bodies the Presidential Decree of May 2000 introduced an institute of the authorized representatives of the President of the Russian Federation in 7 federal districts numbering from 10 to 30 million people: the Central District (Moscow), the Northwestern District (St. Petersburg), the Southern District (Rostov-upon-Don), the Volga Region (Nizhnij Novgorod), the Ural Region (Ekaterinburg), the Siberian District (Novosibirsk), the Far East District (Khabarovsk).

18 subjects of the Russian Federation comprise the Central District. They are: the City of Moscow, Belgorod, Bryansk, Vladimir, Voronezh, Ivanovo, Kaluga, Kostroma, Kursk, Lipetsk, Moscow, Orel, Ryazan, Smolensk, Tambov, Tver, and Tula and Yaroslavl Regions.

Thus, the City of Moscow is the capital in the Russian Federation, the centre of the federal region, the centre of the capital region which includes the capital and the Moscow Region as well as the centre of the Moscow Region geographically situated around Moscow.

At the present time the Moscow Capital Region is one of the most dynamically developing capital regions of Europe, and because of the dynamics, its crucial development factors are to integrate ecological and town-building principles for the sustainable development based on the achievements in the area of sustainable development of city space, city space planning, the promotion of business, living, industrial and recreational territories of the city.

The history of Moscow’s development indicates that, on the one hand, a large city acts as a severe pollutant in the environment and, on the other hand, it is a centre of scientific and technological progress aiming at the solving on environmental problems. Proceeding from the ecological priorities for the sustainable development of cities, city agglomerations and urbanized regions the global experience shows a necessity for a single strategy to regulate the processes of city development and defining the limits of perspective use of a territory in order to preserve its natural originality.

Therefore, the sustainable development of Moscow and the Moscow Region as an integrated regional economic and natural
The radial-ring structure of Moscow included so-called “green edges” which contributed to the reduction of the anthropogenic burden. According to the Master (General) Plan of Moscow’s reconstruction from 1935 a woods and parks protective belt was blueprinted aiming at separating industrial and living quarters by a planted trees and gardens massive. However, because of poor coordination between Moscow and the Moscow Region authorities we can observe the urbanization of the belt of late years. This leads to an expansion of construction sites in Moscow and to the destruction of the green belt protective functions.

In the Regulation “On the Basic Ways of Preservation and Development for the Territories of the Nature’s Complex” the capital’s problems are viewed as three-leveled: the Moscow Region, the city and its downtown. The problems of the city’s ecological development and the whole of the region demand a special attention. They are the key in determining an appropriate scale for the permissible use of the natural reserve potential of the territory. As never before, it is necessary to channel all the potential available to the intensification of the capital’s economy, its modernization and reconstruction, practical saving of resources in the areas of the city’s economy.
Two key tasks are being solved by developing the downtown Moscow: the enhancement of functions inherent to the capital and the preservation of its historical environment. A leading trend in developing territorial and industrial potential of the city implies a transition from the extensive development - the territorial growth included - to a structural reorganization. This means:

- Decentralization of the planning system, including transportation, functional, composition and spatial nodes and links
- Mutual integration of the urbanized and natural frameworks of the city by the intensified development of the system of the so-called “buffer” partially built over and urbanized spaces in the nodes and areas of the planning interaction of the two frameworks and the polarization of urbanized and natural features of the territory in their periphery
- Further development of the landscape and composition structures of open and partially built over spaces, the system of architectural and space dominants of built over areas and their perception
- Priority intensified use of the heart of Moscow
- Step by step integrated reconstruction of the entire built-over area of the city.

3 The system for urban planning and managing the development of Moscow

The Federal Urban Planning Code

The Urban Planning Code of the Russian Federation is the basic legal document which governs the relationships in the area of people’s settlement systems, town-building planning, improving living conditions in urban and rural areas, developing utilities, transportation and social infrastructures, rational using of natural resources, preserving historic and cultural heritage as well as protecting the environment suitable for the life of the population in Russia.

The categorized data on the conditions of the city’s environment as a whole, the integration of its elements, the development of both positive and negative processes should be in conformity with the following levels of the problems’ reviewing and decision-making:

- Strategic decisions on the territorial development of the city and the urban agglomeration
- Long-term forecasts on the basis of maps and forecasting simulation models according to various scenarios
- Assessment and forecast of the region’s impact on the conditions of the city’s territories (lands)
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The city level

- Strategic decisions on the development of the modern city territory
- Retrospective assessment and general analysis of the conditions of the city’s territory on the basis of historical and mapping materials, results of many years’ monitoring and aerial filming aimed at dividing the city’s parts into precincts based on the level of their ecological hazardousness (safety) and the nature of different processes

The local level

- Tactical decisions on the district and precinct planning
- Programme-based monitoring and land survey of the territories.

Capital planning

In 1993 the Russian Federation law on “The Status of the Capital of the Russian Federation” was adopted which governs the implementation of the capital’s functions by Moscow. The documentation system on the town-building planning for the development of Moscow’s territory comprises:

- the Master (General) Plan for Moscow Development;
- the town-building plans for the development of the administrative districts, precincts and territorial areas with a special status;
- planning projects; and
- territorial programmes or schemes.

The Master (General) Plan serves as a basic documentation on the urban-building planning for the development of Moscow territory. Urban-building plans for the development of Moscow’s territorial segments must be conform to those of the administrative districts.
As far as the city’s function as the capital of the Russian Federation is concerned, the Moscow Government agrees a draft of the General Plan with the government of the Russian Federation.

The procedure for town planning in the territories of the federal level areas is established jointly by the bodies of the Federation and Moscow authorities on the basis of both Russian Federation and Moscow legislation.

The development of urban-building activities critical to the performance by Moscow in its function of the Russian Federation capital is provided by the Federal budget subsidies as well as by paid services offered by the city.

The urban-building activities in the territories subject to hazardous impacts – including emergency ethnogeny situations and natural calamities – are carried out in accordance with safety requirements for the territory and protective measures from the above dangers established by the legal acts of the Russian Federation (executive bodies included) and those of Moscow.

Boundaries, special regulations for the above-mentioned territories and protective measures are introduced by the Moscow Government on the basis of the specialized parts of the town-building documentation, territorial maps and hazardous impact protective schemes.

Capital region development

In order to ensure Moscow’s function as the capital the “Order of the State Committee of the Russian Federation on Construction and Utilities” envisages the development of a consolidated capital region development project which would provide for the development, reliable functioning and ecological safety of the territories.

The Moscow authorities cooperate with the Moscow Region executive bodies in the following urban-building areas which are of mutual interest to them:

- devising and implementing the Master (General) Plans for Moscow and the Moscow Region;
- devising and implementing programmes and plans aimed at the development of common transportation and engineering infrastructure systems;
- ensuring the ecological safety of the territory, preservation and development of its natural complex;
- devising and implementing the programme for protecting historic and cultural monuments in the territories adjacent to the boundary of Moscow and the Moscow Region;
- building facilities in Moscow which are necessary for the functioning of the Moscow Region executive bodies, enterprises and the region level organizations;
- housing, social and recreational construction for Moscow citizens in the territory of the Moscow Region;
- coordinated use of areas adjacent to Moscow and the Moscow Region including the joint drafting of documentation on the urban-building planning and participation of the two sides in discussing regulatory documentation on construction and renovation activities; and
- other issues of mutual interest related to urban-building activities.

The above mentioned coordination is carried out by adopting agreed legislation and decisions by both Moscow and the Moscow Region executive bodies, concluding agreements and accords.

The foundation for the improvement of the urban-building system of the Moscow Region is based on the principles of zoning. These provide for

- a well-balanced development of natural and urbanized territories,
- an ecologically, socially and economically optimal combination of intensity and functional types of the use of the territories,
- the establishment of a single system for settlement, natural and urbanized landscapes, and spatial environment as well as for
- the introduction of new organic forms of construction and settlement, low-story houses, office complexes, machine parks etc.
4 The Master (General) Plan of Moscow as a key document for the spatial development of the Moscow Capital Region

The Master (General) Plan for Moscow’s development for the period up to 2020 adopted in 1999 is the key document for the urban-building planning and aiming at creating a favorable environment for living and the city’s sustainable development, ensuring its ecological safety, preserving the nature and the city’s cultural heritage. The new Master (General) Plan for Moscow considers the city as part of the Moscow Region.

The Master (General) Plan provides for introducing a unified settlement system in the Moscow Region which includes:

- Developing of a settlement system in Moscow and central parts of the Moscow Region under conditions of stringent territorial restrictions based on maintaining the priority for the preservation and development of the natural territories given the forecasted reduction of Moscow’s population and stabilization of the number of population in the central parts of the Moscow Region on the current level.

- Developing of Moscow within the existing boundaries with the enhancement of efficiency of the use of living quarters and restructuring industrial and utilities areas.

- Regulating the development of towns of the central parts of the Moscow Region within the boundaries defined by Master (General) Plans of the respective territories.

- Shaping the priorities for the urban (North-western, North-eastern and Southern parts of the Moscow Region) and rural settlement (areas lying between trunk links).

- Preserving and expanding the system of woods, parks, recreation areas located within the limits of the urbanized territories, on the one hand, and restrictions introduced by the requirements of Moscow’s suburban green area, on the other hand.

Map 1
The urban planning structure of Moscow City

Source: State unitary enterprise research and project carried out by the institute of Moscow City Master Plan.
The main aim of the new Master (General) Plan is to secure a favourable environment for living and a sustainable development of Moscow for the current and future generations.

In the new plan the direct administrative control is augmented with economic and legal tools for the development of the city. It also provides for the coordination of federal, social and private interests on the basis which strengthens its territorial and self-control bodies.

The resolution of ecological safety and natural territories protective tasks, preservation of the historic, architectural and town-building heritage, radical solution to housing problems, establishing new social, cultural and business centers, speedy addressing of transportation problems are subordinated to the objectives.
The General Plan substantiates the refusal from a territorial expansion and announces the necessity for an intensified reconstruction of Moscow’s territory. The objective is not to extend the area of the capital and not to exceed its current borders. The ultimate task stated is to approve and confirm the stability of Moscow and its region area for at least 20 years without a right to change their boundaries unless mutual agreement is reached.

The improvement of the use of Moscow’s lands is supposed to be achieved by reducing the inner city industrial areas (from 20,900 hectares to 15,600 hectares), eliminating 16 production facilities and renovating the existing built-over areas (at present only 14 per cent of the territory of living quarters can be described as having good town-building indicators). The city needs another 20 million square metres of new housing (total area of housing space of Moscow is 179 million square metres).

The Master (General) Plan provides for the creation of high quality jobs in the suburbs of Moscow which may trigger migration flows between Moscow and the region and as a consequence raises opportunities for the Muscovites relocation to the suburbs. Provided legal, social and economic bases are equally developed.

The integrity of principle of Moscow and the Moscow Region determines the integrated development of the capital and the region as well as long-term requirements to the development of Moscow and the Moscow Region. These include:

- Ensuring the ecological safety of the Moscow Region
- Preserving and developing the territories of the natural complex
- Preserving the cultural heritage of the Moscow Region
- Integrated restructuring of the Moscow Region’s urbanized territories – the City of Moscow and the central parts of the Moscow Region
- Developing the Moscow Region’s infrastructure systems
- Introducing a unified system for recreation and tourism in the Moscow Region
- Developing the economy of the Moscow Region.

5 The aims and tasks of protecting the environment and ensuring the ecological safety in the Moscow Region

The key aim is to create such conditions for the sustainable development of the Moscow Region which would not only prevent further deterioration of the environment but make its tabilization possible and – in the future – ensure the improvement of the ecological situation in the region.

The strategic objectives are to secure the reduction of the atmospheric air pollution down to acceptable levels in rural areas, to optimize and improve the protection of the water resources of the region, to ensure restoration of the soil and vegetation cover, and to reduce the acceptable level of noise in rural areas.

It should also ensure the implementation of an integrated number of engineering, technological, sanitary and planning measures which would promote the minimization of polluting emissions produced by industrial, utility, transportation enterprises and other facilities, the pollution of water resources by everyday consumer discharges, solid everyday waste.

Further it should promote the sanitary cleansing of the city, the use of disinfecting and safe burial of waste and enhance the sustainability of the regional natural complex.

To achieve these objectives it will be task to:
- improve the quality and reliability of Moscow and the Moscow Region water supply systems by introducing water reserves strengthening the regime of sanitary protection of drinking water sources from agricultural floods, pesticides etc.,
- ensure the production of ecologically safe agricultural goods in the region,
- rehabilitate and re-cultivate ecologically hazardous areas such as random waste dumps, sewerage purification facilities,
- set up an effective regional system for collecting, disinfecting and recycling of solid waste (recycling facilities totaling 1.15 million tons per year capacity are to be built, dumping sites in the region are to be modernized),
- build water supply systems based on underground springs,
- build local environment friendly heat plants and purification systems in the central parts of the Moscow Region,
- restore and preserve the natural and landscape foundation of the region (river valleys, woods, protected natural territory reserves),
- introduce a system of suburban parks and forests in Moscow and other towns of the Moscow Region,
- preserve open spaces and rural landscapes,
- improve and develop the system of rural and recreational settlements as well as towns,
- ensure a complete purification and re-cultivation of lands polluted by heavy metals, radionuclides, oil products and organic compounds,
- ensure radiation safety and arrange dumping sites for burying ion-radiating sources in the Moscow Region,
- carry out a number of measures aimed at achieving the ecological safety of industrial enterprises and technologies,
- renovate and build federal highways,
- develop the Moscow commercial aviation hub and railway center,
- develop the network of the Moscow Region highways (its nuclei primarily) including the renovation of main roads and construction of additional radial highways,
- renovate the existing highways and construct new ring roads, by-passes, bridges, grade-crossing eliminating structures in trunk roads,
- establish a modern municipal network of highways, and last not least,
- to secure a status of historical monuments to certain territories and reserved areas as well as to the quarters and streets of downtown which have retained its historical planning to the full and which should enjoy some special regimes of use and construction.

The “Complex Environmental Programme for Moscow until the Year 2005” was worked out in the period 1993–1994. Its particular aims are:
• Freezing of emissions from all pollution sources at the level of 1994–1995
• Stabilization and gradual reduction of water consumption
• Diminishing of pollutants discharge into the Moskva River and other water bodies of the city
• Removal of silt deposits from nearly 900 hectares of areas in Moscow and the Moscow Region
• Obtaining of additional areas for constructing activities and establishment of recreational zones as a result of reclamation of city dumping grounds
• Utilization and recycling of solid domestic (over 80 per cent) and industrial wastes (95 per cent)
• Creation of additional green areas within the city (minimum 4,000 hectares) as well as reconstruction and restoration of degraded green areas.

The Integrated Environmental Programme provides ecological safety for the further development of Moscow and prevents an aggravation of social and economic problems in the city. The programme stipulates:
• Priority of resource saving measures over the raising of energy, heat and water supply; emission reduction from heat and power plants; improvement or closing down of small boiler-houses
• Implementation of a set of measures aimed at a mitigation of the negative impact from motor transportation (construction of the third ring shaped main street, arrangement of road junctions and pedestrian crossing; application of catalyst and oxygen additives to motor fuel; conversions of car engines from common fuel to gas; use of electric cars to the inside city transportation)
• Implementation of a set of measures and works aimed at a rational use of water resources (reconstruction of sewage farms; decentralization of waste water treatment facilities in course of construction activities in new areas; assignment of the federal status to the territories surrounding sources of water...
supply for Moscow City and Moscow, and Tver and Smolensk Region; construction of deep cleaning facilities for the treatment of surface waste waters; arrangement and reclaiming of flood plain areas; utilization of residues of the Moscow sewage farms occupying over 1200 hectares

- Reconstruction and restoration of green areas totalling over 4,000 hectares; creation of new green areas within the city (4,000 hectares) in accordance with the "Main Guidelines of the General Plan of Development of Moscow and the Moscow Region until 2010".

We hope that Moscow Region has real prerequisites for promising a sustainable development. This can become a reality in case of constant attention to this problem from the authorities of all levels – from municipal to federal ones –, in case of further improvements of the legal base and of economic incentives experience and of involvement of the population in formulating and implementation of sustainable environmental policies in the field of the urban development.