The urban conflicts identification and resolution on the Belogorie reserve territory

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Abstract. One of the state environmental policy priorities both in Russia and other countries is the preservation and development of nature reserves and specially protected natural territories. The article discusses the state natural reserve “Belogorye” Belgorod region. The nature reserve “Belogorye” territory includes five sites in different municipal districts of the region. The main problem of the reserve development is that its territory is of an island character, does not have connecting elements and is a subject to human impact. To solve the specially protected and adjacent territories development existing problems, a conflict approach, which consists of identifying the subjective and objective territorial development contradictions, identifying urban the planning activities participants (subjects) personal conflicts and finding the means and possibilities to resolve these conflicts by legal and urban planning methods, is proposed.

The analysis of the the most problematic areas limitations and burdens of the Belogorie reserve is made. Identified and classified urban conflicts in relation to the reserve territory among which are: land use, social and functional purposes, transport, regulatory documents, property. The regional significance cultural heritage objects are revealed - architectural monuments and historically significant places (zaseki). A territories adjacent functioning model to the reserve has been developed. It also proposes the cultural heritage object reconstruction with the hotel and a museum adaptation.

Introduction

One of the state environmental policy priorities both in Russia and other countries is the nature reserves and specially protected natural territories preservation and development. They are a national treasure and have a research, tourism and recreation, educational value. The protected areas network spatial development problems include admissibility issues and economic activities regulation in specially protected natural areas, forest relations regulation, buffer zones formation, nature protection regimes clarification, urban planning conflicts resolution, etc. [1].

In the Belgorod region there is a state natural reserve “Belogorye”. The reserve structure includes five areas of specially protected natural territories located in different regions - “Forest on Vorski”, “Ostras’evy Yary”, “Walls of Izgorya”, “Yamskaya Steppe”, “Bald Mountains”, natural park “Rovensky”. The reserve development main problem is that its territory is of an island character, does not have connecting elements and is subjected to human impact. As a result, there is a threat of reducing the reserve boundaries and the loss of the unique natural and biological identity of its sites. The main goal of this research is the town-planning development of the Belogorie reserve, the unique...
ecosystems preservation, the natural framework strengthening and the socio-economic development of the territories adjacent to the reserve.

The contradictions often arise with respect to the territorial use in modern society. Because of these contradictions, personal conflicts between the participants (subjects) of the architectural and town-planning activity and the consumers of future transformations arise. Urban conflicts today are extremely common in the territorial planning practice. Conflicts of interests and needs between the urban planning activities participants are becoming particularly complex and large-scale in modern conditions of a market economy and a tense environmental situation [2].

Conflict themes in the urban planning theory has been recently considered, however, it is the search for a balance of interests and needs of urban development participants in the process of territory transformation, the spatial systems interpretation at the conflict level and the search for the land use options for resolving urban development conflicts and the developmental contradictions will help to solve an important socially balanced social problem -economic territorial development [3].

To solve the specially protected and adjacent territories development existing problems, a conflict approach, which consists in identifying subjective and objective contradictions in the territorial development, identifying the urban planning activities participants (subjects) personal conflicts and finding the means and possibilities to resolve these conflicts by legal and urban planning methods is proposed [3].

The reserve “Belogorie” urban planning activities features study

In the framework of the conflict approach application at the first stage, it is necessary to study the territorial town-planning features. When studying the limitations and burdens associated with the urban planning reserve activities and the surrounding areas, the following was revealed.

1. The site “Forest on Vorski” is located in the vicinity of the urban community Borisovka, Borisov district, on the right bank of the river Vorskla. The site “Forest on Vorskla” is characterized by the presence of intermittent protection zone. Limitations of flora and fauna include the presence of many indigenous tree types (oak, maple, elm, etc.), paths of ungulates, badger holes, habitats of rhinoceros beetles on the site. The anthropogenic planning restrictions analysis revealed dilapidated infrastructure to be demolished, objects of the research base of St. Petersburg State University, a historical cordon, a meteo-oak, and also an object of cultural significance at the regional level - the house of academician Sukachev. This reserve section is also characterized by the reserve employees’ permanent residence within the site territory boundaries, including in the cultural heritage site.

2. The “Walls of Izgorye” site is located in the immediate vicinity to the Peschanka village in the Novooskolsky district. The features of the “Walls of Izgorye” site include the complete absence of a security zone. Within the site boundaries wild boars live, there are habitats and stands of river birds in the adjacent territories. A distinctive site flora feature is the presence of rare chalk pines, most of which are preserved. The anthropogenic planning restrictions of the site are manifested in the presence of a railway that runs along the site border, which is a barrier between the territories of protected areas and the forest fund.

3. The following is typical for the Yamskaya Steppe site. The site is located in Gubkinsky district, surrounded by a continuous ring of agricultural activity areas, has a continuous protection zone surrounding the protected areas around the perimeter. The flora characteristics are in the predominant steppe vegetation, the forest areas presence, as well as areas of unmown steppe. The fauna of the site has various species of animals - fox ordinary, bobac marmot, boar, etc. [4].

The steppe belt landscapes are known as natural-anthropogenic complexes, formed as a result of the cultural transformation of space by nomadic peoples [5]. The Belgorod region ecosystem peculiarity is also in a unique phenomenon - the forest-steppe zone. The boundaries or transitions from one ecosystem to another often demonstrate a high level of biodiversity, have their own unique set of species and characteristics to be preserved [6].

A Yamskaya Steppe site anthropogenic planning limitations distinctive feature is the Lebedinsky Mining and Processing Plant presence in close proximity to the borders of the protected areas. The reserve site falling into the sanitary protection zone, is under continuous technological impact. Plans
for the plant territorial development involves the creation of new tailings, which will have an extremely negative impact on the ecosystem of the reserve.

**Identification and classification of urban conflicts in the reserve.**

To identify the urban conflicts in the reserve, three of the most problematic areas are investigated: “Forest on Vorsklo”, “Walls of Izgor’ye” and “Yamskaya Steppe”. The factors contributing to the urban conflicts emergence are identified as: closely adjacent settlement lands (“Forest on Vorsklo”), a section of railroad tracks that passes along the protected areas border (“Walls of Izgor’ye”), agricultural land, the presence of many owners and tenants, the presence in the immediate vicinity of the mountain - productive plant and industrial areas - dumps of rocks and tailings.

In the reserve studied areas, five main types of conflicts in relation to the territory were identified in accordance with the classification developed by M.V. Perfume [7]: land use, socio-functional, transport, regulatory, property.

These five types of urban conflicts are also classified into groups:

1) by hierarchical levels: regional, district, local, local;
2) by duration: daily, periodic and occasional, which may be temporary and permanent;
3) by the occurrence way: deterioration of the already existing environment, reconstruction of the urban environment, new planning / construction, reorganization, re-functionalization of the environment;
4) by the nature of the manifestation: imbalance and dysfunction;
5) development strategy (settlement): antagonistic, adjusting, synergistic;
6) by type of location: point, areal, linear [8].

On the site “Forest on Vorsklo” various concerns and preferences were analyzed with respect to the territory under the study. The following urban conflicts have been identified:

1) transport (the attractiveness of the site and the difficult accessibility of the site, lack of public transport, cycling and pedestrian infrastructure);
2) land use (lack of buffer areas, anthropogenic impact of lands of settlements and areas set aside for agricultural use, degradation of landscapes in areas adjacent to protected areas);
3) social and functional conflicts (the need for a high-quality living environment on the territory of the reserve to live students and students in practice and the presence of dilapidated buildings, the need for premises for scientific and educational activities);
4) property (the residence of employees in the cultural heritage object, which is in emergency condition; the possibility of transfer of residential buildings in the protected areas to private property after a 10-year period of residence) (Table 1).

The following conflicts are typical for the “Walls of Izgor’ye” site.

1. Transport conflicts. The forest area of the “Walls of Izgor’ye” section is divided by the railway, due to which the section border passes according to the railway track. Also, on this site of the reserve there is no organization of entrances to the territory.
2. Land tenure conflicts. The lands of the rural settler closely adjoin the borders of the site – Peschanka village and there are no buffer areas between the village and the protected areas. On the part of the population, the territories of the reserve’s area are being used for personal purposes with mass uncontrolled visits to the reserve’s area by various types of consumers.
3. Socio-functional conflicts. Within the boundaries of the reserve site there is no engineering infrastructure for existing capital construction facilities. In addition, capital construction projects do not meet modern requirements. The cultural heritage object is the house of academician Sukachev. It needs to be reconstructed with a new function in the area “Forest on Vorsklo”
4. Property conflicts. The facility under construction at the “Walls of Izgor’ye” site of the reserve is privately owned, located in adjacent areas at a distance from the protected areas and has no infrastructure links with the “Walls of Izgor’ye” site.
1. Transport conflicts. The site is difficult to access, has no public transport routes, bike paths and walking routes from nearby settlements. The roads leading to the “Walls of Izgorye” and “Yamskaya Steppe” sections do not have asphalt pavement, which also increases the difficulty of accessing them.

2. Land tenure and regulatory conflicts. Considered areas of the reserve are surrounded by agricultural areas, there are no buffer areas. In the immediate vicinity, there is a proliferation of technogenic territories of the Lebedinsky mining and processing plant due to the expansion of the tailing dump, it falls into the sanitary protection zone.

3. Socio-functional conflicts. The site of the reserve has no organized tourist and recreational infrastructure. In the areas adjacent to the plots there is a degradation of natural landscapes (Table 1).

For the development of protected areas and adjacent territories, a number of measures are proposed to resolve the identified urban conflicts.

1. Development of a model for the functioning of the reserve, which includes the formation of the natural core of protected areas, surrounded by protected and buffer zones, the saturation of the territories adjacent to the protected areas with objects of tourist and recreational infrastructure (Figure 1).

2. Strengthening the natural frame by forming a continuous system of connecting elements (ecological corridors, PA areas, buffer and protection zones, etc.) in the administrative boundaries of the municipal districts of the Belgorod region [9].

3. Expanding the boundaries of the reserve to natural frontiers with the status of regional significance through partial removal of degraded territories from agricultural land and renaturation of landscapes on them.

**Table 1. Classification of urban conflicts of the site “Forest on Vorskla”**

| by hierarchical level  | Transport | Land tenure | Socio-functional | Property |
|------------------------|-----------|-------------|------------------|----------|
| local                  |           |             |                  |          |
| by duration 1) daily   |           |             |                  |          |
| temporary              |           |             |                  |          |
| permanent 2) periodic  |           |             |                  |          |
| by the way of occurrence | deterioration of the already existing environment |            |                  |          |
|                        | new planning / construction |            |                  |          |
|                        | environment reorganization    |            |                  |          |
| by the nature of manifestation | imbalance |            |                  |          |
|                        | dysfunction |            |                  |          |
| by location type       | targeted |             |                  |          |
|                        | areal    |             |                  |          |
|                        | linear   |             |                  |          |
4. Organization of tourist infrastructure and recreational spaces in the adjacent territories in order to attract investment, social and economic development of the reserve, as well as the integration of protected areas in the tourist and recreational environment of the region. In general, this will contribute to the active development and positioning of the tourist and recreational environment in the Belgorod Region and the resolution of the urban-planning conflicts and development contradictions existing in the region [10,11].

5. The functional planning structure modernization on the protected areas territory: the two dilapidated buildings demolition, the Museum of Nature new capital construction facility construction, the reconstruction and adaptation of the cultural and historical heritage object to a hotel and the museum of academician V.N. Sukachev.

6. The ecological paths formation, research and educational routes, as well as the organization of a quality environment for research and educational activities in the reserve.

Summary
1. The resolution of urban conflicts with all the restrictions and burdens of the territory will contribute to the socio-economic development of the territory as a large federal museum-reserve.

2. Resolving land use, regulatory and socio-functional urban planning conflicts by forming an interconnected structure of territories using a continuous system of connecting elements will contribute to the formation of a tourist-recreational, educational and research cluster.

3. Carrying out measures to resolve urban conflicts in the areas of the Belogorye nature reserve and the adjacent territories will allow to take into account various interests in relation to the territory under study and realize its resource potential.

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