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## **ON THE PECULARITIES OF DESIGNING AGRORECREATIONAL ECOLOGICAL SETTLEMENTS BY MEANS OF EFFECTIVENESS CRITERION**

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It is becoming evident today that the growth of settlements, increasing the share of urban population, as well as the emergence of more complex networks and systems of cities leads to the expansion of urban areas and their qualitative changes. In contrast, there is a tendency to create agro-recreational and recreational entities of different types. This, in turn, both improves the economic situation of the settlement itself, and provides the opportunity for a full rest of the local residents and visitors. However, in most cases, the process of formation of agro-recreational entities is not sufficiently provided with the necessary methodological recommendations and town-planning standards.

As a result of our research, an algorithm for designing agro-recreational eco-settlements (as a new type of settlements) has been formed, which allows quickly and fairly accurately to solve city planning problems, taking into account both social, economic and environmental aspects.

The algorithm consists of two main stages:

- assessment of ecological integrity of a agro-recreational eco-settlement landscape by means of the landscape ecological integrity index, and accordingly, determining the area of focus of settlement greening;
- solving the problems of agro-recreational eco-settlements formation by means of efficiency criterion.

The criterion of ecological integrity is considered as limitation of the task of agro-recreational eco-settlement formation. That is, the maximum integrity of the landscape should be ensured for the settlement architectural and urban planning. In the presence of water resources, agro-recreational eco-settlement can develop both along the coastline and up to the coastline with the formation of beach areas. If the area is provided with forest resources not far from the settlement, the settlement development should take place towards the forest with the possible formation of a sylvan park.

The next stage is the formation of possible solutions for the system (agro-recreational eco-settlement), their assessment and ranking based on the communication criterion. The decision on the choice of a place of recreational entity/ agricultural enterprise of agro-recreational eco-settlements is made on the basis of proportionality of two factors: - recreational / agrarian attractiveness and transport distance of the recreational object from the settlement. Thus, demand for recreation / agrarian enterprises decreases with increasing costs for transport services, and in the presence of poor transport infrastructure the concentration of summer residents/ agricultural workers in the areas closest to settlement increases. With high availability of recreational / agricultural resources, the problem can be solved through the selection and subsequent development of the territory as the settlement system evolves and taking into account the growing needs of the population. In cases of severe shortage of recreational / agrarian resources, a set of measures is needed to increase the recreational / agricultural potential or maximize the attraction of resources of adjacent territories (calculations using the ecological integrity index).

Then, on the basis of the obtained results, the procedure of functional and planning structure formation of agro-recreational eco-settlement takes place.