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# *УСТОЙЧИВОЕ РАЗВИТИЕ И АКТУАЛЬНЫЕ ПРОБЛЕМЫ ИСПОЛЬЗОВАНИЯ ТЕРРИТОРИИ*

В условиях рынка возросла актуальность определения территориальной емкости, от которой зависит величина платы за использование территории.

За каждой отдельно взятой территорией закрепляется так называемая «функция места» (преимущественный для определенной территории вид деятельности) - промышленная функция, транспортная, сельскохозяйственная, селитебная, рекреационная, природоохранная и др. Рост интенсивности использования территории и усложнение пространственной структуры природопользования способствуют формированию конфликтных ареалов (территориальных конфликтов),

*Цель.* Выявление конфликтных ареалов (территориальных конфликтов), что обусловлено исчерпанием территориальной емкости, ограничивающей масштабы человеческой деятельности в данном месте.

*Методика.* Метод анализа территориальных конфликтов, предложенный в данном исследовании, заключается в их поэтапном разрешении. На первом этапе проводится оценка территориальной емкости территории на базе адаптированного для практических расчетов метода картографической оценки экологической емкости территории Н.Ф. Реймерса. На втором, - выявляется характер пространственного сочетания функций друг с другом - симбиоз, соседство или антагонизм. При получении интегральной оценки остроты конфликта сопоставимость отдельных параметров решается применением непараметрических методов исследования.

*Результаты.* Рассмотрены примеры использования метода выявления конфликтных ареалов при оценке различного рода намечаемых проектов и планов развития территории.

*Научная новизна.* Вклад авторов в изучение феномена формирования конфликтных ареалов (территориальных конфликтов), вызванных исчерпанием территориальной емкости, заключается в выработке новой концепции исследования данного явления, базирующейся на системном подходе, включающем многоэтапное

изучение территории – от оценки ее экологической емкости – к анализу взаимоотношения функций – до выявления конфликтов и способов их разрешения.

*Практическая значимость.* Данный подход позволяет оптимизировать природопользование в данном месте путем «разведения функций» в пространстве за счет создании буферных зон между функциями-антагонистами или передаче функций территориям оптимального развития.

Ключевые слова: территория, концепция оценки воздействия, территориальная емкость, функция места, территориальные конфликты, оптимизация природопользования, конфликтные ареалы

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## *SUSTAINABLE DEVELOPMENT AND TOPICAL ISSUES OF TERRITORIAL USE*

A surge of interest in the territory assessment problem is connected with the market - the urgency of determination of the territorial capacity and fee for the territory.

For every part of territory “place function” is fixed. The “place function” is the primary activity and could be as follows: transportational and industrial, agricultural, intended for building; recreational; environment-oriented. Increase in the intensity of use of territory and complication of the spatial structure of the nature management results in formation of the conflict areas.

*Purpose.* To identify conflict areas are formed due to the exhaustion of the territorial capacity to limit a set of functions of the territory and the scope of their development.

*Methods.* The method of the conflict areas identification as proposed in this study is their gradual resolution.

On first step assessment of territorial capacity held. The basis of the assessment is the adapted for practical calculations mapping method for assessing the ecological capacity of the territory NF Reimers. On second step revealing to determine the nature of the spatial combinations of the functions with each other - symbiosis, neighborhood or antagonism. Upon receipt of an integrated assessment of the severity of the conflict comparability of individual parameters is solved using non-parametric methods.

*Results.* Use of the method of the conflict areas identification in the evaluation of various kinds of the planned projects and territory development plans is aimed. The article gives several examples of potential conflict areas.

*Scientific novelty.* Authors' contributions to the study of the phenomenon of formation of conflict areas (territorial conflict) caused by the exhaustion of the territorial capacity, is to develop a new concept of the study of this phenomenon, based on a systems approach involving multi-stage study of the territory - from the assessment of its ecological capacity - to analyze the relationship between functions - to identify conflicts and their resolution.

*The practical significance.* This approach allows us to optimize the use of natural resources in a given place by "breeding functions" in the space through the creation of buffer zones between functions antagonists or transfer functions to another territories for its optimal development.

*Keywords:* territory, the concept of impact assessment, territorial capacity, place function, territorial conflicts, optimization of natural resources, conflict area.

Territory as a special type of spatial resource is characterized by parameters of dimension, economic and geographic position and other properties that are the subject of specific activities or research. Territory includes many natural, economic, social and ecological components, the whole "totality of natural and social components, the spatial superposition of which is projected onto the Earth's surface". Production, population, nature management are inseparable from the notion of territory. Territory plays the role of specific geographical space for the objects located on it, limits their number, determines their spatial relationships with each other, and it itself, is at the same time a specific resource. Territory is connected with "landscape construction, location of facilities, population settlement, and infrastructure development". [Sharygin M.D., p. 36]

A surge of interest in the territory assessment problem is connected with the market - the urgency of determination of the territorial capacity and fee for the territory.

Among the territorial resources, at least two classes are emphasized: the resources of space and resources of position. Resources of space are characterized by metrics and topology and are expressed in specific indexes.

Position should be considered as a particular significant resource. The role of position in geographical science is considered most important, human life activity and the performance of functioning various sectors of economy depend on it. There is an opinion that the potential of position should be included in the national wealth.

*One of the most urgent scientific researches is the development of the «territorial capacity» notion* – the fundamental systemic property of the territory. This property, in accordance with the physical analogue reflects «the extent of filling» of territorial system with different anthropogenic objects or phenomena.

In geographical works assessments of demographic, recreational, economic and ecological types of capacity are emphasized (Table 1).

*Table 1*

*Types of territorial capacity*

| | | | |
|---|---|---|---|
| *DEMOGRAPHIC* | | | |
| Maximum number of inhabitants, living in this territory and capable of earning means of subsistence | *ECONOMIC* | | |
| *P.P. Semenov-Ryanshanskij, E.B. Lopatina, V.V. Pokshishevskij, S.M. Myagkov, E.G. Petrova* | Possibility to increase the economic activity on the given area by means of its intensification and multipurpose use of natural resources | *RECREATIONAL* | |
| | *G.A. Privalovskaya,* | Size of the territory | *ECOLOGICAL* |

| | | | |
|---|---|---|---|
| | *T.G.Runova, N.F. Reymers* | capable of providing a definite number of holiday-makers with a comfortable recreation without natural environment degradation | |
| | | *V.S.* Preobrazhenskij, *U.A. Vedenin, I.V. Zorin, N.S. Mironenko, I.T. Tverdohlebov* | The scope of ability of geosystem to withstand anthropogenic overloads without worsening the environment quality |
| | | | *B.I. Kochurov, N.F. Reymers* |

*Prepared by the authors*

Capacity of the territory cannot be expressed as a sum of summands of these individual types. This notion is much more complicated and connected with the peculiarity of the functioning of the territorial systems in general.

Filling of the territory with the "social components", turning it into a «social and economic» phenomenon gives birth to the *impact*, causing qualitative transformation of the territory.

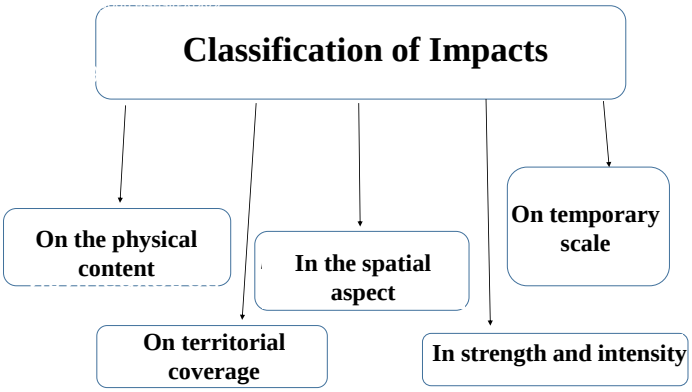



*Fig. 1. Classification of impacts. Prepared by the author. Source: Topchiev A.G. Geoecology: Geographic fundamentals of environmental management. – Odessa: Astroprint, 1996, p. 85-86.*

Environmental impacts are "all kinds of human activities and man-created objects, causing any changes in nature". According to its physical content impacts include (Fig. 1):

- withdrawal of substance;
- introduction of wastes;
- construction of technical objects;
- transformation of components and environment objects.

*In the spatial aspect* impacts can be:

- point-focal;
- linear and network, for example, transport and communication networks;
- areal – agricaultural areas, lands alloted for settlement, recreation areas;
- transformation of components or objects of nature.

*By the time scale* impacts can be:

- short-term and long-term;
- impulsive, episodic or continuous;
- seasonal, annual, century-long.

*By the territorial coverage* local, regional and global impacts are distinguished.

*By strength and intensity* impacts are systematized as strong and weak, with all intervening gradations.

Each research and each region will have its own classification of impacts.

Transformation of the territory is considered in this approach as a change in its natural components. It is important to remember the interconnections, interactions ("chain reactions") in nature, through which the impacts and changes are passed from one component to another and then to the whole natural complex, and then to another natural complex, etc.

*Changed* natural complexes, acting as natural conditions and resources, have the back effect both on man and on his activity (Fig. 2).

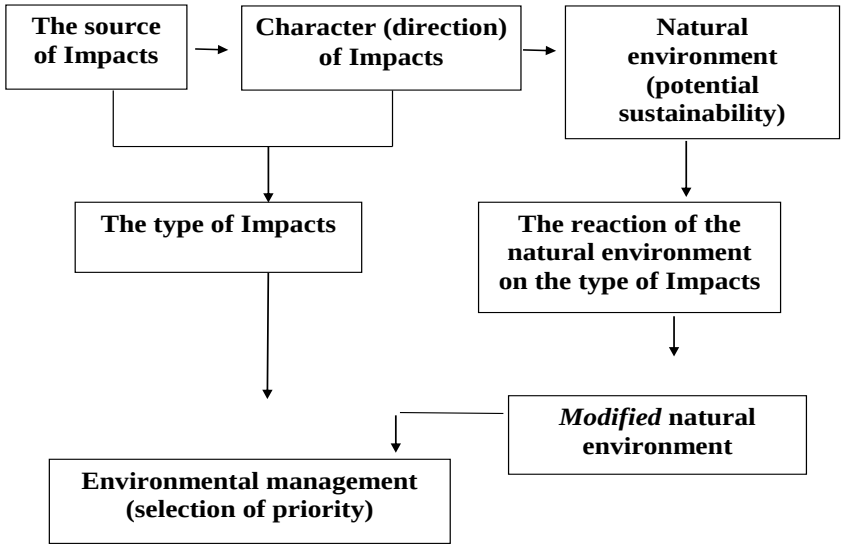



*Fig. 2. Conceptual scheme of research of impact on the natural environment.*
*Prepared by the author.*

Different resistance of natural complexes to the impact is determined by their capability of self-purification, self-regulation and self-healing. Changes in nature in its most general form can be reversible or irreversible. The scope of changes in nature is determined by comparing its current with its basic state, which is taken as the norm or standard.

Consequences of impacts taking place under the influence of changed nature, affect the use of the territory and its functions.

Use of the territory - is a way of its engaging in the society functioning systems. Type of the territory use, considered as the satisfaction of the society certain needs, is called “place function” by A.A Mintz and V.S. Preobrazhenskij. In the place function – in the "positional principle and pressure of place" (as explained by Sharygin M.D.) the uniqueness, individuality, singularity, which are characteristic of any territory, besides its common geographic properties, become apparent.

Human needs for food, habitation, rest, health care, etc are the main motive of the nature management. Thus, the main types of nature management include:

- agricultural;
- intended for building;
- recreational;
- environment-oriented;
- transportational and industrial.

The social importance of the different types of use of the territory is unequal, which shall be taken into account in business practices. Those functions of the territory that preserve its biological productivity are higher priority - environmental, agricultural, recreational, forestry one, etc.

Assessment of efficiency of functions typical for the given place shall take into consideration their totality and cannot be made from the perspective of one of them. Furthermore, multifunctionality and variance of territory use vary through time.

Relative to appropriate types of nature management - industrial, agricultural, intended for building, recreational, environment-oriented - the territory has different ecological capacity. *Determination of ecological capacity is based on the determination of the level of impact at which the territorial system goes into the state of degradation.* The main method for determination of capacity – is normative. There are construction, sanitary and hygienic, recreational, industrial, agricultural, urban-planning, ecological and other regulations. The disadvantage of the normative method is the lack of or weak elaboration of territorial differentiation of indexes.

Scientific rationale of calculation of ecological capacity was suggested by N.F. Reimers, on the basis of the calculation of the optimum ratio on the natural zones of the intensively exploited, extensively used, as well as especially protected territories providing ecological balance .

Interpretation of the method represented by N.F. Reimers on the schematic map is shown in the Table 2.

Thus, in the southern taiga zone buffer territory, providing ecological balance, must be at least 50%, and in the broad-leaved forests zone - only 25%.

*Table 2.*

*The optimum ratio on the natural zones of the intensively exploited, extensively used, as well as especially protected territories providing ecological balance*

| Natural zone | Maximum use, % | Buffer territory (performing or capable of performing ecological function), % |
|---|---|---|
| 1. Arctic desert, tundra and forest-tundra: | 10 | 90 |
| 2. Taiga:<br>а) the north of the zone:<br>б) the south of the zone: | 10<br><br>50 | 90<br><br>50 |
| 3. Mixed forests: | 70 | 30 |
| 4. Broad-leaved forests: | 75 | 25 |
| 5. Forest-steppe: | 65 | 25 |
| 6. Steppes: | 60 | 40 |
| 7. Semideserts and deserts: | 10 | 90 |
| 8. Subtropical forests | 20 | 80 |
| 9. Monsoon mixed forests | 70 | 30 |
| 10. Altitudinal zonation areas | 20 | 80 |

Prepared by the author. Source: Reimens N.F., p. 208

*Ecological capacity limits both a set of functions of the territory and the scope of their development.* Exhaustion of the capacity may occur not only as a result of exceeding its resistance to the impact, but because of complication of the spatial structure of the nature management. This case results in formation of the conflict areas (fig. 3).

The following types of conflict areas can be specified: monofunctional, multifunctional and complex. Monofunctional conflict area is formed in the territories with an evident dominance of certain functions. Its formation takes place when intensity level of the territory use results in exceeding the values of the ecological threshold of the territory capacity, which later can cause decrease in economic efficiency of production.

Monofunctional conflict is formed when take place both intensive and extensive methods of territory use. This is, for example, agricultural and recreational activity and the use of forests for industrial purposes, i.e. so-called "areal" nature management.

Multifunctional conflict area is formed in the zone of fulfillment of various high-intensive functions, the distribution of which is limited by boundaries of housing development (residential, transport and industry activities and some kinds of recreational activities).

The most complicated type of conflict area is a complex territorial conflict, which combines indications of both monofunctional and multifunctional conflicts. This type is characterized by fast exceeding of the environmental threshold parameters of the territory capacity and by formation of environment with low quality characteristics.

*Formation of conflict areas results in lower efficiency of territory use and, in some cases, in destruction of traditional forms of its economic activity.* For their revealing it is important to determine the nature of the spatial combinations of the functions with each other - symbiosis, neighborhood or antagonism (Fig. 3).

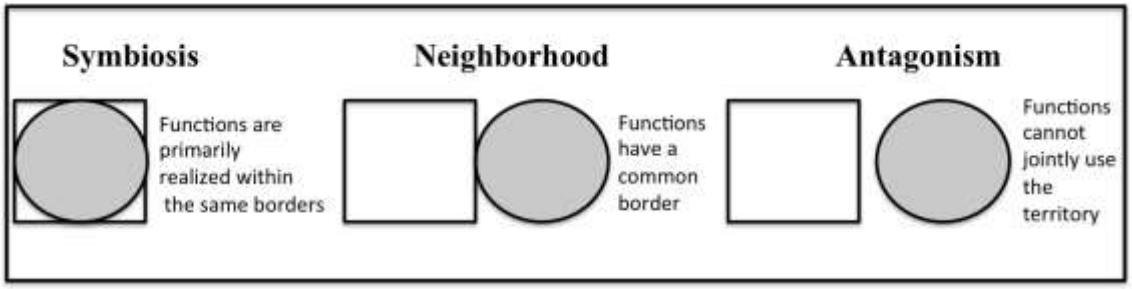



*Fig. 3. From harmony of functions to the conflict areas. Source: Gladkevich G.I., Chukanova O.A. Conflict nature management. // Ecologist's handbook, 2014, no.1, p. 94*

In symbiotic relationship functions can coexist harmoniously in the same territory. In the case of neighborhood functions can have shared borders. Functions that cannot share the territory are antagonists. Antagonism occurs when such functions as "residential and environment-oriented"; "residential and industrial"; "residential and transport"; "recreation and industrial"; "environment-oriented and industrial", and others are incompatible. B.B. Rodoman characterizes the notion of antagonism of functions as "an extreme case of their incompatibility" complicating their functioning.

*Elimination of territorial conflicts – is the paramount task of the nature management optimization.* "Mitigation" of monofunctional conflict is performed by means of a complex of measures (Table 3).

*Table 3.*

*Ways of territorial conflicts elimination*

<table>
<tr><td>TYPE OF CONFLICT AREA</td><td colspan="2">WAYS OF ELIMINATION</td></tr>
<tr><td rowspan="4">MONOFUNCTIONAL<br>(limited number of functions)</td><td colspan="2">LIMITED ACTIONS<br>To eliminate territorial conflict:<br>«extension» of impact in time</td></tr>
<tr><td colspan="2">TECHNOLOGICAL MEASURES:<br>Application of advanced available technologies, decreasing impact of aggressive function</td></tr>
<tr><td colspan="2">ACHIVEMENT OF ECOLOFICAL BALANCE:</td></tr>
<tr><td>Reduction of the scope of impact in accordance with the ecological capacity criteria</td><td>Splitting up the large monofunctional areas by natural objects with conservation</td></tr>
</table>

| TYPE OF CONFLICT AREA | WAYS OF ELIMINATION | |
|---|---|---|
| | | status |
| *MULTIFUNCTIONAL* (many functions) | *OPTIMISATION OF TERRITORIAL STRUCTURE* (spatial measures, in addition to monofunctional conflict elimination measures): | |
| | Increase of area of nature conservation function to minimally necessary | |
| | Refusal or withdrawal of the function on the "territory of optimal development" | |
| | «Polarization of landscape» (creation of «buffer» zones between antagonist functions) | |

*Prepared by the authors.*

Organizational actions to eliminate the territorial conflict are aimed at "extension" of impact in time. For example, determination of the time of the industrial plants construction, taking into account the life cycles of animals protected species and / or water biological resources.

Technological measures - application of advanced technologies reducing the impact of aggressive function - are most important.

Spatial measures are aimed to achieve ecological balance and include decrease of the impact scope in accordance with the ecological capacity criteria and are differentiated according to the type of the nature complex and depending on the types of activities carried out. Splitting up the large monofunctional areas (for example, vast agricultural and intensively used recreational territories) by natural objects with conservation status is efficient.

Under the conditions of multifunctional conflict which has been formed the situation is more complicated. Those measures require more fundamental character and more expenses. The importance of the advanced production technologies that allow reducing highly-intensive functions impact area (residential, transport and industrial) increases even more.

Spatial way of elimination of conflict areas becomes most important. It consists in creation of "buffer zones" between the antagonist functions. Buffer zones are intended to "absorb impact" which is made on the territory by highly intensive functions. Under conditions of forced reduction of buffer zones size tougher nature protection technologies for transport and industrial and residential functions aimed at maintaining ecological balance of the territory are necessary.

Sterner measure is refusal or replacement by the least important function. In this case the functions are desirable to be "transferred" to the optimal development territories.

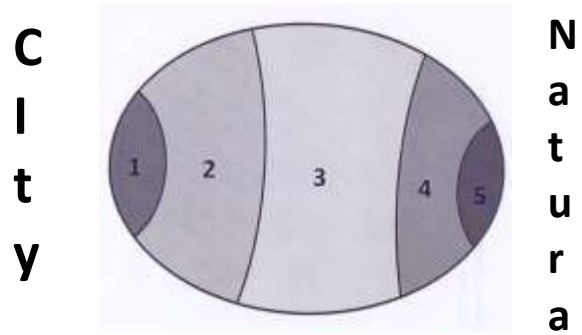
It is interesting that the functions sharing borders in the territory and acting as antagonists with respect to each other can with their harmonized development enhance each other, favoring multifold growth of the territorial capacity. The concept of "ecological landscape polarization" of B.B. Rodoman

is focused on it. B.B. Rodoman suggested "some principles of construction of the perfect landscape", mainly to make its use possible for recreational purposes, but with due account for preservation of the natural complex, on the one hand, and "all other human activity" - on the other hand. The B.B. Rodoman's concept supposes the creation of "buffer zones" between antagonist zones designed to "absorb impact" which is made on the territory by highly intensive functions - industrial, transport-industrial and residential.

«Landscape polarization is not only a model, but also an objective process going beyond our desire». Under conditions of territorial concentration of population and production, a special case of which is the urbanized areas, the natural landscape and the city affecting it negatively should be "separated" from each other as far as possible, and at the same time, they should be connected by "padding" of intermediate functional areas (for example, agricultural zone).

Thus, between "big city" and "wildlife", the opposite and equal worth types of the environment, equally necessary for people there must be transitional zones differing by population density and degree of natural environment changes (nature reserves, out-of-town parks for recreation, agro-industrial zone, residential (residential construction), urban zone, etc.). Only under the conditions of the territorial structure optimization nature will not be destroyed by the pressure of urban growth (Fig. 4).

"Mitigation" of territorial conflicts in nature management by means of "landscape polarization" is based on the desire to preserve the functions providing ecological balance of the territory. However, in real life it is almost unsolvable problem because of multifunctionality of the mentioned zones. The influence of neighboring territories, which can have negative character, should be taken into account.




| Functional elements: | |
|---|---|
| 1 | City centers |
| 2 | Residential districts with a constant population and manufacturing industries, harmless of environment |
| 3 | Agricultural economy of high and medium intensity, sea (lake) plantations and trades |
| 4 | Out-of-town parks for recreation and tourism, extensive agriculture (natural hayfields and pastures, agro-recreational lands), amateur hunting and fishing, forest industry, nature reserves |

| | |
|---|---|
| 5 | Recreational settlements and dwellings (cottages, holiday houses, camp sites, floating hotels) and tourist routes, roads, trails, flights connecting them) |

*Fig. 4. Concept of «polarized landscape» (territorial structure development model of highly urbanized zone). Recourse: Rodman B.B. Polarized biosphere. - Smolensk, «Ecumene», 2002, p. 20*

Analysis of the territory from the viewpoint of formation of the potential conflict areas, interesting for both government agencies and individual investors, include several stages (Fig. 5).

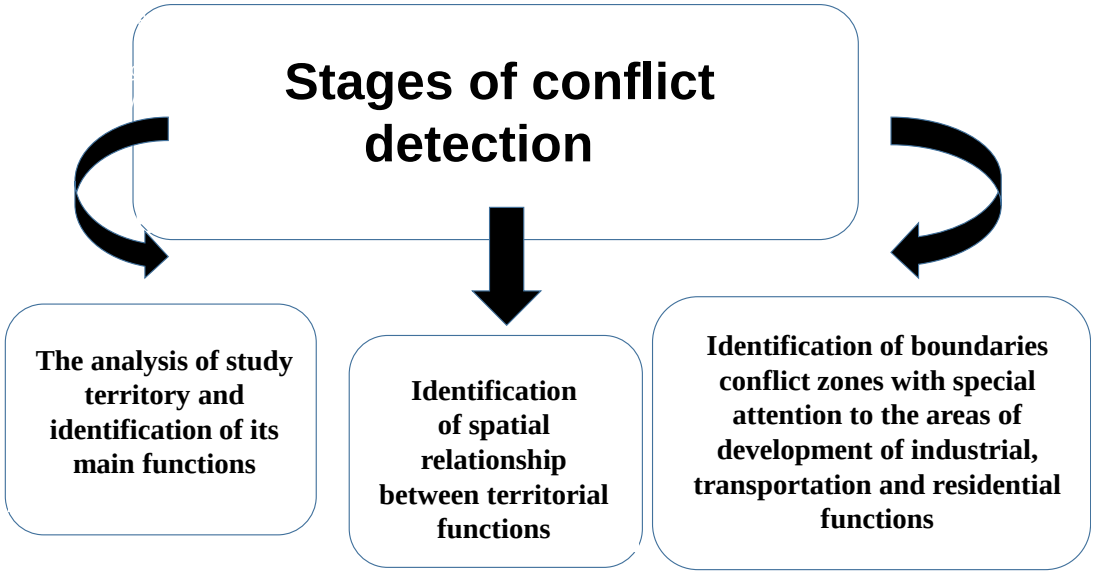



*Fig. 5. Stages of the conflict areas identification. Prepared by the authors*

Use of the method of the conflict areas identification in the evaluation of various kinds of the planned projects and territory development plans is aimed at better decision-making concerning carrying out of the planned economic activity.

*Potential conflict areas - the majority. Let's give examples.* *(All the examples are taken from the scientific researches in which the author participated.)*

*Upper part of the Volga river basin.* *(It is given under the publication:* Gladkevich G.I. Problems of complex use of the territory during the construction of water storage basin of drinking purposes (for example, the Upper Volga reservoirs). / / In "Actual problems of economic and social development of the regions ... - Saratov, 1988[1])

The presence of the drinkable water storage basin in this zone, including for Moscow water supply is the characteristic of this zone. This implies the need to choose such direction of its use, which would not be in conflict with this main function – preservation of drinkable water in the water source.

The choice can be determined by the economic and geographical position - its relative closeness to our country's largest urban agglomeration - the Moscow region. Well-developed transport network reduces the economic distance between them. The fact that the territory is located halfway from Moscow to the important recreational object of non-black earth soil – Seliger Lake - is of great importance for considered territory. Besides, the Upper Volga territory has many notable places - historical, cultural, archaeological sites.

Here is one of the worst demographics situations in Russia. The visible tendency beginning from the end of the 1960s to lowering of natural growth and to reduction of population, a massive flow of rural dwellers to cities continues now and has reached its overcritical level. Rate of natural increase in the Tver Region is currently - $-6{,}7^{0}/_{00}$, only two regions of Russia - Pskov and Tula – have worse figures. The population density here is also lowest among all regions of Central Russia - 16 people per 1 square km (only in Kostroma and Kirov regions the population density is even lower).

Productive plant cultivation development is possible only if significant doses of mineral fertilizers are used and liming of acid soils is made, which certainly have a negative impact on the quality of water in the basins. Taking into account the drinking purpose and closeness to the urbanized districts, the development of the Upper Volga territories as an important recreational zone is suggested. At the same time, here occurs the objective to provide the recreants with highly eco-friendly products - fresh vegetables, dairy and meat products. This will allow involving the local population in gainful activity – service of vacationers. For a start it is not necessary to create the places for recreation. The homes of people living here can become such places. Their interest in providing this sphere of service will "slow down" migration from country to city, which does not currently "abounds" with excess jobs.

The example given above – is not only the preservation of important functions by multipurpose uses, but solving a very important for the country problem consisting in "fixing" the rural population by creating additional in-demand types of activities.

*Lake Baikal natural territory (by example of the Buryat Republic).* (It is given under the publication: Buryatia: Development concept. Monography edited by G.I. Gladkevich. – Moscow-Smolensk, 2005)

Currently Baikal is considered in Buryat Republic not as the main resource of the territory development (fisheries, recreation, maintaining self-employment of the inhabitants), but as the main limiting factor of economic development, which is connected with the Federal "Lake Baikal Protection" Law (dated May 1, 1999), establishing a special regime of economic and other activities in the Baikal natural territory, the fulfillment of which requires substantial additional financial expenses.

Due to the fact that more than 80% of the drain areas of Lake Baikal belong to Republic of Buryatia, the restrictions imposed by a special regime of economic activity cover practically all of its territory. Limiting impact of Baikal on the economic development is intensified by the fact that nearly all the industrial potential of the republic is concentrated irrationally in Ulan-Ude. And the area of impact of the Ulan-Ude industrial hub is stretched along Selenga – the largest of the rivers flowing into Lake Baikal.

In connection with the Baikal factor introduction of various restrictions on the nature management, compliance with strict environmental standards are inevitable which will result in products cost rise.

At the same time, the protection of the Baikal natural territory may become a way of indirect stimulation of development of the ecology-oriented projects. For example, stocking of eco-friendly wild harvest and medicinal technical raw materials on which the republic has significant potential is a stimulus for emergence here of a powerful pharmaceutical and food industries. At the same time, the inhabitants' self-employment will increase.

It is important to choose the right strategy for the development of recreation and tourism. Tourism raises investment attractiveness, provides improvement of the infrastructure, promotes social stability, preserves cultural values and the natural environment and is the factor of regional stability in general.

World experience (for example, the Grand Canyon, USA) shows that when developing the recreation on the basis of unique natural objects the rent is quite considerable.

For the sphere of leisure and tourism Baikal is a brand of tourism product of Buryatia.

There are also other ways of turning environmental restrictions into the economic development factor. With regard to Buryatia the idea of creating a cluster in the field of information technologies, the formation of which will level the remoteness of the territory from the most economically developed districts of the country, is worth considering.

The possibility of creating a free economic zone in the border areas should be analyzed once more to achieve large improvements in small business development.

For success execution of such development program it is necessary to connect information resource. Lack of information about Buryatia has negative impact on tourist flows and puts barriers on the way of investments in the economy. Information factor has great importance for making strategic investment decisions in one region or another. Lack of information in the foreign segment of the Internet is the main information problem of the Buryat Republic. In the major search engines (Google.com, Yahoo.com, Altavista.com), popular among users abroad, information about for example Grand Canyon is found twice as often as about Buryatia. As a result, Buryatia is a "white spot" on the mental map of the most people.

*The Black Sea coast of Krasnodar Krai.* **(**It is given under the publication: Chukanova O.A. Functional zoning of the black sea coast of Russia for rational nature management, 2004 (The master's thesis))

This work is an example of research of use of the territory of the Black Sea coast of Russia in terms of conflictogenity of new business assets affecting the traditionally existing functions. In the area of Novorossiysk the complex for storage and shipment of liquefied hydrocarbons has been created.

Placing the mentioned objects on the Black Sea coast has resulted in the complication of the structure of economic activity and amplification of anthropogenic impact on the flat areas of the territory. The situation worsens by the fact that the flat landscapes, most suitable for the transport complex

development, are limited in size and have been already saturated with other activities, which have led to the conflict areas formation.

The sociological survey of the population of the territory adjacent to the Novorossiysk port and having a high recreational value, revealed that the main aim of their visit here is a holidays at the seaside with nice beaches (more than 70% of the respondents).

According to the survey data, residents of 15 federal subjects of the Russian Federation are represented among the vacationers. One third of recreants live in Moscow, more than 20% - in the Krasnodar region. Such distribution is caused by the fact that people of our country associate Novorossiysk not with industrial functions that it performs, but with the recreational value of the entire Black Sea coast. The main part of the funds spent by the recreants is received by the local residents as payments for rented accommodation or payment for goods purchased on the spot. A substantial part of the income "settles down" in public catering.

The survey showed that the part of respondents, who exactly will change the holiday place because of the construction of the CPC, is about one-third, which will result in reduction of income of population living here and will have a negative impact on the main - recreational – functions of the territory.

*Calculation of the ecological capacity of the territory of Ingushetia, taking into account the nature and specificity of man-caused impact*. **(**It is given under the publication: The master's thesis. Kurcieva X.M. Economic and geographic disparities in the use of plain and mountain territories of Ingushetia, 2012).

The greatest interest to this work concerns the assessment of the real state of mountain territories.

Despite its small size, Ingushetia is situated in 5 natural zones (from the north to the south): Steppe – forest steppe - mixed forests – broad-leaved forests - Altitudinal zonation areas.

According to the classification N.F. Reimers the zone of the broad-leaved forests has the highest ecological capacity of the territory among the represented ones (Table 2).

In the Republic of Ingushetia a few inhabitants of the mountains (about 0.5% of the population), more than other residents of the country, have saved their ethnic and cultural specificity and economic way of life of the traditional society. In the present reality the mountain pasture lands have not lost their household purpose, and the local population continues to graze the cattle on them. A part of the young population may live in the mountains. In recent years, there are the cases when children sent to the plain to obtain the "best" education, come back to the mountains, because they begin feeling unwell rapidly due to pollution with gasses and dust of the large cities.

The demand for land plots in the mountainous part of Ingushetia has grown for the last 10 years. The cost of some land plots reaches the cost of similar land plots in the suburbs of the city of Nazran. The new owners are mostly inhabitants of a plain. Land is still the most reliable capital investment. However, animal breeding, despite its extensive nature, requires constant and

enormous labor and time input. Sale of products is a difficult problem for the mountain dwellers. Nobody invests in expansion of the economy, the purchase of the necessary equipment, improvement of the species composition of cattle. Organization of small production workshops for processing of agricultural products in all the mountain villages faces the instability of electricity supply, deficient credit and financial mechanisms and the lack of co-operation skills.

Nobody cares about the state of the environment and land resources. Violation of storeyed structure of the land use, uncontrolled grazing on the nearest slopes have negative impact on their condition. The slopes neighboring to the villages are exploited mercilessly, cattle walks even on cemeteries. Soil erosion, always ready to wake up in the mountains, has already led to the real baldness of large areas.

Most of the remote pastures are not currently used, but it is not always can be considered as a positive fact for nature because compaction of surface, pasturing, dung application are the necessary conditions for the steady state of the so-called pastoral ecosystems, which have been under the cattle-breeding impact for centuries. When alpine and subalpine pastures are abandoned, recovery of the plant cover typical for them is very difficult.

Low level of infrastructure, lack of self-organization of the inhabitants, their economic and social passivity require a special program of social and psychosocial support of mountain dwellers in the new economic conditions, to stimulate high demand for mountain products with an emphasis on environmental cleanliness and taste.

Use of the territory should be considered as the optimization of its spatial organization, as one of the main paradigms of economic and social geography, contributing to its further development.

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