

Actual Design Technologies as a Method for Solving Problems of the First Stage of Landscaping (By Example of a Project of Implementing the State Policy Concerning the Far East Territory Development)

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Abstract. The urgency of the analyzed problem is connected with a large scale project of developing unpopulated territories in the Far East. The core of the project is concluded in the allotment of one hectare piece of land for unlimited use, the target of the project is small business, farming, and tourism development, etc. The aim of the given article is to analyze the problems connected with the new territories development. The main problem is a systemless and haphazard forming homesteads and constructions. The use of projects made by young designers' associations, student architect design teams, and industrial artists' teams can grow into a method in solving the above mentioned problems. The main accent in this case is on a collective effort to create innovation residential areas. An example of such efforts can be the concepts developed and tested by the Chair of Art Design and Art History members: a training constructor for landscaping, conceptual models of new type residential areas "Nebo" ("Sky") and "Priroda" ("Nature"). The models display acquiring mastery of primary skills of design, composing large scale elements, determining basic factors in interrelation of space and form, and understanding the intricacy of a problem to create a new, aesthetically ideal fragment of the world on a piece of land not large in size. The article can become a basis of the content that allows quick familiarizing with actual concepts and methods in solving problems of landscaping of individual homesteads, provided kinds of activities are taken into account. Cognitive methods for mastering design and development fundamentals, game technologies, and actual forms of visualization are to become an efficient vehicle for creating a radically new image of the Far East region.

1. Introduction

Every year the population of the planet is increasing. Moreover, it is going on in a geometric progression and that means extremely fast. It is already at present, that governments of different countries face an urgent problem of supplying their citizens with vital foods and products.

At the same time, Russia, having uncultivated or semi-cultivated vast territories of plough-lands, buys provisions from abroad. The country, which unlike many others is able to support itself and a few neighbouring countries in addition, has to buy provisions only because its production technologies have become obsolete. They are obsolete to such an extent that farming in Russia has grown unprofitable. By the opinion of many people, modern agro-industry can bring only losses. However, lately, because of the external relations complication, a new tendency is traced in Russia. For a lot of



people it is a new way to invest money in a new business that can become popular and profitable in near future and suggest a new life scenario. This is a harmonic life in accord with nature, a possibility to create something really new, and a chance to independently choose one's own business that is going to be called for and doing good to others. Agricultural products will always be needful because people must eat something; this problem is of great importance all over the world.

Activities are ceased on one third of agricultural territory, and this is the size that the sowing area has decreased in Russia, lead to appearance of gaps, which can at best be occupied by forests, bushes, and marshes; or in another case they can be occupied by neighbouring peoples. Vast territories have become ownerless.

Russia's agriculture potential is not exhausted. Naturally, it possesses its limits; taking into account ecological balance changes, the potential is not very great in foreseeable future. At the first step, it is necessary to reach the level, which was once reached, making use of new technologies, machinery, soil enrichment in agricultural areas, and other facilities.

In near future agriculture should mostly become industrial and cooperative; the areas should be restored and populated; education, modern healthcare, and cultural sources should be available. Ideally, educated and highly qualified personnel, skilled in new technologies, should be engaged in this new agricultural industry.

Today, many existing problems, such as demographic situation balance, active involving young people in creating new agricultural industry, application of most advanced production technologies, and safe agriproduct processing are being solved. Nevertheless, to make a really new agricultural world, it is necessary to involve architects and designers. It is particularly their creative activity that is capable to give agricultural areas a new modern and attractive image indeed.

New territories reclamation is almost a cosmic scale problem. In Russia, such projects require a maximum tension of intellectual, physical, and economic areas. It is associated with geographic location, specific climate, undeveloped infrastructure, and what is in the first place, lack of modern transport network. These problems are clear for everybody. Problems of mentality in Russia are not so evident. In this case large scale problem solution meets an unexpected collision between an overall striving for modernization and a traditional way of thinking. The paradox of the larger part of the society in Russia is concluded in the fact that we all criticize what is going on around us but we are very hard to accept any innovation. Very often against our will, our consciousness leads us back to what we got accustomed and what is quite understandable. The result of it is seen in individual constructions bearing traces of architecture of the previous century, though new materials were used.

2. Materials and methods

"The Far Eastern hectare" is a unique idea having no analogy in the world. The idea to give the most energetic and creative part of the population an opportunity to turn over a new leaf invigorates. "A new leaf" here is a private plot of land 10 000 square meters in size. But this is not a piece of land that is good for nothing. This is a piece of most pure and beautiful Russia's nature. Before a man appeared there those territories followed the laws of the universe and the environment was harmonic and integral having natural cycles of development.

The fact that man comes there is certainly a positive factor; and the idea of the project authors is explicit. These territories are to become those of modernization. They are to receive a new impact and a new image. The essence implied in involving young and energetic people who are ready for experiments is concluded in that most of them have no experience of any ground job. However, they have received a modern education, got acquainted with western and eastern culture, mastered information technologies, and so on. The counterconsciousness of young people who are ready to digest their own territory gives us a hope that the Far East's harmonic nature will not be disfigured by settlements resembling Russian province of the 80-s of the previous century.

Alongside, it is necessary to coordinate private enterprises in order to solve problems of creating innovative infrastructure, capable to provide vital processes. Surely, many people will shudder at the word "coordinate". Most people consider the project of creating his or her own farm (business) as a

form to escape from the ubiquitous administrative supervising. But ideally, new territories can become self-governed. Newest systems of salvage and recycling of wastes, supermodern high-speed transport networks, autonomous power sources, closed water use cycles are rules of life in the XXI century, they should be installed by collective efforts of pioneers of the Far Eastern hectare.

Alongside, it is to be feared to a certain extent that the land can be developed as is usual in Russia, unfortunately. Reckless bravery of our fellow-citizens while they undertake forming landscape, which is a most difficult task, causes anxiety about the unique Far Eastern nature. There are few of the brave pioneers that are engaged in simple everyday problems, such as life support processes: water supply, heating, sanitary units, lighting, and many others. For example, how most rationally to make use of natural factors and to arrange the necessary conjunction among all of the components of the future homestead. At once, it is necessary to take into account transport problems, logistics, infrastructure formation, modern means of communication, and many others.

In the economic science there appeared a new branch – economics of impressions. It suggests that the economics should be built appealing to emotional and sensory ways of perception, and to creative interrelation with the environment. Bright impressions, inducement to imaginative developing the real world, high level service, artistic design in everyday life – in short, according to economists' opinion, all the achievements of service and leisure market can give a significant part of the income of those regions where due attention is paid to it. [4].

A conception of project complex problems to be solved in order to arrange a comfortable and effective way of life on one's hectare can be of a great help to make one's dreams come true.

It is hardly possible to find a landscape designer for each hectare. A range of various projects for developing the Far Eastern hectares can be seen in the internet. Consequently, each owner will have to arrange his "ideal world" independently.

Methods for solving problems of the Far Eastern territories are connected with our country's experience in design. There is no lack of concepts of developing countryside environment in the contemporary design theory and practice. One can find a huge variety of such projects: from futuristic to quite pragmatic ones, based on modern production possibilities. The problem is that a man has no time to examine these projects in detail. If to consider the question seriously any project requires a professional designer education. In its turn, this suggests allocation of time, great efforts, and certain abilities. Not everyone is ready to do such a job.

Russia's designers have always strived to search an artful and integral image. This image should have had a charge of the ideal and of something completely innovative. Perhaps, this is the main distinction of our approach to the designer's work [4].

3. Discussions

We want to have everything "as in Netherlands". But we do not want to have everything "as in Netherlands". We have incomparably greater territorial possibilities and unique nature. Consequently, our Far East should be far more beautiful than any other countryside corner. It is necessary to give an attentive and thorough look at the projects of our designers. Their projects are surprisingly harmonic and innovative. For example, Totan Kuzembayev and Pyotr Kostelov; their works display the solutions not only ideally blending with a typical Russian landscape but also with the Russian outlook and our way of life when many things are subjected to the cycle of seasons. In his architectural masterpieces, Kuzembayev shows simple and expressive forms bearing a deep philosophic meaning with an almost cosmic feeling of accordance of nature and creations of man. Kostelov demonstrates an impressive symbiosis of Russia's cultural codes and contemporary technologies. He puts forward a system that correlates with a new scenario and tempo of life. Remarkable ideas are disclosed in projects made by student architects in ARHKderevnya (Architectural Village) near Moscow.

A general interest in design, its popularity, hard efforts to create new imagery and more comfortable living environment – all this puts design forward to the front lines of actual modes for transformation of the world [4].

The scientific researches and models, which were created in the Ufa State Oil Technology University during recent years, can be regarded as a result of these efforts. For several years, members of the Chair of Art Design and Art History are carrying on development of the actual design methodology adapted for solving practical tasks on improvement and landscaping. It can be seen in the works of the scientific and creative team of magisters (Gimatdinova A.A., Rudakova A.V., Shvaleva O.V.), in the projects made by bachelors; they created a model constructor to train landscaping in a game mode (Parfenova M.Yu.), and many others.

4. Results

The results of the scientific researches carried out by the members of the Chair of Art Design and Art History of the Ufa State Oil Technology University are training models or game models, which make it possible to experiment in landscape arrangement, to try versions of zones of different purpose, to master composition laws with the help of simple and visual means. The model "Six hundred square meters" is a good visual aid for a modern arrangement of a farmland historically habitual for Russia's citizens. The model modules "Sky" and "House life", and the concept "The scientific and research center of progressive plant growing "Cucumber" propose new principles of creating microsettlements based on specialized activities of its dwellers (ex. scientific one) united by professional interests and striving to harmonic integrity with nature.

Many of the projects under consideration are based on the richest experience of landscape design in this country and abroad, and on historical forms of arranging households. Actually, these projects are a reminder of the fact that we do not pay due attention to the experience of our country's agriculture. However, the main part of the worked out concepts is devoted to principally new forms of agricultural areas arrangement. One of the mentioned projects is a Training model for author's landscape design. This is a constructor, a game of a kind, which gives a possibility to do a very hard job of primary designing one's own territory of the future farm. The importance of this model concludes in that it can show the layout very close to reality, demonstrate measures of main landscape components (structures, planting, subsidiary structures, etc.), and allow rational planning interrelation of all components. The layout can be made taking into account the lie of the ground and natural features. It is possible to enter the configuration of the ground in accordance with the siting plan.

Undoubtedly, the possibility of discussing and reaching a decision collectively is an important feature of such a creative search. It is very useful to look for different versions of landscape design, to see if it is possible to insert alterations or to add some elements. Certainly, by means of the model it is hardly possible to make a completely ideal landscape design, in which absolutely everything is taken into account, including consequences of man's interference with nature. However, the landscape constructor can help to understand the complicity of the problem, to acquire primary skills in layout and design, to plan planting, and to try to preserve an accord of interrelation with the environment as much as possible.

The targets that were pursued in the above mentioned works were at first intended for developing suburban areas in Bashkortostan, Russia. However, this experience can be used everywhere.

5. References

- [1] 2010 *Russia 21st century: image of the desirable tomorrow* (Moscow: Ekon-Inform) p 66
- [2] Bell D 2004 *The coming post-industrial society. Experience of social forecasting* (Moscow: Academy) p 576
- [3] Dai C 2000 *Places where soul lives: Architecture and Wednesday as remedy* (Moscow: Ladiya) p 280
- [4] Dugin A 1997 *Fundamentals of geopolitics. Geopolitical future of Russia* (Moscow) p 608
- [5] Inozemtsev V L and Kuznetsov E S 2001 *Global conflict of the 21st century. Reflections about sources and prospects of intercivilization contradictions* (Moscow: Policy) p 137
- [6] Kolodin K I 2004 *Shaping of objects of the country environment* (Moscow: Arkhitektura-S) p 256

- [7] Kuznetsova G N 1995 Design as plastic formula of harmony *Collection of scientific works of MGOPU: Design and art criticism* Is. 1 (Moscow: MGOPU Publishing house) pp 51 – 55
- [8] Lipp R 2008 ElCity *The concept of modern urban infrastructure* vol 1 (Moscow XXI century, Briesen: StrassenHaus Ltd&Co) p 134
- [9] Lviv D Moiseyev N 1999 Russia in search of the third way *Political and legal magazine* p 3
- [10] Pereslegin S B 2009 *New cards of the future, or Anti-Rand* (Moscow: AST, AST MOSCOW; St. Petersburg: Terra Fantastica) p 704
- [11] Rozenson I A 2010 *Bases of the theory of design* (St. Petersburg: Piter) p 224
- [12] Sokolova M L Mamedova I Yu Furnike M Sh 2005 *Dizayn* (Moscow: MGAPI) p 127
- [13] Stolovich L N 1972 *Nature of esthetic value* (Moscow) p 271
- [14] Stolovich L N 1985 *Life, creativity, person* (Moscow) p 415
- [15] Stratonova L M 2018 Design as a way to develop a relevant urban environment *J. Fundam. Appl. Sci.* 10 (6S) pp 36-44
- [16] Suprun V I 2006 Tendencies of development of world cultures. Analysis methodology. *Bulletin of Library Assembly of Eurasia 1* pp 32-33
- [17] Toynbee A J 2002 *A civilization before court of history* (Moscow) p 592
- [18] Toynbee A A 1995 *Civilization before court of history* (St. Petersburg: Yuventa, Progress, Culture) p 480
- [19] Toffler E 1999 *Third wave* (Moscow: AST) p 261
- [20] Toffler E 2002 *Future shock* (Moscow: AST) p 557