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V.I. TRAVUCH, V.S. FEDOROV

**NECESSITY OF EVOLUTION FROM UNCONTROLLED**

**URBANIZATION OF NATURE TO HARMONY DEVELOPMENT OF THE TERRITORY IS THE PRESSING ISSUE NOWADAYS**

It is shown the dynamics of the evolution of the technosphere as a territory with an artificial environment. It is reviewed current threats for human life and the environment. It is reviewed the problem of interaction between the biosphere and the technosphere. It is demonstrated the necessity of changing the traditional criteria, and the evolution model of the world to criteria and model of the living environment, based on the balance between the biosphere and the technosphere.

**Key words**: biosphere, technosphere, coefficients biosphere compatibility of the territory and coefficient of the city functions.

O.V. SERGEYCHUK

**PRINCIPAL AIMS OF IMPROVEMENT OF NORMATIVE BASE   
FOR BIOSPHERE-COMPATIBLE CONSTRUCTION**

*DBN V.2.5-28 “Natural and Artificial Lighting” is currently under revision in Ukraine. New building standards for lighting adopted in Russia in 2011. However, it will not solve the problem of implementation of modern methods of project practice in relation to the lighting of the premises and territories, that keying our normative base with concept of sustainable development. Norms are determined according to sanitary-hygienic, economic and aesthetic requirements in addition to lighting. However, these elements do not create calculation methodologies and design lighting system, optimizing them in terms of impact on the environment. Therefore, development a complex of normative documents in the Ukraine and Russia is considered as a matter of urgency that will include building code and standards that based on designing methods, calculations, arrangement and maintenance of the natural and artificial lighting integration. These standards must be interrelated and take into account the effects of lighting in energy efficient buildings. The article is devoted to consideration of this question.*

***Key words:*** *Lighting, insolation, solar shading system, energy efficiency.*

S. G. SHEINA, E. V. MARTYNOVA

**THE CONCEPT OF ENERGY EFFICIENT RECONSTRUCTION**

**OF URBAN DEVELOPMENT**

*The town-planning concept of development of the cities is based on observance of modern standards in relation to residential buildings and directed on creation of a sustainable urban environment. An important role in it is played by increase of energy efficiency of the built areas by town-planning methods. In this regard, there is a need of development of the new science-based concept of reconstruction of urban areas taking into account increase of energy efficiency.*

***Key words:*** *town planning, reconstruction, energy efficiency, energy saving, sustainable development, urban development.*

A. E. MAKSIMENKO

**PARKS AND MONUMENTS OF SEVASTOPOL AS A SPIRITUAL TOOL, MORAL AND PATRIOTIC EDUCATION BIOSPHERICALLY**

**PERSONALITY**

***The focus of the work:*** *study and evaluation of the historical and cultural heritage of the city of Sevastopol (objects park construction, their sculpture and memorial Composite-tions), which contributes to the revival of the old and the development of new methods and approaches to the creation of biosferosovmestimoy human environment, to develop creative in potential identity which increases the spiritual, cultural and aesthetic level of the members of a modern society, the level of morality, identity and patriotism.*

***Objective:*** *To highlight the historical trends and lessons Sebaste park construction field; creating a unified architectural and landscape ensemble as a whole, and of effective zones of biospheric compatibility, stimulating cultural and aesthetic development and spiritual education biosferosovmestimoy personality.*

***Key words:*** *historical and cultural heritage, parks and monuments of Sevastopol, biospheric compatibility, spiritual, cultural, aesthetic, moral and Patrasmatic education, biosferosovmestimaya personality.*

I.A. ASEEVA, E.G. KAMENSKY

**TO A PROBLEM OF IDENTIFICATION AND FORECASTING OF**

**SOCIO-HUMANITARIAN RISKS OF TECHNOGENIC DEVELOPMENT**

**OF HUMAN’S HABITAT**

*In article the modern situation of an aggravation of a problem of riskogenic development of human’s habitat is described, the reasons and estimated consequences of uncontrolled and aggressive intervention of human in the nature are described. At all evidence of this problems the key to understanding of borders of interference of innovative processes and ways of distribution of risk threats of technogenic modernization of society is still not found. In article a number of tool constructs which is possible for using at an assessment of degree of these or those technogenic risks of development of society is offered. In particular, aprioristic and basic classification of social technological hazards on the basis of criterion "the sociocultural scale" which allows to estimate the existing / possible private representations of each type of risk is simulated.*

***Key words:*** *Philosophy of Science and Equipment, socio-humanistic risks, forecasting of risks, habitat of human, technogenic development of society.*

T.F. ELCHIEVA

**THE LEVELS OF CONTAMINANTS IN THE AIR OF THE**

**CENTRAL BLACK EARTH REGION AND THEIR IMPACT ON**

**EXTERNAL WALLS OF BUILDINGS**

*The pollutants of anthropogenic and natural origin have a negative impact on the exterior of the building envelope. Revealed levels and given maps of the distribution of air pollution on the territory of Central Black Earth region of solid particulate matter, sulfur dioxide, nitrogen dioxide and carbon monoxide for the 2007‑2011 years. The information obtained will allow to pick up the materials, trim and protective coatings for exterior building envelope with regard to their resistance to the aggressive action of pollutants, depending on the levels of contamination of the territory.*

***Key words:*** *air, pollutants, exterior walls, building materials, pollution levels.*

T. A. IVANENKO, N. M. VETROVA

**The violation level of the ecological state of**

**off-shoreterritories of Western Crimea**

*Worked out methodical approach to the exposure of the violation level of the ecological state of off-shore zoneson the basis of calculation of the generalized index of level of violation of the ecological state of off-shore recreational zonethat allows to take into account the complex index of change of the ecological state under influence of natural factors and complex index of violation of the ecological state under influence of the anthropogenic loading and to expose the ecological state of area of off-shore recreational zone with the hearths of instability was tested in the article.*

*Approach was approved at the analysis of violations of the ecological state of off-shore recreational zone of Western Crimea and it was discovered, that exogenous geological processes (such as landslides, abrasion) were activated by the anthropogenic loading (such as hacking and artificial moistening of slopes); a near shore is muddy due to the deep-water producing and emergency up casts of effluents; the presence of the unsatisfactory technical state of building protecting buildings is educed.*

*The areas with the height of violations of the ecological state of parameters of the natural systems were distinguished.*

***Key words:*** *off-shore recreational zone, ecological state, the level of violation.*

N.V. DANILINA

**ROLE OF THE "Park-and-Ride" facility IN THE**

**SUSTAINABLE DEVELOPMENT OF TRANSPORT SYSTEM OF THE CITY**

*Sustainable urban development isn`t possible without creation of perfect transport infrastructure system, providing social public needs and requirements of ecological safety in cities. “Park-and-Ride” facility systems, that have been formed yet or just planned to be formed in the biggest Russian cities, are oriented to quality, safety and ecological comfort of environment in accordance with main principles of urban sustainability.*

***Key words:*** *sustainable urban development, “Park-and-Ride” facility, transport infrastructure, ecological safety, environment.*

E.V. BESSARABOVA

**INFLUENCE OF NATURAL CLIMATIC CONDITIONS ON**

**FORMATION OF ARCHITECTURAL LIGHTING**

***The factors influencing the perception of objects: objective and subjective. Objective factors: geography and climate zone, light and color environment, the shape and proportions of an object, the texture of the material, optical and physical properties combine to form a physics-geometrical parameters, creating an impression. Calculated illumination brightness of the various landscaped areas with the transparency of the atmosphere and the angle of incidence of sunlight. These calculations make it possible to analyze the perception of an object, not as isolated and placed in certain conditions, which corresponds to the actual conditions of perception.***

***Key words: perception, landscape architecture, geography and climate zone, light-color medium contrast, background, landscape, lighting.***

T.A. AKHMYAROV, A.V. SPIRIDONOV, I.L. SHUBIN

**PROSPECTS OF APPLICATION OF TECHNOLOGIES AND**

**SYSTEMS OF ACTIVE ENERGY SAVING, THE POWER**

**EFFECTIVE VENTILATED PROTECTING DESIGNS AT**

**CONSTRUCTION, RECONSTRUCTION AND CAPITAL REPAIRS OF RESIDENTIAL AND PUBLIC BUILDINGS IN THE RUSSIAN**

**FEDERATIONS**

*The prospects for the use of technologies and active systems of energy saving, energy-efficient ventilated cladding structures during construction, reconstruction and capital repair of glyh and public buildings in the Russian Federation. There are main advantages of new principles for the design of the outer shell of buildings and structures for various purposes with the use of active recovery coming out of heat and moisture, and designed energy-efficient ventilated cladding and translucent structures.*

***Key words:*** *conservation, reconstruction, engineering, construction.*

A.T. DVORETSKY, K.N. KLEVETS

**PASSIVE SOLAR HEATING OF BUILDING**

*The purpose of this article is to measure the proportion of passive solar energy in the heat balance of the building in the Simferopol climatic conditions. The stages of building energy efficiency mainly at the expense of passive solar heating were considered. Among the factors influencing the energy efficiency of the building include: the level of development insulation, a moderate increase of the south-facing windows area due to the windows of other fronts, the use of solar space. Functioning of passive solar houses in the Crimea takes on average about 30% less energy for heating than conventional houses, and some houses have more energy conservation.*

***Key words:*** *Passive solar energy, heat balance, solar energy conservation, energy efficiency of buildings, solar space.*

V. T. SHALENNYI, K.A. LEONENKO

**METHODS AND RESULTS OF ENERGY COSTS COMPARATIVE EVALUATION OF MASONS IN THE CONSTRUCTION OF THE GUEST HUSE OF BRICK AND MASONRY BLOCKS**

*Provided an improved contact and application model of the real object and the method of estimating the reduction in energy and labor costs of masons. Consider three ways construction of the object, their comparative analysis, including energy costs indicator. The constructive solutions that allow to reduce energy costs. Using the proposed method and new equipment allows to take into account energy costs of the workers, as the criterion of gravity performed labor, technology compare to each other based on the severity of labor. Our development will enhance the technological capabilities in the production of stone work on the walls of the device and small masonry units, as It becomes possible mechanization of masonry.*

***Key words:*** *Energy Efficiency; the severity of labor; crane-manipulator; method of fixing energy costs, crane equipment.*