tween the productive activity of man and the stability of natural environment. The growing consumption of the natural resources is evident. The qualities of the natural environment, especially of the biosphere, have deteriorated. The decrease in the natural fertility of lands is connected with the reinforcement of the processes of rapid erosion, secondary swamping, salting and so on.

Due to the irrational use of the agricultural lands, from 5 to 12 mln. hectare of lands have been lost. According to the estimation of the United Nations Organization the quality of the exploited lands since 1950 has dropped by 40%. Since 1950 there has been a triple growth in the timber production, more that 50% of which is just burnt even in highly developed industrial countries, and in the so-called "developing" ones - up to 90%. Only about 45% is worked up [1].

Humanity has never faced such barbarous attitude towards the use of forests. The process of disappearing of many species of animals and plants is going permanently and rapidly, that causes the menace of future deterioration of biological diversity. This has led to the degradation of landscapes in many regions of the Earth, especially in the regions of ecological troubles and ecocatastrophes. All the ecological disasters are consequences of the criminal nature use, which has determined pollution and exhaustion of the natural resources, to the processes of rapid erosion, deforestation, desertification and so on. The whole World Ocean has been poisoned. It has taken nearly 40 years to pollute near space.

All these troubles have become global and have been created by man. Now it is on the intergovernmental level that they can only be solved [2].

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PRINCIPLES AND METHODS OF SOLVING ECOLOGO-HYGIENIC PROBLEMS OF THE REGIONS OF RUSSIA ON THE LANDSCAPE BASE

Pasternak A.K.
Smolensk State University
Smolensk, Russia

The most critical ecological situations are connected with degradation of natural landscapes, their pollution as a result of progressive deterioration of the air, surface and subterranean waters, reinforcement of the processes of rapid erosion, chemical and radioactive pollution, decrease in species diversity etc. That is why many landscapes of Russia are degrading; active is the process of desertification including the arctic desertification. We have a number of regions with the most critical ecological problems. Nature in these regions of Russia and in the regions with the greatest density *of* population has been changed so that it has become dangerous for man's health [2].

The problem of man's morbidity is complex and multifactor. The influence of a separate natural component, for example water or air quality on man's health is hard to estimate. The first reason is the constant spatial and temporal changes of the state of the components. The second one is.the diversity and the absence of any borders of the habitat of man in comparison to the ecology of animals. The problem of the influence of the habitat on the morbidity is in the process of solving mainly on the level of general meditations without any fixation of the principal indices of morbidity on the cartographic base. To solve it in the 21st century it is necessary, first of all, to eliminate the reasons of the present state of the natural environment, caused by its pollution and the depletion of natural resources. Man is at fault in all the ecological disasters. The specific ways of solving many ecological problems including the problems of morbidity of the population must base on the use of large-scale scientific landscape and geochemical maps, which we do not actually possess in our country. They are to be made. We suggest solving this problem in the 21st century taking into account the following basic principles and methods

1. To chart large-scale landscape maps for the whole territory of the country of scientific content. Like universal topographic maps they must be the basic ground and landscapes - the object of estimation depending on concrete practical purposes including the exposure of potential areas of expansion of diseases. It is well-known that man's morbidity depends on the composition of chemical elements, their lack or excess in drinking water, air, soils and living organisms. The concentration or dispersion of chemical elements causes dangerous situations for man's health. Many diseases are connected with the variations of concentration of chemical elements with toxic qualities.

2. The most perspective is the use of principles and methods of geochemistry of landscapes based on the theses of classical geochemistry. The) have long ago been worked out in the works by V.I.Vemadskiy, M.A.Glasgovskaya, V.V.Dobrovolskiy, B.B.Polynov, A.I.Fersman etc. The important issue of their works is the ascertainment of geochemical anomalies in landscapes. Many quantitative geochemical indices are used for it. The most important of them are: destructive activity of elements of technogenesis, which characterises the degree of danger of a chemical element for living substance; the module of man-caused pressure, which represents a total flow of man-caused substances to the square unit in a time unit; coefficient

of man-caused transformation, which assess the increase intake water-soluble components and dust, coefficient of the self-cleaning capability of soils, module of the aerial-technogenic intake of the substance, the index of dust burden to the background quality of dust, the total index of the general man-caused of elements with regard to the background.

3. The combined use of the above stated and other qualitative geochemical factors will allow the exact fixation of the qualitative state of landscapes. The qualitative criteria are rather various, but they must be unique by the estimation of morbidity. The most valuable are the data about the maximum permissible concentrations of chemical elements and polluting substances, defined in comparison to the basic norms, as extreme, long-term burdens on the landscapes predetermine the increase of morbidity of the population. Geochemical and man-caused anomalies may be easily fix'ecLif the natural geochemical background, the model of which are landscapes, situated beyond the bounds of the direct influence of man-caused pollution sources, is well-known.

4. Thus by means of imposing a landscape and a geochemical maps we can define the regularities of the distribution of the chemical elements. In the places of landscapes where the migration of chemical elements subsides, concentration is evident, and vice versa by the intensification of migration the places of dispersion are amassed. The landscapes, characterised by anomalous concentrations of chemical elements, always become a nidus. The rapt attention should be drawn to the overburden, involved into the migration of chemical elements, i.e. lithogen base of the landscaped, as only this base is relatively stable and represents a long-term storage of all natural processes and man-caused changes in the landscapes.

5. Basing on the materials of landscape-geochemical studies, hygiene, medical geography and medical ecology will go on solving the aims according to its own methods, but on a reliable landscape base. For research workers in the field of medicine, studying these problems, the main estimation criterion of the critical state of environment will always remain the increase in the morbidity of the population and search for the ways of its rehabilitation. In the course of the last decades the hygienic studies in this field were directed on the normalization of the unhealthy environmental factors, creation of the socio-hygienic monitoring and definition of the ecological harm to the population health. Medical ecology also studies the state of health among the population, living under the conditions of the ecological crisis and on this basis tries to find the main reasons of the diseases, predetermined by the environmental factors, to work out strategic direction of their preventive measures and treatment. Medical ecology may be considered as a hew approach, a perspective scientific tendency with a specific technology of selection, analyses and generalization of the information for the treatment choice for every patient.

Thus, the synthesis of hygiene, medical geography and medical ecology on the basis of landscape-geochemical studies will allow these sciences in the 21st century to become one of the most useful for mankind for solving ecologo-hygienic problems and prophylaxis of the morbidity of the population.

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THE ROLE OF FOREST ECOSYSTEMS IN THE DEGRADATION STABILTY OF LANDSCAPES

Pasternak A.K.
Smolensk State University
Smolensk, Russia

Forest degradation has long ago been considered one of the main global ecological problems. Forests determine natural and ecological potential of landscapes, which the degradation stability depends on. The reduction of forests causes the breach of the stability and to the processes of rapid erosion. The stability criteria to the man-caused effect are difficult to find. But the equilibrium of the functions of landscapes always depends on the biological productivity and the ability for renewing of forests. The main criterion of the stable functioning of forest landscapes is their high productivity which is determined by a normal natural renewability of the forests.

The problem o landscape stability depends on their natural and ecological potentials what is determined by the optimal correlation of warmth and moisture. This is typical of forest-steppe, deciduous and taiga landscapes of Russia. These landscapes are characterized by the highest natural and ecological potential, restrain the processes of rapid erosion, that means the degradation of geosystems. The biggest mass of flora and fauna communities to the square unit or habitat volume. To the north of the above mentioned types of landscapes i.e. in sylva-tundra and tundra regions a disproportion in the product amount of gas and moistening. That is why the species composition of flora and fauna is poor here, their biomass is extremely insignificant. To the south of the region of the optimal correlation of warmth and moisture, i.e. in steppe, half-desert and desert types of landscapes, under the conditions of the excess of warmth and lack of moisture the existence and correlation of the living