

Natural resources as a factor of development of national resort clusters of the North Caucasus

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Natural medical factors favourably differ in safety, availability, dosage simplicity, absence of by-effects and immunity to the action of disorder agents. More humane, social and scientifically progressive principles are the basis of sanatorium-and-health resort treatment: preventive and rehabilitation trend, succession between out-patient and diagnostic, hospital and sanatorium institutions, high specialization of the administered treatment. Sanatorium-and-health resort service of Russia has proved its medical and economic efficiency in the system of medical rehabilitation and health improvement of Russian people for decades.

There are more than 130 medicinal mineral springs are concentrated in this unique nook surrounded with a picturesque ring of Caucasian Mountains. There are 115 spa-hotels, equipped with the advanced equipment only of four cities in the Caucasian Mineral Waters region. Spa -hotels have many well qualified and highly experienced doctors and medical teams. They can offer health services in Wellness centres, natural thermal and mud baths. There are 2 medical institutes. At present Caucasian Mineral Waters region is a nationwide centre of balneology and sanatorium-resort treatment. Hydro-mineral springs, climatic conditions, sanatoria and boarding houses are some kind of a «supporting frame» of the tourist- recreational regional complex. The worked out infrastructure, available human resources and natural ecological conditions is a competitive condition, a factor of stable recreation functioning.

At the resort region of the North Caucasus complex monitoring (mineral springs -trace element composition, aerosol, trace gases NO_x, CO, O₃, CH₄; periodically – heavy metals) is performed at two high levels (860 masl - a park zone of a large mountain resort, 2070 masl - alpine grassland, the net station). The results of the measurements are used in programs of bioclimatic, landscape and medical monitoring to specify the influence of aerosol on rehabilitation properties of the environment and human adaptative reserves. The natural aero ionization $\sum(N^+)+(N^-)$ varied from 960 ion/cm³ to 1460 ion/cm³ in the resort park (860 m); from 1295 ion/cm³ to 4850 ion/cm³ on the Alpine meadow (2070 m); from 1128 ion/cm³ to

3420 ion/cm³ – on the tested site near the edge of the pinewood (1720 m). In the group of volunteers the trip from low-hill terrain zone (860 m) to the lower zone of highlands (2070 m) caused the activation of neuro and humoral regulation, vegetative and central parts of nervous system, psychoemotional status, normalization of frequency spectrum of brain activity and organism adaptation level.

Drinking mineral water treatment is used for medical rehabilitation diseases of the gastrointestinal tract, metabolism, excretory and cardiovascular system. Short-term metabolic reactions (single dose) and effects after the course of procedures (14-21 days) are distinguished in the structure of the biological effect of the MW.