



## **Environmental monitoring system of natural curative geological and climatic resources in mountain resorts of North Caucasus**

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The structure of the national level - monitoring of medical geological and climatic resources carried out by PSSRIRS FMBA includes cross functional interdisciplinary analytical groups investigating weather structure and surface atmosphere properties, recreational landscape functions of mountain resorts; physical-chemical structure and curative properties of the environment (mineral water, brine and peloid and other geological materials); their action mechanism in the experiment on animals and usage as a part of various complexes of resort treatment and health-improving rest in specialized clinics.

The methodology of quality assessment and curative significance of geological and climatic resources for the purposes of resort study is formalized by methodical recommendations of the Ministry of Health of the Russian Federation (MHRF), the National standard of the Russian Federation: Mineral natural fresh water (GOST P 54316-2011) and other normative documents. [1]

The degree of climatic and landscape usefulness for a climatic-landscape therapy is estimated by modular method according to the formula:  $IIBLU = \sum IBLUn/n$ , where IIBLU is integrated index of bioclimate and landscape usefulness of the area for the development of the resort;  $IBLUn/n$  are indexes of usefulness of various bioclimate indicators (degree of environmental comfort, biological UV activity of solar radiation, natural air ionization, level of number concentration of aerosol particles, atmosphere circulation, properties of air masses, etc.) and the landscape of the area (phytoncids, transient metabolites of different types of plants, esthetic perception, the degree of landscape beauty and convenience to terrenkur routes of mountain orography); n is a number of the considered indicators. Weather pathogenicity index is estimated according to the technique (EGU2009-8155, 2009).

The monitoring of curative significance of mineral waters and other medical geological environments are based on the deep analysis of physical and chemical, gas and ionic structure, the existence of specific components, mineralization, microbiological, sanitary and other researches considering balneological classifications approved by MHRF [1].

Innovations are connected with new approaches to the assessment of health-improving areas, the improvement of register criteria of health resorts, a high prospective of creation of wide network of natural territories with valuable curative geological and climatic resources within the State programme in health care of the Russian Federation

### **Bibliography**

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