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**SAFE ENVIRONMENT – KEY OF
HEALTH OF HIGHLANDERS**

Announcement II

**Sanitary aspects of environmental safety
of mountain regions and population of
health of horyan of Chernivtsi region**

**БЕЗПЕЧНЕ СЕРЕДОВИШЕ –
ЗАПОРУКА ПОПУЛЯЦІЙНОГО
ЗДОРОВ'Я ГОРЯН**

Повідомлення II

**Гігієнічні аспекти екологічної безпеки
гірських районів і населення здоров'я
горян Чернівецькій області**

Ключевые слова: горные территории, заболеваемость, популяционное здоровье.

Масікевич Ю., Мислицький В., Ткачук С., Масікевич А. Безопасная среда – залог популяционного здоровья горян.

В сообщении I были приведены результаты анализа основных вызовов экологической и технической безопасности для жителей Покутско-Буковинского горного региона Карпат.

В настоящем сообщении изложены результаты изучения взаимосвязи установленных изменений с состоянием медицинского благополучия его жителей. Исследовано популяционное здоровье по показателям: рождаемости, смертности, прирост населения, демографическая нагрузка, средний возраст.

Сделан вывод о том, что состояние популяционного здоровья горян во многих случаях есть лимитирующим фактором социально-экономического развития Карпатского региона.

Introduction. Population health of horyan of Chernivtsi region.

The analysis of population health foothill and mountain residents of Chernivtsi region. It is shown that population-health caused by mountaineers set of factors among which the main ones are the hygienic quality of the environment and socio-economic performance of the region.

Human health is seen as a sort of dynamic equilibrium of the body i environment¹. Characterized by a complex population health demographics, level of physical development, disease specific groups. At the same time the health of individual regions is an important component of a balanced sustainable development, including the Carpathian region².

As of 01.01.2014 the resident population in the Chernivtsi region was 904,098 people, compared to the year 2012 was an increase of 1,899 persons in the population due to the positive (0.3) of natural increase (in the whole Ukraine – 4.5).

One third of Chernivtsi region presented the. mountain and piedmont areas that are particularly vulnerable to environmental and technological safety³.

A lot of studies⁴ cartographic analysis and study of diseases of public health and disease level for landscapes. A new area of research – medical geology, which studies health and human life in terms of its impact on the geological environment, and feedback (man-made human impact on the environment)⁵. However, analysis of population health indicators inhabitants of mountainous areas and their determination insufficiently studied.

That is why the purpose of our research was to study the population-demographic indicators in one of the most technologically and environmentally sensitive mountain areas Bukovina Carpathians.

According to the Central Statistical Office in Chernivtsi region. As of 01.01.2015, the. Foothills and mountainous region covers an area of 36.3%, live in the territory and 19.9% of the population is concentrated mayzhne third of settlements.

Our analysis of medical and demographic Putyla, Vyzhnytsya and Storozhynets areas that are mountain-piedmont region of Chernivtsi, shown in Table 1.

**Table 1.
Medical residents -demografichna characteristic
foothill and mountain population of Chernivtsi region**

Administrative units	In 1000 residents			Demographic burden	middle age
	birth rate	mortality	increase		
Chernivtsi region	12,8	12,8	0,0	444	38,6
Storozhynetsky region	16,7	10,8	5,9	489	35,6
Vyzhnytsya district	17,1	13,7	3,4	518	37,5
Putylsky region	18,2.	9,8	8,4	552	35,0

*but according to the Central Statistical Office in Chernivtsi region.

Demographic burden is seen as generalized quantitative characteristic of the age structure of the population shows unproductive burden on society population. Calculated figure demographic burden on individuals 15-64 years as the ratio of the total number of persons aged 0-14 and 65 and over to population aged 25-64 years. As can be seen from the table mountain regions are characterized by a reduction in the average age of the population and increasing population pressure compared with the index in Chernivtsi region, which can be explained by rising birth rates in the region.

Analyzing the data presented in pic. 3.1 we see that among the main causes of death foothill area residents are: cardiovascular disease (CVD – 61.8%), cancer (Oncology – 11.6%) and respiratory diseases (ZOD – 8.9%). In general, as noted by several authors⁶, in the Chernivtsi region there is a general tendency to increase in intensity indicators diseases of the population from the south-west to north-east. The lowest incidence rates were found to mountain and forest areas lisoluchnyh Bukovina Carpathians and Precarpathians. An exception to this rule is mountaineers disease tuberculosis. Thus, according to statistics perehirniy indicator of disease in mountainous areas and tuberculosis is 46.4-66.4 cases per 100,000 population (34.7 in the city of Chernivtsi⁷). And this despite the fact that the region characterized by a rather high percentage of forests and forested areas (47,7 - 67.8%). As you know, forests are the lungs of the planet and leaflets purification of air pollutants, volatile plants, forests are areas of recreation leisure and recreation population. That high level of residents of mountain populations disease tuberculosis is likely not caused by violation of environmental safety environment.

It should be noted that population-based or public health characterized by a system of statistical indicators, such as reproduction (medical and demographic characteristics); stock physical strength or capacity (indicators of physical development); peculiarities of adaptation to environmental conditions (morbidity). According to WHO requirements, population health is as follows as:

- policies in Health (allocation of resources for medical care of doctors, the accessibility to the public health, etc.);
- medical education;
- coverage pr sanitary and health education and informing the public about the of food and water, protection of mother and child health, family planning, ect.
- health indicators (infant mortality, life expectancy, mortality from specific diseases, etc).
- structural and economic indicators (unemployment, gross domestic product and its gr. vth, housing, etc.)⁹.

The dependence of population health residents of foothill and mountain areas in the Chernivtsi region of socio-economic indicators analyzed in detail in the works of several studies¹⁰. Thus the above mentioned situation on tuberculosis Highlanders Chernivtsi region can be explained by the lack of comfortable living conditions with proper sanitary conditions, unbalanced nutrition, and so on. In turn, the deterioration of population health entails reducing the economic performance of the region

as a result of temporary loss of the disability population.

Among the important environmental factors that determine population health Highlanders Chernivtsi region water quality. Available literature data¹¹ indicate that for bacteriological in Chernovtsy region with centralized water supply sources for the study period (2000-2004.) Did not meet hygiene standards 3.6% (in Ukraine – 4.8. %); from decentralized sources – 12.0% (in Ukraine – 22.7%). For mountain areas this discrepancy is much lower table 2).

Table 2
Sanitar -hygienic discrepancy between the quality of the water environment in the regions Chernivtsi region. (% Discrepancy for bacteriological⁴)

Administrative units	water quality	
	IT	DC
Chernivtsi region	3,7±0,8	12,0±2,7
Storozhinetsky region	0,4±0,3	7,6±2,9
Vyzhnytsya district	1,2±0,5	11,3±1,7
Putilsky region	3,8±1,1	4,9±1,3

Note: IT – centralized water supply, DC – decentralized water supply.

There is evidence that the majority of drinking water sources centralized and decentralized water for chemical parameters within the sanitary norms. It should be noted that the data on this controversial issue, and the last live years, a trend deteriorating sanitary water quality parameters of river basin Bukovina Carpathians¹². Our results indicate the increase of BSC indicators from the origins to the mouth. White Cheremosh. Downstream the river is a pollution of river water washed away the organic nature of coastal "and water protection zone, which decompose using oxygen dissolved in water. This trend has a seasonal bottom.

Conclusions. 1. A population health of residents foothill and mountain areas of Chernivtsi region caused by complex factors of environmental and technological safety, among which are the basic hygienic quality of the environment and socio-economic performance of the region.

2. The Highlanders population health in many cases is a limiting factor in socio-economic development Bukovina Carpathians.

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Масікевич Ю., Мислицький В., Ткачук С., Масікевич А. Безпечне середовище – запорука популяційного здоров'я горян.

У повідомленні І були наведені результати аналізу основних викликів екологічної та технічної безпеки для жителів Покутсько-Буковинського гірського регіону Карпат.

У цьому повідомленні викладені результати вивчення взаємозв'язку встановлених змін зі станом медичного благополуччя його мешканців. Досліджено популяційне здоров'я за показниками: народжуваності, смертності, приріст населення, демографічна навантаження, середній вік.

Зроблено висновок про те, що стан популяційного здоров'я горян у багатьох випадках є обмежуючим фактором соціально-економічного розвитку Карпатського регіону.

Ключові слова: гірські території, захворюваність, популяційне здоров'я.

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