The ecological situation in the Chechen Republic as perceived by its inhabitants

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Abstract. Human awareness of the danger of environmental problems is associated with serious difficulties. One of them is non-obviousness of human natural basis, psychological alienation from nature, a dismissive attitude towards environmentally-friendly activities. The purpose of this article is to study the attitude of people, in particular residents of the Chechen Republic, to the environmental situation in their region. The research objectives are as follows: to assess the state and dynamics of the ecological situation; to assess the importance of information on the environment for Russian citizens, to assess the sufficiency of measures taken and ways to improve the environmental situation; to study the attitude of citizens of the Chechen Republic to “ecological” behavior.

1. Introduction

Our life, our relationship with nature and the planet are fragile. Nature shows us that humanity is on the brink of extinction. We rely on nature for energy, food and everything we need.

It is time to understand that only our actions today can save the planet.

The history of mankind is the history of an increasing impact on our planet. Humanity in its progressive development goes from one ecological crisis to another.

In ancient times, the impact on the biosphere was local e, and ecological changes were reversible.

Since the middle of the twentieth century, humanity has entered the era of a global environmental crisis. Its main components are depletion of energy and other resources; the greenhouse effect; rising levels and pollution of the oceans; depletion of the ozone layer; soil degradation; radiation hazard; transboundary transfer of pollution, etc.

Facts of the ecological catastrophe are developing hazardous technologies, air, water and soil pollution, application of pesticides, non-utilizable compounds, explosives [2].

Human health depends on the influence of many different factors: food, lifestyle, and stress. We can correct all these influences. However, the activity of our body depends on how the environment affects it. One person cannot cope with such a global adversary as industries, which emit harmful substances into the atmosphere. At the state level, many countries are improving the environmental situation. And this approach also implies the participation of each individual in this process [3].

In the international ranking of countries for 2018 conducted by the Yale Center for Environmental Law and Policy, Russia ranks 52nd [4]. The Environmental Performance Study measures country's
achievements in terms of the ecological state and natural resource management based on 22 indicators in ten categories that reflect various aspects of the natural environment and viability of its ecological systems, preservation of biological diversity, counteraction to climate changes, health status of the population, economic activities, the impact on the environment, and the effectiveness of government activities.

The ecological situation in Russia causes concern among both experts and residents of the country. Official data show that 60% of the population live in areas where quality of the environment is unsatisfactory.

In the "Environmental ranking of the Russian regions" compiled by "Green Patrol", the Chechen Republic ranks 23rd. In the study "Clean cities of Russia", which examined large industrial cities, Grozny ranks 4th out of 10 cites. The capital of the Chechen Republic is not a highly developed industrial city. But there are several large enterprises there [5].

Improving the ecological situation in the country aimed at improving living standards of the population is a priority policy of the Russian government [6].

Each of us can contribute to the world around us, the ecological situation [7].

To improve the ecological situation, it is necessary to find a constructive solution to the coordination of production activities of society and real possibilities of nature. In this regard, it becomes necessary to search for ways to improve the current environmental situation, which, in particular, involves the development of effective measures to improve it both in a particular region and in the country as a whole.

The society should preserve nature for future generations, leave the saved natural capital, search for ways to prevent catastrophic environmental situations and improve the current environmental situation in Russia. All this makes it relevant to study the ecological situation by sociological methods, which make it possible to identify social mechanisms and factors that influence the formation of ecological education and favorable development of the ecological situation [6].

2. Materials and methods
To analyze the ecological situation in the Chechen Republic, since 2010 we have been conducting the monitoring of the state of the environment.

A survey was conducted using a formalized questionnaire. 570 people from six cities and 15 settlements of the Chechen Republic were interviewed. The literature on the research issue was analyzed.

3. Results
570 people (57% men and 43% women) were participated in the survey. Most of the articipants were people aged 16–17 years (44%). 39% of the participants were aged 20–25, 17% – 35–55 years old.

An analysis of the survey showed that young people are not satisfied with the state of the environment. The respondents said that the main problems of the urban environmental problems are air pollution by industrial emissions, exhaust gases (72%), water pollution and waste (28%). 44% of the respondents believe that organizations responsible for the environmental control and protection can solve these problems, 39% of the respondents believe that city residents can solve these problems, 12% of the respondents believe that local authorities are responsible for the ecological situation, and 5% of the respondents believe that joint efforts of local authorities and organizations can protect the environment.

When answering the question "What should be done to keep your city clean?" 51% of the respondents answered that people should not litter, 27% – should fight against the environmental pollution as a result of activities of enterprises and transport emissions, 20% – should inform others (relatives, friends) about the harmfulness of urban pollution. 2% believe that it is impossible to keep Grozny clean, since it is a city of chemists. 94% of the respondents are concerned about the environmental safety of their own home, the environmental cleanliness of food.

In order to solve environmental problems, the following answers were given: greening (27%), no
litter (23 %), treatment facilities (20 %), environmental projects on the environmental protection (14 %), environmentally friendly fuel (10 %), fining (6 %).

Assessing the ecological situation, the participants have drawn the following conclusions: there is a problem of garbage disposal – 48 %; there is a problem of drinking water – 40.3 %; few green spaces – 6 %; soil erosion is developing – 5.7 %.

69.5 % of participants are concerned about global environmental problems. Among the global problems, the respondents identified pollution of forests, rivers, soil and air, and global warming.

4. Conclusion
According to the environmental pollution monitoring results for the Chechen Republic, the total emission of harmful substances during the period under consideration (average values for the year) was 226939 tons / year, including: solids – 39.191 thousand tons, liquid and gaseous substances – 187.752 thousand tons, of which sulfur dioxide – 4.178 thousand tons, carbon oxide 112.682 thousand tons, nitrogen oxides – 1.622 thousand tons, hydrocarbons – 10, 678 thousand tons, volatile organic compounds – 14, 303 thousand tons, other gaseous and liquid 44, 289 thousand tons.

The largest polluting enterprises are Electropult-Grozny – 13547 tons / year, Transmash – 11453 tons/year, Groznneftegaz – 94678 tons/year; Chechzhilkomtrans – 23849 tons/year; Chechengaz – 12,422 tons/year; Asphalt-4 – 2500 tons/year; Road-Building Plant – about 2500 tons/year [8].

Emissions from vehicles and the state of weather conditions deteriorate the ecological situation. The main sources of pollution of water bodies are wastewater discharges, surface washings and diffuse pollution. The level of chemical pollution of soils is permissible.

The existing monitoring system does not meet modern requirements for the transfer of operational information to forecasting centers and provides measurements of only a small fraction of those harmful impurities that need to be predicted.

There is a need to create a mechanism for cooperation between environmental organizations and industrialists, aimed at joint implementation of environmental programs and projects, search for funding resources, prompt exchange of information. Moreover, it would be advisable to change the methods for calculating production efficiency in such a way that this indicator is directly dependent on environmental safety.

Thus, in order to know the degree of environmental pollution in the Chechen Republic, it is necessary:
- to increase the number of observations and indicators, including toxicity;
- to introduce a system of automatic control of industrial emissions (continuous monitoring and timely identification of pollutants).
- to raise the level of environmental education of the population.

The unsatisfactory state of the environment has a negative impact on human health. According to the Ministry of Health of the Chechen Republic, only 20 % of the population are healthy. More than 40 % of children are born sick, and 80 % of newborns have pathologies. High infant mortality, a sharp unprecedented increase in the number of oncological diseases due to the environmental pollution warn us about the impending environmental catastrophe [9].

Despite the fact that the Chechen Republic pays attention to the ecological education of youth, events are regularly held to form a rich inner world in children and a system of attitudes towards nature, its flora and fauna, to love nature and care about it.

There are nine regional reserves and 41 natural monuments, where excursions for schoolchildren and students are regularly conducted. The total area of protected natural areas of the republic is about 150358.8 ha [10]. The data of sociological studies show that many people lack knowledge of ecology and ecological culture.

To this day, the attitude to nature as to something eternal, everlasting and free is preserved. This is evident in the contradiction between the need for a respectful attitude to nature and the behavior of people. They still view their relationship with the outside world as a “taker” and “giver” relationship.

In modern conditions, the state of the natural environment is a criterion for the cultural level of the
state and each citizen. At the center of these tasks are knowledge, experience of people, their love for nature.

The tragedy of many environmental problems has highlighted one strategic idea: a person's ecological culture cannot be formed randomly, it needs purposeful development that encourages people to take active steps to protect the environment.

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