

The Environmental Culture in the Russian society as a Condition for Building Eco-Consciousness and Behavior of the Younger Generation



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Abstract. The environmental state largely depends on the environmental culture and consciousness of the population. The study of these qualities among the representatives of the younger generation is of particular interest: this has determined the relevance of the research problem. The purpose of the research is to compare the attitude towards pressing environmental issues among modern 16-year-olds and their peers interviewed 20 years ago, and to analyze the causes of changes that have occurred in the eco-consciousness and behavior of the younger generation during this period. The research lies in the following: the performance of 16-year-old teenagers' concerns about serious environmental problems and their environmental behavior is studied for the first time in two decades; the causes of changes (decreased attention of the state and the society to environmental issues; the school course "Environment" is no longer mandatory; the media do not pay attention to the issue of sustainable development) are analyzed. The study applies the method of questionnaires. In 1996, the survey was conducted in three, and in 2017 – in four Russian regions. The study shows that modern 16-year-olds, unlike their peers from the 1990s, less often note that people litter in the streets and in the countryside, throwing wrappers and other wastes (which indicates that the eco0culture has increased); however, their participation in environmental movements and organizations, as before, remains at an extremely low level. According to the data, despite the deepening environmental crisis, the share of adolescents expressing serious concern about important environmental problems has decreased over 20 years. In the light of the above, it is of great importance to educate the public on human ecology and develop school education on environment and sustainable

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development, whose objectives include building the younger generation that would understand the need to address environmental problems and reduce anthropogenic load on the environment, as well as developing skills to improve the environment.

Key words: adolescents, questionnaire survey, attitude performance, concern about environmental problems, eco-consciousness, eco-behavior, environment, harm to health.

Introduction. The increase in anthropogenic load on the environment has led to the globalization of environmental problems. Experts alarmingly note the increasing pollution of air, fresh water, oceans, and soil; deforestation, erosion and salinization of soils, their reducing fertility, desertification, sea level rise, biodiversity reduction and global warming. The increase rate of surface temperature has reached its highest levels in the past 600 thousand years due to a rapidly increasing concentration of carbon dioxide and other greenhouse gases [1, p. 31]. In 2015, the World Meteorological Organization stated that 14 out of 15 hottest years occurred in the current century¹. More than 95% of climate researchers do not question global warming and a significant human contribution to this process².

The tense environmental situation makes it relevant to study the dynamics of eco-consciousness, eco-attitudes and eco-behavior of the population and separate socio-demographic groups. That is why in 2017, the Department of Social Health Issues of the Federal Research Center for Sociology of RAS (FNISTs RAN) repeated the study “Adolescent Health and Environment” conducted in 1996 [2, 3] (the author participated in the study in 2017). The applied methodological approach was the following: “The study of factors relevant from the adolescents’ point

of view” [3, p. 18]. The selection of cities and educational institutions was multi-stage, with the use of quota and random samples. The questionnaire method was used. The data were processed and analyzed in SPSS v23. At a 95% confidence limit the statistical error of the sample was 1.98. Descriptive analysis was used. Students from different types of educational institutions (secondary schools, gymnasiums, vocational schools and colleges) were interviewed. In 1996, the survey was conducted in three Russian regions: Moscow, Orenburg, and Abakan (1,004 people interviewed), in 2017 – in 4 regions: the Moscow Oblast, Nizhny Novgorod, Ulan-Ude, and Ulyanovsk (994 people). A comparison of these two surveys shows that adolescents’ perception of most serious environmental problems has decreased over the past 20 years. Arrays of respondents in the past and present century differed significantly by age, so we compared the most numerous group of teenagers aged 16 in each survey (1996 – 266, 2017 – 290 people).

Research purpose: to compare the attitude to important environmental problems of modern 16-year-olds and their peers interviewed 20 years ago, as well as to analyze the causes of changes in the eco-consciousness and behavior of the younger generation during this period. Research novelty: for the first time in two decades, the dynamics of 16-year-olds’ concern with serious environmental problems and their eco-behavior (we studied the aspect of behavior such as garbage disposal in the streets) and the causes of changes are analyzed.

¹ World Meteorological Organization: 2014 turned out the warmest year during the observation period. Available at: <https://tass.ru/obschestvo/1738372> (accessed: 14.09.2018).

² Danilov-Danil’yan V.I., Piskulova N.A. *Sustainable Development: New Challenges*. Textbook. Moscow: AspektPress, 2015. P. 124.

Environmental degradation as a social problem. The deterioration of environment in the second half of the twentieth century is recognized as a social problem as it is largely due to human economic activity and has serious consequences for it. It is no accident that modern society was named a risk society [4], moreover, attention is focused on the anthropogenic risks [5].

In order to assess the impact of the population on the environment of a particular territory environmentalists use the indicator of its ecological footprint (EF) calculated in hectares of biologically productive land and water area necessary for production of resources consumed by the population, as well as for the absorption and storage of waste produced by them. Since 1975, the ecological footprint of earthlings has grown by an average of 14%. The average global demand for natural resources of an average modern human is 2.23 hectares. “Currently, however, the area of bioproductive land and sea on our planet is 1.78 hectares per person” [6, p. 32]. Humankind ES at the present stage is much higher than biocapacity of our planet, which is destructive to the biosphere. Thanks to the scientific and technological revolution people consume renewable natural resources at a rate that exceeds their capacity for self-reproduction. They alter the habitats of various species, destroying biocenoses that have existed there for millions of years. This is one of the main reasons why biological species have been dying out at an unprecedented rate in recent decades, and the average wild animal population has been steadily declining. By 2200, it may comprise 67% compared to the level of 1970³.

In Russia, intensive use of natural resources in the twentieth century has led to serious

³ *Living Planet Report 2016*. Available at: http://ekois.net/wp-content/uploads/2016/11/lpr_2016_summary_ru_net.pdf (accessed: 15.09.2018).

environmental consequences. Forests have depleted, many small rivers have dried up, soil salinization and desertification in large areas has taken place, air, water and soils have become polluted. The example of our country in the past quarter of a century clearly shows the impact of ups and downs in economic activity and air protection activity on air pollution from stationary sources. In particular, it was decreased during 1981–1990 and 1991–1995, then the trend was oscillatory, with an increase in some years after 2000. In the first of these periods, the country’s economy grew and the decline in emissions was due to the adopted air quality measures (switching from coal and fuel oil to gas and other measures). In the second period, economic activity decreased. Reduced emissions were observed in the crisis years of 1998–1999, 2008–2009, as well as in mid-2012 and 2014 where economic sanctions against Russia were imposed. Emissions stabilized or increased during periods of industrial output growth in some periods of the 1990s, the first decade and some subsequent years of the twenty-first century⁴.

In Russian cities, air quality remains unsatisfactory although it is slowly improving⁵. The issue of its state requires careful monitoring. Scientists are concerned about lack of control over the flow of a number of toxic substances that affect ecosystems and human health in Russia. It is noted, for example, that legal acts in Russia “recording emissions from road transport do not contain information on the number of metal compounds and polycyclic aromatic hydrocarbons flowing into the environment during the operation of road transport” [7, pp. 298–299].

⁴ On the state and protection of the environment in the Russian Federation in 2016: government report. Pp. 10–11. Available at: <http://www.mnr.gov.ru/upload/medialibrary/49b/1-73.pdf> (accessed: 15.09.2018).

⁵ *Ibidem*. P. 15.

Environment deterioration, especially air, surface- and groundwater and soil pollution has a negative impact on human health. The International Agency for Research on Cancer emphasizes that the air we breathe is increasingly polluted by mixtures of carcinogens⁶. The World Health Organization (WHO) estimates that air pollution causes 7 million deaths per year⁷.

The world community is trying to develop mechanisms for sustainable development on a global scale. Great expectations are associated with the “green economy”⁸ [8, 9]. The Rio de Janeiro Earth Summit in 1992 adopted Agenda 21, which is “essential for the development of the international environmental policy”⁹. However, it is not always possible to come to an agreement. Even at the government level of some countries, there is no understanding of the importance of joint action. In particular, “the rigidity position of the US resulted in their refusal to ratify the Convention on Biological Diversity”¹⁰. In recent years, the escalation of international tensions has necessitated an increase in military spending and reduced the ability of the US to modernize production facilities to reduce discharges and emissions of toxic substances into the environment.

V.I. Danilov-Danilyan, an outstanding Russian environmentalist, believes that the opinion that “the problems of protection and preservation of environment suitable for the existence of the human race can be solved

by technical means” is wrong [10, p. 9]. In his opinion, to preserve the natural balance it is necessary to clear the space for swamps, forests, stop polluting the ocean as humans cannot “replace the natural regulators of environment (this is justified by comparing the information flow through the system of living organisms in the implementation of the regulatory environmental function) with the information capacities of a civilization – those that it can develop in the remaining time before the environmental disaster” [10, p. 11].

Domestic and foreign researchers note that to ensure human development it is necessary to change the system of values, consciousness and attitude to the environment [11; 12; 13; 14]. In this regard, comparative studies on the transformation of eco-consciousness and behavior of the population are of particular interest.

Eco-culture in the Russian society as a condition for forming eco-consciousness and behavior of the younger generation. Environmental culture of an individual can be defined as a system of knowledge, values, social attitudes, needs, relations and motives regulating their interaction with the environment, which can be natural or destructive. The eco-culture of an individual is formed in the system of social institutions and norms of nature management developed in the society. Sociologists have low recognition of nature management in our country. In the context of economic liberalization, it led “to deplorable, barbaric use of natural resources, both on the part of new capitalists who do not want to invest in environment and impoverished population who has for many years survived at the expense of overexploitation of nature and dismantling technical life support systems” [15, p. 87].

⁶ *Outdoor air pollution leads to increased incidence of cancer.* Available at: <http://ecoportal.su/news.php?id=74267> (accessed: 15.09.2018).

⁷ *UN Environment Assembly: Actions on Ambient Air Pollution* (2014). Available at: http://www.unido-russia.ru/archive/num_14/art14_6/ (accessed: 15.09.2018).

⁸ *Inclusive Green Growth: The Pathway to Sustainable Development.* The World Banc, 2012.

⁹ V.I. Danilov-Danil'yan, N.A. Piskulova *Sustainable Development: New Challenges.* Textbook. Moscow: Aspekt Press, 2015. 336 p. P. 155.

¹⁰ *Ibidem.* P. 156.

The survey of Russians on the quality of life shows that “clean environment (water and air quality)” is very important for them and is estimated at an average of 4.63 points on a scale from 1 to 5, while their satisfaction with this aspect of the quality of life is estimated significantly lower (average – 3.28)¹¹.

The study of people’s attitude to environmental problems in the place of their residence shows that 66% of respondents are “very much worried” and “rather worried” about the environment in their place of residence. The share of the former significantly decreased in 2016 (17%) compared to 1990 (58%). In 2016 when answering the question about what was most disturbing about the environment in people’s place of residence, 52% of respondents highlighted water pollution, 49% – air pollution, 31% – dirty polluted water, 25% – insanitation of the territory, 21% – climate change, 14% – deforestation, 10% – extinction of certain species of birds, fish, animals, plants, insects or changes in flora and fauna, 14% of respondents mentioned “the shallowing of water bodies, desert advancing and other water upsets”. Moreover, 7% of respondents aged 18–24 mentioned poor hydrologic behavior, 13% – aged 25–39, 13% – aged 40–54, and 19% – aged 55 and over¹². The older generation have witnessed significant shallowing of water bodies throughout their lives, which explains the higher share of those who are concerned about this phenomenon. Young people aged 18–24 have observed this process for a shorter period of time, that is why the share of those who are aware of this serious problem is lower among them.

¹¹ *Russia–2017: Quality of Life*. VTsIOM press release, 2017, no. 3498. Available at: <https://wciom.ru/index.php?id=236&uid=116472> (accessed: 15.09.2018).

¹² *Environmental Issues*. Levada-Center press release, 2016, 03.06. Available at: <http://www.levada.ru/2016/06/03/ekologicheskie-problemy> (accessed: 15.09.2018).

As a rule, sociologists study the eco-culture of the adult population, which is important for characterizing conditions for socialization of the younger generation. Mass surveys of citizens in Russia reflect the state of their eco-consciousness and eco-culture which are transmitted in the process of intergenerational transfer of experience to children. The eco-culture of the modern Russian society is called consumer with predominant individualistic utilitarian attitudes. “The culture of general environment planning is replaced by consumer culture which forms negative trends in the general context of social development” [16, p. 4]. The eco-consciousness of the majority of Russians is characterized as environmental dependency and personal exclusion from problem solving. “The results of a sociological study demonstrate the predominance of consumer attitudes to ecology and environmental protection”¹³. Sociologists have come to a conclusion that the type of eco-culture predominant in our society is that “in which environment is perceived as a condition for a comfortable lifestyle, rather than an independent value”¹⁴.

Relationships, social attitudes, eco-culture are pre-scheduled units with cognitive, emotional, and behavioral components in their structure. Different researchers focus on a particular component using different indicators. However, according to general opinion, the main criterion of ecological culture is behavior. Studies show that Russians demonstrate low levels of eco-activity. This applies both to personal participation (donation for environmental purposes, signing letters and petitions for environment protection,

¹³ *Eco-Culture of the Russian Population*. VTsIOM press release, 2011, no. 1670. Available at: <https://wciom.ru/index.php?id=236&uid=1763> (access: 15.09.2018).

¹⁴ *Ibidem*.

prevention of violations of environmental standards in the micro-environment) and collective solidarity (activities of public environmental organizations, environmental groups in social media, participation in collective action, pickets and environment-related meetings) [17]. According to the survey of students of two Moscow universities, most of them understand that the environmental situation in the country is deteriorating, that this trend will continue in the future, and that the deterioration of environment in the capital has a negative impact on their health. At the same time, students are not much interested in the problems of environmental change, rarely use collective forms of its protection (public hearings, environmentalist actions, voting for parties with environmental programs). In everyday life, 62.3% of boys and 71.7% of girls save resources (water, electricity, etc.). Economic motivation prevails (“to pay less”), followed by personal eco-culture (“I understand that resources need to be protected”) and family traditions [18].

The analysis of data of social surveys concerning the peculiarities of eco-consciousness and behavior of different age groups shows that young people, compared to older age groups, sometimes act less environmentally appropriate. For example, older respondents more often mentioned that they save energy everyday (73% of respondents aged 60 and over versus 25% of respondents aged 18–24)¹⁵. Although careful attitude to energy resources is mainly dictated by economic motives, in this case it is important that the share of those who save them is lower among young people.

¹⁵ *Energy efficiency and economical consumption of resources: who knows what's going on?* VTsIOM press release, 2015, no. 2980. Available at: <http://wciom.ru/index.php?id=236&uid=115474> (accessed: 15.09.2018).

Speaking about the relevance of environmental issues, experts proceed from the assessment of their consequences for humanity, for the environment and the biosphere. Each generation finds a new landscape which becomes a reference point for them. Eco-education can compensate for limited personal experience.

Eco-education at schools in our country is criticized. In recent years, there has been a decrease of cognitive interest in environmental knowledge among high school students compared with primary school students (from 67 to 27%) [19, p. 34]. It is emphasized that the result of traditional eco-education is schoolchildren’s awareness of environmental problems, which “weakly correlates with practical actions to solve them, to reduce the negative anthropogenic impact” [20, p. 66].

Russian experts also note that “despite a number of attempts to introduce education for sustainable development...in Russian schools, it is not widespread, and even during the UN Decade has not gone beyond rare educational forums and round tables on thematic conferences” [21, p. 38].

The study of social attitudes of adolescents (end of the 20th century) in the field of ecology revealed the anthropocentricity of their consciousness, manifested, in particular, in relation to different ecosystems. It depended on the importance of ecosystems in meeting human needs, while their role in biosphere processes was not taken into account. Only 40% of high school students answering the question about what they value in nature, chose the answer symbolizing its inherent worth; more than half of respondents value its wealth that it gives us the most; almost as many answered that they have a rest in the nature. The survey showed that not all teenagers are familiar with the rules of environmentally appropriate behavior in the natural environment [23, pp. 140–141].

The development of eco-literacy (EL) of students is provided by the Federal State Educational Standard (FGOS) of general education. EL includes the assessment of environmental knowledge, the ability to apply it when performing training tasks and the ability to work with environmental information. The testing of high school students' EL in Moscow showed that they have successfully coped with about half of the test tasks (45.4%). Researchers were interested in the students' willingness to participate in solving environmental problems. It turned out that only 0.15% of respondents in the 10th and 0.39% in the 11th grade put themselves as the subject of solving these problems, 36.1–38.4%, respectively, considered that government bodies of different level are responsible for the majority of decisions, 28.6–32.4% – other people, 28.6–32.4% – enterprises and organizations, 18.3–20.7% – experts [22, p. 57].

Eco-culture, environmental awareness and adolescent behavior is an underdeveloped topic. The future of the biosphere depends on the eco-culture of the population, especially young people and adolescents; this determines the interest in the topic of the study.

Discussing the results of empirical research. *Table 1* shows the distribution of adolescents' responses to the most serious problems they consider to be threatening the world. It was proposed to choose the four most important problems and rank them on a scale from 1 to 4, where 1 is the most significant, 4 – the least significant. The list includes environmental problems such as pollution, including radioactive pollution, desertification, greenhouse effects, as well as the consequences of excessive consumption of natural resources (lack of resources, including the energy crisis). Moreover, the list includes threats associated with human aggression (war, crime and violence) and the imperfection of the social

structure and wealth distribution (inequality between people, hunger). This combination of problems reflects the opinion of adolescents about the place of environmental threats in the system of various serious dangers that can undermine global stability.

Both in 2017 and in 1996 “war” was considered by teenagers as the main global threat (“the first problem”), the second was “radioactive pollution”.

The “no answer” line provides information on issues that most respondents did not identify as the four most serious threats out of the 10 suggested in the question. The least relevant, according to adolescents, are: “energy crisis”, “lack of mineral resources”, “desertification (soil erosion)”, “greenhouse effect” and “inequality”. These problems, according to the results of both surveys, consistently take the last five positions in the “no answer” column, but today, compared to the 1990s, the share of respondents who did not choose them as very serious has decreased. This is especially relevant to “inequality” which in 1996 was not considered as one of the 4 serious threats by 81.6% of respondents, in 2017 – 59.3%, and “lack of mineral resources” (this threat in 1996 was not highlighted by 89.4% of respondents, in 2017 – by 75.5%). With regard to the remaining three threats, processes such as global warming, desertification and depletion of non-renewable resources are developing rapidly. The consequences may be very serious; those that already take place in other parts of the world, although the respondents do not yet feel them.

Teenagers of 1990s rarely considered pollution an important threat (this is understandable given the growth rates of pollutants in the environment over the past 20 years), war (perhaps the reason is that in the 1990s Russia was in a war against Chechnya), crime (apparently, this was affected by the rampant crime in our country in the past decade of the

Table 1. Opinions of 16-year-olds in 1996 and in 2017 on serious problems threatening the world (% to total respondents, R)

Problems threatening the world	Radioactive pollution	Hunger	Pollution	Rime and violence	Inequality	Energy crisis	Lack of mineral resources	Desertification (soil erosion)	Greenhouse effect	War
1996 (N=266)										
1st problem, %	25.2	8.3	10.5	14.3	1.5	0	0.8	1.5	2.6	35.7
R	2	5	4	3	7-8	10	9	7-8	6	1
2nd problem, %	16.9	16.9	13.9	23.7	3.0	0.8	1.5	2.3	3.4	16.9
R	2-4	2-4	5	1	7	10	9	8	6	2-4
3rd problem, %	14.3	10.2	13.2	24.8	6.8	2.6	2.3	6.4	4.1	14.7
R	3	5	4	1	6	9	10	7	8	2
4th problem, %	12.8	9.4	16.2	13.9	7.1	3.0	6.0	3.8	6.4	18.8
R	4	5	2	3	6	10	8	9	7	1
No answer, %	30.8	55.2	46.2	23.3	81.6	93.6	89.4	86.0	83.5	13.9
R	8	6	7	9	5	1	2	3	4	10
2017 (N=290)										
1st problem, %	23.8	11.4	14.8	10.7	7.6	1.0	2.1	4.1	1.0	29.3
R	2	4	3	5	6	9-10	8	7	9-10	1
2nd problem, %	11.7	15.9	22.4	22.4	5.5	2.8	9.3	6.2	3.8	11.0
R	4	3	1-2	1-2	8	10	6	7	9	5
3rd problem, %	11.0	13.1	19.7	19.3	11.7	7.9	5.9	3.4	6.9	6.6
R	5	3	1	2	4	6	9	10	7	8
4th problem, %	9.3	9.7	11.7	13.1	15.9	6.9	7.2	5.2	6.9	20.3
R	6	5	4	3	2	8-9	7	10	8-9	1
No answer, %	44.2	49.9	31.4	34.5	59.3	81.4	75.5	81.1	81.4	32.8
R	7	6	10	8	5	1-2	4	3	1-2	9
Source: author's calculations based on database of the Department of Social Health Issues of FNISTS RAN.										

20th century), radioactive pollution (most likely at the end of the 20th century the most frequent were reminders about the accident at the Chernobyl nuclear power plant) were more often considered as threats.

The question about global threats revealed the views of adolescents on the danger of environmental problems against the background of other risks to humanity. The question of their concern about various environmental problems

rank these threats in the respondents' opinion (Tab. 2).

According to the table, both in 1996 and 2017, "air pollution" was the biggest concern among adolescents, with "survival of animals and plants" ranking second. Problems such as "undisposable waste", "deforestation", and "water pollution" rank highest ("very concerned") in both surveys. In general, the ranking of problems of great concern has not

Table 2. Attitudes to various environmental problems of 16-year-olds in 1996 and 2017 (% of respondents; R)

Answers	Water pollution	Survival of animals and plants	Landscape destruction	Air pollution	Oil disasters	Undisposable waste	Nuclear power stations	Problems of increasing amount of waste, garbage	Construction of water reservoirs blocking rivers	Deforestation	Use of fertilizers and pesticides	Harmful effect of noise	Greenhouse effect
1996													
N	265	266	263	265	265	266	265	265	265	266	265	265	266
Very concerned, %	69.1	77.4	25.5	89.1	62.90	72.2	47.8	55.8	28.3	64.3	32.1	19.6	27.1
R	4	2	12	1	6	3	8	7	10	5	9	13	11
A bit concerned, %	25.3	17.7	41.4	9.4	22.3	16.9	32.5	33.6	36.6	26.3	32.4	34.3	30.0
R	9	11	1	13	10	12	5	4	2	8	6	3	7
Not concerned, %	2.6	1.9	17.5	0.4	9.1	4.5	9.1	5.3	17.7	1.9	15.1	36.7	25.6
R	10	11-12	4	13	6-7	9	6-7	8	3	11-12	5	1	2
Undecided, %	3.0	3.0	15.6	1.1	5.7	6.4	10.6	5.3	17.4	7.5	20.4	9.4	17.3
R	11-12	11-12	4	13	9	8	5	10	2	7	1	6	3
2017													
Number of respondents (n)	276	274	275	274	275	273	274	276	276	276	272	276	272
Very concerned, %	49.2	62.9	28.0	71.1	33.1	53.1	29.9	59.4	26.1	55.8	16.5	19.2	20.6
R	6	2	9	1	7	5	8	3	10	4	13	12	11
A bit concerned, %	37.7	28.8	37.1	22.3	39.6	25.3	33.2	26.8	35.9	31.5	29.0	25.7	32.7
R	2	9	3	13	1	12	5	10	4	7	8	11	6
Not concerned, %	9.1	4.7	26.9	4.0	18.9	13.9	30.7	7.6	28.6	9.1	39.1	43.5	27.6
R	9-10	12	6	13	7	8	3	11	4	9-10	2	1	5
Undecided, %	4.0	3.6	8.0	2.6	8.4	7.7	6.2	6.2	9.4	3.6	15.4	11.6	19.1
R	10	11-12	6	13	5	7	8-9	8-9	4	11-12	2	3	1

Source: author's calculations based on database of the Department of Social Health Issues of FNISTS RAN.

changed much in two decades. The differences between positions in ranks is no more than one or two positions, with the exception of three problems: “landscape destruction”, “use of fertilizers and pesticides”, and “increasing amount of waste and garbage”. The first of these problems in the ranking of answers “very concerned” went up from the 12th position in 1996 to the 9th in 2017, the second fell from the 9th to the 13th, the third – went up from the 7th to the 3rd position, respectively.

Among the problems listed in Table 2 there are those where the difference in the percentage distribution of responses in 1996 and 2017 on the indicator “very concerned” is not so significant. These are the problems of increasing amount of waste and garbage (although this problem has worsened over the years), landscape destruction, the harmful effect of noise, and the greenhouse effect. For two decades, the situation for these indicators got worse, however, adolescents have not yet realized how serious these environmental problems are.

The analysis of data obtained twenty years ago shows that even then a significant share of respondents (we note that only groups of 16-year-olds were compared) were not sensitive about the problems specified in Table 2 way. About a quarter of adolescents were not very concerned (“a bit concerned” + “not concerned” + “undecided”) about the reduction of biodiversity and undisposable waste, one third – about water pollution, deforestation and oil disasters, a half – about the increasing amount of waste and garbage, nuclear energy, two thirds – about pollution caused by the use of pesticides and fertilizers, three quarters – about greenhouse effect, landscape destruction, construction of reservoirs, dams blocking rivers, 80% of adolescents – about the harmful effect of noise.

In 2017, the share of adolescents with strong feelings (“very concerned”) about 11 out of 13 environmental problems listed in the table decreased. The difference between the two surveys on the indicator “very concerned” about the indicators such as “oil disasters” (30%), “water pollution” (20%), “air pollution” (20%), “the problem of undisposable waste” (20%), “nuclear power plants” (20%), “use of fertilizers and pesticides” (15%), “survival of animals and plants” (15%) was impressive. These problems do not cause such a strong reaction among modern adolescents as they did among their peers 20 years ago. In 2017, compared to 1996, respondents were significantly more likely to choose the answers such as “a little concerned” and “not concerned”, and the share of indifferent adolescents (“not concerned”) increased significantly. There are several reasons. First, over the years attention to the environment by the state and the society has decreased. In the second half of the 1990s, state structures dealing with environmental issues were downgraded¹⁶. Currently, there is no separate agency for environmental protection or environmental issues in Russia. Second, the media pay little attention to social ecology and do not cover sustainable development. Third, in the 1990s much more attention

¹⁶ The State Committee for Environment Protection of the USSR was established in 1988, the Ministry of Ecology and Nature Management of the Russian Federation – in 1991 (until December 25, 1991 – RSFSR). Based on this department in 1992 the Ministry of Environment Protection and Natural Resources of the Russian Federation was established, which in 1996 was split into the State Committee of Russia for Environment Protection and the Ministry of Natural Resources (the latter established on the basis of Committee of the Russian Federation for Water Management and the Committee of the Russian Federation for Geology and Use of Mineral Resources). In 2000, this Ministry was given the functions of the abolished State Committee for Environment Protection, as well as the federal Forestry Agency, the Committee for Land Resources and Land Management, and Federal service for Hydrometeorology and Environment Monitoring. In 2008, the Ministry of Natural Resources and Ecology of the Russian Federation was established on the basis of this Ministry.

was paid to environmental issues at school. In 1994, according to government decrees (1993) “Ecology” as a mandatory course was introduced in the curriculum for high schools. In the mid-90s, the requirements for the results of environmental education were formulated in the Temporary State Educational Standard of general secondary education (educational sphere “Ecology”). In the second half of the 1990s the situation changed. In 1998, the course for high schools in Russia was excluded from the federal part of the curriculum. Currently, “Ecology” in school is an additional optional course (high school students must choose a certain number of subjects among natural sciences). The results of the survey showed that 4–6% of respondents want to study “Ecology”, “which roughly corresponds to the share of students engaged in various forms of environment-related extracurricular work and activities (5–9% in different regions)” [23, p. 23].

It was assumed that the teenagers’ concerns regarding the environment are related to their experiences regarding health. This assumption was confirmed. In 1996, 34.2% of 16-year-old respondents highlighted that they are very worried about the harm environmental pollution causes to their health, 49.6% – that they worry about this enough, 3.0% – that they do not worry, 13.2% of respondents were undecided; in 2017 – respectively, 26.4 and 55.7% (worried, but not very much), 11.1 and 6.8%. The concern somewhat decreased. Both in 1996 and 2017 the extent to which adolescents are concerned about the effects of environmental pollution on their health and about the environmental problems listed in Table 2 were associated. For example, in 1996 73.4% of 16-year-olds who are very concerned about the harm caused to their health by environmental pollution were very worried about the increasing amount of waste and

garbage; their share among those who were not very much concerned about the negative impact of environmental pollution on health comprised 52.6%, among those who did not worry at all about the negative impact of environmental pollution on their health – 28.6%. In 2017, these figures were 80.6%; 55.9% and 38.7%, respectively.

Some of the respondents are concerned about the environment only in words, some really understand the threats it poses to the biosphere and humanity. The most important thing here is whether concerns are expressed in deed. In 1996, 3.4% of 16-year-olds noted that they are engaged in activities of any environment protecting organization, in 2017 – 8.3%. Among them only 3 people were able to name the organization (one wrote “an Olympian”, other – “school project”, the third – “ground maintenance”). The absence of names of environmental organizations casts doubt on the participation of adolescents in their activities. Probably, they only mentioned their participation in some single events.

A person can make a contribution to preserve the environment not only by working in environment organizations or by promoting individual environment protecting actions such as cleaning up garbage. They can do this in their daily life, by following the eco-culture of proper environment-friendly behavior. The simplest thing is throwing garbage in place designated places. In 1996, 15.8% of surveyed 16-year-olds said that they “never” threw away garbage (chewing gum, candy wrappers, cigarettes, cans), 65.7% of them did it “sometimes”, 12.5% – “often”, and – 6.0% “almost always”. In 2017, 34.3, 55.0, 4.8 and 5.9%, respectively. It is obvious that not all those who have declared their correct behavior stick to it practically, but the distribution of responses in 1996 and 2017 indicates the dynamics of socially approved and disapproved behavior patterns.

Conclusion. To sum up, sociologists pay little attention to the adolescents' eco-culture. The comparison of two surveys shows that, despite the deepening environmental crisis, the share of adolescents expressing serious environmental concern has decreased over the past 20 years. This is due to the reduced attention of the state and the society to environmental problems, lack of relevant information in the media and poor eco-education for children and adolescents. In the light of the above, educating the population for environmental issues, especially school education on environment and sustainable development is extremely relevant. The purpose of such education is to make children and adolescents understand the seriousness of environmental issues, the need to reduce anthropogenic load on the environment and develop skills to improve the environmental situation.

Modern teenagers unlike their peers from the 1990s rarely note that they throw away wrappers and other garbage in the streets, i.e. the cleanliness culture has improved. This shows that developing eco-culture is a problem possible to be solved. Eco-movements and organizations could play a major role here. However, the share of adolescents participating in their activities remains low (the share of respondents who said that they are members of environmental organizations although increased in 2017 in comparison with 1996 but, as a rule, respondents could not specify their name – most likely they participated in some separate single events).

The article compares a small set of respondents; however, data suggest the need for further study of the dynamics of eco-consciousness of adolescents and young people and the role of various social institutions in this process.

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