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Ecologism as a Modern Strategy of Human Survival (Regional and Global Dimensions)

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Abstract. The aim of this article is to reveal the ecological education's perspectives at the present stage of the globalization processes' deployment and their influence on the formation of the environmental consciousness of both an individual and the society as a whole. A wide variety of methods were used in the research, in particular, general scientific, special

scientific and philosophical methods and approaches, including structural and functional analysis, synthesis, comparative, systemic, as well as synergetic approach, which allowed considering education as a complex and opening system. The authors have proved that the organization of the ecological education is important at all levels of an individual's socialization, especially in the process of enculturation. The individual simultaneously forms responsibility for his or her actions at the local level (within the city, region, or state) as well as on the planetary scale, as the modern humankind faces global ecological problems, which cannot be solved by a separate society. Thus, humankind has already developed appropriate protocols and activity programs, but that is not enough for today. Therefore, the authors of this research claim that only carefully considered approaches to education and upbringing are the ways that enable real solving of the global problems instead of declarative attitude to them. The authors attempted to substantiate the need to organize the environmental education and upbringing at all levels of an individual's socialization in the context of modern globalization processes. The research results can serve as guide marks for improving ecological education, both at the state programs level and at the supranational level.

Keywords: ecology, ecologism, ecological education, upbringing, globalism, global problems of our time

Екологізм як сучасна стратегія виживання людства (регіональний і глобальний вимір)

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Анотація. Висвітленні перспективи екологізму на сучасному етапі розгортання глобалізаційних процесів та їх вплив на формування екологічної свідомості як окремо взятого індивіда, так і людства загалом. У процесі дослідження застосовано різноманітні методи та підходи, а саме структурно-функціональний, аналіз, синтез, порівняльний метод, системний, а також синергетичний підхід. Автори довели, що організація екологічної освіти, а саме визнання в її структурі екологізму (локального і глобального вимірів його існування і розвитку) є важливою на всіх рівнях соціалізації людини, особливо в процесах інкультурації. Індивід одночасно формує відповідальність за свої дії на місцевому рівні (в межах міста, регіону, чи держави), а також на планетарному рівні, оскільки сучасне людство стикається з глобальними екологічними проблемами, які не можуть бути вирішеними окремо взятим суспільством. Людство вже розробило цілу низку відповідних протоколів, програм діяльності, але цього, на сьогодні, недостатньо. Тому автори даного дослідження стверджують, що лише ретельно продумані підходи до навчання та виховання – це ті дієві способи, які дозволять реально вирішувати глобальні проблеми, замість декларативного ставлення до них. Обґрунтовано необхідність організації екологічної освіти та виховання на всіх рівнях соціалізації індивіда в контексті сучасних глобальних перетворень. Результати дослідження можуть слугувати відповідними орієнтирами для покращення екологічної освіти як на державному, так і наднаціональному рівнях.

Ключові слова: екологія, екологізм, екологічна освіта, виховання, глобалізм, глобальні проблеми сучасності

Introduction. The world has become a whole one since the time of great geographical discoveries. However, today it is characterized by the intensive deployment of globalization processes. This period

marked the fact that humanity by its activities has influenced the environment more and more and it has far-reaching devastating consequences. This is what poses a direct threat to the human survival today.

Analysis of recent research. Modern scientific and non-fiction literature has a rather powerful basis for research of the state of global problems. These are different programs of local, state or regional level regulations which provide the rational use of natural resources, opportunities for their restoration, or on the contrary, finding alternatives. That also involves developing different long-term and short-term programs to conserve and restore the natural environment and resources as well as their rational production and use. For example, they are the annual analytical reports of the UNO and other organizations within its membership (FAO, ECE), reports and proposals from non-governmental organizations and associations, such as the Club of Rome, which serves as an advisory body.

Conservation and development of the biosphere, namely the issue of regulation and development of world forest resource potential are considered in many scientific works of native and foreign authors. Among them, it is necessary to pay attention to the works of such scientists as D. Alderman, D. Bauer, E. Pepke, T. Pakhkasalo, M. Foneska and many others.

A number of studies are focused on examining the Earth's population growth rate and the effects of the demographic "outbreaks" in some globe regions. In this aspect, the researches of L. Anderson, J. Blake, K. Davis, S. Enke, J. Caldwell, A. Landry, L. Levi (2017) and others should be mentioned.

The current approach to the study of climate change connected with the ice sheets melting in Antarctica is represented by the work of a group of scientists who use the latest technological computer facilities to predict the effects of global warming. In particular, they are such scientists as B. Bronseler, M. Winton, S. Griffis, V. Yurlin, B. Rogers, O. Serhienko, J. Ronald (2018) and others.

Lara Buchak (the University of California, 2019) uses the method of risk analysis and environmental policy-making while studying the issue of climate change. Oxford University researcher Hilary Greaves (2019) makes a comparative analysis of climate changes, which are directly proportional to the Earth's population growth rates.

The current state of ecological education requires rethinking of the "human-nature" attitude on the principles of eco-biocentrism. These questions are clarified in the works of V. Boreiko (2000), D. Grodzynskyi (2002), T. Gardashuk (2015), V. Krysachenko (2002), M. Kislov (2018), and others.

The aim of the article is to reveal the essence and prospects of environmental education at the current stage of development of the world community, which is associated with awareness of the paradigm shift from local vision and solving environmental problems to global, large-scale existence of them, possible and necessary ways to overcome them.

The methodology of this research involves a complex analysis of the relationship "human – nature" at the beginning of the XXI century. It is an attempt to actualize this relationship through the processes of upbringing and teaching global eco-consciousness instead of seeing its abstract version.

Presenting main material. It was at the end of the XXth century when the unprecedented load was put on the nature. This is primarily due to the increase in the population of the Earth by more than 4 times. The world population grew from 2.5 billion in 1950 to 6.1 billion in 2000. It is estimated that by 2050 the Earth's population will increase to 9.7 billion (Rusanova, 2007). Currently, the world's population is 7.7 billion people.

The demographic situation in the world has two main peaks. The first is growth, and the second is ag-

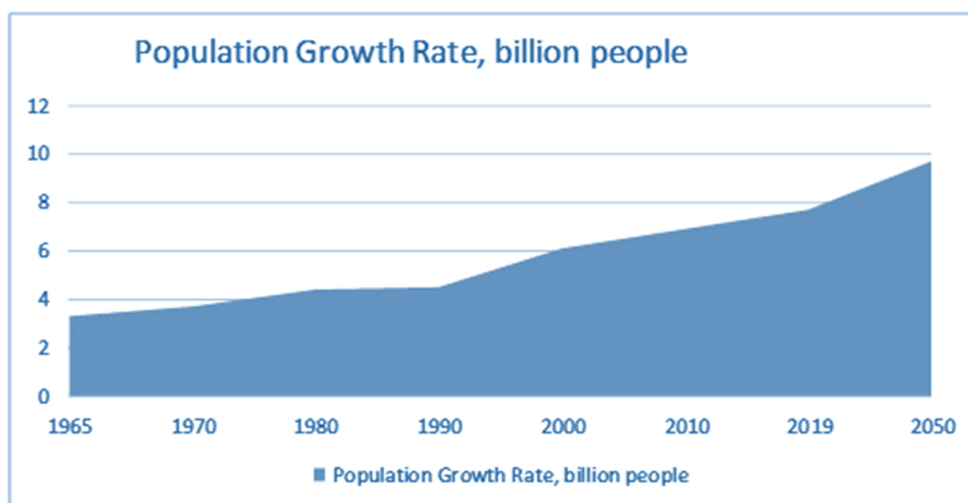


Fig. 1. Population Growth Rate, billion people

ing. According to statistics, by the XXth century the population of the Earth was growing slowly. Its rapid growth in the XXth century is due to the fact that during this period mankind experienced two world wars.

According to forecasts of one of the UNO programs, namely UNDP, the following changes are expected by the middle of the XXI century. First, by 2022, India will become the world leader in terms of population, ahead of China. Second, the population of Nigeria will increase by about 400 million, which will exceed the population of countries such as Pakistan and Brazil. Third, the United States will become the third most populous country in the world. Fourth, Russia's population will shrink by 10%, and that result will remove the country from the list of the world's ten largest countries by population. Fifth, in 18 countries, mainly in Eastern Europe, the population will also decline; while in North Africa, it will double. For example, the population of Africa will increase by about 2.4% and Europe - by 0.04%. (World Population Prospects: The 2017, 2020).

China	1.38 billion, or 20% of the Earth's population
India	1.28 billion, or 17% of the Earth's population
The USA	326 million
Indonesia	260 million
Brazil	207 million
Pakistan	205 million
Nigeria	191 million
Bangladesh	157 million
Russia	142 million
Japan	126 million

Such demographic changes cause a number of challenges. In particular, increasing the burden on the world's ecosystems and as the consequence, there is rapid development of human natural resources (energy, water, food, etc.).

The other aspect of the demographic problem is the global aging, particularly in the Western and Eastern Europe. According to the statistics, in the middle of the XXth century 8% of the Earth's population were 60+ people. Today there are 12 % of such ones, or 900 million people. According to forecasts, by 2025 there will be about 1.2 billion aged people, or 22%. (World Population Prospects: The 2017 Revision).

Thus, the circumstances listed above have the corresponding consequences. In particular - the "shortage" of labor, slowdown in economic development, pension problem, health care system problem and others.

Another equally important issue today is the

problem of global migration. On the one hand, it can be considered as overcoming the aging population problem; however, on the other hand, it changes the ethnic, national, religious, cultural picture of the world, creating all sorts of conflicts. For example, the growing number of Latin America migrants to the United States and refugees from Syria to the countries of Western Europe, like France, Germany.

Therefore, a conscious attitude to these demographic data indicates that in the nearest future humanity will face new, extremely important environmental, economic and social problems.

That is why it is necessary to provide the purposeful population policy, when states are the main subjects, which have a significant impact on the population reproduction in the right direction for a particular society. However, it should be taken into consideration that most demographic issues, such as marriage, fertility, divorce, migration, etc., are an individual's personal matter, so demographic processes cannot be managed through different compulsion or prohibition, although such attempts were made and are still being made in humankind's history.

In our opinion, regulation of the demographic processes is possible only through organization of the proper education, in particular, through distribution and implementation of a family planning program, which includes two main levels. The first one is the macro level, which involves the activities of both governmental and non-governmental organizations and includes creating the programs of responsible parenting that provide for upbringing a desirable number of children in the family. The second level is the micro one that involves making individual decisions about the number of children in the family. This right is granted by a number of international agreements and is regarded as one of the fundamental human rights.

The burden on nature is also connected with the world production increase. In the modern world, every second employee's work is related to the environment (work in the field of forestry, fishery, etc.). According to the USA researcher Matthew Hansen and his colleagues, who used remote methods to study the Earth's surface, namely installing a MODIS spectroradiometer onboard US satellites, in 2000 the total area of forests on all the continents was 32.688.000 square kilometers (3.268 million hectares). However, by 2005 it had significantly reduced by 1.011.000 square km (1.011 million hectares). Thus, the average annual forest loss was 0.6% (Hansen Matthew P., 2010). However, it should be noted that forests are unevenly distributed on continents. Therefore, in 64 countries with 2 billion inhabitants there is 0.1 hectare of forests per capita. The five most forest-rich

countries (Russia, Brazil, Canada, USA and China) account for 53% of the total forest area; Russia has 20% of the world's total forest area, while ten countries have no forests at all, and in other 54 countries forests cover less than 10% of their total area.

Besides, the constant growth of the Earth's population leads to excessive consumption of forest resources and decrease in the forest area. The annual volume of timber harvests in the world exceeds the annual growth by 20 – 24%. The wood of high quality is produced only from 20% of the deforestation area, while 80% of the territory is used for producing low-quality wood. (Genyk Ya. V., 2011). Rapid deforestation is taking place, in particular, in South America and Africa, where the area of forests decreased by 4 million and 3.4 million hectares respectively, during 2000–2010.

The most important issue that arises in the process of environmental impact is the sustainability and survival of the biosphere, because it depends on the survival of other living things on the Earth.

Global warming is also one of the main threats nowadays. According to the statistics, the twentieth century was the warmest in the history of the Earth. As a result, there is climate change, average temperature increase, etc.

The American researcher Hilary Greaves points out that the amount of emissions into the atmosphere is directly related to the amount of the Earth's population. That is, interrelation between these problems requires their complex solution. The researcher notes that “climate change is primarily related to the emissions of various greenhouse gases, which are constantly increasing. For example, in 1970, the global amount of anthropogenic emissions was 27 billion tons of CO₂ a year; by 2010, this figure came to 49 billion tons a year and it is expected to rise. The result of these emissions is global warming from 1.5 to 4° C” (Greaves H., 2019).

Examining the probability of climate change risks, American researcher Lara Buchak argues that modern humanity must pursue a prudent climate policy and pay sufficient attention to any consequences from the most threatening to the most optimistic, and therefore direct their activities, always remembering the responsibility to future generations, in what conditions they will live and develop. “We must organize our activities with restraint, appropriately assess all possible risks, from climate catastrophe to relatively small risks so that it does not cost the next generation too much.” (Buchak L. 2019).

The researcher focuses on two main aspects in assessing climate change. The first is the organization of planetary climate policy. The second is the individ-

ual policy of the country. These two aspects are inter-related and they accordingly form the responsibility of each individual for the future fate and development not only of their region, state, but also the world as a whole. Indeed, today we go beyond the local development and the local responsibility, because we form two types of identity – local and global, which do not contradict each other and are not opposite, this reveals their unity. Therefore, L. Buchak quite rightly notes “the interests of future generations should be just significant and valuable for modern people” (Buchak L. 2019). The formation of this type of responsibility should include all possible ways from philosophy, ethics to environmental education programs, starting with preschool, school education and educational activities of public organizations, associations to involve more people in solving environmental problems of present. Moreover, the development of information and communication technologies provides such opportunities for humanity to conduct various flash mobs, actions, etc. The organization of environmental policy, as noted by L. Buchak, “should be as fine-grained as possible, and should include both restrictions and ways to adapt to possible changes” (Buchak L. 2019). Thus, this indicates that such an environmental policy has two directions. The first is a policy that aims to increase or decrease the probability of drastic climate change. The so-called “precautionary policy”, which is able to anticipate an appropriate climate change and offer to reduce carbon emissions. Moreover, the second is the policy of allowing any level of carbon emissions. That is, the most industrialized countries in the world, in particular the United States, Japan do not reduce carbon emissions, but have the opportunity to buy interest from other countries. One of the steps to address these issues was the adoption of the Kyoto Protocol in 1997 under the aegis of the United Nations, which came into force in 2005. The protocol obliges all industrialized countries to review their environmental policies and reduce emissions. It should be noted that in 1997 the United States did not sign this agreement, however, did it only after powerful hurricanes, including Katrina, had passed over the United States.

The Kyoto Protocol was replaced in 2015 by the Paris Climate Agreement, which was supported by 195 countries and ratified by 175 countries under the UNO Convention. The new agreement contains two strategic goals – the first one is regulation of carbon dioxide emissions and the second is prevention of increase in the global average temperature by more than 2 degrees.

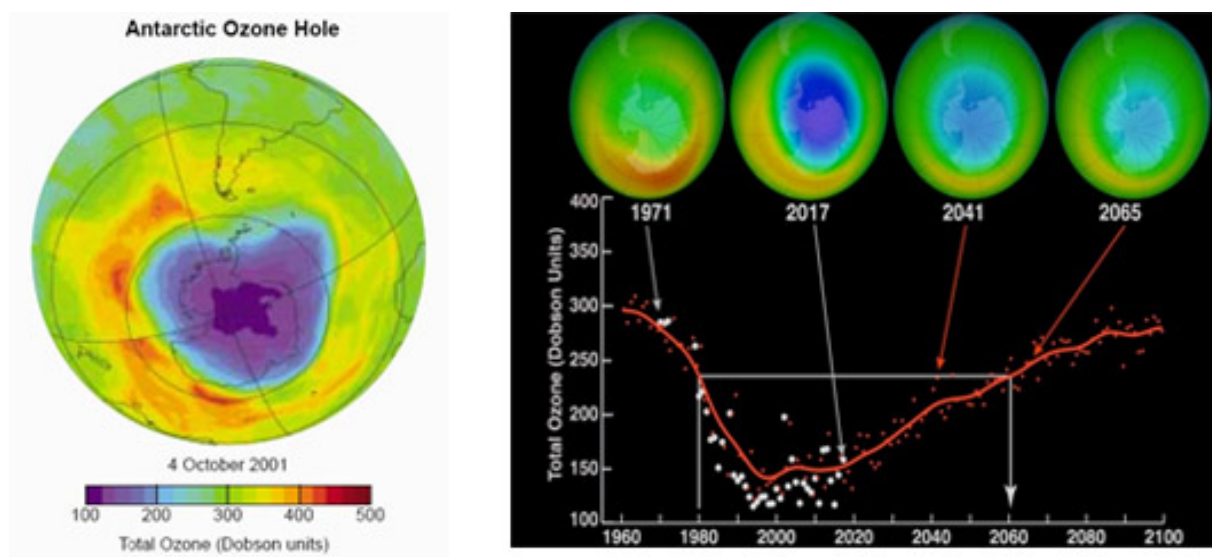
Unlike the Kyoto Protocol, the Paris Climate Agreement stipulates that all the states undertake ob-

ligations to reduce harmful emissions into the atmosphere, regardless of their level of economic development. Every 5 years, the participating countries will report on the contributions made to the implementation of strategic goals and form new goals. The first report of the country should be published in 2023.

Scientists have been actively monitoring the rate of harmful emissions into the atmosphere. These emissions affect the state of the ozone hole over Antarctica. (The Antarctic Ozone Hole Will Recover)

cal elements that deplete the ozone layer. The effect of this agreement shows that by 2075 the size of the hole will return to the level of 1980. NASA research and observation at <https://ozonewatch.gsfc.nasa.gov/monthly/SH.html> gives the opportunity to see dynamics of the Antarctic ozone concentration from 1979 to 2018 (National Aeronautics and Space Administration. Goddard Space Flight Center).

As the result of these processes, glaciers melt intensively, this can lead to flooding of ocean areas.

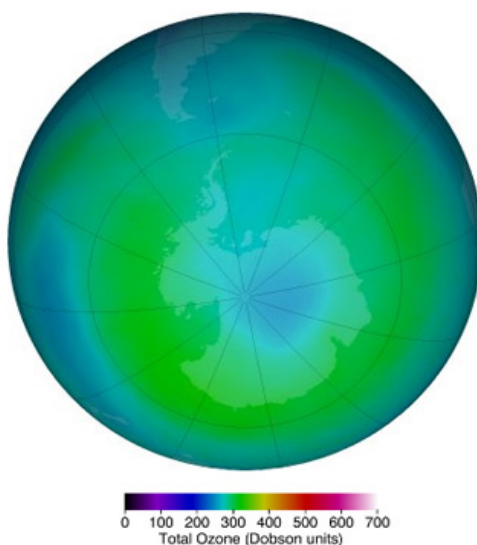


The state of the ozone layer over Antarctic

Fig. 2. The state of the ozone layer over Antarctica

The study of the state of the ozone layer around the Earth was intensively begun in the 70–80's of the XXth century. At the same time, the Montreal Protocol was signed. It was about protecting the ozone layer by banning chlorofluorocarbons and similar chemi-

The sea level is projected to rise by 17 centimeters, which will change every ecosystem on the Earth. However, a team of scientists has modified one of the most modern computer models of the climate, including the ice melting rate. In addition, it turned



The state of the ozone layer (March 2020)

Fig. 3. A snapshot of NASA's ozone layer. The data is obtained from AMPS on Suomi NPP (March 2020).

out that the fresh water released in this way from the ice sheet slows down the release of heat, as if “preserving” the water around Antarctica. “This is the first and new identified relationship between climate and warming in 20 years. Melting glaciers are delaying global warming – it is still happening, but it will be less intense and will give us a head start in 15 years”. (Ben Bronselaer, 2018).

Thus, these studies show that humanity has time to weigh all possible consequences and make constructive decisions.

It is worth mentioning that there are non-governmental organizations, such as the Club of Rome, which is a research association of famous scientists, public figures and politicians, many of whom are Nobel laureates. The research programs of the Club of Rome cover such a range of problems as analysis of strategies for the development of the world civilization; possible options for alternative human development; substantiation of the futility of the arms race; uniting the efforts of all mankind to preserve the environment and achieve social justice on a global scale. Among the representatives of the Club of Rome it is worth mentioning the names of such researchers as A. Peccei, D. Meadows, M. Mesarovich, E. Pestel, E. Laszlo, S. Botkin and many others.

At the present stage of development, humanity has appropriate programs aimed at solving these problems. This should be the program of all humankind, because the solution of these problems depends on the survival of the entire world community. These programs must be implemented in educational processes at all levels and in all countries of the world. For example, the World Wildlife Fund, Greenpeace, the World Commission on Environment and Development; World Health Organization; The World Bank; Friends of the Earth; UN Commission on Sustainable Development; International Maritime Organization; International Atomic Energy Agency; UN Development Program; European Environment Fund; TACIS program, etc., influencing the formation of the global and national policy.

These problems are the consequences of human consumption in the natural environment, mainly in the twentieth century. Intensive development of industry, the final “taming” of the nature, the struggle for possession of natural resources and disregard for the possibility of restoring the biosphere have exacerbated the conflict between humanity and nature. The consequences of this conflict are catastrophic. Not only the survival of humankind, but also life on the planet Earth in general depends on the solution of this conflict. The natural environment has been a field of people’s struggle for possession of territory and

resources. Thus, the solution to this conflict lies not only in limiting and regulating the impact of technology, but, above all, in the formation of environmental responsibility and a new ethical paradigm of world-view, the realization of the necessary moral values of everyone on the Earth. The current state of the environment requires a new understanding and control of the behavior of both the individual and humanity as a whole. Revision of traditional theories, and the introduction of a new scale of responsibility in the system “nature-human-society”, not only by the state in the form of laws and provisions, but, above all, through education, training, active involvement of children in various programs that allow establishing a dialogue “human - nature”. According to the first president of the Club of Rome A. Peccei, global problems are inside people’s nature, not outside of it. Thus, overcoming these problems including environmental ones is, firstly, the requirement of change in a person himself (Peccei. 1985). Therefore, human activity should be aimed at ensuring the survival of all living things on the Earth in their diversity. Globalization processes, in this case, can bring constructive consequences in resolving this conflict, because humanity is on the path to self-awareness as a global community.

The current stage of development of the world community has created new conditions for the socialization of the individual, a new organization of upbringing and education. The development of the individual, his/her involvement in various social processes at both regional and global levels are now due to high dynamism, and methodological approaches and attitudes to education and training do not have time to establish within these processes. The reason for this is access to and use of various gadgets, which greatly expands the field of communication of an individual.

Indeed, we are both witnesses and participants in various processes of organizing people’s lives, which organizes us into an effective civil society that is able to change everything around us. Thus, the emergence of well-known environmental movements is due to their passage from spontaneity, informal gatherings to worldwide recognition, popularity, the available million-dollar support, as well as the real impact on political decisions around the world. Ukraine takes an active part in environmental activities, one of the types of which is environmental movements, the purpose of which is to optimize the development of ecosystems, taking into account both local characteristics and global interests. A huge number of public organizations and movements operate in Ukraine, including the *All-Ukrainian Ecological League*, *Green World*, *EcoRight*, the *Ukrainian Nature Conservation*

Society, Voice of Nature, All-Ukrainian Committee for Support the United Nations Environment Program (UkrUNEPCom) and many others. They carry out significant work on the implementation of ideas and principles of environmental ethics in modern society and the formation of a new form of environmental consciousness through conferences, congresses, seminars, festivals, environmental actions, etc. The most powerful public organization is the *All-Ukrainian Ecological League*, which includes 22 organizations, which makes a significant contribution to improvement of the environmental situation in the country.

A large number of public initiatives have been already operating in a number of cities in Ukraine, which are independently engaged in the arrangement of parks, park areas, etc. For example, there is the *Group 109* in Lviv. In Odessa, there is a wide range of initiatives, including associations of architects and representatives of various professions who are engaged in the maintaining and optimization of the cultural landscape of the city, creating a system of bike paths, parks and squares. Another group is trying to implement a rather ambitious project, called the *Park of the Future*, which provides a large green area for every resident and guest of the city. The community of Kyiv is also not far behind and presents a large-scale project called *Podolianochka*, which provides for the arrangement of the capital Podil; *Samosad Ecological Park*, modeled after the Princess Gardens in Berlin and New York. In addition, the Square of the Heavenly Hundred is created.

In addition to these organizations and initiatives in Ukraine, there are many non-governmental organizations such as *Lybid Exists*, *Carrot Club*, *Ukraine Without Rubbish*, *Green Incubator*, *Kyiv Cyclists' Association*, *World of Education*, *Rivne Ecoclub*, *Zelenka*, *Ekoltava*, *Toloka Association*, *The Animal City*, *Eco-Centre*, etc.

Ecological awareness of Ukrainians is increasing which is confirmed by the fact that since 2015, in particular, such cities as Kyiv, Odessa, Kharkiv and Kherson joined the Global Climate March, taking place annually on November, 29. It means that the society has reached a new level of ecological development. Nowadays, local problems though they are rather important, especially in the industrial regions of our country, are not the only issues that worry Ukrainians. Ukrainian people are also concerned about global problems and get engaged in their solving.

Therefore, the relevant issue for today is self-organization of people who are not indifferent to further development of the “human-nature-society” system. Anyone’s activity should be organized in

such a unity, because a human is simultaneously in these two systems and his or her actions influence their further development.

Both governmental and non-governmental institutions are important for eco-awareness forming as well as for the education and upbringing processes. The example is the scout organization *Plast* that has its representatives in many world countries, including the USA, the UK, Germany, Ukraine and others. This organization has a clear direction, namely the comprehensive personality development. To implement this idea, they involve such training components as love and respect for nature, self-education, responsibility forming etc. The upbringing program includes the following key elements: competitions (intellectual, creative, sportive) and forming ecological awareness (herewith the scouts get both theoretical knowledge and practical skills as learning process includes arranging camping and excursions. The organization arranges at least one hundred camps a year. Therefore, the current stage of societies’ development has many opportunities to upgrade the educational process. Due to that, a person’s responsibility for themselves and their actions is formed at the earlier age as well as a person is sooner involved in environmental preservation, its restoration etc.

Therefore, an integral part of the educational process is ecological education, which must be directed to acquiring ecological knowledge and skills, environmental thinking and ecological behavior. “The main goal of eco-education is the formation of ecological awareness as a special form of social responsibility that reflects the interaction of these two systems. By its goals and orientations, eco-awareness is aimed at forming a global strategy for preventing environmental catastrophe at both the local and global levels” (Kampov, Kasynets, Maslygan, Medvid, 2018). This approach to ecological education is considered within the development of ecotourism. In our opinion, it is rather relevant to Ukraine with its ecosystems’ diversity, one of which is the Carpathians. The organization of tourism can have several aspects, including education, upbringing, learning traditions of ethnic groups and working with different age groups from preschoolers to the elderly.

The modern world’s political, economic and ecological interdependence should be presented in the ecological education as a significant element, that is, the aim of this educational process branch should be the way from regionalism to globalism, as the locally made decisions can have large-scale consequences, such as the Chornobyl disaster. The current stage of the ecological education should develop a sense of global responsibility and solidarity between different

regions and countries to form a constructive dialogue and interaction at international cooperation level which would guarantee preserving and optimizing the level of the environment development.

To organize this model of the ecological education, governmental institutions, such as the Ministry of Education and Science, the Ministry of Youth, Tourism and Sports, the Ministry of Ecology and Natural Resources and national nature parks should interact with non-governmental entities in the form of ecological movements, public organizations and tourist associations, which should be open and ready for all sorts of excursions, introductory lectures and seminars to familiarize their listeners with the peculiarities of their region's ecosystems. They also should create advertising products, posters, network commercials, film and cartoon industry, photo-reproductions, museums as well as arrange mountain paths and develop ecotourism etc. These steps create the wide range of informational activity on ecosystems of different regions not only in a particular country but also in the world as a whole, presenting different objects and their peculiarities etc. For example, Ukraine has had such initiatives for a long time. They are the *Hutsul Alps*, the *Ukrainian Venice*, *Chernivtsi Prague*, *Transcarpathian Japan*, the *Ukrainian Maldives* and many others. There have been created TV projects like *The World Inside Out*, *7 wonders of Ukraine*. Various tourist organizations have their pages on social networks like Coulair, Globe, etc. There are a lot of national parks, for example, the National Nature Park Synevyr besides its nature protection function informs people about the natural and cultural values of the protected territories, organizes educational activities, etc.

Modern youth consciously and actively engages in forming their future, demonstrating that humankind has already moved to the new paradigm of development of ecological awareness from the local, regional one to the global one. Young people do not need to develop and implement methodological recommendations on development of ecological consciousness into the educational process. It is "something from the past" for them. They are actively involved in all processes thanks to dissemination and consumption of information around the world and about the world. For example, there is National Ecological and Naturalistic Centre of School Students in Ukraine, which holds conferences and international competitions, issues newspapers and magazines and implement different projects (<https://nenc.gov.ua>).

Thus, in March 2019, climate protection actions took place in almost 100 countries of the world. About 1300 demonstrations were held. In particular, there are constant actions of the "Fridays for Future" move-

ment in London and Hamburg. The young generation does not wait for reaching the appropriate age to influence environmental policy-making. They actively work and support such slogans as "Planet B does not exist", "March now – Flood then", "You can overcome the school skips but not the climate change", etc. For example, world-known Swedish student Greta Thunberg aged 16 is an activist against climate change. For several months, she has been picketing on climate protection instead of school on Fridays. That is why one of the American editions has included the student in the list of the most influential teens of 2018.

The participants of the ecological movement publicize their actions on social networks, such as Facebook, Instagram and Twitter, as well as on various Internet platforms. The movement has its own channel on Youtube.

Thus, modern information and communication technologies provide many opportunities for self-organization of various environmental and climatic movements. First, holding many flash mobs, challenges, actions – from the coordination of the venue, to fundraising and more. That is, the current stage of formation of ecological consciousness, education is characterized by the fact that starting from individual actions it grows into global ecological, climatic movements. For example, there are about 155 groups only in Germany. Mass culture is also used with its powerful propaganda functions, namely film-industry (for example, such films as *Tsunami*, *Human Child*, *The Day after Tomorrow*, *The Postman* and others) and musical industry (the national group *Antibodies* filmed some video-clips for the songs *Catch the Moment* and *Hello* which reflect "human-nature" relationship that has global dimension of existence instead of local one).

Conclusions. The development of modern humanity takes place in the continuum of two extremes' existence. On the one hand, large-scale global threats, namely climate change, demographic problems, harmful emissions into the atmosphere (including carbon), which are associated with increasing production rates. On the other hand, there are new ways and means to solve these problems, primarily due to humankind's awareness of being a single entity, global community that is equally responsible for everything happening in their common home named the Earth. The new ways include involving more and more conscious people through different organizations, actions and movements. Only together humankind can solve the problems it faces.

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