

Impact of globalization on the world environment

O. Vyshnevskaya^{1*}, O. Litvak², I. Melnyk¹, T. Oliinyk¹, S. Litvak²

¹ Mykolayiv National Agrarian University, Mykolayiv, Ukraine

² National University of Shipbuilding named after Admiral Makarov, Mykolayiv, Ukraine

Corresponding Author E-mail: olganykk@gmail.com

Received: 23.12.2020. Accepted: 30.01.2021

Our research generalized the essence of globalization, its impact on the world economy and society. The authors argue that each subject of the global space should have specific initial prerequisites and opportunities for adaptation to global changes, ensuring stable performance in the world scene. Negative global trends, as well as their impact on the environment, are determined. The study proves the expediency of using the adaptive approach in preserving various ecological systems of the world, environmental quality in parallel to leveling environmental risks and preserving natural and biological diversity in different regions of the world. The study outlines critical priorities in implementing the adaptive approach to minimize ecological threats because of their complexity and scale. The adaptive approach's essence is to adapt to the external environment, given the existing internal threats.

The adaptive approach is more effective, as it does not impose tight restrictions and implies each state's ability to independently choose directions and priorities for further development, with due regard to both resource capabilities and national interests. The paper proves that implementation of the adaptive approach results in the effectiveness of measures aimed at serving the interests of the state and society, keeping in mind the depth and extent of problems, peculiarities, and pace of socio-economic development of any state as well as social consciousness concerning the existing ecological threats. The authors determined that crucial areas of adaptation for Ukraine include developing ecological networks, increased use of alternative energy sources, improvement of domestic waste management combined with environmental education and consciousness to each element of the environment. Adaptation efficiency critically depends on responsibility for the adoption, implementation, and effectiveness of the identified critical approaches at all government levels. Responsibility is a significant prerequisite and the basis for implementing the previously mentioned adaptive approach concerning the efficiency of environmental preservation measures, including commitments under the international agreement on climate action – the Paris Agreement.

Keywords: Globalization; Comprehensiveness; Geospace; Adaptation; Threat; Risk; Constraints; National interests; National priorities; Ecosystem

Introduction

Trends in the development of the global space show the growing role of globalization processes, which are near interrelated with all systems and significantly impact each of these systems and their totality. Globalization is a process that links the world economic system with its natural and biological environment; it is a process of reproductive transformation of national economies and their economic structures, capital, goods, and labor, in which the world economy is viewed not only as a set of financial, regulatory, informational, natural systems but as holistic geospace. The space of globalization binds local problems at the national or regional levels to global dilemmas that require a systemic solution, taking into account political, ideological, socio-economic, natural-biological peculiarities, scales, and development of negative processes. Keeping in mind that all systems in the geospace are interconnected and interdependent, which increases risks for the world society, one needs to implement appropriate decisions at all management levels (from global to local).

In the globalized environment, different regions of the world, states, national economies, society, and individual macro-entities cannot be regarded apart from the global space, keeping in mind the inclusiveness of this process and its growing influence. Each global space subject should have specific initial prerequisites and opportunities for adaptation to global changes, ensuring stable performance in the world scene, considering this concept's essence.

Global trends indicate that the relevance of adaptation to globalization changes is determined by the fact that all processes (from socio-economic to natural-biological) occur and transform through a holistic perception of the world, its complete, universal and inclusive global influence. Present tendencies in the world scene's development indicate an increased negative impact of globalization on various processes and phenomena. What becomes particularly important is that strengthening negative trends in the environment is confirmed by the ever-growing scale of natural hazards, increased degradation of productive lands, and imbalance in various ecosystems of the world. These processes form specific threats to the world community, which requires further research on the adaptation to globalization processes in the context of environmental protection.

The essence and specific features of the world's comprehensiveness, globalization, its manifestations, and interrelations with ecosystems were studied by several researchers. In particular, one should mention works by V.G. Andriyчук, O.F. Balatskiy, O. Belarus [12], I.K. Bistryakov, O.A. Volodymyrov [2], V.I. Vlasov [6], V.G. Voronkova, L.O. Zelenov [2], E.G. Kochetov [5], I.D. Primaka, S.M. Rogach, V.V. Rossokha, P.T. Sabluk, V.K. Savchuk, E.I. Stepanov [2], A.V. Tabakov, A.M. Tretyak, M.A. Khvesik, Y.V. Khlobystov. Also, globalization processes were investigated by D. Held, P. Gerst [8], A. Giddens, Nord D. [7], J. Peitser, R.

Robertson [11], D. Acemoglu, James A. Robinson [9], R. Scase [16], G. Soros, J. Stiglitz, K. Schwab [18] (World Economic Forum), G. Thompson [8], A. Toffler and C. Wheelan [13]. Historical principles of globalization and its manifestations were investigated by Huntington S., Berger L., Sadlak J., Dicken P., Ietto-Gillies Gr. [17], and Nester W. The analysis of research developments made it possible to determine that consistent studies of globalization processes and phenomena started in the 1990s. The most significant factor in this respect is globalization, its impact on research activities, and socio-economic and political processes, specific features of its manifestation in society, in various sectors of the world economy between 2000 and 2010. Separately, one should consider the study of anti-globalization manifestations, describing its impact on the environment. Since 2010, most research works have been devoted to individual manifestations of globalization.

That is why further research is determined by the growth of global negative trends, which induce the need to implement systemic measures and prevent environmental disasters. A research methodology is based on an integrated approach to the adaptation of states and regions of the world to changes in the global environment, taking into account the scale and spread of environmental threats. The need to develop priority areas for adaptation to changes in the globalized environment and approaches to the development of states and national economies is confirmed by the aggravation of the environmental situation in most regions of the world. Globalization trends have a comprehensive impact; therefore, there is a need for an adaptive approach to preserving the world's ecological systems.

It is clear that with several positive aspects, globalization processes are accompanied by some negative factors (from the heavy-handed approach in dealing with international problems up to intense trans-nationalization of the world economy and its impact on the environment) [3]. Eight key sectors of environmental cooperation were identified, considering the existing environmental threats at the global level. These include environmental management and the integration of environmental policy into other sectoral policies; air quality; waste and resource management; water quality and water management, including the marine environment; environmental preservation; industrial pollution and human-made threats; climate change and ozone layer protection; genetically modified organisms [4].

Minimization of the previously mentioned threats should be systematic, and solutions should be implemented globally, taking into account the magnitude of every existing threat. Most researchers confirm the aggravation of the environmental situation under the influence of globalization processes. World environmental problems exacerbate the internal need to introduce effective environmental measures to ensure environmental and social safety.

Different trends over the past 30 years show that the above issue's relevance is determined by air and soil pollution and the pollution of water resources, which remain the primary source of life for every living creature on the planet. The shortage of drinking water and its quality combined with the limited access to freshwater resources considerably increase the need to implement system measures both in individual states and at the global level. Current ecological problems of humanity require integrated action because of the global strategy for global environmental preservation.

International organizations, including the United Nations, have already developed and implemented measures to prevent climate change, loss of biodiversity and understanding of its spatial change, protection of human health and quality of life, effective management of natural resources, and waste management. The financial mechanism for implementing these measures can be launched through the Global Environment Facility, which implements its activities through environmental grant projects. Given various environmental problems of any individual state, region, or territory of the world, there is a need for understanding, generalization of approaches, financing, and implementing measures aimed at global environmental preservation.

This research's originality is determined by identifying the adaptive approach's possibilities to minimize environmental threats in the global environment, public safety provision because of environmental protection through research and generalization of potential (including environmental) threats, their scale, and depth a separate territory.

The study determined that globalization processes had a significant impact on the environment in all world regions. The ecological burden on the world's ecosystems is increasing, and it has already become a threat in some regions of the world. That is why there is a need to develop effective social development programs and individual spheres of activity based on ecologization. The original approach is based on the need to carry out a comprehensive study to determine the environmental consequences of social development and specific areas of activity to introduce practical approaches to reducing environmental threats in the globalized environment.

Separately, one should consider issues related to the growing demand of the world economy for natural resources and its development in pursuit of economic efficiency, leading to a systemic conflict with the principle of rational nature use. The orientation of scientific research towards obtaining effective management of market actors leads to an increase in contradictions between financial results and the systematic increase in global environmental threats' negative impact.

That is why ensuring conditions for the preservation and development of various regions of the world and individual states in the global environment is relevant and requires further scientific substantiation and the development of priorities for the world economic systems to adapt to global changes.

Addressing negative globalization trends concerning the environment and environmental preservation to provide security for the world society from a long-term perspective is very relevant today.

The purpose of this research is to substantiate the essence and peculiarities of globalization processes, global trends in the development of the world economy, determining their impact on the development of a global society and environment. Besides, this study aims at justifying the adaptive approach in preserving ecological systems of the world, environmental preservation aimed at reducing environmental risks, and preserving natural and biological peculiarities of ecosystems in different regions of the world.

The main objective of this research is to identify priorities of environmental protection in a globalized environment and analyze the expediency to introduce the adaptive approach to minimize environmental threats and preserve both natural and biological features of ecosystems in various regions of the world.

Research results can be widely used in the practical application of the revealed dependencies related to the formation of environmental protection strategies, programs designed to implement environmental protection measures concerning the identified regional peculiarities, scale, and the growing trends of environmental threats.

Current studies make a significant contribution to developing effective programs aimed at social progress and individual spheres of activity upon systemic globalization principles. At the same time, most research works are based on a specific criterion. Given the growing negative impact on the world's ecosystems, there is a need to provide a comprehensive study of both socio-economic and environmental impacts, which has led to further research and generalization of approaches aimed at minimizing environmental threats globally environment.

Methods

To study and generalize the globalization impact on the world economy, society, and various world systems, the authors used a wide range of research methods. In particular, the abstract-logical method was used to substantiate the essence and peculiarities of globalization processes and phenomena; systemic analysis was used to assess the practical impact of globalization on different world systems, including the environmental ones. The bibliographic method was used to evaluate different views and generalizations; analysis and synthesis were used to identify the relationship between globalization processes, phenomena, and their impact on the environment and define causal relationships and adaptation directions.

This research's relevance is determined by the fact that globalization processes require the prevention of negative trends and their reduction to guarantee public safety. Analysis and generalization of globalization processes should be complemented by a detailed assessment of the relevant criteria (political, socio-economic, and environmental).

It was found that the Globalization Index defines the degree of globalization by splitting this process into separate components. This index reflects the political, social, economic, and technological integration of any state into the world community. In this respect, seventeen criteria are considered (international trade and investment, participation in international organizations and programs, including UN missions, development of international tourism, a list of services through which communications are carried out, search for information, money transfers) [1]. Using this approach does not reveal clear boundaries of the global integration of different countries. A significant dynamics characterize the interdependence of political, socio-economic and environmental criteria in time and space, which has become particularly relevant in the recent decade. Most regions of the world increasingly feel the impact of global environmental threats. In particular, L.O. Zelenov notes that globalism is the highest and the last stage in imperialism [2]. The author considers the process of globalization in the world as "Americanization" and defines the United States as the leading globalist of the world. Referring to the most globalized countries of the world, L.O. Zelenov mentions Singapore, the Netherlands, Sweden, Switzerland, Finland, Ireland, Austria, the United Kingdom, Norway, Canada, Denmark, the United States, Italy, Germany, Portugal, France, Hungary, Spain, Israel, and Malaysia. Different states of the world cannot take the lead in global integration processes for a significant period due to the globalized world's variability and the high probability of global threats that are not clearly defined by political or socio-economic factors (terrorism, environmental threats, man-caused threats).

Consequently, globalization is a process that embodies the transformation of the spatial organization of the world and its regions, social relations, and interactions, measured by the level of duration, intensity, speed, and influence on various systems and phenomena. Globalization processes encourage the activity, interaction, and manifestations of political, socio-economic, and environmental processes. Given significant dependence on all world systems, globalization processes require relevant analysis, synthesis, systematization, integration, adaptation to other processes and phenomena that change in time and space. Adaptation of the world's ecological systems and its separate regions is particularly relevant, keeping in mind the permanent strengthening of negative globalization trends, which predetermined this research.

Results

From an economic perspective, globalization represents the transition of individual economies to an international economy. The economy of every country in the world is becoming more transnational. The process of globalization has a significant number of benefits that visibly change the internal and external economic environment, extending the scope of global companies, which actively develop a global business. Transnational companies open branch offices in many countries globally; they establish large economic systems using modern technologies and significant financial flows. Transnational companies control 30.0 - 50.0% of the world industrial production, more than half of international trade, most world patents and licenses for new equipment and technology [5].

In this context, any country's economic functioning in the world increasingly depends on external factors, including export-import operations and capital inflows and outflows. The qualitative difference of globalization implies a devaluation of regulatory functions at the state level since the protection of national interests, including dealing with negative foreign economic trends, is considerably complicated [6].

Consequently, globalization's positive impact is significant from an economic perspective; international business development trends confirm this. Nevertheless, globalization processes cannot be considered only in the economic context since globalization processes and phenomena are multifaceted and affect all spheres of activity, regions, and states of the world. In substantiating approaches aimed at minimizing the negative impact of globalization factors, one should consider the fact that globalization cannot be controlled through local state regulation, as this process is global by nature (Table 1).

Table 1. Globalization processes and phenomena in the global space.

No	Concept	Implementation in the global space
1	Comprehensiveness	The process of holistic perception of the world as a combination of features and various elements (economic, social, political, ideological, environmental)
2	Global	The process that covers all spheres of activity, objects, and subjects at the world level in conjunction with the system of global tools; the action of this process cannot be neutralized
3	Globalistics	The process that implies learning about the global sphere of knowledge dealing with spheres of the global world, patterns, and technology of their operation
4	Globalization	The process that implies consideration of the world economic system in its interrelationship with the natural and biological environment; the process of reproductive transformation of national economies and their structural elements (capital, goods, labor force), which brings local problems at the national or regional levels into a worldwide set of interdependent and complementary threats.
5	Geo-approach	The process of achieving strategic development goals concerning the combination of different influence factors (political, socio-economic, environmental) in the global world.

Source: summarized by the authors upon analysis of sources [2, 5, 6, 7, 8, 9, 10, 11, 12]

Keeping in mind that the global economy aims at expansion, as evidenced by the growing volumes of resources involved, including transnational companies, and all elements of the globalized environment are interdependent and interactive. The existing trends led to an increasingly negative impact on the world's ecosystems. Global processes caused increasing environmental risks and hazards in almost all world regions: climate change, increase in the number of natural disasters, flooding in different territories, desertification, and pollution in the world's seas and oceans. All this confirms the complexity and scale of today's environmental problems, prompting the need for geo-approaches to adapt to external changes and internal threats.

The adaptive approach's essence is to adapt to the external environment, given the existing internal threats. That is why the adaptive approach is more effective since it does not stipulate strict restrictions; it is focused on each country's ability to independently choose directions and priorities for further development about relevant resource opportunities and national interests. Implementation of the adaptive approach mostly results in the practical measures taken to advance social and state interests concerning the depth and scope of problems, peculiarities and pace of socio-economic development of any state, and public awareness of the existing environmental threats.

A clear distinction between levels and centers of responsibility in implementing local and national environmental measures is a significant prerequisite for gaining expected results.

It is determined that adverse developments in the world's environment will only increase their impact. Reduced areas of natural ecosystems, increased concentration of greenhouse gases, continuous ozone depletion, reduced proportion of forests (including tropical forests), desertification, degradation of productive lands, sea-level rise, reduced biodiversity, deteriorating quality, and insufficient access to freshwater resources – all these trends evident throughout the previous 30 years will increase in all regions of the world [6].

Consequently, the relationship between the global development of the world and the spread of environmental threats is substantial and strengthens. Environmental threats in the 1980s and the 1990s inevitably lead to ecological disasters and the destruction of ecosystems in the modern world. It is recognized that reducing adverse environmental developments and addressing environmental threats could be effective using an adaptive approach at the state and local levels, considering key environmental cooperation sectors at the global level. This approach includes the development of an ecological network to reduce environmental threats; forms and methods of using alternative sources of energy for public and private needs; raising public culture in dealing with household wastes, which will increase waste management opportunities; creation of secondary products in parallel to the dissemination of environmental knowledge. Also, raising public environmental awareness will increase each individual's responsibility to the environment and its preservation as a basis of life.

Implementation of the adaptive approach to environmental preservation should focus on the complexity and scope of specific environmental threats and dangers, which gives the possibility to avoid the expansion of environmentally hazardous or can become unsuitable for life (Table 2).

Priority measures should be determined at the state and local levels. It was determined that most countries of the world faced those problems not only at the local level. Over the past 20 years, local environmental issues have become regional, state, interstate, and global. Most countries of the world do not consider implementing environmental measures due to some objective and subjective factors. However, addressing local environmental problems has led to the spread of environmental hazards with looming global developments. An international climate agreement (in Paris) was adopted at the 21st Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change.

Table 2. Priorities for the implementation of the adaptive approach in preserving the natural environment in Ukraine.

No	Scope and implementation directions	The essence of the process
1	Strengthening the interaction between states and regions of the world in addressing ecological problems of humanity (at the global level)	Increasing the level and scale of the global fight against threats related to climate change, preventing temperature rise on the planet, reducing greenhouse gas emissions, in particular, highly toxic emissions.
2	Eco-network development (at the state level)	Provides for changes in the structure of the land fund of the country by classifying (based on substantiation of ecological safety and economic expediency) parts of agricultural land as lands that are subject to superior protection along with the development of landscape diversity inherent in them
3	Increased use of alternative types of energy from among other energy resources (at the state level)	Involves the introduction of technologies using renewable energy sources (solar, wind, water, biomass, and the Earth's heat) and secondary energy resources that occur permanently or periodically in the environment (part of solid household waste).
4	Reducing the level of harmful emissions into the atmosphere (at the state level)	Provides for implementing global environmental agreements adopted at the 21st Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (the Paris Agreement, December 12, 2015).
5	Improving the culture of household waste management (at the local level)	Envisages comprehensive introduction of waste sorting (in industries and households), their processing, manufacture of secondary raw materials, and its use in different economy branches, including for energy and public needs.
6	Dissemination of environmental knowledge and raising public awareness on environmental issues (at the local level)	Provides for raising public awareness on consequences related to the destruction of ecosystems, raising awareness on each element of the environment, extending the scope of public environmental organizations and dissemination of environmental knowledge, relevant responsibility for decisions and violation of environmental legislation

Source: summarized by the authors upon analysis of sources [7, 9, 10, 11, 12, 13]

Meeting the Paris Climate Agreement's key goal requires accelerated development of renewable energy sources combined with a significant increase in industries' energy efficiency; this is extremely important for countries with rapid economic development. That

is why 147 countries of the world are ready to reduce greenhouse gas emissions, reducing global emissions of greenhouse gases to 57 billion tons by 2030. Unlike the Kyoto Protocol, countries have no clear commitments in this agreement regarding reducing greenhouse gas emissions. Each country can determine its own goal of reducing greenhouse gas emissions, taking into account national characteristics. Cooperation at the global level will provide local opportunities for environmental preservation.

Consequently, under current international conditions, one needs to consider the rapid adaptation of state systems to changes in the global environment through intense geo-tools, which are comprehensive by nature.

Given the interconnection between global processes and commitments, the issue of environmental protection becomes very relevant. That is why any state's strategic development should be based on clear objectives and directions providing adaptation and neutralization of environmental threats. Considering different views, the authors of this research note that globalization processes caused further spread and increased environmental hazards. Therefore, the world community's main task in the nearest future is to mobilize efforts to preserve the territory of human existence. It was discovered that globalization processes and phenomena had a comprehensive impact on social development and spheres of activity, mainly through socio-economic and political factors.

Since the 1990s, most EU countries started the active implementation of environmental protection measures stemming from humankind's growing negative impact on natural ecosystems. Practical experience shows an effective implementation of such measures in Sweden, Norway, Denmark, and Finland (domestic waste management, water purification, forest conservation, and active use of alternative energy sources). Over the past decade, the world has been actively implementing resource-saving approaches and environmental protection measures to ensure careful use of all types of natural resources. The above activities' high cost led to various environmental organizations' involvement, which, including through grants, actively invest in environmental projects. The relevance of preserving both natural and biological peculiarities of ecosystems in different regions of the world encourages different investors' involvement, whose interests should be guaranteed by the state. Each region of the world has its peculiarities and a specific range of problematic issues that can be solved using the authors' adaptive approach.

This approach ensured the preservation of ecosystems in the world, relevant quality of the environment, reduction of environmental risks, and preservation of biological and landscape diversity in various regions of the world. Implementation of the adaptation approach results mainly in real measures aimed at safeguarding the state and society's interests regarding the depth and scope of different problems. In particular, one should consider specific features and pace of socio-economic development in different states, financial and investment opportunities, social consciousness, interaction with the world community related to environmental threats, and implementation of all commitments. Implementation of the adaptive approach should imply a clear distinction of levels and centers of responsibility in the implementation of local, regional, state, international, and global environmental measures and coherence of action following the identified global priorities to preserve our world.

Discussion

Regarding the expected effects of globalization, M.I. Fleichuk notes that the process of world integration should contribute to the deepening of specialization and the international division of labor to achieve a higher total effect following international trade theories. Besides, it should contribute to savings on a production scale, potentially leading to cost reductions and lower prices, sustainable economic growth, the dissemination of advanced production and management technologies, increase in productivity as a result of rationalization of production at the global level, and the spread of advanced technologies, competition promoting innovations on a global scale; increased access to external financial resources; creation of an individual basis for solving everyday problems of humankind (primarily, the environmental ones) through unified efforts of the world community, consolidation of resources, coordination of actions in various spheres; improving welfare in all countries of the world. However, today, most of our planet's inhabitants do not feel the positive effects of globalization [10], which confirms our research.

V.I. Vlasov notes that most globalization trends refer to the economic sphere of human activity [6]. However, this researcher separately distinguishes negative changes in the environment and the expected trends until 2030. The author notes that the globalization impact can lead to an increase in negative trends as the biosphere is destroyed, which, in turn, will cause shortages of food and water, growth and spread of epidemics, and the emergence of new dangerous diseases, which also confirms our research. Keeping in mind the analyzed sources, the authors revealed that new development could be regarded as crucial positive effects of globalization changes since globalization contributes to disseminating information, knowledge, and new technologies. Moreover, it fosters full use of benefits stemming from the international division of labor, industrial cooperation, and efficient use of resources. At the same time, globalization exacerbates the existing contradictions and creates new dangers and conflicts. The process of globalization manifested itself in the international and military sectors; in recent decades, it has become more dynamic in all spheres of world affairs. E.G. Kochetov argues that the world system's unity presupposes integrity and specific processes of its formation, particularly internationalization, mondialization, and globalization.

Internationalization characterizes individual national economies' interconnection, which prompts individual sectors of the national economy towards active participation in foreign economic activity. Mondialization characterizes the integrity of the global economic system, including national economic systems and multinational companies. Mondialization processes in economic development are reflected in the growing share of TNCs in providing the gross product [5].

Consequently, globalization processes promote the strengthening of economic interdependencies and relationships, creating economic relations, which ensure the development of individual business systems in a combination of social and environmental interests. Quantitative and qualitative characteristics of the global economy are manifested through the heterogeneity of economic activities, a transformation of structural entities accompanies the relevant transition into non-structural ones, which defines the fundamental basis of development upon extra-system integration at different levels of geoeconomic space (production, finance, economy, and environment).

Modern features of geoeconomic space are characterized by active innovation and technological development, which is reflected in the continuous innovation breakthroughs and the formation of the world's technological unity. Therefore, one should provide conditions for adaptation to geoeconomic conditions and obtain appropriate benefits for developing specific economic sectors. The primary condition is to increase the national economy's susceptibility to new trends in the world's economic space [2].

It should be noted that any national economy as an integral part of the world economic system has already activated some aspects of a holistic world system; however, their development is still slow. In this respect, negative factors include unresolved regulation of the domestic market, price formation, product quality, and standardization combined with slow integration and development of organizational and economic structures adapted to external conditions.

Simultaneously, the national economy's production basis should be adapted to the geographic environment, taking into account monetary and financial conditions and trends, conditions and level of readiness for investment and attraction of innovation roles, changes in the labor market. The level of adaptation to the geoeconomic environment can indirectly reflect the share of exports globally, which characterizes the national economy's capabilities and capacity to reproduce [2]. Development depends critically on an effective strategy or behavioral model, reflecting the integrity of the global economic system. The strategy should be based on internal aspects concerning the national economy's sectoral structure and possibilities for adaptation to changes in the external environment. Adaptation to external global changes can be carried out under several conditions.

These include complete economic adaptation concerning key socio-economic parameters, an adaptation based on economic and territorial cooperation, and the established interconnections between global actors; adaptation based on different behavioral models about economic development features, and geoeconomic tendencies environmental threats.

That is why negative globalization impacts should be reduced by active economic development through scientific and technical, innovation-investment, socio-cultural, and environmental aspects. These aspects reflect the interrelated factors of influence on all subjects' macro-environment activities, including their forward-looking development. Also, they will contribute to ensuring social security as well as to preserving ecosystems in the world.

Research results reflect their growing practical significance. Current environmental threats, which lead to the growth of crisis phenomena, including the increasing number and intensity of natural disasters, are confirmed by studies provided by international environmental organizations. Processes in all ecosystems of the world require clear and concerted actions stipulated in the international agreement on climate action - the Paris Agreement. This research's scope is determined by the complexity of predicting environmental impacts in different world regions because of combined globalization factors. Decoupling analysis can only form the general idea of possible future threats given the further expansion of the world economy.

Our study provides an opportunity to identify key priority areas of limiting negative environmental impacts and determine relevant approaches to the interaction of different states and environmental organizations, including Ukraine, to minimize globalization-related threats preserve the environment.

Conclusion

Because of the expansion of globalization, the objective of this research was to substantiate the essence and specific features of globalization processes, global trends in the development of the world economy, to define the impact of globalization on global social development, and to justify the use of the adaptive approach in preserving the environment. We determined environmental protection priorities in a globalized environment and substantiated the introduction of the adaptive approach to minimize environmental threats and preserve ecosystems' natural and biological features in various regions of the world. Key directions in implementing the said approach to environmental preservation should be focused on the complexity and scale of certain types of environmental threats and dangers, which will make it impossible to expand the territories that are environmentally hazardous or can become unsuitable for life. The practical significance of this study is determined by the possibility to provide clear actions oriented on peculiarities and possibilities of each state and each region of the world to adapt to globalization processes and phenomena, to preserve the sphere of human existence and national wealth - the environment. The value of this research is to enable further studies research with due regard to natural processes and phenomena as well as obligations of different states according to the international agreement on climate action - the Paris Agreement, which was ratified in 2015.

The priority of adaptation measures should be determined at different management levels, taking into account the scale and depth of environmental hazards. It was found that most countries of the world faced environmental hazards not only at the local level. However, addressing local problems has already led to the spread of environmental threats, confirmed by relevant findings. Most scholars argue that globalization has already promoted the economic development of leaders in terms of the integral globalization index. However, in most countries of the world, globalization processes caused disturbance of the ecological balance, including the growing use of natural resources by various economic sectors, the uncontrolled use of natural resources, and an increase in a waste generation; this refers both to household and toxic waste.

That is why there is an urgent need to implement the adaptive approach in preserving the environment because of the global environment's growing negative impact and increase in environmental hazards. Strategic directions for the development of states and regions of the world should be based on clear objectives and steps towards the neutralization of environmental threats to preserve the sphere of human existence. Each state should choose its action plan to adapt to global change, given the scale and relevance of environmental threats. According to this approach, considering all measures' aggregate, programs aimed at environmental preservation will be effectively implemented. Each country should adjust its management decisions to the implementation of relevant strategies, programs, or approaches to viewing all existing threats and potential opportunities, including financial ones. The authors determined that critical areas of adaptation for Ukraine include developing ecological networks, increased use of alternative energy sources, improvement of domestic waste management combined with environmental education and consciousness concerning each element of the environment. Adaptation efficiency critically depends on responsibility for the adoption, implementation, and effectiveness of the identified key approaches at all government levels. Responsibility is a significant prerequisite and the basis for implementing the previously mentioned adaptive approach concerning the efficiency of environmental preservation measures, including commitments under the international agreement on climate action – the Paris Agreement.

References

- Acemoglu, D., Robinson, J.A. (2015). Why are some countries rich and others poor. The Origin of Power, Prosperity, and Poverty. Moscow. Issue of AST.
- Belorus O. (2003). The Economic System of Globalism. Kyiv: IWEIR, KNUE, NASU.
- Climate Policy of Ukraine. (2019). Available from: <https://menr.gov.ua/content/klimatichna-politika-ukraini.html>.
- Fleischuk M.I. (2008). Legalization of the economy and counteracting corruption in the system of economic security: theoretical foundations and strategic priorities in the context of globalization. Fleischuk M.I. Lviv: Achilles.
- Gerst P., Thompson G. (2002). Doubts in Globalization. Kyiv: K.I.C.
- Global 500 Fortune. (2019). Available from: <http://fortune.com/global500/>
- Grinchenko O.V. (2014). Globalization and its impact on the development of production systems. Bulletin of Mariupol State University, 4, 113-118.
- Jetto-Gillies Gr. (2002). Transnational Corporations: Fragmentation Amidst Integration. London. Routledge.
- Kochetov E.G. (2010). Geoeconomics. Development of the World Economic Space. Moscow. Norma.

National strategy on the approximation of Ukrainian legislation to the EU law in the field of environmental protection. (2015). Kyiv.
North D. (2010). Understanding the Process of Economic Change. Higher School of Economics.
Robertson R., White K. (2003). Globalization or glocalization? Globalisation. Critical concepts in sociology. Vol. III. London.
Scase, R. (2007). Global remix: the fight for competitive advantage. London: Kogan Page Limited
Schwab, K. (2019). The Global Competitiveness Report. World Economic Forum.
The Paris Agreement. (2019). Available from: http://zakon.rada.gov.ua/laws/show/995_l61.
Vlasov V. (2012). Globalistics: History, Theory. Vinnitsa: Nilan LTD.
Wheelan C. (2010). Naked Economics. Undressing the Dismal Science. N.Y.; London: W.W. Norton & Company, UK.
Zelenov, L.A., Vladimirov, A.A., Stepanov, Y.I. (2010). Modern Globalization: State and Prospects. Moscow.

Citation:

Vyshnevska, O., Litvak, O., Melnyk, I., Oliinyk, T., Litvak, S. (2020). Impact of globalization on the world environment. *Ukrainian Journal of Ecology*, 11(1), 77-83.



This work is licensed under a Creative Commons Attribution 4.0. License
