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## Conceptual bases of environmental security

This article encompasses the conceptual foundations of the formation of the «environmental security» concept; also reveals the essence of environmental security in the context of a globalizing world. This made it possible to determine that environmental security is the process of ensuring the protection of the vital interests of the individual, society, nature and the state from real and potential threats posed by anthropogenic or natural impacts on the environment. The article attempts to define a common vision of the environmental dimension of the security concept, based on the systematization of pre-existing approaches to the security issue. Consideration is given to the natural-scientific, financial, and political components of global environmental protection problem. It is determined that, during the transformation of the concepts of international environmental security at the turn of the 20th — 21st centuries, the classical concepts of international security, which focused on military confrontation of sovereign states, were replaced by the concepts of comprehensive security and human security, in which environmental began to play a major role. The historical stages of the formation of the concept of environmental security are investigated. The first stage is the revision of the concept of security after the end of the Cold War and the connection of environmental problems with security. The second stage is the establishment of empirical relationships between the environment and security, the third stage — deepening and theoretical extension of the concept, and the fourth stage — the concept of balance. The works of theorists who provide an extended definition of the concept of security are also analyzed. The article is a comprehensive interdisciplinary study, with both a general theoretical conceptual and a sectoral character.

*Keywords:* security transformation, state security, environmental security, security concept, environmental degradation, environmental threats, sustainable development.

### Introduction

The environment aspect is becoming an integral part of world politics in the 21st century. The global economic system reached a critical point in the late 1960s, in which the environmental pollution issues became so severe that they call into question the development of all terrestrial civilization. Environmental problems lead to a change in the whole paradigm of human development. The foundations of the modern market system were established even before environmental threats became catastrophic. The world system was thus not ready to solve environmental problems, which forces humanity to look for new ways of survival. This is no longer possible to address environmental challenges, depending solely on technical growth and the implementation of technological solutions. Social transformations, political will, and the involvement of many political institutions are required. Awareness of this has culminated in environmental concerns being strongly placed in the political framework.

Environmental security is a priority in the national security framework under current conditions. The state of environmental security is an indispensable condition for the survival of mankind in the circumstances of the latest environmental threats and challenges of the 21st century. National security systems become effective and reliable if they are initially oriented towards protecting the environment and citizens' rights to an environmentally safe existence through organic interaction with other traditional components of the national security system.

### Experimental

The methodological basis of the study is a set of general scientific approaches to the study of traditional and new concepts of international security and its environmental dimension, the place of environmental security in the main theories and paradigms of international relations, and scientific discourse on environmental security.

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Ecological security in this article is understood as «the process of ensuring the protection of the vital interests of the individual, society, nature and the state from real and potential threats posed by anthropogenic or natural impacts on the environment» [1].

An analysis of the evolution of the concept of international security in the second half of the 20th century — the beginning of the 21st century revealed that they had gone through a path of significant transformations, discovering their previously unknown features, and also incorporating additional dimensions. There has been a transition from an understanding of security, in the core of which is the territorial integrity of the state, characteristic of the realistic paradigm of the Cold War, to a new understanding of international security, in the center of which is the successful sustainable development of man. The perception of threats has changed. If earlier they had a purely military character, constituted a danger to the state and emanated from another state or group of states, now threats have become global. They pose a danger not only to the state, but also to the individual as well. Today these threats include terrorism, environmental degradation, depletion of resources, the spread of drugs and many others.

Environmental problems were considered indirectly as probable causes of increased tension that could provoke military conflicts in the framework of the traditional concept of security. Since the breakdown of the world bipolar Yalta-Potsdam system, the traditional realistic concept of security was replaced by the concept of comprehensive security, one of the most important dimensions of which is environmental. There is a tendency towards the demilitarization of security, which is becoming less military, but rather economic, political, social, and environmental. The environmental dimension has become one of the most important security concepts.

In this study, we will try to identify a more or less general vision of the environmental dimension of the security concept.

The concept of global environmental security differs fundamentally from traditional concepts in its understanding of threats. If in traditional concepts environmental problems were not considered at all, or were considered indirectly as probable causes of increased tension, then the concept of global environmental security considers the environmental degradation as a threat itself. Another important difference between the concept of global environmental security and the traditional approach is the attitude to the concept of state sovereignty. The concept of global environmental security defines the sovereignty of the state as a negative factor, an obstacle to achieving comprehensive security.

The sovereignty of states and their national interests often lead to the fact that international cooperation in the field of environmental protection is difficult and even impossible. The unilateral actions of states undertaken by them to protect the environment have long been outdated, ineffective and unproductive. Thus, environmental security challenges the fundamental foundations of international relations, such as the concepts of national interests and state sovereignty. The ideas about the geographical scope of threats that formerly came from the specific actions of certain states have changed and become global in nature.

### *Results and Discussion*

Historical elements of environmental security concept.

Little reference had been made about the environment in the early 60s. We may claim that in fact there were no international conventions or national laws in this area. The Ministry of the Environment had been fully formed in no country, and environmental movements were not involved as they are today.

However, the situation rapidly changed when industrialized societies began to talk about the close relationship between man and nature. Some famous works, such as *The Silent Spring* (published in 1962) [2] and *Limits to Growth* (published in 1972) [3] drew attention to the limited natural resources and energy required for functioning of our modern society, and to environmental threats caused by uncontrolled industrial growth.

The concept of environmental security has developed in four stages:

The first stage is the revision of the concept of security after the end of the Cold War and the connection of environmental problems with security. The second stage is the establishment of empirical relationships between the environment and security, and the third stage encompasses deepening and theoretical extension of the concept.

Well, you can add the fourth stage, which is the concept of balance.

It was then that there was a conceptual debate about environmental security in the scientific community, the idea was widely discussed that environmental factors should be integrated into the concept of security.

First stage. The concept of environmental security arose in the 1970s. It was then that there was a conceptual debate in the scientific community about environmental security, the idea that environmental factors should be integrated into the concept of security was widely discussed. The main issue of scientific and political debate was the possibility of introducing environmental issues into the concept of security and how this could happen. Brown Leicester (1977) criticized that great importance was attached to military security and the militarization of the world economy, which led to neglect of the threats posed by the interaction of man and nature, in particular, no attention was paid to the state of ecosystems and food security and oil resources [4].

One of the key works of the first period is Richard Ullmann's article «Redefining Security,» published in 1983. Ullman criticizes a narrow understanding of the military dimension of the security concept. It offers an extended definition of the security concept, attaching great importance to the new definition of security threats proposed by them — «a threat to state security is an action or continuation of events that radically threaten and in a short time worsen the quality of the inhabitants' life of these states, or threats seriously limit possible choices for governments of states, for private or non-governmental persons (persons, groups, enterprises) within the state» [5].

This attempt to expand the concept of security is quickly criticized for its conceptual uncertainty, lack of originality, and its political content. The most specific area that has been criticized has been the possibility of militarizing environmental issues, potential inappropriate decisions, and the associated negative consequences. Paying tribute to the scientists of the first generation of publications, critics agreed that this was the first pronounced attempt to propose, if not a new framework for analysis, then a timely «political slogan».

The second stage is the end of the 1980s and the beginning of the 1990s. The key issue of this period is that environmental degradation can be a potential source of conflict that threatens national security. The study of specific examples was the answer to the criticism of the first generation of environmental security studies. It was assumed that global climate change, scarcity of resources, unequal access to resources and unequal opportunities for responding to crisis situations could lead to conflicts between states or within a state.

The main focus is on «monitoring the process» of research, i.e. the determination of independent, dependent and intermediate variables in the process of the onset of conflict due to environmental degradation. The levels of analysis are state and sub-state levels.

Among the environmental security work of this period, the work of researchers working in Canada at the University of Toronto as part of the Environment, Population and Safety Project, led by Thomas Homer-Dickson, can be noted. The basic questions that this group of experts focused on were about whether environmental degradation affects the occurrence of conflicts in developing countries, and if it does, what is the degree of this influence. Among the countries studied are Rwanda and the Middle East. Later, the types of potential conflicts are specified: local, ethnic, civil war, conflicts between states, and North-South conflicts.

Homer-Dickson developed a pattern of conflict, which included environmental degradation as an independent variable that provokes social «effects» leading to conflict, which was considered as a dependent variable [6].

One of the basic conclusions was that environmental degradation is the result of over-exploitation of natural resources. This factor weakens the state and exacerbates social and economic contradictions along with the uneven distribution of natural resources.

The second generation of scientific works to a large extent supplemented the studies of the first generation, proved the interconnection of environmental, economic, political and other reasons in provoking a conflict.

The third stage. If the second wave of research on environmental security was focused on the relationship between the environment and conflicts, the third stage will include new multidisciplinary methods. Attention is paid to the fact that environmental crises are resolved through cooperation between national actors, as well as at the international level, in particular by creating international regimes and global governance.

This time, the levels of analysis are global, regional, state and sub-state. An additional regional level of analysis was introduced by Marc Levy, making assertions that nation states, when implementing their domestic policies, are guided by the situation in neighboring states and in their region. A high degree of probability and success of international cooperation in the field of environmental conservation is noted.

The authors of the works of the third generation expanded the range of independent variables that are conflict genes, including not only the environment, but also material and socio-political variables among the main ones [7].

Thus, scientists introduced the issue of environmental security into the field of research on peace and conflict. Particular attention during this period was given to quantitative research methods. Using qualitative analysis, Vanch Hog, Tanya Elingsen, Dan Smith, Jack Goldstone made a significant addition to the fact that under the same conditions, environmental factors are more important in provoking a conflict.

In addition, some third-wave scientists, like Homer-Dickson himself, came to the conclusion that the starting point of the analysis can be not only a deteriorating environment, but a poverty factor that can itself provoke environmental degradation.

The fourth stage began in the early 2000s. But the first works appeared in the second half of the 1990s. Fourth-generation scientists studying the concept of environmental security urge to apply the methods of analysis of the three previous ones at the macro (global) level, emphasizing the deterioration of the global environment. At the same time, attention is drawn to the micro (state and substate) level. Particular attention is paid to the issue of resources and relations between states.

During the time when international relations were based on the military strategies (especially nuclear) of the two superpowers, environmentalists also began to talk about creating a «global protection strategy.» Environmental discourse began to revolve around the concept of environmental security. According to researchers of this generation, the problems are regulated, and the tasks remain the same, so that the contents of the terms «conservation strategy» and «environmental security» from an environmental point of view are interchangeable in many respects [8].

### Conclusions

Thus, the vital interests of the citizen, the socio-territorial institutions, and the state merged with the interests of conserving life on Earth in the context of environmental security. It became possible to unite the spiritual principle and the active creative activity of society aimed at sustainable development for the first time in the history of civilization.

There has been a shift from an understanding of security, the core of which is the territorial security and integrity of the state, to a new understanding of security with an emphasis on sustainable social development. The main trend is the demilitarization of security. The central place begins to take a healthy development of man. The concept of security has ceased to be primarily a concept of state security and has evolved into the concept of human security. Today security is considered not only in military terms, it is developing in economic, political, social, and environmental dimensions. The subjects of security comprise not only national states, but also international intergovernmental and non-governmental institutions, the media, and public opinion.

The perception of threats to international security has also changed. If earlier they had a purely military character, represented a danger to the state and proceeded from another state or groups of states, today other dimensions of the nature of threats have been identified. So, non-state actors can now act primarily as a source of threats. Terrorism, environmental degradation, resource depletion, drug trafficking, the spread of disease, and many others become new dimensions of threats. These threats pose a danger not only for the state, but for the individual.

Currently, the international community has officially adopted the concept of sustainable development as a model for the future development of mankind. Sustainable development is a managed balanced development of mankind, in which the needs of these generations must be met by all countries without prejudice to future generations. Many states of the world, including Kazakhstan, use this concept as a guideline for building environmental policy.

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## Экологиялық қауіпсіздіктің тұжырымдамалық негіздері

Мақалада «экологиялық қауіпсіздік» түсінігінің тұжырымдамалық негіздері қарастырылып, сонымен бірге жаһанданушы әлем жағдайында экологиялық қауіпсіздіктің мәні ашылған. Бұл экологиялық қауіпсіздік дегеніміз адамның, қоғамның, табиғаттың және мемлекеттің өмірлік мүдделерін қоршаған ортаға антропогендік немесе табиғи әсер ететін нақты және ықтимал қауіптерден қорғауды қамтамасыз ету үдерісі екенін анықтауға мүмкіндік береді. Қауіпсіздік мәселесіне қатысты бұрыннан бар көзқарастарды жүйелеу негізінде мақалада қауіпсіздік тұжырымдамасының экологиялық өлшемі туралы жалпы көзқарастарды анықтауға талпыныстар жасалынған. Жаһандық экологиялық қауіпсіздік проблемасының табиғи-ғылыми, әлеуметтік және саяси компоненттері қарастырылған. XX–XXI ғасырлар тоғысында халықаралық экологиялық қауіпсіздік тұжырымдамасының өзгеру кезеңінде, егеменді мемлекеттер арасындағы әскери және күш теке-тірестеріне көңіл бөлген халықаралық қауіпсіздіктің классикалық тұжырымдамасының орнын жалпы бұқаралық қауіпсіздік және адам қауіпсіздігі тұжырымдамалары алмастырып, онда қауіпсіздіктің экологиялық өлшеміне үлкен көңіл бөліне бастады. Экологиялық қауіпсіздік тұжырымдамасының қалыптасуының тарихи кезеңдері зерттелген. Бірінші кезең — қырғи қабақ соғысы аяқталғаннан кейінгі қауіпсіздік тұжырымдамасын қайта қарау, экологиялық проблемалардың қауіпсіздікпен байланысы. Екінші кезең — қоршаған орта мен қауіпсіздік арасындағы эмпирикалық қатынастарды орнату, үшіншісі — тұжырымдаманың тереңдеуі және теориялық кеңеюі, төртінші кезең — тепе-теңдік тұжырымдамасы кезеңі. Мақалада қауіпсіздік түсінігінің кеңейтілген анықтамасын ұсынатын теоретиктердің еңбектері талданған. Мақала жалпы теориялық концептуалды және салалық сипатқа ие, кешенді пәнаралық зерттеу болып табылады.

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## Концептуальные основы экологической безопасности

В статье обсуждены концептуальные основы формирования понятия «экологическая безопасность», а также раскрыта сущность экологической безопасности в контексте глобализирующегося мира. Это позволило определить, что экологическая безопасность — это процесс обеспечения защищенности жизненно важных интересов личности, общества, природы и государства от реальных и потенциальных угроз, создаваемых антропогенным или естественным воздействием на окружающую среду. В статье на основе систематизации ранее существовавших подходов к проблеме безопасности авторами реализована попытка определения общего видения экологического измерения концепции безопасности. Рассмотрены естественнонаучная, социальная и политическая составляющие проблемы глобальной экологической безопасности. Определено что, в ходе трансформации концепций международной экологической безопасности на рубеже XX–XXI вв. на смену классическим концепциям международной безопасности, основное внимание уделявшим военному и силовому противостоянию суверенных государств, пришли концепции всеобъемлющей безопасности и безопасности человека, в которых одну из главных ролей стало играть экологическое измерение безопасности. Исследованы исторические этапы становления концепции экологической безопасности. Первый этап — пересмотр понятия безопасности после окончания «холодной войны», связь экологических проблем с безопасностью. Второй — установление эмпирических связей между окружающей средой и безопасностью, третий — углубление и теоретическое расширение концепции и четвертый этап — концепция баланса. В статье проанализированы труды теоретиков, которые предлагают расширенное определение концепции безопасности. Статья имеет как общетеоретический концептуальный, так и отраслевой характер, является комплексным междисциплинарным исследованием.

*Ключевые слова:* трансформация безопасности, государственная безопасность, экологическая безопасность, концепция безопасности, деградация окружающей среды, экологические угрозы, устойчивое развитие.

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