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## ІННОВАЦІЙНИЙ МАРКЕТИНГ-МЕНЕДЖМЕНТ В СИСТЕМІ ЕКОЛОГО-ЕКОНОМІЧНОЇ БЕЗПЕКИ

**Актуальність.** Однією з найважливіших сторін інноваційного маркетинг-менеджмент є його спрямованість в майбутнє, що складається в прогнозуванні можливості вилучення ресурсів, використання нових технологій, методів очищення, переробки та утилізації відходів, можливості задоволення економіко-екологічних потреб шляхом пропозиції відповідних (або альтернативних) товарів або услуг. Система інноваційного маркетинг-менеджмент природних ресурсів і умов, раціонального природокористування цілком ґрунтується на знанні споживчого попиту і його передбачуваних змін в найближчій перспективі, чим повніше товар відповідає бажанням і екологічним потребам покупця, тим більшого успіху досягне виробник, який повинен враховувати якість життя людей. Такий системний підхід в умовах розвитку нових інформаційно-комунікаційних технологій для економічної безпеки є актуальним. Інновації маркетинг-менеджмент повинні розглядатися комплексно з урахуванням екологічних чинників, як одного з найважливіших складових в майбутній розвиток економіки, і тому одним з її центральних ланок є дослідження ринку екологічних товарів і послуг, ринку екологічних потреб і екологічного попиту, тобто маркетингу в системі економіко-екологічної безпеки.

Охорона середовища, раціональне використання природних ресурсів, забезпечення екологічної безпеки життєдіяльності людини - невід'ємна умова економічного, екологічного та соціального розвитку України. Інновації покладені в основу забезпечення інноваційної складової маркетинг-менеджменту системи економічної безпеки підприємства, регіону, держави. Сталий економічний розвиток в значній мірі обумовлено координуючою роллю держави в створенні умов для реалізації інноваційного маркетинг менеджменту, накопиченні відповідних коштів підприємствами, використанні елементів екологічного маркетингу. Тобто без інвестування реальних капіталовкладень у виробничу сферу неможливий розвиток і ефективність інноваційних процесів, що визначають економічне зростання будь-якої країни і економічну її безпеку.

**Мета та завдання.** Метою статті є визначення в сучасних умовах забезпечення еколого-економічної безпеки розглянути механізму формування інноваційного маркетинг-менеджменту.

**Результати.** Потреби людей в чистих природних ресурсах і умовах, в безпечних товарах, послугах є основою стратегічної державної політики - економіко-екологічної безпеки суспільства. Принципове значення має орієнтація виробничо-господарської діяльності на випуск потрібної екологічно чистої і екологічно безпечної продукції, яка відповідає екологічним стандартам якості самої продукції та екологічним стандартам навколишнього природного середовища, витримує в процесі виробництва, реалізації, обміну і споживання. Інноваційний маркетинг-менеджмент сприяє розвитку фундаментальних і прикладних досліджень, створення на стиках дисциплін особливої галузі наукових знань про властивості і закономірності ринкової динаміки, принципи і методи, засоби і форми управління екомаркетинговою діяльністю в системі формування економічної безпеки суспільства.

В даний час інноваційність маркетинг-менеджменту придбала універсальність і потужно впливає на теоретичні підходи до управління навколишнім середовищем (природокористуванням), особливе значення при цьому набувають дослідження, спрямовані на стимулювання всіх видів природоохоронної діяльності та ресурсозбереження. Основним напрямком регулювання економіки в умовах забезпечення економічної безпеки є трансформації в економіці - це м'яке впровадження окремих елементів економічного механізму без будь-яких радикальних ломок існуючих структур для стабілізації позицій з метою забезпечення економічної безпеки.

**Висновки.** Нове техногенний простір, організоване навколо нових потоків економіко-екологічної інформації, трансформуючи виробничі потоки, створюючи множинність глобальних індустріальних мереж, включаючи провідні екоінноваційні середовища, з одного боку, сприяють створенню територіально-просторових екорегіонів, екометрополісов. З іншого боку, веде до відособленості регіонів для ведення, наприклад, там органічного землеробства, збереження традиційних форм природокористування,

біорізноманіття. Нова глобальна безпечна економіка і виникає інформаційне суспільство мають нову просторову форму, яка враховує маркетинг-менеджмент і включає екологічні фактори в їх різноманітності.

Обґрунтовано, що з метою дослідження теоретичних і практичних питань взаємовпливів і взаємодій технологій, суспільства, простору і екології, слід застосовувати механізм інноваційності маркетинг-менеджменту з урахуванням якості навколишнього середовища.

**Ключові слова:** безпеку навколишнього середовища, інновації, маркетинг-менеджмент, навколишнє середовище, екологічний маркетинг, поведінка споживача, ринок, сталий розвиток.

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## INNOVATIVE MARKETING MANAGEMENT IN THE SYSTEM OF ENVIRONMENTAL AND ECONOMIC SAFETY

**Topicality.** *One of the most important aspects of innovative marketing management is its focus on the future, which consists in forecasting the possibility of resource extraction, use of new technologies, methods of cleaning, recycling and waste disposal, the ability to meet economic and environmental needs by offering appropriate (or alternative) goods or services. The system of innovative marketing-management of natural resources and conditions, rational use of nature is based entirely on knowledge of consumer demand and its expected changes in the near future, the fuller the product meets the wishes and environmental needs of the buyer, the greater the success of the manufacturer. Such a systematic approach in the development of new information and communication technologies for economic security is relevant. Innovations in marketing management should be considered comprehensively, taking into account environmental factors, as one of the most important components in the future development of the economy, and therefore one of its central links is the study of the market of environmental goods and services, market of environmental needs and environmental demand. environmental safety.*

*Environmental protection, rational use of natural resources, ensuring the environmental safety of human life - an integral condition of economic, environmental and social development of Ukraine. Innovations are the basis for providing an innovative component of marketing management of the economic security of the enterprise, region, state. Sustainable economic development is largely due to the coordinating role of the state in creating conditions for the implementation of innovative marketing management, the accumulation of appropriate funds by enterprises, the use of elements of environmental marketing. That is, without investing real investment in the manufacturing sector, the development and efficiency of innovation processes that determine the economic growth of any country and its economic security is impossible.*

**Aim and tasks.** *The purpose of the article is to determine in modern conditions of environmental and economic safety to consider the mechanism of formation of innovative marketing management.*

**Research results.** *The needs of people in clean natural resources and conditions, in safe goods and services are the basis of strategic state policy - economic and environmental security of society. Of fundamental importance is the focus of production and economic activities on the production of the required environmentally friendly and environmentally safe products that meet environmental quality standards of the product and environmental standards of the environment, withstands production, sales, exchange and consumption. Innovative marketing management promotes the development of basic and applied research, the creation of a special branch of scientific knowledge about the properties and patterns of market dynamics, principles and methods, tools and forms of management of eco-marketing activities in the formation of economic security.*

*Currently, the innovation of marketing management has become universal and has a strong influence on theoretical approaches to environmental management (nature management), of particular importance are studies aimed at stimulating all types of environmental activities and resource conservation. The main direction of economic regulation in terms of economic security is the transformation of the economy - is the soft introduction of certain elements of the economic mechanism without any radical breakage of existing structures to stabilize positions in order to ensure economic security.*

**Conclusion.** *New technogenic space, organized around new flows of economic and environmental information, transforming production flows, creating a plurality of global industrial networks, including leading eco-innovation environments, on the one hand, contribute to the creation of territorial-spatial and ecoregions, ecometropolises. On the other hand, it leads to the isolation of regions for conducting, for example, organic farming, preservation of traditional*

*forms of nature management, biodiversity. The new global secure economy and the emerging information society have a new spatial form that takes into account marketing management and includes environmental factors in their diversity.*

*It is substantiated that in order to study the theoretical and practical issues of interactions and interactions of technologies, society, space and ecology, the mechanism of innovative marketing management should be applied taking into account the quality of the environment.*

**Keywords:** *environmental safety, innovation, marketing management, environment, environmental marketing, consumer behavior, market, sustainable development.*

**Problem statement and its connection with important scientific and practical tasks.** During the period of the establishment of Ukrainian statehood, economic and environmental problems acquire particular relevance, on the successful solution of which the country's sovereignty, economic security and the well-being of its people depend. To create a powerful economic basis for the country (regions), market mechanisms should contribute to the rapid and high-quality renewal of production based on the latest technologies and modern scientific achievements, the introduction of new management technologies.

Today on the agenda of economic security is the solution of qualitatively new, complex, multifaceted tasks and the provision of a single goal: preserving the living conditions and activities of people. It is possible to get out of this situation only by attracting scientific knowledge and experience, that is, creating an independent research base, participating in the internationalization of high technologies and gaining experience in effective technology transfer, competition for new markets, and strict adherence to scientific recommendations in economic activity.

It is quite obvious that the transition of mankind to sustainable development will require the manifestation of greater responsibility of the world community for the preservation of ecosystems on which the life of the entire planet and its safety depend.

Environmental safety is the state of protection of the individual, society and the State from the consequences of anthropogenic impact on the environment, as well as natural disasters and catastrophes. Concerns about future environmental risks may well be justified. Future environmental damage is often underestimated due to a lack of knowledge of the possible outcomes and consequences and insufficient information about the relevant processes. The target guidelines for sustainable social development are the quality of life, the level of economic development, and environmental stability.

**Analysis of recent publications on the problem.** At the present stage of development of the market economy, in the aggregate of problems, one of the most important is the formation of the prerequisites for a new technological basis of production in all sectors of the national economy. Progressive shifts in production can occur only under the influence of scientific and technological progress on the basis of scientifically grounded economic, environmental and scientific and technical policies.

Currently, there are works that consider issues in different areas, for example, on safety, on environmental marketing, on innovative marketing and marketing management, but there is practically no such thing as a systematic disclosure of the problem of innovative marketing management in a safe environment.

Analysis of the literature in the field of marketing management of sustainable and safe development of the economy gives reason to say that the problem of innovativeness of marketing management in promoting an environmentally balanced business and its implementation both in domestic and international markets has practically not been developed.

The problems of forming an effective system of economic and environmental safety are studied in the works of such scientists as: Vichevich A.M., Vaidanich T.V., Didovich I.I., [1], Zaporozhets O.I., Khalmuradov B.D., [2], Zerkalov D.V. [3], Ilyashenko S.M., Prokopenko O.V. [4], Kan E. Yu. [5], Melnik L.G. [8], Lyashenko O.M. [6], Logutova T.G., Kamyshnikova E. V. [7], Nagursky O.A., Korchak B.O. [10], Rashchenko A.V., Zinovchuk N.V. [11], Sadchenko E.V. [12, 18], Sokur M.I., Shmandiy V.M., Babets E.K., Biletsky V.S. [13], Khlobistov E.V., Zharova L.V. [14], Shevchenko L.S., Gritsenko O.A., Makukha S.M. [15].

**Allocation of previously unsolved parts of the general problem.** After analyzing the literature on this issue, it can be assumed that in this context, the problem of security in the innovation space was not considered.

**Formulation of research objectives (problem statement).** The purpose of studying this problem is to consider issues of economic and environmental safety, taking into account the innovations of marketing management by substantiating the theoretical and scientific and practical foundations of the formation of the mechanism of economic and environmental innovative development.

**An outline of the main results and their justification.** Scientific and technological progress

accelerates the pace of development of production processes and the sale of goods, shifting the main focus of the economy to management and marketing, modifying and finding new tools for marketing and management activities that contribute to improving the socio-ecological and economic efficiency of production and economic activities. The task of marketing management is to constantly expand the target audience and its activities must meet the needs and requirements of all people, and this means both manufacturers and consumers. Therefore, innovative marketing and managerial approaches shape the behavior of economic entities and are relevant.

The current stage of development of the world economy tends to converge the economy, management and marketing, and the transition to an information society, where information acts not only as a means to achieve goals, but also as a commodity, but this approach is possible only in conditions of sufficient provision of society with material benefits.

Thus, social innovation includes new information approaches that satisfy any social needs - from working and educational conditions to community development and health care, contributing to the expansion and strengthening of civil society, taking into account marketing management.

Interaction of information technology, biotechnology, nanotechnology and cognitive science. This phenomenon is called NBIC convergence (after the first letters of the areas: N-nano; B-bio; I-info; C-cogno). The term was coined in 2002 by Michael Roco and William Bainbridge - the report "Converging Technologies for Improving Human Performance" (Roco, Bainbridge 2004), prepared in 2002 within the framework of the World Technology Assessment Center (WTEC) [16]. Progress directly affects the economy and marketing management, modifying production and economic processes and marketing mechanisms.

Innovative marketing-management approaches provide an opportunity to disseminate environmental ideas and approaches to the public, in particular regarding environmental conservation, biodiversity and sustainable development. Therefore, marketing management can be considered an effective tool in the formation of the economic and environmental safety of society. This research approach is due to the needs of socio-ecological practice, as well as the lack of scientific developments that would provide a comprehensive theoretical understanding of pressing economic and environmental problems in public-administrative relations.

Transformations in the economy are the soft introduction of certain elements of the economic mechanism without any radical breakdown of existing structures to stabilize positions in order to ensure economic security. The goal of the stage is to keep (or bring out of the crisis) the country's economy within the framework of a unified program to stabilize the living standards of the Ukrainian population, to establish the work of the financial and credit, banking system, the work of enterprises, agro-industrial, transport complexes, etc.

When considering issues of resource-safe policy, interests and disagreements arise between the state, entrepreneurs and consumers. The partnership should be aimed at clarifying economic and environmental interests in the system of production, consumer, distribution and exchange relations. During the period of economic transformations, there are acute questions about the most optimal combination of economic and environmental interests between producers and consumers. The priority direction of improving the mechanism for implementing the state environmental policy is to reform the legislative and regulatory framework for environmental management.

The desire to increase the profitability of enterprises, organizations, firms and the mobilization of countries to achieve greater competitiveness have caused changes in the new time interval between technology and productivity.

The strategic concept of stable economic development should ensure a systematic reproduction and revolving process not only of the socio-economic, demographic and spiritual life of human society, but also the reproduction, preservation and protection of the entire natural environment, the total resource potential of life support, the circulation of animate and inanimate nature [18].

To create a powerful economic basis for the country and its regions, market mechanisms based on the latest technologies and modern scientific achievements, the introduction of new methods of management will determine the main strategic directions of the activities of enterprises and evaluate its results by the value of the final income.

In the context of deepening economic reform in Ukraine, the issues of sustainable development of economic and ecological systems are of particular importance. Market mechanisms should facilitate rapid and high-quality renewal of production, meet the growing needs of society, taking into account the environmental component.

Currently, violations by business entities of legal norms, ethical rules and environmental restrictions on economic behavior, and in particular, the requirements of social justice, are widespread. The study of social justice as a factor of economic efficiency is one of the fundamental problems of economic theory.

In these conditions, the state regulation system needs strong institutional support aimed at increasing the level of social justice in economic and environmental relations.

Many politicians, experts and scholars argue that the security of the national economy and the building of civil society largely depend on how the principles of social justice are observed in all spheres of public life, including the economy. The environmental factor is a component of social justice. In these conditions, it is necessary to create socio-ecological-oriented and economically efficient institutions of the national economy.

Social justice in economic and environmental relations should be considered as a special type of sustainable development institution (socio-ecological-economic). To ensure it at the state level, it is necessary to develop an appropriate institutional mechanism. All this testifies to the insufficient development of the institutional system of sustainable development, and the lack of coordination between its formal and informal components. It is on the basis of the development of informal institutions, thanks to their constancy and form-building function, that a more effective construction of a mechanism for sustainable development is ensured, and, consequently, the economic and environmental security of society.

Informal institutions are created over a long period of time under the influence of the unification of relations between business entities, and they are also capable of exerting a reverse influence, both stabilizing and destabilizing (for example, during the formation of the shadow economy). In countries that have made significant progress towards sustainable development, the formation of informal environmental institutions is given an equally important role as government regulation.

The introduction of marketing management innovations in Ukraine contributes to the solution of a very important economic problem at the national level - the problem of expanding the export of Ukrainian enterprises. The fact is that ecological ("green") products and services are in more and more demand on the world market. The country's membership in the WTO, as evidenced by international business experience, sets increased requirements for the quality of environmental standards of products of national producers. Fulfillment of these conditions is becoming the most important factor in increasing the competitiveness of goods and services in international markets. Therefore, the distribution of marketing management among Ukrainian entrepreneurs and businessmen will allow increasing the export potential of production by increasing the part of the so-called "green" products. Despite the imperfection of domestic markets for goods, services and natural resources, there are objective factors that contribute to the development and use of marketing management innovations in Ukraine.

Firstly, it is the need to increase the competitiveness of domestic goods in order to promote them in the world market. The fact is that at present the world market is developing in the direction of increasing attention to the environmental properties of goods and services. Ukrainian producers must also take this into account if they want to compete on equal terms with foreign firms.

Secondly, the spread of marketing management innovations in Ukraine is facilitated by an increase in the overall level of environmental culture of the country's population, which has already experienced and continues to experience the consequences of environmental disasters and problems (the Chernobyl accident, numerous regional environmental problems).

Thirdly, an important political factor contributing to the formation and spread of marketing management in Ukraine is the priority of European integration. To do this, Ukraine must bring its environmental legislation and environmental practice in line with the high standards and requirements of the European Union.

Marketing management can be used as an effective tool for increasing the competitiveness of certain regions and territories of Ukraine. In the context of globalization and increased competition among regions, the environmental factor is gaining more and more weight and importance. There is an increasing demand for ecologically clean areas for the location of food and electronics industries. The demand for such a service as ecological tourism (ecotourism) is growing very dynamically. Therefore, local authorities should be very interested in using the marketing management of territories, thanks to which the task of promoting the region (territory) as a product to potential producers of investors is solved.

Socio-ethical marketing and comprehensive quality management have served as the basis for new constructs of environmental management and, within its framework, environmental marketing. Marketing management involves environmental management and the so-called Total Quality Management. Within the framework of environmental management, the environmentally responsible behavior of an enterprise

becomes an imperative of its economic success. Thanks to these two areas, as well as social and ethical marketing, marketing management can be viewed both as a philosophy and as a methodological guide to further planning. Thus, marketing management can be called the theory of modern business, i.e. a kind of "philosophy" of doing business. Marketing management was required by companies producing goods (eco-goods, eco-services) as a kind of business philosophy based on strict socio-ethical and acutely emerging environmental standards.

Thus, modern marketing management is a special area of economics that deals with solving implementation problems in a broad sense by developing appropriate tools. There is no isolated art of marketing management, in view of the fact that a company, an enterprise, an organization is effective in marketing, it must become effective in everything, from research and development to the production and sale of goods, from quality control to control of financial activities, from clean natural resources to the quality of goods, services, living conditions.

When considering the basic directions of the use of marketing-management in the activities of enterprises, their management is guided by the solution of the following tasks: the implementation of a competitive product; sales promotion, advertising; preliminary research and satisfaction of the needs of buyers (market) and timely adjustment of the range, quality of goods, services; diversification, expansion of the economic sphere; preservation, expansion and development of new markets; gaining a leading position in the market; research activities. As a rule, environmental aspects are not highlighted in the listed measures to meet the needs of buyers in an explicit form, they are latent (hidden).

The stage - "consumer orientation" - differs from the previous one in that in this case the environmental needs and interests of consumers are taken into account as much as possible. It is the study of consumer environmental needs, the degree of awareness of people, as well as taking into account certain "environmental attitudes" that made it possible to ensure the economical exploitation of natural resources and the most effective mode of their reproduction, taking into account the prospects of a developing economy and preserving human health.

Thanks to the ideology of marketing-management, it is possible to resolve one of the main contradictions of any society that uses a market economy: the contradiction between the interests of the manufacturer (seller), striving to create more products and selling it at a higher price, and the consumer (buyer), striving to buy the best quality product at a cheaper price. Thus, classical marketing contributes to the resolution of this contradiction, fulfilling the most important social function - bringing the conflicting market interests of sellers and buyers into conformity.

But another contradiction arises - the problem of the impact of human activities on the natural environment as a result of satisfying the demands and needs of consumers, the contradiction between the economic interests of enterprises and the ecological and social needs of society (production and preservation of the environment). Although clean natural resources and environmentally friendly living conditions ultimately constitute the main needs, preferences, demands and needs of people.

Therefore, the ultimate goal of marketing management is to resolve these contradictions. The innovativeness of marketing management should be based on the principles of environmental friendliness and safety. Socio-ethical marketing takes into account the strategic needs of society as a whole, and innovative marketing management - meeting the environmental needs and needs of all consumers. In modern conditions, this will ensure the economic and environmental safety of society. It is obvious that marketing management has all the features of social and ethical marketing, while it can be commercial and non-commercial.

Non-commercial marketing management includes, for example, the following activities: activities of participants in the conservation movement; marketing of environmental policy makers; scientific and public programs, ideas, initiatives to restore and maintain ecological balance; marketing management of investments in environmental projects at the local, regional and state levels; regional marketing in order to attract producers of environmentally friendly products in the region; marketing programs for the creation of protected areas and reserves.

Commercial marketing management is the production of environmentally friendly goods and services, marketing management of natural resources and conditions, marketing management of environmental quotas for emissions and discharges of pollutants into the environment, marketing management of economic and environmental incentives for an effective environmental policy, marketing - management of ecotourism, etc.

To increase the economic and environmental efficiency of production and economic activities, it is necessary to use traditional marketing and marketing management, and for this one should have information on changes in the conjuncture of goods, services (and, in particular, environmental focus), improve the

management system of production, natural, financial and other resources. But this is still not enough, since it is necessary not only to change the organizational and technological plan, but also of a psychological nature.

The goal of marketing management innovations is to create such economic conditions for enterprises, organizations (firms, companies) in which they will be interested in modernizing production technologies and strive to rationally use, preserve and restore the natural resource potential of the region (or compensate society for the damage caused). Marketing management is aimed at stimulating the manufacturer to create and distribute economically and environmentally friendly goods and services, combining the economic and environmental interests of society.

The scientific novelty of the research results of marketing management innovations lies in the fact that in the aggregate of all the proposed theoretical provisions, conclusions and recommendations, an important scientific and applied problem of further development and deepening of the theoretical and methodological foundations of innovative management and marketing, environmental marketing is solved. On the basis of the methodological principles of a new paradigm for managing the process of greening social reproduction, the concept of environmental marketing has been formulated and substantiated as a multifunctional and multi-vector system of approaches, techniques, methods and tools for planning environmental management in a market environment based on the principles of environmental safety and sustainable social development.

A necessary condition for achieving a policy of economic and environmental security in the new economic conditions is not only effective and continuous provision of production with materials, labor, financial, environmental, information resources in the required quantity, of the appropriate quality and at reasonable prices. Of fundamental importance is the orientation of production and economic activities towards the release of the products that are necessary for an environmentally friendly and environmentally safe market that meet the environmental quality standards of the products themselves and the environmental standards of the natural environment, which are maintained in the process of production, sale, exchange and consumption.

Today, there are many different classifications of needs, but, as we can see, with the development of society, environmental needs become more and more relevant.

Environmental needs are formed by preferences in environmental goods, services, conditions, depending on the degree and aggressiveness of pollution, natural depletion of regions (or various natural resources) and cultural level. Human ecological needs do not remain unchanged, they develop with the evolution of human civilization.

The need "ecological" cannot be directly measured, it can be measured indirectly, using the price of demand, which a person is willing to pay for the fulfillment of his desire. One thing to keep in mind, however, is that there are an infinite number of needs. The needs are limitless, but each of the needs, in particular the ecological one, taken separately, has its own limit, reflecting the overall environmental utility, where the total utility is the totality of satisfaction or other benefits. For example, as a result of the accident at the Chernobyl nuclear power plant, a new regional environmental need for environmentally friendly goods, services, equipment, technology, territories, regions, etc. appears. So, to mitigate the consequences of radioactive contamination, it is necessary to produce sorbents for environmental and medical purposes. Sorbents for ecological purposes are used for the purification of drinking and waste water from radionuclides. The raw material base for the production of sorbents in Ukraine can be expanded through the use of natural sorbents - zeolites. Zeolite is not toxic to algae, fish, does not cause water bloom. In addition, the use of zeolite is accompanied by an additional effect - it extracts heavy metals such as mercury, lead, zinc, cadmium, copper, strontium. The highly effective sorbents that selectively bind cesium radionuclides and prevent their absorption in the digestive tract include preparations based on ferrocyanides, which can later be used in feed additives. They perform both the function of a sorbent for heavy metals and a protective function, reducing the general toxicity of ferrocyanides for a living organism [12].

A company that is interested in making its product competitive in the market should not ignore the environmental demands of consumers. A number of factors influence consumer behavior: ecopsychology; sense of place; culture, environmental education, social and environmental norms, historical features of the economic development of the state; personal - age, stage of the family life cycle, lifestyle, economic situation, personality type and self-image, roles and statuses; psychological factors - motivation, perception, learning, persuasion and attitudes; geographical, territorial features of the location of the state (living conditions); ethnodemographic.

In the future, a marketing management is considered in which a natural resource acts not as a component of any product or auxiliary raw material, but as the main product (resource-commodity) of a given type of environmental management.

This environmental marketing involves three main activities:

1) study of the existing market for natural resources at the appropriate regional (national, international) level, i.e. supply and demand;

2) active participation in the formation of the natural resources market (information support for the study of the natural resources market, new technologies, types of natural resources use and related issues of the economic assessment of natural resources, information on advanced technologies for the processing, cleaning, processing of natural resources and disposal of their waste ; pricing, economic and environmental inventories, etc.);

3) activities to control the compliance of nature management with environmental standards, regulations, i.e. monitoring compliance with the regulatory framework for environmental management.

In marketing management, natural resources are considered as environmental and economic resources (as environmental resource goods), therefore, the object of marketing activities here are environmental factors and environmental management conditions, taking into account their inconsistency and conjuncture. A resource-product (ecological and economic resource) is a product, when selling it, with the help of environmental marketing, there is a compromise between the need to use (withdraw) a certain natural resource and the need to preserve the habitat, in the formation of which this natural resource participates (directly or indirectly). The main points of marketing-management of natural resources and conditions, marketing of rational use of natural resources are a clear setting of long-term goals and an integrated approach.

Thus, the innovative strategy of marketing and management of environmental management should be considered, first of all, as a strategy associated with new design and technological developments of technology that ensures the rational use, preservation, restoration of the natural environment and the quality of life, the creation of new technologies on its basis, the production of ecological -safe goods and services, searching for promising sales markets, developing new management methods and new organizational and production structures.

The needs of people for clean natural resources and conditions, for environmentally friendly goods and services are the basis of strategic state policy - the economic and environmental safety of society. Achievements of scientific and technological progress lead to the rational use of natural resources (the amount of natural resources for the production of a unit of output is reduced), technological processes of production and sale of goods and services are being improved, some types of raw materials are being replaced by others. This is especially true for non-renewable resources. Optimal use of non-renewable resources involves adjusting and balancing the positive and negative aspects of their immediate consumption, i.e. a compromise is required between the present and the future. So, if in a competitive market for natural resources the expected growth rates of prices for non-renewable resources exceed the level of income on capital, then it becomes profitable to conserve them for the production of future goods, i.e. the market contains a mechanism for their conservation. An important way of implementing research on modern scientific and technological progress is the development of waste-free and low-waste production, which is of particular importance as an environmental measure.

Some (environmental) markets may be generally closed to the products of enterprises that do not strictly comply with environmental standards. This kind of negative analysis result is very important, as it frees the enterprise from unnecessary commercial activities and prevents unnecessary marketing costs and stimulates the enterprise to research and manufacture products that meet environmental requirements. For the skillful use of the peculiarities of the modern market for natural resources, environmentally friendly goods, technologies (local, regional, international levels), it is necessary to constantly and thoroughly study it, and at the same time forecast it.

Progress directly affects the economy, management and marketing, modifying production and business processes and marketing mechanisms.

In the new economic relations, information and innovative marketing management of the behavior of subjects of environmental and economic activity is given the main place, because the speed of its dissemination and bringing information to consumers is high. Quantum computing is a new technology that opens up new possibilities that will radically change the way humanity processes information. These are technologies of the future, which are already in dire need of the modern world. Quantum technology sparked the second quantum revolution. They affect many areas of our lives, from medicine to agriculture, from economics, social issues to environmental issues. Quantum computing will help you cope with a huge amount of data - the amount of information generated by big data and the Internet of Things will contribute to the development of artificial intelligence and machine learning. In HPC and cybersecurity, we fully

support the second quantum revolution.

Using quantum computing in marketing management:

- improved mobile data coverage (a boon for mobile marketers),
- artificial intelligence is becoming more human-like (Google AI is developing quantum algorithms that will significantly improve machine learning),
- increasing the relevance of advertising (quantum annealing can help advertising reach a wider range of people at a better price).

The civilized market has a developed, complex and ramified infrastructure. It includes the financial and credit-banking system, a developed monetary system, stock and commodity exchanges, etc. A civilized market does not work without a developed infrastructure, including without its legal support. The banking system is an important component of the market infrastructure.

The international integration of financial markets as a result of the use of new information technologies has had a huge impact on the withdrawal of capital flows from national economies. Recently, by increasingly focusing their activities on international markets, integrating markets and maximizing the competitive advantages of enterprises and firms, including the environmental component, they have managed to increase profitability indicators.

Reforming the Ukrainian economy involves a structural reorganization in the use, protection and reproduction of natural resources, covering the banking, financial and credit systems, investment, innovation policy and direct use of natural resources at private and state enterprises. Only an ecologically high-quality product and the same high-quality ecological service are in real demand on the market and can attract consumers. Proceeding both from the interests of society as a whole and of each member of society, it is required to use new forms of organization of production, business and labor, to improve the structure of production and economic activity, taking into account the national characteristics of nature management. The effectiveness of measures to preserve and support biodiversity, innovations in the environmental sector can be ensured only if a nationwide approach to this problem is achieved.

The general definition of environmental marketing management is the process of planning and managing a business that better adapts production (distribution, exchange and consumption) to the environmental requirements of the market for a more profitable sale of goods (environmentally friendly goods, services and conditions) and ensures sustainable demand for these goods while guaranteeing the ecological and economic safety of society. Marketing management is not only ensuring maximum consumption growth, expanding consumer choice and consumer satisfaction, as well as maximizing the quality of life, it is also supporting sustainable, balanced development of territories, rational use, preservation and restoration of the country's natural resource potential, taking into account future generations, maintaining the high quality of the natural environment. As a "profit," marketing management offers a better quality of life. In other words, it is a system of various economic and environmental mechanisms that ensures the development of an enterprise (organization, firm, company) through market activities.

Today, command-and-control measures still prevail, but the use of economic instruments has expanded and is increasingly finding its practical application. But it should also be borne in mind that general economic measures are highly correlated with environmental measures and sometimes contribute to the implementation of, for example, capital-intensive projects that can be major sources of pollution. The possibility of simultaneous implementation of economic, environmental-economic and institutional reforms will contribute to the development of environmentally sustainable business.

When considering innovation, marketing management should consider marginal environmental utility. The theory of marginal environmental utility is based on the basic rule for choosing the volumes of environmental goods, taking into account all environmental factors. An enterprise that maximizes profit should focus on such a volume of output of goods or services at which the marginal costs, taking into account environmental factors - the coefficient of a depleting resource, an assessment of damage to the environment, a coefficient of priority of natural resources for future generations, that is, the optimal use of natural resources and the minimum environmental pollution, taking into account the alternative cost of manufactured goods and the alternative cost of renewable and non-renewable natural resources, are equal to the marginal income. Taking into account all components, including environmental ones, will expand the boundaries of the theory of marginal utility and focus on the relationship between the ecological usefulness of each unit of good and the intensity of the immediate need (including ecological) both of the given moment and for future generations, which it must satisfy, as well as from the quantity of the good already in consumption. When considering ecological usefulness, the factor of limited natural resources consumed with intensity at a given time and the factor of the ecological capacity of space are very important. Today,

renewable natural resources also require optimal use, while the amount of non-renewable resources is decreasing and cannot potentially be used in the future. If no substitutes for these resources are found or alternative goods in the production of which these resources will not participate, then over time their prices will rise, due to the increased deficit and the increased cost of extracting these resources. Ecomarketing studies the problem of personal (and the motives of action of all consumers) and public consumption, therefore, accounting for environmental components should be included in the subject of economic theory - the theory of marginal utility. In the theory of marginal economic and environmental utility, the value of a product (resource-product, region-product) should be determined by the value of the beneficial effect obtained from the consumption of both each specific individual and society as a whole, i.e. marginal ecological usefulness of the good. The theory of marginal economic and environmental values finds its application in the field of exchange, consumption, and production. But the production of eco-goods can arise (develop or twist) if the usefulness of goods-eco-goods, eco-services will determine their ability to satisfy human needs. In the doctrine of marginal utility, Pareto put forward the thesis about the impossibility of absolute measurements of marginal utility and proposed to proceed to assessing the preferences of some goods over others or some combinations of goods over other combinations of goods. In this regard, in our opinion, the preference for ecological goods, preference in high-quality living conditions will determine (or influence) the value of the good. When considering ecological goods, the usefulness of each next unit of this product decreases, acting according to the general laws of the market, but when considering pure resources, living conditions of people, the utility and need increases. This interdependence and interconnection of economic and environmental phenomena can be called the law of growing marginal utility.

The second stage is modeling the process of searching and evaluating information about an ecological product. The buyer needs different environmental information depending on the market situation, that is, availability and transparency.

The third stage is making a purchase decision. A purchase is always a compromise, an expected risk, but the environmental risk of goods must be excluded, a guarantee that the goods are environmentally friendly and safe. The consumer should be aware of the degree of environmental risk and the rules (aspects, instructions, etc.) to reduce this risk. Ecopsychology is an important factor in this stage.

The fourth stage is the consumer's assessment of the correctness of the choice of an ecological product. A positive assessment of the "environmental friendliness" of a product strengthens the buyer's consumer commitment to this product, and hence its value, while a negative one weakens interest in it. Thus, a specialist in environmental marketing, on the basis of modeling consumer behavior, gets the opportunity to know which environmental needs the product serves, and, if necessary, improve its environmental characteristics. He can see where a consumer goes for information about an environmental product, help him get the data of interest faster and more fully, and then make a purchase decision (knowing the environmental motives and incentives that are guided by him).

Modeling of consumer behavior in the market is due to the population's need to obtain the maximum economic and environmental effect. It enables marketing management innovation professionals to anticipate consumer actions and develop a marketing mix that takes environmental considerations into account to better meet customer needs and generate profit for the enterprise. The company's ecomarketing activities should be aimed at a constant increase in the number of its consumers, taking care to establish strong relationships with them. Innovative marketing management contributes to the identification of environmental needs, requirements and their satisfaction through the production of the necessary environmental goods and services. Innovative marketing management contributes to the determination of the final purposefulness of social production and to fully reveal its effective aspect.

**Conclusions and perspectives of further research.** In particular, analyzing the process of economic transformations in Ukraine, we can conclude that not all activities related to meeting consumer needs through exchange can be called innovative marketing management. Traditional marketing is characterized by the fact that its activities are focused on traditional needs, and for innovative marketing management - on environmental needs arising from the environmental crisis or deterioration of the quality of the living environment using new information and communication technologies. It is the environmental needs of consumers that are the main focus of the producers of environmentally friendly and environmentally friendly goods, services and conditions. By meeting the environmental needs of consumers, manufacturers realize their ultimate goal - making a profit, and the final profit in the case of using marketing management innovations is to increase (improve) the quality of life and reduce the risks of economic and environmental safety. As a means to achieve it, innovative marketing management technologies should be introduced, which involve the implementation of not individual activities, but their complex.

Marketing management should be comprehensive, and one of its central links is the study of the market for environmental goods and services, the market for environmental needs and environmental demand. Environmental protection, rational use of natural resources, ensuring the environmental safety of human life is an integral condition for the environmental and social development of Ukraine.

The initial challenge of marketing management innovation is to identify environmental products, services and identify environmentally sustainable products that will appeal to consumers. As a result, a decision is made about what goods should be produced and at what price they should be sold.

One of the most important aspects of marketing management innovations is its focus on the future, which consists in predicting the possibility of extracting resources, using new technologies, methods of cleaning, processing and recycling waste, the possibility of meeting environmental needs by offering appropriate (or alternative) resource products. The innovation system of marketing and management of natural resources and conditions, marketing of rational use of natural resources is entirely based on knowledge of consumer demand and its expected changes in the near future, the more fully the resource-product corresponds to the desires and environmental needs of the buyer, the more successful the manufacturer will achieve. In order to use marketing management innovations to improve the efficiency of production and commercial work, it is necessary to quickly respond to changes in market conditions, freely maneuver the production and other resources of the enterprise, using new technologies and methods of extraction, treatment, processing of natural resources and waste disposal. Marketing management innovations determine the further development and improvement of the environmental management system, including such components as programming and forecasting the existing and potential demand of buyers for resource goods and services; strategic planning of the market for natural goods and environmental needs of society; determination of the prospects for the development of economic and environmental safety programs.

#### ЛІТЕРАТУРА

1. Вічевич А. М., Вайданич Т. В., Дідович І. І., Дідович А.П. Екологічний маркетинг. Львів: УкрДЛТУ, 2002. 248 с.
2. Запорожець О.І., Халмурадов Б.Д., Применко В.І. та ін. Безпека життєдіяльності: підручник. К. : «Центр учбової літератури», 2013. 448 с.
3. Зеркалов Д.В. Екологічна безпека: монографія. К.: Основа, 2012. [http://www.zerkalov.kiev.ua/sites/default/files/06\\_ekologicheskaya\\_bezopasnost.\\_monografiya.pdf](http://www.zerkalov.kiev.ua/sites/default/files/06_ekologicheskaya_bezopasnost._monografiya.pdf)
4. Ілляшенко С. М., Прокопенко О.В. Формування ринку екологічних інновацій: економічні основи управління: Монографія. / Під ред. д.е.н., проф. С. М. Ілляшенка. Суми: ВТД «Університетська книга», 2002. 250 с.
5. Кан Е. Ю. Нейромаркетинг – механізм маніпулювання потребителем [Електронний ресурс]. Режим доступу: [http://nbuv.gov.ua/Portal/Soc\\_Gum/Biznes/2009\\_1/2009/01/090117.pdf](http://nbuv.gov.ua/Portal/Soc_Gum/Biznes/2009_1/2009/01/090117.pdf).
6. Ляшенко О. М. Концептуалізація управління економічною безпекою підприємства: монографія / 2-ге вид., пере - робл. К. : НІСД, 2015. 348 с.
7. Логутова Т. Г., Камышникова Э. В. Экономическая безопасность промышленных предприятий : монография; М-во образования и науки Украины. ПГТУ. Мариуполь: ПГТУ, 2013. 230 с.
8. Мельник Л.Г. Экологическая экономика: Учебник. Сумы: Издательство «Университетская книга», 2001. 350 с.
9. Методичні положення та рекомендації щодо визначення економіко-екологічних пріоритетів “зеленої економіки” у контексті сталого розвитку України / [Буркинський Б. В. та ін.] ; [за ред. Буркинського Б. В.] ; НАН України, Ін-т пробл. ринку та еконн-екол. дослідж. Одеса : ППРЕД НАНУ, 2019. 48 с. ISBN 978-966-02-9011-2
10. Нагурський О.А., Корчак Б.О. Безпека життєдіяльності людини у концепції реалізації цілей сталого розвитку: монографія. Національного університету «Львівська політехніка», 2020. 380 с.
11. Ращенко А. В., Зіновчук Н. В. Екологічний маркетинг: навч. посіб. // Житомир: Вид-во ЖДУ ім. І. Франка, 2015. 190 с. Режим доступу: <http://ir.znau.edu.ua/handle/123456789/3786>
12. Садченко Е.В. Принципи і концепції екологічного маркетингу: монографія. Одеса: Астропрінт, 2002. 400 с.
13. Сокур М.І., Шмандій В.М., Бабець Є.К., Білецький В.С., та ін.. Екологічна безпека та економіка: монографія Кременчук, ПП Щербатих О.В., 2020 240 с.
14. Хлобистов Є.В., Жарова Л.В. Інноваційний потенціал забезпечення екологічної безпеки у контексті структурно-динамічної теорії продуктивних сил // Екологічний маркетинг та менеджмент.

2011, № 4, Т. II. С.257-267. <http://mmi.fem.sumdu.edu.ua/>

15. Шевченко Л. С., Гриценко О. А., Макуха С. М. та ін. Економічна безпека держави: сутність та напрями формування : монографія // за ред. д-ра екон. наук, проф. Л. С. Шевченко. Х.: Право, 2009. 312 с.

16. Converging Technologies for Improving Human Performance nanotechnology, biotechnology, information technology and cognitive science NSF/DOC-sponsored report Edited by Mihail C. Roco and William Sims Bainbridge. National Science Foundation. Kluwer Academic Publishers (currently Springer). 2003. 482 p. [https://www.wtec.org/ConvergingTechnologies/Report/NBIC\\_report.pdf](https://www.wtec.org/ConvergingTechnologies/Report/NBIC_report.pdf)

17. Hetman O., Iermakova O., Laiko O., Nikishyna O. Eco-innovations under conditions of glocalization of economic and sustainable development of the regional economy. *Ekonomia i Środowisko. Fundacja rodowiska i Zasobw Naturalnych Biaystok*, 2019, 4 (71). Pp.69-82. <https://doi.org/10.34659/2019/4/49>.

18. Sadchenko O.V. Theoretical foundations of environmental marketing management // *MIND JOURNAL*, 2018, № 6. (13 c.) URI: <https://mindjournal.wseh.pl/ru/articles/nomer-62018.html>

## REFERENCES

1. Vichevych A. M., Vaydanych T. V., Didovych I. I., Didovych A.P. (2002). *Ekolohichnyy marketynh*. [Environmental marketing] L'viv: UkrDLTU, 248 s. [in Ukrainian].

2. Zaporozhets' O.I., Khalmuradov B.D., Prymenko V.I. ta in. (2013) *Bezpeka zhyttyedyial'nosti: pidruchnyk*. [Life safety: a textbook] K. : «Tsentr uchbovoyi literatury». 448 s. [in Ukrainian].

3. Zerkalov D.V. (2012) *Ekolohichna bezpeka: monohrafiya* [Ecological safety: monograph] K.: Osnova. [http://www.zerkalov.kiev.ua/sites/default/files/06\\_ekologicheskaya\\_bezopasnost.\\_monografiya.pdf](http://www.zerkalov.kiev.ua/sites/default/files/06_ekologicheskaya_bezopasnost._monografiya.pdf) [in Ukrainian].

4. Ilyashenko S. M., Prokopenko O.V. (2002) *Formuvannya rynku ekolohichnykh innovatsiy: ekonomichni osnovy upravlinnya: Monohrafiya* [Formation of the market of ecological innovations: economic bases of management: Monograph] / Pid red. d.e.n., prof. S. M. Ilyashenka. Sumy: VTD «Universytet's'ka knyha». 250 s. [in Ukrainian].

5. Kan Ye. YU. *Neyromarketing - mekhanizm manipulirovaniya potrebitelem* [Elektronnyy resurs]. Rezhim dostupa: [http://nbuv.gov.ua/Portal/Soc\\_Gum/Biznes/2009\\_1/2009/01/090117.pdf](http://nbuv.gov.ua/Portal/Soc_Gum/Biznes/2009_1/2009/01/090117.pdf). [in Russian].

6. Lyashenko O. M. (2015) *Kontseptualizatsiya upravlinnya ekonomichnoyu bezpekoyu pidpryyemstva: monohrafiya* [Conceptualization of management of economic security of the enterprise: monograph] 2-he vyd., pere - robl. K. : NISD. 348 s. [in Ukrainian].

7. Logutova T. G., Kamyshnikova E. V. (2013) *Ekonomicheskaya bezopasnost' promyshlennykh predpriyatiy* : monohrafiya [Economic safety of industrial enterprises: monograph]; M-vo obrazovaniya i nauki Ukrainy. PGTU. Mariupol': PGTU. 230 s. [in Russian].

8. Mel'nik L.G. (2001) *Ekologicheskaya ekonomika: Uchebnik* [Ecological Economics: Textbook] Sumy: Izdatel'stvo «Universitetskaya kniga». 350 s. [in Russian].

9. *Metodychni polozhennya ta rekomendatsiyi shchodo vyznachennya ekonomiko-ekolohichnykh priorytetiv "zelenoyi ekonomiky" u konteksti staloho rozvytku Ukrainy (2019)* [Methodical provisions and recommendations for determining the economic and environmental priorities of the "green economy" in the context of sustainable development of Ukraine] / ; [za red. Burkyns'koho B. V.] ; NAN Ukrainy, In-t probl. rynku ta ekonno-ekol. doslidzh. Odesa : IPREED NANU. 48 s. ISBN 978-966-02-9011-2 [in Ukrainian].

10. Nahurs'kyu O.A., Korchak B.O. (2020) *Bezpeka zhyttyedyial'nosti lyudyny u kontseptsiyi realizatsiyi tsiley staloho rozvytku: monohrafiya* [Safety of human life in the concept of achieving the goals of sustainable development: a monograph]. Natsional'noho universytetu «L'vivs'ka politehnika». 380 s. [in Ukrainian].

11. Rashchenko A. V., Zinovchuk N. V. (2015) *Ekolohichnyy marketynh: navch. posib*. [Ecological marketing: textbook] // Zhytomyr: Vyd-vo ZHDU im. I. Franka. 190 s. Rezhym dostupu: <http://ir.znau.edu.ua/handle/123456789/3786> [in Ukrainian].

12. Sadchenko E.V. (2002) *Pryntsypy i kontseptsiyi ekolohichnoho marketynhu: monohrafiya* [Principles and concepts of environmental marketing: a monograph] Odesa: Astroprint. 400 s. [in Russian].

13. Sokur M.I., Shmandiy V.M., Babets' YE.K., Bilets'kyu V.S., ta in. (2020). *Ekolohichna bezpeka ta ekonomika: monohrafiya* [Ecological safety and economy: monograph] Kremenchuk, PP Shcherbatykh O.V. 240 s. [in Ukrainian].

14. Khlobystov YE.V., Zharova L.V. (2011) *Innovatsiynyy potentsial zabezpechennya ekolohichnoyi bezpeky u konteksti strukturno-dynamichnoyi teoriiy produktyvnykh syl* [Innovative potential of ecological

safety in the context of structural-dynamic theory of productive forces] // Ekolohichnyy marketynh ta menedzhment. № 4, T. II. S.257-267. <http://mmi.fem.sumdu.edu.ua/> [in Ukrainian].

15. Shevchenko L. S., Hrytsenko O. A., Makukha S. M. ta in. (2009) Ekonomichna bezpeka derzhavy: sutnist' ta napryamy formuvannya : monohrafiya [Economic security of the state: essence and directions of formation: monograph] // za red. d-ra ekon. nauk, prof. L. S. Shevchenko. KH.: Pravo. 312 s. [in Ukrainian].

16. Converging Technologies for Improving Human Performance nanotechnology, biotechnology, information technology and cognitive science NSF/DOC-sponsored report Edited by Mihail C. Roco and William Sims Bainbridge. National Science Foundation. Kluwer Academic Publishers (currently Springer). 2003. 482 p. [https://www.wtec.org/ConvergingTechnologies/Report/NBIC\\_report.pdf](https://www.wtec.org/ConvergingTechnologies/Report/NBIC_report.pdf) [in English].

17. Hetman O., Iermakova O., Laiko O., Nikishyna O. (2019) Eco-innovations under conditions of glocalization of economic and sustainable development of the regional economy. *Ekonomia i Środowisko. Fundacja rodowiska i Zasobw Naturalnych Biaystok*, 4 (71). Pp.69-82. <https://doi.org/10.34659/2019/4/49>. [in English].

18. Sadchenko O.V. Theoretical foundations of environmental marketing management // MIND JOURNAL, 2018, № 6. (13 c.) URI: <https://mindjournal.wseh.pl/ru/articles/nomer-62018.html> [in Russian].