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Zhdanova E.A.**

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**THE USE OF WORLD EXPERIENCE
IN THE IMPLEMENTATION OF
ENVIRONMENTAL MANAGEMENT
SYSTEMS IN THE FORMATION OF
FOREIGN LANGUAGE TEACHING SKILLS
IN A TECHNICAL UNIVERSITY**



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T.V. YAREMA, K.K. SAGADIYEVA, E.A. ZHDANOVA

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***Annotation.** The monograph considers the world experience of environmental management as one of the global trends that confirms the need to change traditional methods of enterprise management.*

The content and structure of this monograph are determined by the facts about the need to solve current environmental problems and to prevent possible crisis events in the future. It speaks of necessity to tighten national environmental legislation and harmonize it with international standards.

It gives a multi-level analysis of the world experience in implementing the environmental management system, which, as part of the overall corporate governance system.

The paper gives a detailed description of environmental management as one of the advanced systems at the micro level, which ensures the coordinated achievement of two main goals - the preservation and strengthening of the company's competitive position and the maximum possible reduction of the load on the environment.

The purpose of this work is to characterize the model of environmental management, its place and role in the modern economy; to reveal the significance of this model for the coordinated solution of two main tasks - to strengthen the competitive position of the organization and to reduce the load on the environment as much as possible.

The examples considered in this monograph show that the responses of different TNCs to similar changes in four groups of factors are not the same. Some companies under the influence of "greening" regulation, demand and requirements of business partners are moving towards the best practices of environmental management and use the environmental component in the competition. Others, on the contrary, try to counteract or restrain the "greening" of external factors, and their economic activities gradually become the worst environmental practices.

The corporate environmental management system is changing dynamically, and the internal standards of individual companies are often higher than the environmental requirements of developing countries and countries with economies in transition.

The monograph shows that the system of environmental monitoring and reporting in Kazakhstan is imperfect, and statistics are unreliable. The public is not sufficiently informed about the environmental situation. The lack of effective environmental regulation that is comparable to the standards of developed or newly industrialized countries can lead to a loss of competitiveness.

Key Words: *Environmental management, enterprise, protection, management systems, standards, audit, certification, environmental standards, green market, threats, harmful impact, eco-friendly, green policy, corporations, transnational corporations, problems, environmental policy, negative impact, analysis, quality management system, effectiveness, global, investor, negative effect, legislative, documents, state regulation, regulation*

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INTRODUCTION

The socio-economic systems of most countries of the world have been exposed to drastic changes in the theory and practice of enterprise management since the 70s of this century in the context of a sharp deterioration of the environmental situation. One of the leading directions of these transformations is the transition from traditional, "technogenic" management of the company to management that prevents harmful effects on the environment at all stages of value creation and at all levels of management. Under the influence of these processes, the understanding that the management of production development and the management of environmental processes is not only possible, but they must be combined. The condition for solving this problem is the formation of micro-level management systems and mechanisms that are not focused on production as such, but on environmental production.

The issue of environmental management formation is particularly relevant in countries with economies in transition, where the desire to ensure high rates of economic growth is often associated with an increase in its natural intensity: significant consumption of natural resources and savings on environmental costs. The process of forming market instruments and business management mechanisms in these countries should adequately take into account the issues of environmentally friendly operation of enterprises. Effective management of environmental protection and rational use of natural resources should become integral characteristics of the formation of a new type of management philosophy focused on the principles of a sustainable economy.

The phenomenon of environmental management did not have a sufficiently solid research base and empirical experience until the 70s of the last century. As the problem of environmentally friendly enterprise management is put into practice within the framework of national and international environmental transformations, it becomes the subject of socio-economic research. However, as for domestic research, until recently, many of them did not achieve the necessary complexity. Foreign experience in developing this problem is more significant, but it is also not clear. In the recent past, the main focus was on building environmental management, primarily related to the solution of such tasks as product quality assurance, occupational health and safety, etc., but not with the General management system. In addition, much attention was paid to individual components of environmental management (eco-marketing, environmental planning, etc.) without forming a complete system of industrial environmental protection that meets the requirement to include environmental protection in all production functions at all stages of the enterprise's work with the product.

The subject of this paper is the world experience of environmental management (IEM), which arose in the late 80's of the last century under the direct influence of the requirements of sustainable development as they are projected in the activities of enterprises operating in a competitive environment. The study of this issue has determined the need for the synthesis of scientific results of various directions and economic schools, to a greater or lesser extent developing the problems of forming an environmentally safe management of the company. The development of the theory and accumulation of practical experience in industrial environmental management led to its study as one of the key categories of modern Economics. Moreover, the logic of theoretical analysis has caused the need to understand issues related to environmental-oriented enterprise management in a broad international context, and environmental management - as one of the leading trends in the modern world economy, one way or another, implemented not only in economically developed countries, but also in Kazakhstan. With this approach, it is of particular interest to study the problem of the integrated nature of environmental management, expressed in a harmonious combination of economic and environmental activities of the company. These and other circumstances determined the choice of the topic of the dissertation research, its logic and structure.

The key task is to study and multi-level analysis of the world experience in implementing the environmental management system, which, as part of the overall corporate governance system, is the most important condition for the integration of domestic enterprises into the global economic system.

The purpose of this work is to characterize the model of environmental management, its place and role in the modern economy; to reveal the significance of this model for the coordinated solution of two main tasks - to strengthen the competitive position of the organization and to reduce the load on the environment as much as possible.

Based on this goal, the thesis sets and solves the following tasks:

- study of the conceptual foundations of ecologized and environmental management at the macro, meso and micro levels;
- generalization of international experience (primarily European) in the formation of environmental management systems and identification of common principles, goals and implementation mechanisms;
- analysis of the advantages and risks associated with the implementation of environmental management at the enterprise;
- identify common features of environmental management with other modern models of corporate governance and determine on this basis how to include environmental management in the internal management system;

- assessment of various models of integrated environmental management and justification of a variant that is adequate to the conditions of the modern economy of Kazakhstan;
- research of eco-controlling, eco-marketing and eco-audit as integral components of integrated environmental management;
- study the place and role of environmental management in domestic enterprises, as well as develop recommendations for its more effective application.

Theoretical and methodological basis of research were works of domestic and foreign scholars on the Economics and theory of management, Economics of nature management and environmental protection, environmental management: V. N. Belkin, I. Y. Blazina, S. N. Bobylev, C., Hoffmann, A. A. Golub, V. K. Donchenko, M. Y. Lemeshev, E. M. Korotkova, O. P. Litovko, SV. Makarov, V. V. Marakova, A. L. Novoselov, N. In. Pakhomova, V. F. Protasov, V. M. Razumovskiy, E. A. Solovieva, N. D. Sorokin, SG Strumilin, T. S. Khachaturov, N. In. Chepurnykh, A. I. Chistobaev, L. B. Saharova, A. S. Shilova, Dyllick V., Fischer N., Freimann J., Gunther K., Hopfenbeck W., Hummel J., Kirchgeorg M., Matschke M, Pfriem R., Richter K., Rubelt J., Schreiner M, Seger U., Seidel E., Semi J. F., Siebert H., Steger U., Steinle C, Tischler K., Titze W., Ulrich P., Welford R., Wicke L., winter G., and Many others.

Organizational and economic bases of environmental management are described in the works of V. P. Anufriev, E. V. Girusov, T. V. Guseva, V. Deming, L. B. Zalessky, E. M. Korotkov, V. I. Morozov, G. S. Feraru, S. A. Fokin, and others.

In addition, the study uses the legislative acts of the Republic of Kazakhstan, regulatory and methodological materials of government bodies, European Union directives, and international agreements on environmental protection.

The information base of the study consists of materials of the International Commission on environment and development, the International organization for standardization, the President's Address to the people of Kazakhstan, reports Of the Committee on environmental protection, etc.

The scientific novelty of the monograph is primarily due to the author's comprehensive analysis of the environmental management model, its place and role in the national and international economy, its significance for the formation of environmentally friendly enterprise management. More specifically, the novelty of the work is as follows:

- based on the analysis of the processes of formation of production management systems that comprehensively take into account environmental issues in various countries of the world in recent years, the position on

environmental management is argued as one of the global trends that confirms the need to change traditional methods of enterprise management; environmental management is now a single-order category with such concepts as social market economy, greening of entrepreneurship, sustainable development, etc.;

- clarified and supplemented the theoretical concepts of the essence and content of environmental management, the introduction of which allowed to determine the problems (lack of economic interest, models, tools and methods of assessment), motivation and methodological approaches (complexity, dynamism, functionality) of its formation

- the results of the study of ecological and economic conditions prevailing in recent decades, provide additional arguments that allow to give a principled characterization of the model of integrated environmental management that provides a consistent implementation of the objectives of strengthening the market position of the company and reduce the harmful effects on the environment;

- the argument is based on the position that integrated EM, characterized by the inclusion of environmental protection actions in all stages of work with the product within the concept of the product life cycle, as well as the connection of General production management with the EM structure is able to reduce the company's environmental burden as much as possible;

- substantiates the position that the formation of environmental management corresponds to the overall macroeconomic and political situation in a particular country and its implementation largely depends on such factors as economic stability, development of ecobusiness and infrastructure of environmental services, the perfection of environmental legislation; the level of entrepreneurial culture and business ethics; environmental awareness of the population and the structure of its consumption, etc.

- identified the functions and tasks of the eco-marketing as part of integrated EM, having the task to promote the avoidance and reduction of the environmental load in the planning, coordination and control of all actions of the company aimed at the market, as well as environmental controlling, performing the function of an information system EM for the detection and prediction of environmental requirements and complaints about the company, along with the weak/bottlenecks in production activities.

- assessment of the development of environmentally acceptable enterprise management in Kazakhstan and formulated the main principles of such management, including: orientation to international standards; setting and justification of achievable environmental goals and principles of their achievement; formation of environmental policy; acceptance of a wide range

of voluntary environmental obligations to staff, investors, local governments, the public, the population; expanding the scope of environmental activity to include various areas and aspects of activities that are not directly related to the requirements of environmental legislation; combining the tasks of quality management of products and services with the tasks of environmental management; involving all personnel in active environmental activities, etc.

The practical scientific significance of the study consists in a detailed description of environmental management as one of the advanced systems at the micro level, which ensures the coordinated achievement of two main goals - the preservation and strengthening of the company's competitive position and the maximum possible reduction of the load on the environment. The main elements of the external environment of integrated environmental management are disclosed, without the formation of which it is impossible to effectively operate this model. The ways of integrating environmental management into the overall organizational structure of enterprise management are substantiated. Taking into account foreign experience, recommendations were developed for the rapid implementation of the IEM model, including forms and methods of environmental planning, the use of eco-marketing tools, etc.

The materials of the research can serve to develop and deepen the course of Economics of nature management and environmental protection; to comprehensively reflect environmental issues in the courses "enterprise Economics" and «fundamentals of management». This work can be used for preparing special courses: "corporate environmental management", "environmental marketing". The conclusions based on this work can be used to develop a model of integrated environmental management at enterprises, as well as in the activities of state organizations of environmental control and management.

1. THEORETICAL, METHODOLOGICAL AND CONCEPTUAL FOUNDATIONS OF ENVIRONMENTAL MANAGEMENT

1.1 The Nature and historical background of the environmental management system, its types and place in a multi-level management system

Environmental management is a type of special management; it is a part of the General management system that studies the basic principles and laws of management (organizational structure, management functions, management cycle, management strategy, planning, motivation, leadership, etc.).

Environmental management can be defined as a special management system aimed at preserving the quality of the environment, ensuring legal and regulatory environmental parameters and based on the concept of sustainable development of society. The practical implementation of the principles of sustainable development is largely determined by the organization and development of industrial and environmental management systems.

There is a distinction between ecologized management and environmental management. Ecologized management (Environmental Management) does not require a significant change in the existing technical and economic system. This is a kind of conservative environmental management or the first stage of an enterprise's readiness to solve environmental safety problems.

Ecologized management is a system of economic management of an object by adapting the existing infrastructure to the requirements of national and international standards, acts, rules in the field of resource conservation and environmental management [1].

Basic principles of ecologized management: – development of environmental policy taking into account existing technologies; - making environmentally-oriented decisions; - organization of environmental control over all stages of the technological process and environmental monitoring in the area of the enterprise location.

Main tasks: - saving raw materials; - minimization of waste and environmental pollution; – organization of safe work of personnel; - environmental risk assessment; - allocation of funds to create a "green" image of the company; - informing the public about the nature of the enterprise's production activities and the state of the environment in the area of operation of the enterprise.

Environmental Management is a more advanced management

system. In relation to the enterprise, it provides for the formation of an environmentally safe industrial and territorial complex, provides an optimal ratio between environmental and economic indicators throughout the entire life cycle of both this complex and its products. Basic principles of environmental management: - consideration of environmental features; - timely solution of the problem; - responsibility for environmental consequences arising from management decisions at any level; - priority of solving environmental problems.

Main tasks of environmental management:

- organization of environmentally friendly production processes;
- ensuring environmental compatibility of all production facilities;
- prevention of negative anthropogenic impact on nature in the process of production, consumption and utilization of manufactured products;
- getting the maximum result with minimal damage to the environment;
- turning environmental constraints into new opportunities for growth in production activities;
- updating products based on demand and creating a "green" image of the company in the eyes of the public;
- creation and implementation of low-waste technologies; - promoting environmental initiatives that reduce costs or increase revenue [2].

The subject of environmental management is: environmental Economics, organizational structure, environmental marketing, environmental policy, information, environmental and corporate culture, motivation, interaction with the public and other components of the management system. The principles of sustainable development should be included in the environmental strategy of enterprise development and state environmental policy for the long term.

Researchers identify the following principles:

1. The Benefit from an environmentally significant economic activity should not be less than the damage caused by it.
2. Environmental costs and benefits must have a cost.
3. Damage To the environment should be as minimal as can reasonably be achieved taking into account economic and social factors.
4. Prevention of irreversible processes.
5. Limiting the use of renewable goods to the level of ensuring their sustainability or accounting for costs;

Environmental management should be based on the principles of eco-efficiency and eco-fairness. The principles of eco-justice should be

manifested in the awareness of the company's management of moral responsibility for the negative impact on the environment and the irrational use of natural resources.

We will briefly provide historical information and describe the key stages of the development of environmental management.

The analysis of human interaction with nature allows us to distinguish four periods, different in time and strength of the impact of people on nature. Currently, there is a transition to the fifth period.

The first period is the era of primitive culture of the stone age and primitive communal way of life. This is the longest period of human interaction with nature, which has led to subtle changes in it.

The second period—from the beginning of land use, i.e. from the VIII-VII centuries BC to the formation of industrial production in the XV century ad. This is the period of slaveholding and feudal society, the period of active development of cattle breeding and agriculture. Land irrigation. Use of underground water. The use of wood as the main energy source and building material reduces the area of woodlands. For example, the construction of the "invincible Armada" in Spain led to deforestation.

The third period spans from the sixteenth to the nineteenth centuries. This is the time of formation and development of capitalism, private enterprise, and concentration of productive forces. But this is also a period of aggressive wars that led to the division of the world. Active development of mineral resources, development of mining, metallurgy, coal mining has led to a violation of the geochemical balance of the biosphere. Only in the XIX century, according to V. I. Vernadsky, processing of rock mass amounted to at least 50 billion tons, which exceeds the annual removal of solid material from the continent to the ocean by all river systems in the world.

Expansion and improvement of production, its concentration in industrial areas. Intensive process of urbanization. The use of coal as a fuel and the lack of cleaning systems has led to rapid pollution of the air basin, river systems, and sometimes to the degradation of soil cover (mining areas of great Britain, Central Europe, the southern Urals, and the United States of America).

The fourth period is the period of social revolutions, the period of imperialism. Organization of large-scale industrial production, increasing their harmful impact on the environment. There is a real danger of depletion of not only non-renewable, but also renewable natural resources. Huge growth rates of oil and gas production. When developing oil fields, there is a tendency to leave pollution in the countries that supply raw materials. Intensity of mining operations and, as a result, technogenic transformation of

landscapes [3].

Creation of large reservoirs, which led to changes in the ground water level and disruption of the water-salt balance of the surrounding territories. Increasing the intensity of geological impacts, changing their quality.

Human geochemical impact is determined by three factors:

1. Synthesis of more than 1 million chemicals that were absent in natural conditions and have qualities that are not characteristic of natural compounds.
2. Construction of a wide network of gas and oil pipelines, power lines, main roads, mass transportation of various raw materials – all this has led to pollution of the atmosphere, lithosphere and hydrosphere.
3. Mass production and use of fertilizers, pesticides, herbicides, the negative side effects of which were revealed after a long time from the beginning of their use.

The creation of powerful thermal power plants led to the emergence of new thermal pollution of the hydrosphere and atmosphere, which caused degradation and depletion of fish stocks, overgrowth of reservoirs, etc. The development of transport and various radio engineering devices has led to an increase in the overall level of noise, vibration, and electromagnetic radiation.

Environmental degradation and the risk of depletion of non-renewable and renewable resources have attracted the attention of many scientists, politicians and the public to the problem of environmental pollution.

The English scientist L. J. Smith. Botton wrote: "There are two possible options: either people will make the air less smoke, or the smoke will make the Ground less people."

In 1983 The UN created the world Commission on environment and development, whose report for 1987 noted that if humanity does not change much in its production activities and lifestyle, it will face unusually severe tests and a sharp deterioration of the environment.

In June 1992, the United Nations conference on environment and development was held in Rio de Janeiro. Representatives of 179 States adopted the historic document "Agenda 21" - a kind of environmental program for the new century, aimed at achieving a high quality environment and a healthy economy for all peoples of the world: "Humanity can make development sustainable – to ensure that it meets the needs of the present, without compromising the ability of future generations to meet their needs." Environmental requirements change a lot in approaches to the economy and social development, to state regulation, to management at all levels.

Environmental requirements change a lot in approaches to the economy and social development, to state regulation, to management at all levels.

The emergence of a management system and environmental management should be analyzed on the basis of the main historical stages of the formation and development of world market relations (table 1) [4].

Modern industrial environmental management is primarily aimed at compliance with mandatory state requirements in the field of the environment and the use of natural resources. There is an obvious need to develop and adopt international standards for environmental management.

In the 70s of the twentieth century, the end-of-pipe strategy ("at the end of the pipe") was adopted as the main strategic direction of environmental protection, when pollution coming out of the pipe was measured. This principle was found to be incorrect.

The next direction of environmental protection was chosen at an International conference in 1978 in Geneva: the need for technical re-equipment based on resource-saving and low-waste technologies. These are high-cost mechanisms that require a large amount of financial investment. The search for methods to reduce the cost of implementing such technologies has led to the emergence of investment environmental management.

Table 1
Main stages of environmental management development in the context of the world market economy

№ п/п	Main stages	Description of the stages
1	The era of free competition	"Pure capitalism" based on free competition. The era of classical bourgeois political economy theorists in the XVII-XIX centuries (A. Smith, D. Riccardo, etc.). Restrictive factors of free competition-dictatorships, wars, social pressure of certain segments of society, etc.
2	The era of mass production	The predominance of the production phase in the system of economic relations. The decisive factor in winning the competition is the reduction of production costs. Mass production of cheap products (G. Ford, etc.).

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		Development of firms and corporations. 20-90 years of the XIX century.
3	The era of sales	In 30-50 years. The twentieth century – an active struggle for the consumer. Mastering the techniques of state stimulation of demand, encouraging investment activity, and curbing unemployment. There is a tendency to shift attention from the production phase to the sales phase (General motors, etc.). Search for new consumers, market niches
4	Post-industrial era	From the 50s of the XX century to the end of the XX century-the era of active change in the production of technologies. Moving competition in the market to the area of corporate investment strategies. A sharp increase in the role of science and new technologies. Assessment of the impact of production on the environment. The concept of strategic management, including new environmental and natural resource requirements
5	The age of the information society	With the end of the twentieth century the massing of information on all aspects of human life and society. Information resources, technologies, information-a commodity in the modern economy. In this era it is possible to distinguish five phases of the expanded reproduction of information. Informatization of the market and management. Virtual capital, virtual Finance. Environmental management - as an environmentally safe management of modern production in the conditions of various forms of ownership and various sectors of the economy
<p>Note-source: Makarov S. V., Ivanova T. A., Alexandrova E. V. Assessment of the effectiveness of enterprises in the field of environmental management and management.//Ecology and industry of Russia. - 2012. - №8. - P. 25-30.</p>		

In 1992, the UK introduced the national standard BS-7750 (British standard of environmental management system) – the first European standard for environmental management, which was used in other European countries (Sweden, Norway, etc.) as a national standard. This standard was used as the

basis for the development of Guidelines (rules) European Community (EU) on environmental management and environmental audit. These rules, adopted by the EEC Council in 1993 (EMAS), were a system of state regulation of environmental protection processes.

Management systems created in accordance with EMAS rules contain specific requirements for the technologies used. The most important thing in these rules is the requirement to constantly improve environmental protection measures, to widely inform the world community and all interested parties about the activities of the enterprise, its products, environmental protection measures, and to publish annual publications about the activities of the enterprise [5]. A forum held in Rio de Janeiro in 1992 decided to develop new international standards in the field of environmentally oriented management [6]. The ISO 14000 system of standards is based on the BS 7750 standard, as well as the ISO 9000 product quality system standard. Unlike many other environmental standards, it is not focused on quantitative parameters (volume of emissions, concentration of substances, etc.) and not on technologies (the requirement to use or not use certain

The ISO 14000 system of standards covers several areas (figure 3.1):

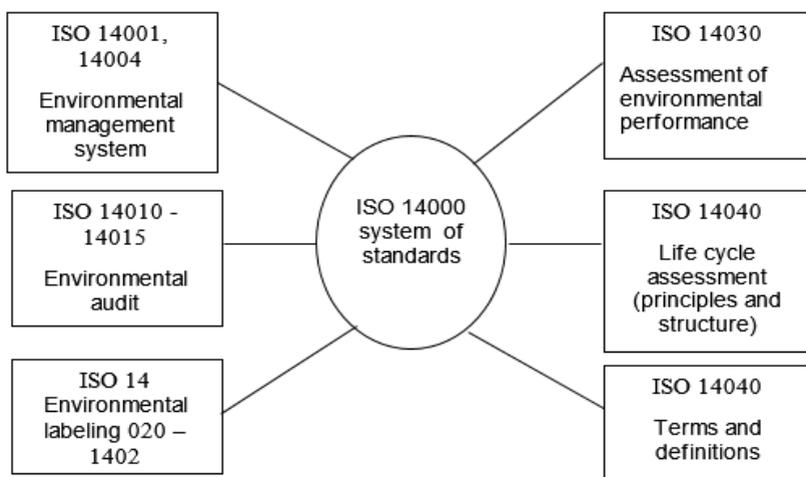


Figure 1. ISO 14000 system of standards

Typical provisions of these standards are that certain procedures must be introduced and followed in the organization, relevant documents must be prepared, and a person responsible for a certain area must be

appointed. The main document of the series – ISO 14001-does not contain any "absolute" requirements for the organization's impact on the environment, except that the organization must declare its desire to meet national standards in a special document. This nature of standards is due, on the one hand, to the fact that ISO 14000 as international standards should not intrude into the scope of national regulations. On the other hand, the predecessor of ISO is "organizational" approaches to product quality (for example, the concept of "global quality management" – total quality management), according to which the key to achieving quality is to build an appropriate organizational structure and share responsibility for product quality.

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An organization can use ISO 14000 standards for internal needs, such as the EMS model or the internal audit format of an environmental management system. It is assumed that the creation of such a system gives an organization an effective tool with which it can manage the totality of its environmental impacts and bring its activities in line with various requirements. The standards can also be used for external needs to demonstrate to customers and the public that the environmental management system meets modern requirements. Finally, an organization can obtain formal certification from a third (independent) party. As can be assumed from the experience of ISO 9000 standards, it is the desire to obtain formal registration that is likely to be the driving force behind the implementation of environmental management systems that comply with the standard.

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Preparation for environmental certification, as well as for certification of quality systems, is much more efficient and cheaper to carry out by the company itself. Holders of the auditor's certificate can participate in audits for certification of Russian enterprises for the international ISO 14000 certificates, which are currently conducted exclusively by foreign certification bodies (since Russia has not yet been accepted into IQNet) and are therefore very expensive.

IQNet is an international network of certification bodies. Its members-organizations that certify enterprises for compliance of their quality management systems with international standards ISO 9000 or 14000, issue a single international certificate with the IQNet logo.

Along with IQNet, there is the IAF, an international network of national accreditation bodies that accredit certification bodies in their countries. Certificates for quality systems issued by certification bodies accredited by national accreditation bodies that are members of the IAF are all different, but there is an agreement between IAF members on mutual recognition of these certificates.

Having our own auditors with recognized IQNet documents will allow the company to save not only a lot of money, but also time, which is no less important factor in the fight for export markets [1].

The situation in the CIS countries. Obtaining certification in the ISO 14000 system may be necessary for companies operating or planning to sell products on foreign markets. Since the national certification infrastructure is currently at an early stage of development, such enterprises tend to invite foreign auditors. In addition to the high cost of services provided, foreign auditors are often unfamiliar with the requirements of domestic environmental legislation.

Therefore in the near future it seems appropriate to take the following steps:

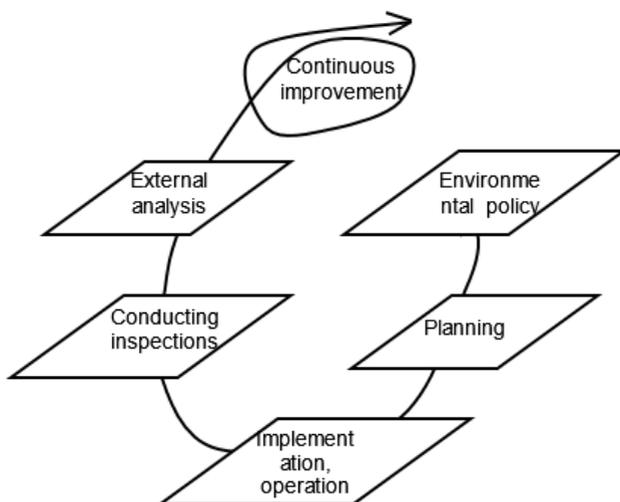
- popularization of ISO 14000, including through the publication of the Russian-language text of the standards;

- popularization of the basic principles of environmental audit of industrial enterprises;
- training of professional auditors;
- development of the regulatory framework for environmental audit;
- implementation of a national system of environmental certification and labeling of products, and as a first step – official recognition of certain systems of environmental labeling of imported products.

Certification of enterprise quality management systems for compliance with international standards ISO 9000 or 14000, especially those related to the defense, chemical, petrochemical, engineering and food industries, has now become a prerequisite for exporting products, participating in joint projects with foreign partners, and receiving government orders.

Currently, the Customs Union has a system of state Standards that regulate the implementation and operation of the environmental management system – GOST R ISO 14000, which prescribes all the principles of environmental management. For example, GOST R ISO 14001 provides guidance on the use of environmental management systems; GOST R ISO 14004 is a General guide to the principles, systems and methods of environmental management systems; using GOST R ISO 14014, you can determine the "initial level" of environmental performance of an enterprise; GOST R ISO 14010, 14011, 14012 give an idea of environmental audit and recommendations for its conduct; GOST R ISO 14020 describes the principles of environmental labeling of products, and GOST R ISO 14040 provides a methodology for evaluating its "life cycle".

This system, in contrast to most environmental standards, is not aimed at quantitative indicators or changes in production technology (although it does not exclude them), but at the management potential of the organization. According to the standard [2], the result of implementing an environmental management system is consistent improvement (Fig. 2), i.e. a development process aimed at achieving the best performance in all environmental aspects of the enterprise, where it is practically achievable in accordance with its environmental policy.



Having studied the historical and essential characteristics of the environmental management system, we will consider the main "green" trends in the state policy of the leading developed countries and Kazakhstan, which ultimately determine the main directions of environmental management at the enterprise level.

1.2 Foreign Experience of State Policy in the Field of Environmental Management: Principles of "Green" Economy.

In 2020, the UK plans to reduce greenhouse gas emissions by 34% compared to 1990 levels in accordance with its obligations under the Kyoto Protocol. The level of harmful emissions in the UK is reduced by 22% compared to 1990. The authorities confirmed their commitment to achieve an 80% reduction in harmful emissions by 2050. Meanwhile, the government recognizes that the forced transition to renewable energy will make this type of energy more expensive for the population – in 2020, electricity bills increase by about 6%.

The development of energy-saving technologies is also achieved by implementing various schemes (Green Landlord Scheme, Feed-In Tariffs, Warm Front scheme). The essence of these schemes is to encourage medium and small enterprises, as well as individual households, to introduce energy-saving technologies and install energy elements on renewable (alternative)

fuel sources. Currently, individuals and companies that independently produce electricity from RES can sell their surplus to national distribution networks. Thus, they become suppliers of electricity from consumers.

Since 2012, a green investment Bank started operating in Britain, which will provide loans to companies for the development of green projects. This Bank created on the principle of public-private partnership.

In the world, Germany has a strong reputation as one of the leaders in the global green technology market. German companies account for 23% of all environmental technologies patented in the world and more than 30% in solar and wind energy. About 2 million people, or 4.5% of the total economically active population, work at German enterprises working in the green sector – areas that are somehow related to the protection of the environment and climate (energy, transport, recycling and recycling of garbage, etc.). This indicator has a constant growth trend.

Germany's demand for energy resources from its own sources is only sufficiently met by brown coal. Germany imports 100% of the uranium needed for nuclear power plants, 67% of the consumed coal, 82% of gas, and 97% of oil. Thus, for the main types of energy carriers – oil and gas, the share of which in the country's energy balance exceeds 56%, Germany is almost 90% dependent on supplies from abroad. The German leadership is particularly concerned about the high degree of dependence on Russia (14% for coal, 40% for oil, 36% for gas).

The introduction of green technologies in the energy sector is accompanied by active propaganda activities that cover almost the entire population of the country. Classes on alternative energy with an explanation of its importance for the economy and ecology, types and principles of operation of devices powered by renewable energy are organized in kindergartens, schools and Universities. The topic of renewable energy does not leave TV screens and occupies an important place in public political discussions and speeches of the country's leadership. On the websites of almost all government agencies (from Federal and land ministries to municipal councils), you can find statistics on the development of alternative energy in the country and region, its legal framework and forms of support (financial and consulting).

At present, 21 thousand wind power plants operating on land provide more than 10 million households in Germany with electricity, and avoid 30.2 million tons of emissions into the atmosphere. It is assumed that by 2030, wind farms in the North and Baltic seas will produce 25 GW of electricity, which is equivalent to the annual capacity of 20 nuclear power plants. To increase the capacity of wind power plants in coastal waters to 25 GW, it is

necessary to invest about 75 billion rubles. euro. To speed up this process, the procedure for registering investment projects is being simplified. Within a few years, investors will also be spared from paying for the transit of clean energy through power lines. The Federal government supports the construction of 10 wind farms in coastal areas. For this purpose, in 2011 the state Bank KfW opened a preferential credit line in the amount of 5 billion rubles. euro.

With regard to the development of wind power installations on land, the Federal government is guided by the principle of "less but better": in 2020, it is planned to replace 20,000 wind turbines with an average capacity of 1.2 MW, with 19 thousand installations with a capacity of 2.4 MW. The concept attaches great importance to the development of bio - and solar energy. According to some estimates, only the "Desertec Industrial Initiative" project, which involves the construction of giant solar power plants in Africa and the middle East, is able to meet 15% of electricity needs by 2050. The project is estimated at 400 billion rubles. euro. Its participants include the companies "Siemens", "E. ON", "RWE", "Deutsche Bank AG".

Germany aims to become a leader in the implementation of clean technologies in transport – the development and creation of electric vehicles. It is expected that in the near future, 17 billion rubles will be invested in research and development in this area. euro. The electric car industry will create an additional 30 thousand jobs. The state program of incentives for electric vehicles includes various financial incentives for consumers, provided that they use hybrid passenger cars with an internal combustion engine and an electric motor, electric vehicles in their pure form, as well as electric motorcycles and mopeds.

Starting in 2017, mass production of electric vehicles will begin and filling stations in Germany will be equipped with installations for recharging electric vehicle batteries. It is expected that by 2030, 6 million electric vehicles will travel on German roads.

The tragic events in Japan forced the Federal government to reconsider the role of nuclear power plants, strengthening Germany's view of the need to completely abandon the use of peaceful nuclear energy as soon as possible. On June 3, 2011, the Cabinet of Ministers and heads of government of the Federal States of Germany approved a plan to completely abandon nuclear power. The deadline for disconnecting the last operating German nuclear power plant is the end of 2022. In parallel with the decision to abandon nuclear power plants in Germany adopted a package of laws and orders concerning changes in energy policy in Germany, which complement and develop the energy concept of an expedited transition to renewable

energy, construction and development of new power plants and electromagnetically saving energy.

Germany is a world leader in terms of waste processing and use as recyclable materials. Currently, according to the Federal Ministry for the environment, nature protection and nuclear reactor safety, the German waste management industry is an area with an annual turnover of over 50 billion euros. The industry employs more than 240 thousand people. Its significance, role and prospects are also evidenced by the fact that in many higher educational institutions of Germany, waste disposal is allocated as a specialty with the assignment of professional qualifications based on the results of training.

Thanks to the systematic introduction of efficient waste processing and recycling technologies Germany successfully solves three tasks: - saving raw materials (replacing primary resources with secondary ones) 66% of all produced waste is recycled and used for new production, including 89% of paper waste, 90% of glass, 72% of metal, 67% of plastic, 99% of batteries and accumulators.

Thanks to the introduction of recycling technologies, Germany solves not only the problem of providing raw materials, but also actively reduces the burden on the environment. By phasing out the disposal of untreated household waste, harmful emissions to the atmosphere in Germany have been reduced by 58 million tons of CO₂ equivalent. In 1990, the level of waste resulted in emissions in the amount of 38 million tonnes (the waste), then the annual "saving" of CO₂ not entering the atmosphere thanks to the efficient waste management system is 18 million tons. This is equivalent to the annual exhaust produced by 7.7 million cars (almost 20% of German passenger transport).

The waste management system in Germany is neutral from the point of view of harm to the atmosphere and helps other industries (chemical industry, etc.) to reduce the harmful impact on the environment. According to forecasts, the spread of recycling technologies, increasing energy efficiency in the production and use of electric current and heat in incineration plants and thermal power stations will increase the annual volume of "savings" of greenhouse emissions by another 10 million tons of CO₂-equivalent compared to their current level in 2020.

The main energy effect is achieved during the thermal utilization of waste and waste mixtures (surrogate fuel) in industrial furnaces. Industrial combustion of surrogate fuel in Germany is widely practiced in the cement industry, iron and steel production, and power plants. There are more than 70 incineration complexes with a total capacity of 18 million tons (not counting

thermal power plants, industrial furnaces that burn waste of their own production). According to the company "E. ON Energy from Waste AG", which is the market leader in the energy use of waste by incineration and has a network of incinerators with a total capacity of 4 million tons, 1 ton of waste provides 600 kW/h of electricity. Individual complexes of the company, depending on the capacity, provide electricity to localities ranging in size from 10 thousand to 115 thousand households.

According to the World Bank, over the past ten years, the cost of environmental degradation in China annually amounted to 8 to 12% of GDP. The decision to take measures to transition to a green economy was made by the Chinese leadership in 2007. Chinese President Hu Jintao called the environmental situation one of the main threats to national security. The introduction of a green economy is an integral part of the plan to create a resource-saving and environment-friendly society. It was decided to take a course to increase the share of green GDP.

Creating an ecological culture through the introduction of energy-efficient and eco-friendly production structures, forms of growth and consumption patterns is also one of the requirements of the Chinese leadership, put forward as part of the tasks of fully building a middle-income society. The necessity of practical implementation of the system of responsibility for saving energy resources and reducing emissions, development and dissemination of advanced and practically applicable technologies for resource economy, resource substitution and recycling of resources. Along with improving the regulatory framework, significant financial support is planned for the implementation of plans to create a green economy.

It is also planned to support companies that build waste disposal plants by allocating significant fi

Today, the Chinese biogas complex is developing with the direct support of the state. A large-scale project designed to increase the number of families using biogas. Within the framework of the Program, about 4,000 large biogas stations were built; operating on the basis of waste from livestock farms, and the share of agricultural enterprises using biogas technologies has increased to 52%. More than 31 million Chinese families use biogas plants, and this figure continues to grow, increasing by several million annually. The total production of biogas is 10.2 billion cubic meters per year (equivalent to 13.5 million tons of conventional fuel), which puts China in first place in the world in this indicator.

The Chinese authorities consider biogas as a significant source of electricity for rural areas. By the end of the seven-year plan, the total capacity

of cogeneration plants was 5.5 GW, and by 2030 it is planned to increase to 30 GW, which will fully provide villagers with electricity and heat of their own production.

The government plans to enter the first place in the world in terms of sales of hybrid and electric vehicles. In 2020, their projected output will be 15 million cars, which in turn is confirmed by the plans of the world's leading automakers.

The key direction in the process of long-term strategic development of the Republic of Korea is the green growth policy announced by the President in 2008, aimed at forming an integrated system of economic development without a noticeable impact on the environment

It is expected that the implementation of this policy will become one of the important engines for the growth of the South Korean economy and ensure the necessary level of competitiveness in the world market for all sectors of the country's economy. One of these areas is the program of "Green growth" - economic development without harm to the environment. Its goal is to place Korea in the top seven green growth countries in 2020, and in the top five by 2050. Thus, green growth is a strategic direction of the country's development. The new deal also aims to ensure that the development of green technologies is accompanied by the creation of jobs.

The strategic directions of the Program include work to counter climate change, search for new "engines" of economic growth through renewable energy, improving the quality of life of the population and the status of the country as a whole. According to the government's calculations, its implementation will create a total of about 1 million new jobs.

Green course objectives:

1. Conservation (environmentally friendly cars, providing clean energy, expanding recycling);
2. Improving the quality of life (creating an environmentally friendly environment, homes, schools and offices);
3. Protection of the earth (the restoration of four major rivers, securing water resources, forest biomass);
4. Preparing for the future (information infrastructure for an environmentally friendly green country, ecological transport networks). The new green course focuses on the following areas: - conservation and recycling of energy and the development of clean energy to build an energy-efficient economy;

Currently being reviewed 9 major, and 27 related projects "new green deal" of economic development. The main projects include optimizing the use and recycling of natural resources, developing clean energy and

saving energy resources, and building environmentally friendly green homes, schools, and office buildings. Much attention is also paid to the implementation of projects to clean up and improve the condition of rivers and lakes, which are aimed at creating a convenient and favorable environment for human life, improving the quality of life of the population and increasing tourist resources.

Large funds are allocated for the development and development of environmentally friendly information infrastructure and green information technologies, as well as for improving the efficiency of energy resources use. In particular, a project has been launched to improve the condition of four rivers, which includes strengthening dams, restoring the ecosystems of waterways, reviving domestic consumption, and creating jobs. The new green deal is a complement to the implementation of incentive plans characterized by deregulation, tax cuts and reform of state organizations. The government also identified 21 industries that should become a kind of "growth engines of the national economy. According to preliminary estimates, revenues from the sale of products from priority industries should more than triple over the next ten years, amounting to at least \$ 600 billion. 21 industries are divided into three groups: environmentally friendly.

The group of environmentally friendly technologies includes six industries, including alternative and renewable energy sources, low-carbon energy, efficient use of water resources, the widespread introduction of energy-saving lighting sources, including LEDs, the development of energy-saving and environmentally friendly transport systems, and the construction of environmentally friendly cities that are as livable as possible. The high-tech group includes six areas: connecting broadcast and telecommunications technologies, developing information technologies, robotics, nanotechnology, production of new materials, biopharmaceutical and medical technologies, as well as environmentally friendly food production. High-performance services include the creation of quality health systems, education, financial institutions, Internet services and software, as well as a network of recreation and tourism facilities. Development program of 21 «locomotives of growth»

An important element of South Korea's green policy is its accession to the UN framework Convention on climate change. In this regard, the law on reducing carbon emissions and green growth came into force. The document provides for a reduction in carbon dioxide emissions in 2020 to 4% from the level of 2005. The amount of emissions that are planned to be reduced is equivalent to 30% of the emissions projected in 2020. The creation of environmentally friendly transport is also an important element of the

green growth policy. Korea is preparing for the era of electric vehicles. At the beginning of this year, the government identified manufacturers and suppliers of environmentally friendly transport, as well as provided tax incentives for buyers of electric vehicles. By the end of 2011, more than 800 electric vehicles will be operating in the country and a network of more than 200 stations for charging electric vehicles were created throughout the country (in 2020, their number will be increased to 1 million). The Republic of Korea is at the forefront of a worldwide movement to completely replace existing vehicles with environmentally friendly ones. Based on the main trends in the development of the global transport industry, the government understands that electric cars belong to the future, and sooner or later most car factories will be reoriented to their production.

The government encourages public participation in solving environmental problems. In this regard, the Ministry of ecology is working to attract the population to participate in environmental programs. One of the new methods attracting interest is the introduction of green cards. This is a system for encouraging individual families and companies that save energy. They are awarded special points, which can then be exchanged for cash or gift certificates. The population will be able to receive benefits for using public transport, purchasing eco-friendly goods, and other assistance in protecting the environment in everyday life.

Netherlands. Making progress on environmental issues has required significant technological, economic, socio-cultural and institutional changes in the Netherlands, clear formulation of innovative goals, and the use of interlinked policy instruments. In this regard, the Ministry of ecology, together with the national Institute of health and environment, has developed the following special management models that make it possible to make complex decisions taking into account all the complexities and problems of the environment: - eight General topics that cover all environmental issues: acidification, eutrophication, depletion of groundwater resources, dispersion of uncontrolled hazardous substances, waste, waste management, harm from increased noise and gas pollution, global climate change; - five geographical scales, including local, regional, riverine, continental, and global; - six target business groups with many subgroups.

At the same time, to reduce the risks of chemical emissions, the government and the business community are entering into step-by-step agreements that divide all chemicals into categories in 2020, depending on the risk, the possibility of using their less harmful alternatives, the openness of chemical data, etc. If substances cannot be classified, their use may be restricted or prohibited. For agriculture, the government has set strict

minimum environmental quality standards to encourage innovation. Given that in many cases local authorities were more objective in assessing the concrete steps that needed to be taken to improve the quality of the environment, municipalities are given greater freedom to implement regional environmental plans.

To support the transition to a green economy, the use of market-oriented tools, also called green taxes, has been initiated. Initially, the introduction of green taxes was intended to encourage other approaches to the environment, rather than to raise funds for spending to protect the environment. Therefore, today the income from green taxation is transferred to the General budget, and environmental policy measures are financed from it.

Green taxes in the Netherlands include: - fuel green tax. Fuel was chosen as the object of taxation for the implementation of the "pollute-pay" principle. This tax is paid by parties that extract, produce, import and use coal as fuel or transfer it to others for use as fuel for heating homes. Since 2004, the fuel green tax has only been applied to coal. Other types of energy carriers are subject to energy tax and excise taxes on refined products;

- energy green tax. The main purpose of this tax is to further encourage energy saving among small consumers (households, food companies, small shops, schools), with whom it is extremely difficult or impossible to conclude long-term agreements. The energy green tax applies to the use of natural gas, petroleum products used as gas substitutes, and electricity. The collected tax is returned to taxpayers by reducing direct taxes, which corresponds to the government's policy of shifting the tax burden from taxation of labor and capital to taxation of environmental attitudes. Part of the energy tax is also used to promote energy saving among households and businesses. The energy green tax is the cornerstone of a multi-pronged policy designed for small-scale energy consumers.

- water green tax. The main purpose of this tax is to promote the conservation of water resources and obtain funds for the restructuring and greening of the tax system. The tax is levied on drinking water suppliers, who can then pass the tax on to consumers. The exception is the supply of water for emergencies (for fire hydrants, fire extinguishing installations, etc.);

- green tax on ground water. The goal of water use policy is to reduce the use of cheap ground water for drinking purposes compared to more expensive surface water. The tax reduces the difference in price between the two types of drinking water, preserves ground water for the future, and mitigates the adverse effects of groundwater extraction on ecosystems. The payers of this tax are farmers, as well as industries that use water for irrigation

of agricultural crops and other production processes. Companies that supply drinking water include the cost of the tax in the total cost of water for consumers;

- green waste tax. This tax is levied on waste delivered to landfills and incineration plants. Despite the fact that the cost of landfill disposal is significantly lower than that of incineration, the use of landfills is considered a less desirable method of disposal. The waste tax raises the cost of landfill services to the level of incinerator services and, moreover, encourages the use of other more preferable alternatives, such as recycling. The tax is levied on the owner of the waste disposal company, but then the tax is transferred to the waste suppliers. In the case of citizens, municipalities compensate for increased recycling costs by increasing local rates for waste collection. Organic waste is collected separately for composting and is not taxed.

The country increased energy efficiency and reducing the energy intensity of GDP by 40 by 2020%; - increased the share of RES from 0.5% currently to 4.5% by 2020. Reduce emissions by 40% 2020; - increased in environmental protection expenditures from 0.89% of GDP in 2010 to 1.5% in 2020 and 1.75% in 2030.

The green industry in Japan is a world leader in the production of the following environmental products and equipment: hybrid cars, nuclear, thermal and alternative energy, railway transport, municipal systems (wastewater treatment and recycling of household waste), building materials. In the near future, Japan hopes to enter the world market with its technologies in the field of electric vehicles and energy production from biomass. Now these developments are receiving increased attention. Ten years ago, such intensive development was observed in the production of hybrid cars and solar energy, Japanese companies have made a number of breakthroughs in the development of relevant technologies, so now they are being refined and improved. Japan is one of the world leaders in the field of solid waste recycling and recycling. Until the early 90-ies of the last century, the main form of processing was incineration.

Japan has made progress in organizing the collection of sorted garbage. Less than 24 years have passed since the adoption of the law on mandatory sorting of garbage, and the population of the country has long and fully accepted and strictly complies with all its requirements. At the same time, the country's authorities did not rely only on the awareness of citizens and imposed strict penalties against violators of environmental legislation. Since these violations directly affect the health of the country's citizens and the state of the environment, ignoring the rules for waste disposal is punishable by both large fines and imprisonment. With regard to taxation and

the use of financial instruments in environmental regulation, it should be noted that Japan does not have a single environmental tax for all business entities. Previously, the country had a principle according to which the financing of environmental activities.

Currently, the main mechanism for regulating emissions is strict environmental standards that oblige manufacturers to use modern filtration technologies, process industrial waste and secondary raw materials. Today, up to 20% of private investment in the country is carried out in cleaning and other equipment used for environmental purposes. Such investments can be considered as a kind of environmental tax, since without them it becomes impossible to continue functioning of the enterprise. There is a system of tax incentives for companies that purchase processing and filtering equipment. In the coming years, the Japanese government does not rule out the introduction of green taxes in accordance with the global trend. These funds are planned to be used for further improvement of the waste collection and processing system. Oil and gas imports form the basis of the country's fuel balance. This gave a significant boost to the development of non-traditional.

Since 2005, the development Bank of Japan has been launched a program of preferential loans for small companies and households aimed at encouraging the purchase of household solar panels, water heaters and energy-saving equipment. The credit system involves the development Bank, the Ministry of economy, trade and industry, and electricity suppliers in such a way that the end user does not incur additional utility costs after purchasing this equipment. Loan payments are included in monthly bills that do not increase expenses due to reduced energy consumption. Often, they are even reduced by 10-15 us dollars, which serves as an additional incentive. The service life of such equipment usually coincides with the time of repayment of the loan (10-12 years), after which it is assumed to replace it with more advanced samples. Since the mentioned Bank is a state-owned organization, the system created is actually a state-owned Bank.

According to public opinion research, neither large energy consumers nor households are willing to purchase part of the energy at high tariffs, while the government spends a significant amount on purchasing quotas for greenhouse gas emissions abroad. The opposite opinion is held by companies that generate energy from renewable energy sources, and individuals who have installed the appropriate equipment at home, which are still not many. Therefore, the main task of the Japanese government in the coming years is to popularize these energy sources. Working in the ideological direction can be even more difficult than finding financial resources for these purposes. For this reason, almost all state institutions issue

appropriate stands informing about the work of a particular body in the field of green energy and energy conservation. Solar panels and wind generators are installed on the roofs of administrative buildings, and television sets are installed in the foyer of these buildings.

In Tokyo, more than half of the energy from non-traditional sources is generated by burning fuel pellets obtained during the processing of incinerated household waste. In almost every district of the metropolis, you can see waste-processing enterprises equipped in accordance with all environmental standards. The electricity generated by them does not exceed the cost of traditional sources. This gives the Tokyo authorities a reason to be optimistic about the development of this direction, since now the potential for incineration is used by about 30%. Among other energy sources in the city Tokyo the most promising is solar energy (30% RES). Equipping private households and office buildings with appropriate equipment is one of the main tasks of the mayor's office. Leading Tokyo companies are engaged in technology development. For example, "Asahi Glass Company" is developing a special transparent coating for building facades that will allow the use of solar energy

1.3 The Main prerequisites and practices of environmental management of modern transnational corporations

The cause of the global environmental crisis is human economic activity, which has found its most extensive embodiment in the activities of transnational corporations (TNCs). However, TNCs also have the technological, financial and human resources to address many environmental issues. Under the influence of stricter environmental regulations, as well as the requirements of consumers and business partners around the world, TNCs are gradually "greening" their activities. In addition, environmental practices are becoming a tool for international companies to compete in global markets. The fact is that in economic theory and practice, it is widely believed that the solution of environmental problems should be undertaken by States and international governmental organizations. However, in most countries, governments do not have the necessary financial, scientific, technical and human resources.

In 1990–2003, under the influence of the requirements of the authorities, consumers, creditors and the business environment in General, companies significantly "greened" their practices. Moreover, greening the activities of companies, including the international activities of TNCs, is now becoming a new serious factor in the competitiveness of goods, companies

and States. This process is linked to the gradual decline in the role and potential of many other factors of competitiveness, in particular, the narrowing field of price competition. "Greening" of management methods allows companies to reduce environmental risks and reduce costs in the conditions of strict state regulation of environmental pollution, as well as save the resources they use, including non-renewable ones, and make their business more attractive to investors. The environmentally responsible approach adopted by a significant number of Western companies contributes to, rather than hinders.

As a result, TNCs are gradually becoming subjects of "greening" the world economy. And in situations where States and intergovernmental organizations are not able to solve environmental problems, the public and environmentalists can in some cases attract business resources for these purposes. However, the destruction of the environment, even in developed countries, has only been halted, but not stopped. In contrast to developed countries, where the "greening" of companies' activities has produced significant positive results, in developing countries and countries with economies in transition, including Kazakhstan, the transition to green management methods is much slower. This is due to the lack of development of appropriate methods of regulating the economy, as well as its industrial (and not post-industrial, as in developed countries) structure. The role of TNCs operating in these countries is twofold.

For Kazakhstan, the role of the environmental factor in the activities of TNCs is of great interest for three reasons. First, Kazakhstan has become an object of expansion of many TNCs that have a negative impact on the environment. Secondly, in the context of imperfect domestic environmental standards and insufficient control over their compliance, environmentalists and the public often try to encourage self-regulation of companies in the environmental sphere. At the same time, of course, it cannot replace state environmental regulation. Third, we are also in the process of forming TNCs, and to ensure the competitiveness of companies in foreign markets, it is necessary that their managers are familiar with the practice of environmental regulation in other countries, especially with environmental practices

It is considered that private enterprise and market relations are incompatible with the tasks of nature protection. The global environmental movement, born on the wave of criticism of the "consumer society", traditionally considers large transnational corporations (TNCs) as the main opponent of nature conservation and the culprit of the destruction of the biosphere. The reasons for this can be easily understood by looking at the actual practice and its legislative "enforcement" in many developing

countries in South-East Asia, Africa and Latin America.

Even the greens' criticism of the state and state bureaucracy is not as uncompromising as the criticism of TNCs: environmental non-governmental organizations (NGOs) are usually opposed to the privatization of many environmentally significant state facilities or functions. This approach is based on the assumption that public administration is better than private management because, at least theoretically, in principle, the state can be required to be responsible to society and to the future, including the transition to sustainable development of individual States and humanity as a whole. At the same time, TNC management is responsible only to its shareholders and its sole purpose is to extract maximum profit. However, when dealing with specific environmental issues, we are increasingly finding that it is sometimes easier to find mutual understanding in solving environmental problems with large businesses, and TNCs in particular, than with government authorities.

It is the large TNCs that are more sensitive to criticism than other economic entities and tend to "greening" their activities. It is well known, for example, that the same companies behave differently in countries with a responsible state and strong civil society and in the third world. However, the practice of "double standards" is also gradually decreasing: violations committed in the Caspian sea or in Nigeria are increasingly hitting the company's image as a whole and its business in Europe or America. End-users in the main markets for TNC products in developed countries are often responsible in their choice of goods and services and have a large number of offers. In the modern high-tech world, the necessary and not loved by many "transparency" of activities is provided, including images taken from satellites of many competing countries. Therefore, even in the poorest and most corrupt tyrannies, TNCs gradually have to make efforts to ensure the same strict and responsible environmental policies as in the European Union or North America. Ensuring a single overall level of environmental policy of the Corporation is the task of management of TNCs themselves, and the fight against "double standards" in their activities is the task of the community of environmental NGOs in General and WWF and Greenpeace in particular. Environmental responsibility is becoming one of the main factors of competition in the twenty-first century, and businesses are showing a willingness to change.

There are many examples of companies improving their environmental policies and practices as a result of entering new markets with strict environmental regulations. Almost all Southeast Asian companies seeking to increase exports of finished products to Western Europe and the

United States have faced this need. There is an argument about the environmental irresponsibility of China's economy as one of the leading sources of its rapid economic growth. Due to a significant narrowing of the field of price competition in the markets of developed countries and, consequently, with a decrease in the competitive advantages of Chinese exports due to a lower price due to the cheapness of labor in China, the level of environmental management and environmental responsibility of Chinese businesses is rapidly increasing. In particular, it is noteworthy that in 2004 and 2005 China ranked second in the world (after Japan) in the number of companies that received ISO 14001 environmental management certificates. Their availability facilitates access to markets in Japan, Western Europe, and the United States. In total, as of the end of 2005, Chinese companies received 12,683 ISO 14001 certificates, while South Korean companies received 4,955, while in the former Soviet Union – only 185. These facts indicate that the "de-ecologization» of domestic legislation, which took place in 2000-2006, can become a serious barrier to the diversification of the Kazakh economy and export of products with a high share of added value. It should be remembered that there is a fundamental difference between the export of hydrocarbons, which in fact is largely a "seller's market", and the export of value added products – products aimed at the markets of an environmentally responsible buyer.

Humanity came to understand the urgent need to solve environmental problems and prevent their occurrence in the future in the last third of the XX century. This is due to two reasons. First, by this time, the environmental crisis had assumed threatening proportions. Secondly, the developed countries of the world have already entered the post-industrial stage of development, and they have accumulated the resources and knowledge to begin the transition to "green" management methods.

Compliance with environmental standards becomes necessary not only for the proper corporate activities for environmental protection, industrial safety and labor protection – in one way or another it affects the activities of companies in all sectors and at all levels. In General, thanks to advances in science and technology, extensive growth is not the only option for post-industrial industries, so saving resources is more profitable in the long term.

Within the framework of solving a number of environmental problems, specialization is not only sectoral, but also regional and cross-country. For example, in the EU, the emphasis is on energy-saving technologies, in the US-on bio and genetic engineering. Thus, a new area has emerged in the international division of labor. However, many developing

countries and countries with economies in transition have not yet realized the importance of the ongoing changes in the approach to environmental management in the developed world and have either not integrated into this new system or are just beginning to integrate into it. This often happens spontaneously, under the influence of external forces, rather than consistent state policy.

With regard to the impact of economic activities, including those of TNCs, on the environment, there are four main approaches that guide companies, States, and society itself, including scientists.

The first approach is to ignore the environmental component of development and make economic decisions in the field of production and consumption without taking into account environmental and natural resource constraints. We can call it "ecological nihilism". "Ecological nihilism" can be either total, which denies the importance of the ecological component of economic development in principle, or private, which denies or underestimates only certain environmental trends. Total "ecological nihilism" prevailed until 1960 –

1970s in the economic doctrines of almost all States. An example of private "ecological nihilism" is the denial by many modern economists and politicians of the relationship between human activity and global climate change.

The second approach – Neo-Malthusianism–develops the ideas of the English priest Thomas Malthus (1766-1834), who formulated in his "Experience of the law of population" the postulate of limited resources: the population grows exponentially, while the amount of food and other means of subsistence produced by people – only in arithmetic. This leads to the so-called second law of Malthus, according to which the growth of the Earth's population leads to a violation of the ecological balance. The famous report to the club of Rome "Limits of growth" in 1972, in fact, develops the ideas of Malthus, as do many scientists and public figures in many countries to this day. Supporters of Neo-Malthusianism do not take into account the achievements of scientific and technological progress, the emergence of new energy sources and effective ways to save resources.

The third approach can be called "ecological technocracy". In contrast to Neo-Malthusianism, it focuses on scientific and technological progress in the field of environmental management. There are many examples of the fact that new technologies have provided a breakthrough in one or more sectors of the economy both from the point of view of economic efficiency and in reducing and preventing negative impacts on the environment. For example, horizontal drilling technology has significantly reduced the

negative impact on the water environment during the development of oil and gas reserves on land and offshore and increased their recoverability, which has increased the profitability of field operations.

"Environmental technocracy" is a promising concept of state and corporate governance, in which the environmental friendliness of goods and services becomes an important factor of competitiveness. This approach has been adopted by the world's leading companies and is the basis for the economic and environmental policies of most Western countries that have entered the post-industrial stage of development. In practice, it is expressed, first, in the requirements (often legislative) for the use of the best available technology (best available technology), especially in particularly environmentally sensitive regions, and second, in the promotion of innovation. It seems that it is "ecological technocracy" that will develop most dynamically in the future.

Along with the greening of traditional business associations, a number of completely new inter-firm associations have emerged that specialize in coordinating the environmental policies of their members. Among them, it is necessary to mention the world business Council for sustainable development, established in 1992 by the Chairman of the Swiss holding ANOVA AG S. Schmidheini and with the support of the Secretary-General of the UN Conference on environment and development in 1992, M. strong. The world business Council for sustainable development presented its platform at this conference, which drew criticism from a large part of the conference participants who did not want to allow TNCs to dominate this global forum as well.

The decision to develop national and especially international environmental standards ISO 14000 was a compromise on the place and role of environmental regulations in international trade at the Uruguay round of the GATT and the UN Conference on environment and development, held around the same time in Rio de Janeiro. Standards of environmental management systems do not prescribe or define requirements for companies' environmental activities (for example, they do not contain provisions on the maximum permissible concentration of pollutants), but contain recommendations for improving the environmental efficiency of their activities. The company wishing to obtain the appropriate certificate must introduce procedures and documents defined by the standard, and assign persons responsible for the delineated areas of environmentally significant activities.

To a certain extent, these environmental management system standards resemble financial reporting standards: compliance or non-

compliance with both is not a guarantee of high or low performance of the company. However, these standards help to organize the company's activities and facilitate the assessment of its results in the relevant field.

Since the environmental management system is a key subject of ISO 14000, the Central document of the standard is ISO 14001 - "Specifications and guidelines for the use of environmental management systems". Unlike other documents, all of its requirements are "auditable": it is assumed that compliance or non-compliance with a particular organization can be established with a high degree of certainty. Compliance with the ISO 14001 standard is the subject of formal certification, which is mainly carried out by private companies. All other ISO 14000 documents are considered auxiliary. For example, the 14040 series defines a life-cycle assessment methodology that can be used to assess the environmental impacts associated with an organization's products.

Officially, ISO 14000 standards are voluntary. They do not replace legal requirements, but only set benchmarks. A company can use ISO 14000 standards for internal purposes, such as a model for its environmental management system or as a format for its internal audit. But it is more important to use these standards for external needs. They are used by TNCs to demonstrate to creditors, clients and the public that their environmental management system meets modern requirements and therefore seek to obtain appropriate independent certification. It is the desire to document the application for the release of "environmentally friendly" products that is the driving force behind the introduction of environmental management systems that meet the ISO 14000 standard.

An indicator of compliance of the company's products with high environmental requirements is the Ecolabel, which is also regulated by the ISO 14000 series. This marking sends an additional signal to the market, thereby improving the competitiveness of the product. However, it is worth noting that companies sometimes manipulate consumers' opinions due to a lack of awareness of ecolabeling, for example, by actively using the green color in the design of packaging or the product itself.

According to the International organization for standardization, the system of environmental certification should be created at the national level. National standards agencies, as well as chambers of Commerce and industry, business unions, and so on, play a leading role in the process of creating an environmental certification infrastructure.

As a result, each country has a national accreditation body that operates according to the rules of the International organization for standardization. It is he who accredits companies that perform customer

certification according to ISO 14000. Both private ISO 14000 accreditation bodies (for example, in the United States) and "hybrid" ones (i.e. partnerships between relevant agencies and private entrepreneurs (for example, in Germany) are doing well abroad.

Almost all major TNCs that are expanding into foreign markets passed ISO 14000 certification in the late 1990s and early 2000s.

Environmental audit began to take shape in the United States in the 1970s. After the Love Canal disaster and other incidents, the public and insurance companies began to insist on a systematic analysis of the potential environmental risks inherent in production processes. When the relevant legislation came into force, industrial firms began to regularly assess the risks of accidents, inform the authorities about them, and allow inspections by independent experts. Later, the US Environmental Protection Agency published the environmental audit Program (EPA 130/4-89/001), which strongly recommended that individual States establish environmental audit rules for all industrial enterprises.

An eco-audit can be an expensive undertaking that will cost a large firm with its many branches millions of dollars.

However, advanced TNCs develop and support periodic audits of environmental management systems in order to better interact with regulators, creditors, investors, and other stakeholders. It is noteworthy that under the influence of market incentives and inter-firm regulation in the environmental sphere in Western Europe, the United States and Japan, the development of eco-audit was promoted not so much by governments and international organizations as by companies themselves.

The solution of complex environmental problems and access to new, sustainable patterns of production and consumption is only possible creative combination of market, administrative and legal mechanisms of regulation in the environmental field. Despite the fact that the environmental practice of companies is a new, extremely dynamic phenomenon, the role of the environmental factor in the activities of multinational corporations in the 1970s – 2010s has significantly increased and will continue to grow in the future.

2. ASSESSMENT OF THE EFFECTIVENESS OF THE ENVIRONMENTAL MANAGEMENT SYSTEM OF DOMESTIC CORPORATIONS: COMPARATIVE CHARACTERISTICS AND THE PROBLEM OF ADAPTING WORLD EXPERIENCE

2.1 Main directions of environmental management of domestic corporations (on the example of JSC "KazMunayGas»)

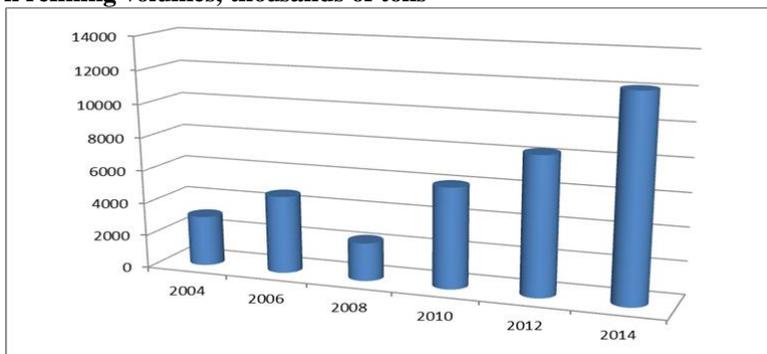
KMG's policy is aimed at reducing the negative impact on the environment and improving the environmental situation in the territories of corporate responsibility.

Despite the increase in production volumes in recent years, there is a steady decline in specific emissions from oil production, refining, and transportation of oil and gas.

For example, in Atyrau refinery LLP, KazMunayGas – refining and marketing JSC, specific emissions from oil refining decreased from 1.13 to 1.05 kg per ton of refined oil.

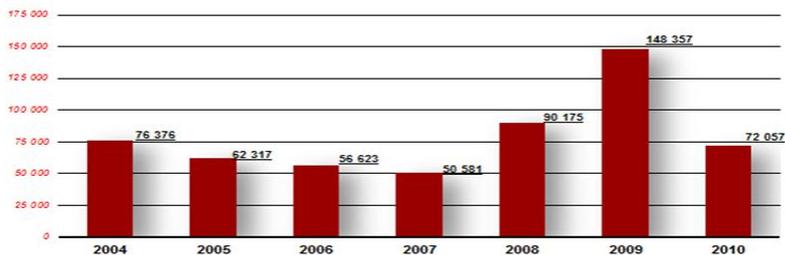
Chart. Volume of specific emissions per ton of refined oil LLP "Atyrau refinery" JSC "KazMunayGas-processing and marketing»

Oil refining volumes, thousands of tons



The volume of production and consumption waste decreased by 76,300 tons, or 51.4 %, compared to the previous year. Work continues on the elimination of polluted areas and reclamation of polluted territories. For this purpose, 1,040 million tenge was allocated during the reporting period.

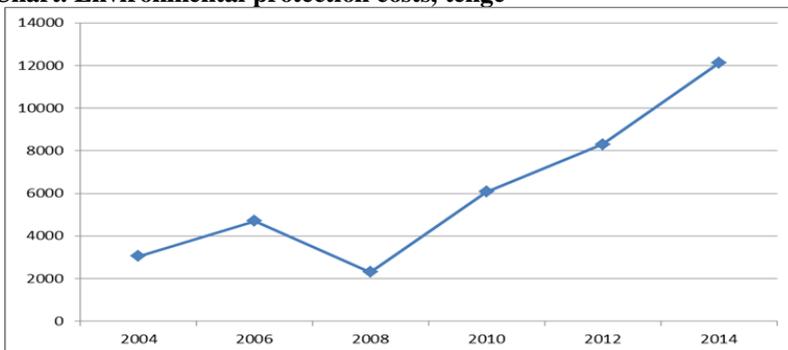
Chart. Production and consumption waste volumes, tons



Within the framework of the current waste management system of KMG, one of the main directions is the introduction of modern low-waste technologies, the use of high-performance equipment. For example, in KazMunayGas Exploration and Production JSC, within the framework of pilot industrial works, the restoration of contaminated territories is carried out using the zeolite-microbiological method, which allows using bacteria-destructors of hydrocarbons to restore the lost fertile properties of the soil.

High-performance equipment for processing difficult-to-destroy oil, installations for processing oil sludge, by thermal desorption is used. To carry out liquidation works with minimal negative impact on the environment, high-tech mobile complexes are used for processing oil-contaminated soil and oil sludge, with a capacity of 30 tons per hour.

Chart. Environmental protection costs, tenge



KMG annually spends a considerable amount of financial resources for the implementation of environmental protection measures. In 2010, more than 15 billion rubles were allocated for the implementation of environmental

measures by KMG's subsidiaries tenge.

Since 2005, the aerospace environmental monitoring system has been established and is functioning as an integral part of KMG's Corporate industrial environmental monitoring system, in order to automatically monitor changes in the state of the environment throughout KMG's corporate responsibility, as well as to ensure that adequate management decisions are made on environmental protection.

This system of aerospace ecological monitoring based on the use of GIS technologies, the use of modern special equipment and mathematic programs for receiving and processing of space images and to accumulate, analyze and summarize all environmental data, and model an ecological situation that allowed creating a continuously updated electronic environmental map.

The main tasks of KMG's aerospace environmental monitoring are:

- * identification of sources of atmospheric air pollution, including operating flaring installations for the combustion of associated petroleum gas;

- * detection of oil spills and sources of ks km contamination;

- * identification of high-risk sections of gas and oil trunk pipeline routes;

- * identification and mapping of oil-contaminated territories, tracking the dynamics of oil-contaminated elimination and large oil-sludge storage facilities, in area terms;

- * tracking the ice situation of the ks km;

- * systematization and storage of information in the database;

- * interaction with stakeholders.

As noted, one of the current tasks of the KMG aerospace environmental monitoring system is to detect oil spills and sources of pollution in the Kazakh sector of the Caspian sea, including oil spills, and forecast their spread over the next 120 hours, using accurate mathematical models. The urgency of this task is obvious in the light of the environmental consequences of the accident in the Gulf of Mexico.

The developed system and modern technologies can be effectively used in the tasks of rapid detection and monitoring by remote sensing of emergency situations, such as natural and man-made fires, accidents on oil and gas pipelines.

In accordance with the requirements of the KMG environmental management system and the requirements of the legislation of the Republic of Kazakhstan, each project is subject to an environmental impact assessment (EIA) to determine the environmental and other consequences of

management and economic decisions, develop recommendations for improving the environment, prevent destruction, degradation, damage and depletion of natural ecological systems and natural resources.

Ensuring environmental and industrial safety is achieved by applying modern technologies during production operations that have a minimal impact on the environment, including the water environment and bioresources, collecting and transporting all types of production and consumption waste, their further utilization and reuse.

For example, when implementing KMG's offshore projects, which are carried out by a subsidiary of KazMunayTeniz Marine oil company JSC, background environmental studies and monitoring of the impact of production processes on the Caspian sea ecosystem are carried out before, during and after the production stages, with the determination of chemical characteristics, the state of vegetation, plankton, benthic, fish, birds, mammals, etc.

As a result of research and collection of information for the EIA, a certain amount of data has been accumulated on the state of the natural environment of the territories of KMG's responsibility, including the waters of the Northern Caspian, which are entered into the KMG environmental database. This information is used for drawing up and adjusting regional maps of environmental vulnerability.

2.2 Implementation of ISO 14000 and EMAS standards in Kazakhstan as a stage of environmental management

The international organization for standardization defines the purpose of standards that establish requirements for environmental management systems as providing organizations with systems that allow improving environmental efficiency and business performance, systems that can be integrated with other management systems in order to help achieve the priority economic and environmental goals of companies.

"These standards, as well as other international standards, are not intended to be used for the purpose of creating non-tariff barriers to trade or increasing or changing the obligations of the organization imposed on it by law," the text of the ISO 14001 standard indicates. Nevertheless, as one of the most significant international environmental initiatives, these standards are becoming an increasingly serious condition for our country's integration into the international market as an equal partner of the developed countries of the world.

The Central document of the standard is ISO 14001 - "Specifications

and guidelines for the use of environmental management systems", which sets requirements for the environmental management system that allow any enterprise to formulate an environmental policy and goals in accordance with the requirements of the environmental legislation of its country. The standard provides basic terms and definitions, as well as recommendations in the field of environmental policy, planning, goals and objectives, programs and environmental management systems. In accordance with these recommendations, any company can create an environmental management system, develop environmental management functions and ensure that the environmental management system meets the requirements of the standard.

Let's make a reservation at once, in the "pure" form of environmental management systems at domestic enterprises do not exist. The conclusion probably looks too categorical. Almost all managers who attend seminars and conferences on environmental management, audit, and cleaner production easily declare that all these techniques, methods, tools, and systems have long been known. However, all researchers in this field say that there is no system. But there are all prerequisites for the development of activities in the field of environmental management. And above all, there is a desire to improve the situation. This is evidenced by the position of corporate managers and staff, who are far from perfect. This is also thought about by those who do not have claims from the public or state environmental authorities.

The environmental management system allows an organization to structure and link together processes aimed at achieving consistent improvement, the desired degree of which is determined by the organization itself, depending on economic and other circumstances. Integration of environmentally significant activities into the overall management system can lead to effective implementation of the environmental management system, as well as affect the efficiency of the organization as a whole and clarify the distribution of responsibilities and positions in management.

The main principle laid down in the environmental management system – EMS) is continuous consistent improvement.

Consistent improvement is the process of developing an environmental management system aimed at achieving the best performance in all environmental aspects of an enterprise, where it is practically achievable in accordance with its environmental policy.

Consistent improvement from year to year should be achieved in all environmentally significant aspects of economic entities' activities, where it is practically achievable. Such improvement in General cannot be imitated or falsified, which creates the necessary basis for assessing the environmental viability of economic entities. Thus, effective environmental management

provides the company with a credit of trust in relations with all interested parties in its activities. This is the main advantage of environmental management in comparison with traditional formal environmental management. The actual impact of an industrial enterprise on the environment (discharges, emissions of pollutants, waste, resource use) changes over time.

The adoption and systematic implementation of environmental management methods can produce optimal results for all stakeholders. However, the adoption of these standards does not in itself guarantee optimal results related to the environment. In order to achieve environmental targets, the environmental management system should encourage organizations to consider implementing the best available technology where appropriate and economically feasible. In addition, the environmental effectiveness of such technology should be fully taken into account.

Environmental management covers the entire range of issues, including those related to strategy and competitiveness. Demonstration of the successful implementation of this standard can be used by the organization to ensure that stakeholders are satisfied that it has an appropriate environmental management system in place

Despite all the contradictions in the process of involving domestic enterprises in certification in accordance with the requirements of the ISO 9000 series of quality management system standards, we should not underestimate its potential in terms of developing environmental management systems. Almost all managers who adhere to the concept of quality management are ready to discuss the prospects for voluntary environmental activities.

However, in our conditions, another variant of the situation is possible, which is known, however, in the UK. Environmental management systems as a tool not only internal, but also external, helping to clarify relationships, discuss problems and opportunities of environmental activities of enterprises with stakeholders, have a socially higher significance than quality management systems. Moreover, with the growing interest of public organizations, higher schools, and specialists in environmental management systems and their considerable openness and transparency, we can expect that the incentives for implementing such approaches will be so significant that entrepreneurs will take the newly opened opportunities seriously. Finally, the introduction of environmental management systems may entail the development and implementation of quality management systems, industrial safety, etc.

In accordance with the "Strategic development plan of the state

standard of the Republic of Kazakhstan", developed taking into account the Message of President N. A. Nazarbayev to the people of Kazakhstan "Kazakhstan 2030", we will:

"Given the trends of greening of society as a whole, the demographic problems of depopulation and preserve the quality of the population, to implement a new approach to solving the problem of environmental protection on the basis of implementation of international standards ISO 14000 series on environmental protection and sustainable development of Kazakhstan with the use of economic mechanisms; to develop regulations on the environmental labelling of products meeting the requirements of environmentally friendly".

And this is natural, because according to the Declaration of the UN Conference on environment and sustainable development (UNCED-92), the environmental dominant should become an integral part of the development process. The strict need for adequate measures to improve environmental safety and environmental protection led to the idea of using a certification procedure that has proven itself in solving product quality problems.

At the same time, this approach has deepened the philosophy of production itself, because the availability of certificates of conformity that guarantee the quality of products and services no longer satisfies society, since it is necessary to guarantee the safety of not only people, but also the environment.

In Western Kazakhstan in connection with the development of the Karachaganak gas condensate field by the Alliance of foreign companies British gas, Ajip, Texaco, LUKOIL there is a real possibility of implementing ISO 14000 standards in the Burlinsky district at the facilities of the oil and gas complex. The first steps have already been taken. When considering the field's EIA at the session of the district maslikhat of the Assembly, our territorial body made a proposal in the ruling part that particularly hazardous objects should be certified for compliance with ISO 14000. Several meetings were held with leading experts of the Alliance, where the issues of the need for environmental certification were put into practice. There is a favorable opportunity to transfer the rich British experience in the field of environmental certification to the Kazakh land.

The CIS countries have also recently been working hard to create a legal and regulatory framework for environmental certification. Belarus has introduced a subsystem of environmental certification, actively involved in the training of expert auditors; Russia has approved the Concept of a system of mandatory certification for environmental requirements. The scope of accreditation includes production of oil and gas processing, food industry and

automobile transport. Enterprises apply to the CES with an application for a certificate and fill out a Declaration indicating the objects of the relevant regulatory documents. The laboratory conducts analyses, measurements, and tests of objects, compares protocols, and then decides to issue a certificate. Certification is mandatory and voluntary. An enterprise that has received an environmental certificate has the right to advertise its products marked with an established environmental sign symbol of its environmental cleanliness. What arguments can be made in favor of implementing an environmental management system? From the experience of leading companies that have implemented ISO 14000, it follows:

Improving the image of production, thanks to the recognition of the company's activities in the field of environmental protection; - a new step in working with the public;

- cost savings due to the conscious use of resources, such as electricity, raw materials;- proper waste management; "transparent" organizational structure by creating the right structure; proper distribution of responsibilities and responsibilities.

Reducing risk in process management through: - "transparency" of risk assessments of processes and activities related to the environment;

- measures that prevent or reduce the degree of danger in emergency situations.

Motivation for cooperation, thanks to:

- recognition of their contribution to the protection of the environment;- a sense of belonging to work in an enterprise that conducts the correct environmental policy.

A sense of trust and respect:

- from the authorities, the public and organizations involved in the field of environmental protection.

Competitiveness, thanks to:

- meet the requirements of customers to produce environmentally friendly products.

Occupational safety, thanks to:

- timely informing all employees of the possible consequences of working with dangerous substances.

Preliminary knowledge:

- problems related to the environment; equipment that is optimal from an economic point of view.

Legal security, confidence in evidence, thanks to: - compliance with all rules, regulations and laws;- fulfillment of the company's obligations to achieve the goals and objectives of the environmental management system.

Understanding the need to create an enabling environment for environmental protection. The emergence of a new system or subsystem takes place in the depths of the established systems of certification of the Republic of Kazakhstan, however, one must keep in mind that it has the features of, in particular, the availability of certification schemes for compliance with environmental rules and also systems in which place the test will take impact assessment, analyses and forecast, and listening will be one of the main methods of implementation of environmental certification implementing conformity assessment evidence of the ecological examination. All the leading countries of the world are following this path today, and the introduction of environmental management in Kazakhstan.

In this regard, the slogan and credo of the American firm Tennant Company are very indicative: "We work to make the world clean and safe» and the policy is set out in two simple formulas: maximum customer satisfaction that exceeds their expectations; continuous quality improvement. There is no doubt that these simple truths should be at the heart of production and Kazakh enterprises, because in our case, an even more stringent formula works: "Quality is the last chance of poor countries."

But environmental certification in Kazakhstan does not arise from scratch, because certification of products, works and services for their environmental safety (assessment of the presence of pesticides, heavy metals, radionuclides, electromagnetic effects, etc.) is already carried out according to the rules of the certification System of the Republic of Kazakhstan and is regulated by the laws "on certification and standardization", "on environmental protection" and other legislative and regulatory acts of the Republic. However, to develop an effective subsystem of environmental certification, it is necessary to speed up the solution of four main tasks.

1. Providing legal support measures and creating an environment for the economic feasibility and profitability of this type of certification.
2. Development of regulatory documents regulating environmental requirements, norms and rules that are consistent with international standards.
3. Development of rules and procedures for subsystems.
4. Training of certified expert auditors. At the same time, the procedures of the economic and legal mechanism of environmental certification are reduced to two versions of mandatory and voluntary environmental certification.

There is a lot of work to be done in Kazakhstan, and the sooner it is started by the concerned agencies, the faster Kazakhstan will join the countries that use the principles of system management of environmental

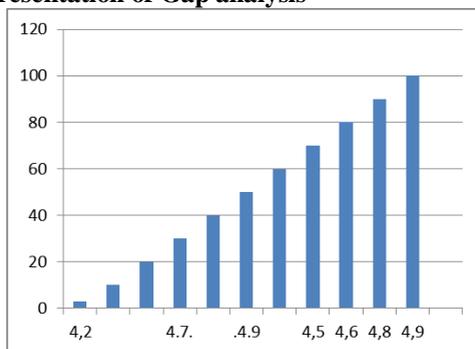
protection.

According to ISO 14031, the results of managing the environmental aspects of an organization can be presented in the form of special indicators (management performance indicators), which provide information about the effectiveness of the impact of management decisions on the environmental activities of the organization. The assessment is based on a comparison of management costs and the results obtained.

The results of implementing an environmental management system can be evaluated using Gap analysis, a method that allows you to visualize how the system meets the requirements of ISO 14001.

Let's build a diagram that represents the results of Gap analysis in graphical format

Graphical representation of Gap analysis



Gap analysis allows you to identify existing inconsistencies and understand what the system is missing in the first place. In other words,

Desired - Available = Necessary.

The information obtained allows us to evaluate the results of measures taken to implement the environmental management system, as well as to assess the degree of readiness of the system for certification. The system shown in the example is 47% implemented.

Thus, the goal of Gap analysis is to highlight the main successes and focus management's efforts on priority issues in order to adjust future plans for the implementation of the environmental management system. The cost of implementing the system should include the working time of the employees involved, spent on drafting and discussing system procedures, training, inspections, etc. For an objective assessment of the effectiveness of management, it is necessary to compare the results of measures to implement

the environmental management system, which were discussed in the previous paragraph, with the costs just mentioned.

You can evaluate the effectiveness of activities by conducting regular audits and comparing the results with previous audits. Thus, in the example under consideration, the organization's compliance with the standard increased by 11% to 58% over the period between two audits. During the reporting period, 180 people were spent on the implementation of the environmental management system.

Very often enterprises are faced with challenges in the development and implementation of management systems. Practical experience gained over the past 4-5 years allows us to point out the main problems that slow down the spread of EMS approaches in enterprises. Note that there are both sectoral and regional features of these problems, but in General they can be attributed to the following categories.

1. Incorrect planning of work on the development and implementation of the EMS - the time and resources allocated for the implementation of the EMS are overstated or understated. This is usually due to the lack of experience of the company's employees responsible for planning such work. Meanwhile, the term of development of EMS depends on the number of employees of the organization, the complexity of production, the presence of branches, etc., as well as on the involvement of consulting companies specializing in the development and implementation of management systems, preparation and support of their certification, and having extensive experience in the field of enterprise activity. The development period of the SEM can vary from several months to several years.

2. Low involvement of the company's personnel in the development and implementation of EMS - this problem is very common in enterprises that are implementing a management system for the first time and do it independently. In such enterprises, as a rule, all work is carried out by one or more employees without involving the company's leading specialists and managers. As a result, the developed management system does not correspond to the real situation at the enterprise, its activities and the existing management system. The implementation of such a system ultimately boils down to three results:

- the system exists only on paper, it does not bring any effect;
- the system is completely reworked in accordance with the actual activity of the enterprise and the management system, which requires additional resources and time;
- the company's activities and management system are changed in

accordance with the developed management system, namely, the company is reorganized and restructured. This result is the most negative, since the reorganization and restructuring of the enterprise must be carried out as separate types of work and by specially trained specialists, otherwise there is no guarantee of a positive effect from these measures.

3. Low involvement of the company's management in the development and implementation of EMS - this problem is most common. It consists in the fact that the management, having set the development period and the amount of resources, then does not participate in the process of implementing the EMS until all the developed documents are approved. Thus, the basic principle of management systems - leadership of management-is violated. This leads to the fact that in most cases, when approving documentation, which includes, among other things, Environmental policy and goals, environmental aspects of the organization's activities - the basis of the EMS, the company's management does not agree with the developed documents. This leads to the need to rework the management system, and, consequently, extra funds and time are spent.

4. Low level of General management in enterprises. As already emphasized, the environmental management system is closely linked to the management system of the organization as a whole and should be an integral part of it. International standards imply that the implementation of EMS is carried out in a specific organizational context. It is assumed that the organization's mission is defined, a hierarchy of goals and objectives is formed, systematic planning is carried out, and procedures are developed and recorded. At the same time, for most businesses, many of these concepts are new and unusual. In addition, the domestic industry as a whole is characterized by a low level of management, which is manifested, first of all, in the lack of use of modern approaches to planning and analyzing performance, inattention to staff motivation, and a formalized approach to their training.

This situation, of course, creates difficulties for the implementation of EMS in enterprises. At the same time, this is why there is a significant potential for reducing the impact on the environment by using organizational and low-cost measures. For example, the development and implementation of special procedures for handling hazardous substances actually leads to the prevention or reduction of their impact on the environment and the company's personnel, and in some cases helps to reduce the cost of production. In addition, the introduction of EMS provides the enterprise with an opportunity to test modern approaches to management by example of solving environmental problems, laying the basis for creating a quality management

system that meets the principles laid down in the ISO 9000 quality management system standards, as well as to improve the effectiveness of the management system as a whole.

5. Unjustifiably narrow understanding of the company's environmental performance and environmental management system. In most cases, the environmental (nature protection) activities of enterprises are considered exclusively as activities carried out on the principle of "at the end of the pipe". Of course, the introduction and operation of environmental protection equipment is an integral part of environmental activities, but in many cases a preventive approach based on a systematic analysis of the production process as a whole can lead to much more productive solutions. Thus, optimization of existing technological processes and reduction of losses may require relatively small costs, resulting in both a reduction in the environmental impact and an economic effect.

In many cases, the creation of an EMS is also initially seen as a reorganization of the work of the environmental protection division. At the same time, creating an effective EMS requires a fundamental decision of the top management on the importance of such a system for the enterprise, its further participation in its implementation, as well as, to some extent, the development of the management system as a whole. In addition, it is necessary to involve all personnel in the organization's environmental activities and invest in its development.

6. lack of Understanding of the nature of standards in the field of EMS. It is difficult to understand the nature of voluntary standards and their relationship to government regulation. A characteristic of our conditions is the desire to consider them as mandatory, which is greatly facilitated by the position. In other words, business leaders often view ISO 14000 series standards as another tool of government regulation that is about to be put into effect. Therefore, considerable attention is paid not only to the dissemination of information about the principles and specific elements of EMS, but also to explaining their voluntary nature. At the same time, it is noted that the standards in the field of EMS offer a tool that allows, in addition to solving other tasks, effectively organize the accounting and compliance of enterprises with the requirements of regulatory authorities.

7. Lack of an internationally recognized EMS certification system

As follows from the world statistics, after the official publication of the international standard ISO 14001, work on certification/ registration of EMS has been widely developed in the world. Many countries have established appropriate national accreditation bodies or expanded the scope of accreditation of pre-existing bodies.

One of the problems faced by the certification bodies of these systems is the recognition of the certificates issued by them by the certification bodies of other systems, in particular, by foreign certification bodies and, consequently, by foreign consumers. The lack of such recognition causes significant damage to the economy, since foreign certification bodies are deploying their activities on the market, providing certification services for a very high fee. In addition, such services in some cases are not quite high-quality. On the other hand, in a number of cases, Russian organizations offering EMS certification services do not have the necessary experience and skills, do not comply with international certification requirements, and the quality of their services is clearly questionable.

Thus, the relevance of creating a system of accreditation of SAM certification bodies that could qualify for recognition by its foreign partners is constantly increasing.

In General, the analysis of global trends in the development of environmental management systems allows us to identify several basic priorities that are relevant for domestic corporations:

1. the Ideology of sustainable development of society-the principle is political, state, ideologically significant and our large TNCs have the opportunity to implement it at the level of interaction with the regions.
2. a focus on resource conservation that allows achieving environmental and economic development goals simultaneously-widely developed in Sweden, Germany (sustainable product lifecycle), Japan (3R waste management initiative, zero waste - zero waste), and the Scandinavian countries (cleaner production and energy efficiency program).

More global specialized programs (for example, to reduce methane losses) that require investment of financial resources should be widely implemented at the corporate level, since, as a fact of implementing the provisions of the Kyoto Protocol, they contribute to the formation of a positive image of the company in addition to the economic effect.

3. Replacing the principle of "impact control" with the principle of "impact prevention" - in particular, the prevention of unacceptable impact is facilitated not only by the introduction of modern environmental technologies, but also by an informal approach to the design and placement of objects (the EIA procedure, the choice of alternative options, etc.).

4. Use of best available technologies – BAT) - compliance with the requirements of the EU Directive 96/61 "on integrated prevention and reduction of OS pollution" (IPPC) on the use of best available production methods and technologies (BAT). The introduction of BAT, of course, requires the development of the regulatory framework of the Republic of

Kazakhstan, which was provided for by the law "on technical regulation". 5. Environmentally-oriented innovations are associated with new multi - purpose technologies-industrial or social, useful for society as a whole, so they, like basic science, should be largely funded from public sources.

5. Producer responsibility is actively promoted and legally issued in the EU. For example, the environmental policy and legislation of the Netherlands provide that all financial costs for waste collection and disposal are borne by the manufacturer. 7. Impact of environmental factors on the market of products and investments - in the international market, the factor of environmental friendliness of products (production, distribution, consumption and disposal with the least impact on the environment) has already become a full-fledged factor of competitiveness. At the same time, non-compliance with environmental measures in some industries is already considered in the US and EU countries as a reason for dumping with the application of appropriate sanctions.

6. Implementation of the integrated management system (IMS) - world experience has shown that the most effective system of administrative management of an enterprise is focused on ensuring high quality of products while complying with the requirements of environmental and labor legislation (ISO 9001:2000, ISO 14001:2001 and OHSAS 18001:1999). The European Union has a positive integration practice-ISO/DIS 19011:2003 "Guidelines for the verification of quality management systems and / or environmental protection".

We will also discuss in detail the environmental management and audit system EMAS.

The EMAS program is designed to encourage organizations to take certain actions on environmental management issues, but not to wait and respond passively to environmental legislation and regulations. When implementing EMAS at an enterprise, the organization and society gain a lot, since the legislation sets minimum requirements, and the EMAS program expands and supplements them, emphasizing the importance of these enterprises in the field of ecology, which voluntarily set their own goals and objectives and independently decide to continue working in this direction.

Not all companies are committed to improving the environment, but they must recognize the benefits of being able to reduce their environmental impact.

Environmental management scheme organizations that build their philosophy on the basis of modern environmental management requirements and want to document their environmental protection activities in a publicly available environmental Declaration. EMAS is a management tool for all

companies and organizations. EMAS is open to all economic sectors, including public and private entities. EMAS provides the basis for preparing and submitting an organization's environmental report on its contribution to the environment. This is done by those organizations that go beyond the minimum legal requirements and that continuously improve the environmental situation.

An organization that has passed EMAS accreditation shows its participation in this scheme through the use of the EMAS brand name.

Difference between ISO 14001 and EMAS

The requirements for an environmental management system in accordance with ISO 14001 are an integral part of EMAS (Regulation EC 761/2001). Publication EC 761/2001 provides a brief overview of management concepts and tools, highlights the economic and other benefits of implementing environmental systems, and offers a step-by-step guide to implementing EMS and obtaining EMAS registration.

Currently, EMAS is the most modern and effective environmental management system on the market.

EMAS (Eco Management and Audit Scheme) is a regulation in force in the European Union that requires the systematic conduct of environmental work and reporting on the work performed. The main requirements of EMAS for the work system coincide with the requirements of the ISO 14001 standard. The ISO 14001 standard does not contain any requirements for eco-reporting, but the requirement for public availability of environmental policy is mandatory. Compared to the requirements of ISO 14001, EMAS contains more stringent requirements, such as continuous improvement and development with the latest achievements, taking into account economic feasibility.

Other ISO standards and technical reports (TR) in the 14000 series focus on approaches that can be used by businesses and organizations to reduce their environmental impact. All of these standards are recommendations, but because of their framework nature, they are followed by most organizations that develop environmental management systems or apply appropriate approaches and tools independently. The ISO 14010, ISO 14011 and ISO 14012 standards describe requirements for environmental audit (EMS audit), General requirements for auditors. A standard on environmental assessment of sites and organizations (ISO 14015) has been published. In 2002, the final version of the General standard on audit of quality management systems and environmental management - ISO 19011. This standard replaces the requirements of ISO 14010, ISO 14011 and ISO 14012.

The ISO 14020, ISO 14021, ISO 14024, and ISO 14025 standards describe General requirements and various approaches to environmental labeling, including self-Declaration, labeling based on the results of a product lifecycle study, and so on.

The ISO 14031 standard and the ISO/TR 14032 technical report are dedicated to the principles of environmental performance assessment for monitoring environmental aspects; they describe the main principles of development and provide examples of the use of environmental performance systems.

ISO 14040 standards are dedicated to product life cycle assessment. It includes ISO 14040, which describes the principles and structure of life cycle assessment; ISO 14041, ISO 14042, and ISO 14043, which provide recommendations for performing various stages of life cycle assessment. ISO/TR 14049 provides examples of the application of ISO 14041 to define the purpose and scope of life cycle assessment research, as well as inventory analysis; ISO/TR 14047 provides examples of the application of ISO 14042; ISO/TS 14048 defines the format for documenting product life cycle assessment data.

The ISO 14000 series also includes a Glossary (ISO 14050); the second edition of this standard (ISO 14050:2002) has recently been officially adopted. In 1998, the ISO/TR 14061 technical report "Information to help organizations working in the forestry sector use the ISO 14001 and ISO 14004 environmental management system standards" was published, and in 2002, ISO/TR 14062 "Guidelines for integrating environmental aspects into the product design and development process". Working group 4 developed the ISO 14063 standard "Environmental management-Exchange of environmental information-Guidelines and examples", which describes the principles and provides examples of the presentation and dissemination of environmental information.

In General, the system of international standards ISO 14000 series is becoming more and more deeply developed, an extensive set of tools in the field of environmental management for enterprises and organizations in various fields of activity. Today, the ISO 14000 series reflects the experience of leading organizations in the field of environmental management, while representing generally recognized approaches to the organization of environmental activities of enterprises and organizations. to obtain EMAS registration, an independent environmental auditor must conduct an audit of the company's activities, and if the audit results are positive, the organization can receive registration.

Four EMAS points that exceed the requirements of ISO 14001:

- * continuous improvement of environmental production
- implementation of environmental legislation under government supervision

- annual inspections with the publication of results
- involving every employee

If the company has ISO 14001 and EMAS systems, the audit is usually performed simultaneously.

Ecomanagement and ecoaudit scheme (EMAS)

EMAS was created to improve the quality of environmental management in the industry of European countries. EMAS is a tool in the competition between enterprises, an important element of enterprise development and meeting the requirements of the public in the environmental field.

EMAS is designed to highlight progressive companies that have introduced positive action programs to protect the environment and that do not stop only on meeting legal requirements, are constantly looking for and improving their performance in the field of ecology.

An enterprise wishing to register with EMAS must have a clearly defined environmental management strategy with precise and clearly defined quantitative goals.

Initially, the implementation of EMAS was supposed to be applied only to the industrial sector, but the UK also distributes this scheme for conducting audits in municipal authorities.

Use of EMAS in local governments

It is widely recognized that local governments play a major and leading role in the local economy and as a government body in local government, have a significant impact on the environmental behavior of both the population and organizations. With the introduction of the concept of sustainable development, the important contribution of local government to the implementation of the principles of sustainable development was recognized. The main contribution to this process is to put your own home in order and improve your own environmental performance, which allows local governments to serve as role models. EMAS for local governments helps achieve this by providing a governance structure and improving the local government's own effectiveness. The EMAS scheme at the European level, as well as ISO 14001 on a global scale, are a direct result of the need to improve environmental performance and management.

Currently, in the UK, approximately 52% of local governments work with EMAS and the complementary international standard ISO 14001.

The success of EMAS in the UK was such that a community of

organizations consisting of the city of Newcastle-upon-Tyne, EURONET, LGMB, Eurocities and Ecotec jointly put forward a pilot project for the implementation of EMAS throughout Europe, which is supported by the EU environment Fund LIFE.

The European EMAS project attracts with its direct implementation experience in the UK. Similar pilot projects are currently being implemented in Sweden, Denmark and Germany to demonstrate the potential of EMAS for collaboration between partner cities across Europe and beyond.

2.3 Analysis of indicators and criteria for evaluating the effectiveness of environmental management systems of international corporations

Environmental practices are activities that have a negative impact on the environment, as well as activities aimed at reducing and preventing such impacts. For transnational corporations, the specificity is that they need to take into account the consequences of their environmental activities not only at the national level, but also at the international level.

In recent studies on this issue, it is noted that the concept of "negative impact on the environment" has begun to include an increasingly wide range of problems. Traditionally, environmental damage has been associated with industrial problems, such as industrial pollution at particularly "dirty" sites (deterioration of air, soil and water quality caused, for example, by chemical plants or pulp and paper mills) or excessive extraction of renewable and non-renewable resources. It is now increasingly recognized that nature conservation requires the "greening" of all production activities, taking into account not only local and national but also international impacts.

The company's environmental management system includes economic and financial aspects. Economic aspects are related to the environmental consequences of the production of products (goods or services), as well as their marketing, after-sales use and disposal.

For the implementation of certain types of environmental activities in the economic sphere, as well as any other areas of activity of TNCs, appropriate financial support is required. In a narrow sense, the environmental component of the company's expenses is the sum of expenses for eliminating negative impacts on the environment (cleaning up emissions, effluents and soils, recycling waste, afforestation, etc.) and environmental payments (including fines). In a broader sense, the company's environmental costs also include the costs of preventing negative environmental impacts.

Avoiding environmental damage is not only related to the actual environmental capital and operating costs, but also with the introduction of new technologies (less resource - and energy-intensive, etc.), that is, with investments in production, sales, process management and other areas of activity of companies. Therefore, in a broad sense, the environmental component of companies' expenses is usually not accurately measured.

A quantitative assessment of the environmental performance of a TNC or group of companies should be based on absolute and relative production indicators rather than financial ones. These quantitative indicators include: standards for the production of various pollutants (liquid, gaseous and solid waste removed from the production cycle); indicators of radiation, noise and heat pollution per unit of production in physical or monetary terms; data on the areas of soil used for industrial needs (construction of structures, roads, waste storage, etc.) and changes in biodiversity. In addition, the analysis must take into account data on the absolute and relative resource intensity of production (consumption of raw materials, water, air, electricity, etc.)

Analysis at the level of individual companies and groups of companies should also be based on a wide range of qualitative indicators. They can be distinguished by referring to such a common term in the specialized literature as "best environmental practice". In determining which combination of measures constitutes the best known environmental practice, special consideration is given to:

- 1) danger to the environment of the product, its production, use and final disposal from the environment after use;
- 2) the possibility of using less polluting processes or substances;
- 3) extent of use of this practice;
- 4) potential environmental advantages or disadvantages of alternative (substitute) materials or activities;
- 5) progress and changes in scientific knowledge and understanding of problems;
- 6) the timing of the transition to this practice;
- 7) its social and economic consequences.

At the same time, best environmental practice is a concept that is valid for each specific industry at a given time period. Over time, the perception of best environmental practices changes under the influence of scientific and technological progress, as well as economic and social factors.

Similarly, we can talk about the worst environmental practice of companies. In this case, we are talking about the practice that is the worst from an environmental point of view among the management methods

applicable in each specific area at the moment. Over time, many of the economic practices die out as obsolete, including those prohibited by law. For example, currently sanitary and epidemiological regulations prohibit the construction of water pipes from lead pipes, although in Ancient Rome this practice took place and for some time could be considered the worst from an environmental point of view.

The most important object of qualitative analysis of the TNK environmental management system is the choice of technologies and know-how that allows you to gradually change the set of production and organizational processes in the "portfolio" of companies. When planning, the choice of technologies and know-how determines the possibility of reducing or increasing the negative impact on the environment in the future, taking into account the lag on the implementation of these technologies.

As a rule, the literature on branches have information about how environmentally dangerous is in the production of one or another technological process, and description of the technology, the best from an environmental point of view (in short: best available technology best available technology). In determining whether processes, installations or their operating modes represent the best available technology in General or in each individual case, special consideration is given to:

- 1) comparable processes, installations or modes of operation that have been successfully tested recently;
- 2) technological progress and changes in scientific knowledge and understanding of problems;
- 3) cost-effectiveness of the technology;
- 4) the timing of its implementation in both new and existing enterprises;
- 5) nature and volume of discharges and effluents;
- 6) low-waste and waste-free technology.

Thus, the production of steel by oxygen-Converter method is more environmentally acceptable (primarily in terms of energy intensity) than in open-hearth furnaces, but less so than in electric steelmaking. Offshore oil and gas production using platforms has a greater impact on the environment than by subsea injection of wells (without using platforms).

It is also necessary to distinguish between environmentally-oriented end-of-the - pipe approach solutions and integrated technologies. In the first case, improved environmental practices can be achieved by installing treatment facilities in addition to existing equipment. In the second case, in order to achieve the best environmental result, all equipment must be replaced.

The best environmental technology is determined for each individual case and may not be the same in other circumstances. For example, using the best available river booms is not an optimal solution for oil or petroleum product spills on the high seas, where a special type of booms is needed. However, for a specific process, the best available technology will change over time, influenced by new scientific knowledge and approaches to solving problems.

In some countries, companies are required by law to apply the best available technologies and know-how in certain industries. For example, the EU has the IPPC (Integrated Pollution Prevention and Control) Directive 96/61/EC, according to which EU member States are required to issue licenses for certain industrial activities only under the conditions of applying the best available technique. This method is defined in the Directive itself. The concept of "available" as a technique "developed to a level that allows you to apply it in the appropriate sector on the economic and technical viability, taking into account costs and benefits, using or manufacturing equipment in a given member country and in case of possibility of access of the operator on reasonable terms" (article 2(11) of Directive 96/61/EC). Thus, we are not talking about too expensive or technically incompatible and unproven solutions.

The best available technologies, equipment and know-how tend not only to reduce the negative impact on the environment, but also to be less resource-intensive. According to the calculations of a group of authors in one of the reports to the club of Rome at the end of the XXI century, humanity will have technologies that allow it to produce twice as much final products while using twice as little resources compared to the current environmental practices of companies and other economic entities. This conclusion was identified by the authors of the report as "factor four", and following this principle can significantly reduce the burden of economic entities on the environment.

The transition of companies and business entities to best environmental practices is constrained by two factors: the cost of environmentally-oriented innovations and the amortization period of fixed capital that was put into operation in the past.

Indeed, the best available technologies, equipment and know-how tend to be more expensive than less environmentally acceptable ones. However, the level of expenditure required for their implementation and use does not necessarily mean a loss of economic efficiency and competitiveness. In this regard, it is appropriate to refer to the study of the Institute for advanced technological research at the European Commission and covering

more than 100 companies and factories of non-ferrous metallurgy, cement production and pulp and paper industry in Europe, Canada, the USA and Brazil. It concludes: "there is no evidence that the application of the best environmental management systems has impeded the competitiveness of these companies, both at the national and international level (although the companies studied have not always achieved the level of reduction of negative environmental impact expected from the transition to the best available techniques established for them)."

However, even in cases where the implementation of the best available technologies, equipment and know-how does not involve excessive costs, this process is slowed down due to the impracticability of decommissioning equipment that is still in operation. It is the old equipment that often has the most negative impact on the environment. At the same time, the acceleration of technological progress in the XX-XXI centuries, this causes not only a reduction in the time needed to replace equipment, but also the rapid obsolescence of technologies that were previously considered the best from an environmental point of view.

At the end of the XX - beginning of the XXI century, the first attempts were made to integrate the above-mentioned qualitative and quantitative indicators of environmental performance of companies into indexes, the dynamics of which could be easily tracked. The need for such information arose from decision-makers, primarily from investors. The first environmental ratings of companies and their "sustainability" ratings (including social and economic components in addition to environmental ones) began to appear. However, to date, no generally accepted approach to assessing the environmental practices of companies has yet been developed, nor has such an approach been found for the environmental situation in various countries and the world as a whole. Work in this direction continues.

At the same time, it is advisable to briefly discuss the methods of rating environmental performance of companies that have been applied in practice.

One of the simplest methods for assessing TNC environmental practices is used in calculating the Dow Jones sustainability indices: DJSI World and DJSI STOXX. Indices have been published since 1999 and are calculated based on a system of weights (coefficients) for various qualitative and quantitative indicators in three areas: economic, environmental and social. The calculation of these indices shows that investments in companies that pay great attention to the social and environmental component are profitable.⁷⁶ Thus, from January 1, 1999 to June 30, 2010 the group of companies combined by the DJSI World index outperformed the group of the

traditional Dow Jones Global World Index by 127 points.

The Dow Jones sustainability indices are calculated only for the most "socialized" and "green" companies and therefore do not provide an idea of trends in the environmental practices of TNCs in General. However, the methodology for evaluating it developed by Dow Jones is quite universal and can be applied to any company. According to this approach, companies are ranked based on the collection of data from open sources and a survey of responsible corporate representatives, followed by data verification. At the same time, the part of the questionnaire devoted to environmental practice contains questions on the documentation and organizational design of the environmental policy, its scope of application, the company's goals and objectives in the environmental sphere, the type of environmental management system, quantitative indicators of greenhouse gas emissions and waste production, water intake and energy consumption (in recent years), as well as a number of characteristics specific to each specific industry. Using a system of weights (coefficients), these indicators are reduced to a value expressed as a percentage (100% - the highest "stability").

The results of evaluating a sample of the most "sustainable" TNCs by environmental parameters in accordance with the Dow Jones methodology for calculating the DJSI World index are presented in table 9. It seems that the bottleneck of this approach is the complexity of determining the objective value of weights for linking all indicators (weights are set based on expert assessments by Dow Jones analysts).

Methods for evaluating the effectiveness of companies' environmental management systems developed by environmental non-governmental organizations are also of considerable interest. For example, the World Wildlife Fund's (WWF) environmental rating of energy companies maintains subjectivity in determining weights, but introduces such an important assessment criterion as the choice of technologies.

Based on the above and taking into account the experience of the methods considered, the basis for conclusions on environmental practices of TNCs (in General, as well as in the sectoral, country and regional aspects), including for the purposes of this study, can be considered:

- 1) reducing or increasing various quantitative indicators of companies' negative impact on the environment (this is important for analyzing current environmental practices);
- 2) decrease or increase in various quantitative indicators of natural resource use (this is also important for the analysis of current environmental practices);
- 3) selection of technologies, equipment and know-how for

investment decisions in comparison with the best from an environmental point of view (this is important for predicting future environmental practices).

With complete information about these three components, it is possible to clearly determine whether a company is moving towards best or worst environmental practices (RIS).

This study does not aim to calculate any new indices or create new ratings for TNCs, which is still impossible for most companies due to the lack of data on the three areas of assessment.

Let's discuss in more detail the requirements of consumers to the environmental properties of products and the environmental practices of their manufacturers. In the environmental sphere, consumers' opinion of certain companies and their products, and therefore the demand for them, is determined both by the consumer properties of the product and its "environmental image" in the media. For example, in the sphere of final consumption, an example of the formation of an environmental component of demand under the influence of the "green" movement and the media is the campaign against aerosols, which may contain substances that destroy the earth's ozone layer.

Thus, "greening" the demand for various goods and services, especially in developed countries, is becoming increasingly important for TNCs. In some cases, companies have to change the entire process to meet the requirements of consumers. In particular, in the 1980s, many pulp and paper companies revised their production technology due to protests against the use of pure chlorine (Cl₂) in paper bleaching. The non-governmental organization Greenpeace and the General public were concerned that chlorine-containing effluents after discharge could react with organic matter and form highly toxic substances. The problem could not be solved by installing treatment facilities "at the end of the pipe", so new, integrated technologies were developed in which pure chlorine was either not used at all, or its dioxide was used.

The changing environmental requirements of consumers have generated a new wave of investment in the German pulp and paper industry and the German-oriented Scandinavian countries. By the early 1990s, the use of pure chlorine in the pulp and paper industry in Sweden had decreased tenfold, and in Finland five times. A similar process has begun in developing paper-exporting countries. Subsequently, the rejection of the use of pure chlorine in the United States and a number of other countries became not just a market requirement, but also an official environmental standard¹⁰³.

TNCs, through advertising campaigns and public relations, attempt to increase demand for their products, positioning them as more "eco-

friendly" than their competitors. However, it is usually possible to increase consumer demand for products with a dubious environmental reputation only by reducing the price of them. Since the demand for "environmentally friendly" products is highly elastic in terms of income, products for which demand is falling due to environmental concerns in Europe, the United States and Japan, manufacturers in some cases sell in countries with lower per capita income. For example, this applies to the sale of transgenic food products, for which there is limited demand in the US and EU. In this regard, environmentalists are concerned about the emerging trend of gradual movement of demand centers for many types of goods from developed to developing countries in South - East Asia. In these countries, which are currently experiencing a consumer boom, the requirements for environmental friendliness of products are much lower than in developed countries. However, even here, although slowly, there is a "greening" of consumer preferences.

No less important is the "greening" of the demand of TNCs themselves as the largest consumers of industrial goods and services on a global scale. Various researchers and representatives of international organizations see it as a key to improving environmental practices in the world as a whole. "Charter of entrepreneurs for transition to sustainable development", adopted in 1991 The international chamber of Commerce (principle 11) also recommends that international companies "encourage wider application by suppliers" of the principles of sustainable development. Many companies try to follow this advice in practice.

It is particularly important that TNCs impose strict environmental requirements on suppliers not only in developed countries (where there is strict government regulation), but also in developing countries and countries with economies in transition (where government regulation in some cases is much less stringent than the environmental standards of individual TNCs).

The most obvious way to use the environmental component in the competition of TNCs is to position their products on the market as "green" and safe for health. For example, "green" products are advertised such as phosphate-free detergents, products in easily recyclable packaging, books and magazines made from recycled paper, and electronics that consume little electricity or are produced from recycled materials.

At the same time, the use of the environmental factor in the competition of companies is not limited to the "environmental" positioning of their products. For most large industrial firms, the "green" competitive strategy involves promoting information about the "greenness" of the production cycle itself, and not just the resulting final product. An example

is the competition between two major international oil and gas companies that are both leaders of the British fuel and energy sector: BP and Royal Dutch/Shell. BP, positioning itself as an "eco-friendly" company, rebranded itself at the turn of the XX-XXI centuries, choosing green as its corporate color. Shell has not re-branded, but it also pays great attention to environmental aspects in public relations. So, as a symbol of "greening" and switching to alternative energy sources, Shell installed a wind power generator near its London office on the banks of the Thames.

The media and non-governmental organizations quickly «replicate "the image of a particular TNC as an «environmental criminal". Such precedents are actively used against the company by its direct competitors. The initiation of an " environmental process " against TNCs in one country (for example, a developing host state) may trigger similar investigations in other States, including countries where companies are registered, countries where the main shareholders of corporations reside, and their main markets.

It is for this reason that more and more TNCs, along with "traditional" annual reports, have begun to publish extensive documents on the firm's performance in the transition to sustainable development.¹⁰⁹ In some cases, representatives of TNCs seek to join the boards of Directors of leading "green" non-governmental organizations in order to establish interaction with them.

A number of researchers note that the use of environmental policy by large corporations as a competitive tool contributes to the transition to sustainable development, since it "educates" the environmental preferences of consumers. Indeed, one of the effects of "greened" advertising and information campaigns of TNCs is the formation of more stringent environmental requirements for consumers in countries with different income levels. This is particularly important for developing countries and countries with economies in transition, where governments have so far done little to promote economic mechanisms to address environmental problems. Environmental requirements of business partners (not clients) and associations, including in the field of insurance and credit. International universal and industry associations of companies issue various declarations and recommendations in the field of sustainable development and ecology, signed by their members. Thus, corporate ethics as part of the business environment can contribute to improving the environmental practices of TNCs.

In fact, of all the factors in this group, the most effective incentive to improve environmental practices of TNCs is the requirements of credit and insurance organizations. TNCs actively work with borrowed funds, and there

is a group of banks with which the largest international companies interact as regular customers on the terms of the most profitable lending. Often large industrial projects (development of deposits, construction of factories, etc.) with a long payback period can only be implemented on the condition of an inexpensive loan. When working in developing countries and countries with economies in transition, TNCs usually take loans from regional development banks (the European Bank for reconstruction and development, the inter - American development Bank, etc.) and major private banks, and guarantees against them - from national export-import banks, such as the Export-import Bank of the United States.

Under public pressure and as a result of the "greening" of the business environment, the European Bank for reconstruction and development, export-import banks of developed countries and major private banks are gradually moving to more stringent requirements for credit projects, regardless of the country of their implementation. The fact is that large projects with a significant impact on the environment are often subject to additional environmental requirements after the approval of the feasibility study, the provision of credit and the start of implementation. For example, it was during the construction of the Baku - Ceyhan oil pipeline and the implementation of hydrocarbon production projects on the shelf of the sea of Okhotsk (Sakhalin-1 and Sakhalin-2)¹¹². As a result, projects are suspended, deadlines are disrupted, and additional funds are required for environmental research and new safety measures. Lenders are not always satisfied with this situation, as well as accusations from the "greens" that "money bags" provide funds and guarantees for the implementation of environmentally dangerous projects. Therefore, international credit institutions are gradually moving to stricter environmental requirements.

Insurance companies in their relations with TNCs in the environmental sphere are guided by both regulatory norms (as a rule, national legislation provides for minimum amounts of insurance against certain types of environmental damage) and market signals. At the same time, environmental payments in the event of major accidents tend to increase, as a result of which insurance companies in various market segments periodically increase the cost of environmental insurance for objects with old equipment. Therefore, if the cost of insurance, for example for tankers over 20 years old, is very high, it is more profitable for the company to purchase new, more environmentally friendly vessels, insurance of which will be cheap.

At the same time, insurance as a compensatory mechanism for environmental emergencies plays a dual role. On the one hand, in the event

of an accident, insurance companies provide the insured company with the means to eliminate its consequences. On the other hand, in case of particularly large accidents, such as the oil spills from Exxon Valdez, Erika and Prestige tankers described above in this paragraph, no insurance funds can cover the environmental damage. But all three of the above-mentioned tankers were insured (otherwise they would not have been accepted by any port), that is, insurance payments for them were quite acceptable to the owners.

"Green" public organizations see in increasing the environmental requirements of insurance companies and especially credit institutions a powerful lever for "greening" the activities of TNCs. Therefore, if there are concerns about the environmental safety of a project, the greens discuss them not only with representatives of companies and regulatory authorities, but also with creditors. As a result, the company may be denied a loan and Bank guarantee for the implementation of an environmentally dangerous project, and funds for its implementation will have to be found from other sources on less favorable terms. Thus, the future of the project may be jeopardized.

The responses of different TNCs to similar changes in the four groups of factors are different. Some companies, under the influence of "greening" regulation, demand and requirements of business partners, are moving towards the best environmental practices and use the environmental component in the competition. Others, on the contrary, try to counteract or restrain the "greening" of external factors, and their economic activities gradually become the worst environmental practices.

Moreover, the same TNC often follows different environmental policy options in different countries. Just as TNCs with a global (i.e., one for all countries) and multi - national (i.e., adaptable to the specifics of the home country) marketing strategy are singled out, TNCs with a global and multi - national environmental policy can be singled out. For example, Rio Tinto - one of the world's leading producers of uranium ores and non - ferrous metals in both developed and developing countries of the world - in almost all of them operate under the same internal corporate environmental standards. On the contrary, Shell oil and Gas Company adheres to multinational environmental practices. While Shell's activities in Canada have earned high praise from environmentalists, in the Netherlands, Nigeria, Russia and some other countries, the company faces harsh criticism from the "greens".

Environmental management of TNCs goes through four stages in its development:

- 1) management focused on compliance with environmental legislation (the reactive corporation);

2) preventive environmental management (the lean and precautionary corporation);

3) strategic environmental management (the opportunity-seeking corporation);

4) management focused on sustainable development (the responsible corporation). At the same time, regulatory measures play a huge role in the evolution of environmental policy of TNCs, which should be different for corporations at different stages of environmental management development. The conclusions drawn by UNCTAD from this study are presented in the table.

Four stages of development of environmental management of TNCs
based on the results of an UNCTAD study

Type of management	Corporate practice	Incentives from regulating bodies
1. Management, oriented on compliance environmental legislation (the reactive corporation)	<ul style="list-style-type: none"> - Solutions " at the end of the pipe»; - procedures for reducing negative impact; - ecological monitoring; - reports on the observance of environmental legislation; - environmental education of personnel;- 	<ul style="list-style-type: none"> - Development of environmental legislation and monitoring of its implementation; - "realistic" regulation; - involvement of business in the development of environmental legislation; - dissemination of information on environmental regulation; - strict administration
2. Warning environmental management (the lean and precautionary corporation)	<ul style="list-style-type: none"> Internal environmental audit; - pollution prevention; - reduction of volume of waste; - dissemination of information on environmental issues to the public; - energy saving; - "green" reporting 	<ul style="list-style-type: none"> Increasing responsibility for environmental violations; - requirements for waste management; - restrictive policies in relation to waste dumps; - securing the public's right to environmental information; - promoting energy savings; - environmental tax

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3. Strategic environmental management (the opportunity-seeking corporation)	Dialogue with the public on environmental issues; - external environmental audit; - full disclosure of environmental information; - integration of environmental management and planning; - environmental support of products throughout the entire life cycle; - R & d in the environmental sphere; - setting environmental goals for the future	Stable improvement of environmental regulation; - eco-labelling programmes; - support of environmental programs for consumers and investors; - market mechanisms for environmental regulation; - encouraging voluntary commitments in the environmental field; - tax holidays for companies conducting R & d in the environmental sphere
4. The management-oriented sustainable development (the responsive corporation)	Special programs for developing countries; - policy of "ethical sales"; - full disclosure of environmental information on international operations; - climate change strategy; - afforestation programs; - unified environmental policy on a global scale; - international environmental audit	International exchange of information in the environmental sphere; - integration of the "sustainable development" goals and the decision-making process; - international harmonization of environmental norms and / or standards; - international environmental taxes

At the same time, almost all of the studies listed above do not pay enough attention to the "endogenous" reasons for choosing a particular environmental strategy by various companies, although "exogenous" factors, as already noted, do not completely determine it. Therefore, it seems appropriate to elaborate on this issue in this monograph.

Both the conclusions discussed above from the point of view of economic theory and the examples of the activities of transnational corporations studied show that the decision to choose less or more environmentally acceptable practices depends on the planning horizon of the firm. As a rule, environmental investments are characterized by a significant payback period. Switching to the best environmental technology can provide the company's advantages in the medium and long term, taking into account

the tendency to constantly tighten environmental regulations. However, in the short term, the cost of environmentally-oriented solutions may appear unprofitable to the company's management.

Therefore, companies that plan their activities based on long-term (5-10 years or more) strategies are more interested in switching to best environmental practices than companies with short - term (1-3 years) and medium - term (3-5 years) planning horizons. This conclusion is supported by the results of the above-mentioned specialized review of UNCTAD. In particular, it notes that the most effective environmental practices of those corporations that carry out its centralized planning. At the same time, this centralized strategy can be applied by independent business units of corporations within the framework of shared responsibility between headquarters and subsidiaries.

The proposed thesis about the dependence of environmental practices on the company's planning horizon, in our opinion, requires an extended explanation of the reasons for the choice of corporate management in favor of short -, medium-and long-term strategies. The diverse examples of companies' activities in the environmental sphere considered in this study suggest that such a choice in relation to environmental practices in TNCs depends on three factors: 1) the phase of the company's life cycle; 2) the company's capital structure; and 3) the "portfolio" of available technologies and equipment. All three factors are closely interrelated, and the phase of the company's life cycle is the most versatile characteristic.

The company's capital structure is important for its environmental practices for two reasons. First, there are formal considerations. In particular, when placing company shares on stock exchanges, corporate environmental practices affect their value, as shown, for example, by the Dow Jones sustainability index. In addition, as discussed earlier in this Chapter, credit institutions are placing increasingly stringent environmental requirements on funded projects. Increased attention to the environmental indicators of projects is becoming characteristic of investment banks and other investors.

Thus, all other things being equal, the shareholders of public companies are more interested in the environmentally acceptable practices of these firms than the owners of non-public companies. In addition, the scope of responsibility, including in the environmental sphere, for public companies is greater than for partnerships and limited liability companies, and therefore the legal incentives to reduce the risks of environmental violations and accidents are stronger.

Secondly, a number of facts suggest that the distribution of shares / interests of a company among a large number of individuals contributes to

a relatively greater "greening" of activities and for less formal reasons. In this situation, compared to cases where control of the company is concentrated in the hands of a single individual/family (especially in the first generation), there is less likelihood of speculative interest of owners in this firm and focus solely on maximum profit. An example is the largest "family" company in the United States - DuPont (chemical production), in the 1970s. actively resisted the ban on the production of chlorofluorocarbons that destroy the earth's ozone layer.¹⁴² It is logical that a speculative investor who bought a company for the purpose of resale and quick profit will not develop a long-term strategy for it and invest in the transition to best environmental practices.

Technologies and equipment of companies have their own depreciation periods and, therefore, are updated cyclically. The renewal of fixed capital is one of the reasons for the cyclical development of the world economy as a whole. At the same time, the introduction of the best environmental technology is usually the most effective for the company when implementing investment projects "from scratch". Replacement of equipment that has not yet worked out the entire depreciation period is usually impractical for companies solely for environmental reasons. Therefore, when solving new environmental problems, firms often limit themselves to additional implementation of technologies "at the end of the pipe".

Similarly, R & d in the environmental sphere is carried out by companies mainly in anticipation of the launch of new facilities and installation of new equipment. However, with the introduction of each new technology, which is more advanced from an environmental point of view, the company acquires new advantages, from the use of which it can get significant savings.

90% of all patents for the use of technologies and the production of certain types of products in the world are concentrated in the hands of TNCs. This also applies to patents for the best available technologies. The acquisition of patents for eco-friendly technologies for some of the company's facilities (both through its own development and by purchasing licenses) gives its management an incentive to use these technologies at other corporate facilities, including on an international scale. Thus, the technological leadership or lag of the Corporation, the company's life cycle and its environmental strategy are interdependent.

In the future, as at present, differences in environmental practices of different corporations will persist even within the same industry, since TNCs will always differ from each other in the planning horizon, the life cycle phase, the degree of equipment wear, the technologies used and the capital structure.

It can also be assumed that public companies that are in the later stages of the life cycle and have advanced technologies, with the tightening of external factors of "greening", as a rule, do not abandon projects in host countries. At the same time, companies that are in the early stages of their life cycle or are going through a crisis or decline are more sensitive to stricter environmental requirements: strict environmental standards may be prohibitive for them.

Accordingly, the weakening of environmental regulation can not cause a significant inflow of foreign investment, since the environmental factor is critical only for the most "young" and "old" companies, which, as a rule, do not struggle to enter new markets. In a single country, lowering the "environmental bar" may provide certain advantages for the development of "young" national companies, but it will not prepare them for competition in more "green" foreign markets.

Nevertheless, due to the increase in the volume of TNC production in the world, as well as their expansion into countries with an undeveloped environmental consciousness and regulation, the activities of international corporations continue to pose a serious threat to the environment. It is the development of external factors of "greening", including in developing countries and countries with economies in transition, which determines whether the resources and technologies of TNCs will be used to reduce the negative impact on the environment.

Already at present, the use of the best available technologies gives the effect of increasing production, outstripping the growth of the load on resources (on average, "half the cost - double the return"). Due to financial and organizational reasons, TNCs have much more prerequisites for faster and more effective development and implementation of such technologies and approaches than small and medium-sized enterprises, as well as public sector entities.

3. MAIN DEVELOPMENT TRENDS AND WAYS TO IMPROVE CORPORATE ENVIRONMENTAL MANAGEMENT IN THE CONTEXT OF GLOBALIZATION AND INCREASING THE INTERNATIONAL INVESTMENT ATTRACTIVENESS OF KAZAKHSTAN

3.1 Overview of hypotheses of global trends in corporate and state environmental management

The development and release of international standards defining requirements for organizations' environmental management systems has opened a new stage in the globalization of the economy. In fact, in the 90s of the XX century, voluntary standards in their essence, in practice, became a fundamentally new tool for competition in the international arena. It turned out that the voluntary implementation of modern environmental management systems in accordance with international standards refers to the voluntary decision of entrepreneurs to adopt modern rules of the game and develop their business in a toughening environment, or to act on a residual principle, searching for market segments where management systems are not yet a prerequisite for success.

The international organization for standardization defines the purpose of standards that establish requirements for environmental management systems as providing organizations with systems that allow improving environmental efficiency and business performance, systems that can be integrated with other management systems in order to help achieve the priority economic and environmental goals of companies.

Thus, the introduction (and in most cases - with subsequent certification) of management systems that meet international requirements for international companies acts as an indicator of the choice of a strategy for long-term business development, and hence the rational development of the national economy as a whole.

According to the hypothesis of investors searching for "havens" with the least developed environmental regulation (pollution havens / industrial flight / race to the bottom hypothesis), TNCs seek to escape from strict environmental legislation in their home countries and move production to countries with less developed environmental regulation. Accordingly, it is assumed that countries seeking to attract foreign direct investment compete with each other, weakening environmental regulation.

The hypothesis has been tested in numerous empirical studies, using three approaches. Proponents of the former sought to establish a relationship

between the strictness of the environmental legislation of the home country and the outflow of investment from it. However, they found no empirical evidence for the hypothesis that investors are searching for "de-ecologized havens".

The second approach was to identify the role of the environmental factor in choosing the "destination" of foreign direct investment. It was found that in the 1980s and early 2000s, the main determinants of the choice of host country TNCs were still the availability of the necessary natural and labor resources, the cost of labor, the quality of infrastructure, distance from the main markets, market size, and political and economic stability. The strictness of environmental management was taken into account only by companies producing highly toxic products (asbestos, petrochemical dyes, pesticides) and heavy metals (copper, zinc, lead).

The third approach involved studying specific situations, and it proved more effective in terms of shifting production to countries with less stringent environmental regulations, while in others governments relaxed their environmental requirements to attract foreign direct investment. The Fund's study provides relevant examples for developing countries such as Mexico, Indonesia, the Philippines, Papua New Guinea, and others.

All three approaches to test the hypothesis of "dumping dirty production" have their drawbacks. As for the first two, it is not yet possible to accurately measure variables such as the severity of environmental regulation; statistics on foreign direct investment are also imperfect. Therefore, proponents of the first two approaches work mainly with US data. The third approach cannot be considered completely objective, since only those cases where "dumping of dirty production" to developing countries from developed countries actually took place are analyzed.

However, all researchers note the tendency to transfer not only "dirty production", but mainly production in General from developed countries to developing countries. This process is stimulated both by relatively lower production costs in developing countries and countries with economies in transition, and by higher demand growth in them.

Failure to confirm the hypothesis that investors are looking for "de-ecologized havens" has given reason for most developed countries' governments not to fear that stricter environmental regulation will lead to a loss of competitiveness of their national economies and an outflow of foreign direct investment from them. At the same time, despite the lack of clear, scientific evidence of "dumping of dirty production" in countries with less strict environmental laws, governments of some developing countries and countries with economies in transition sometimes relax environmental

regulations in order to attract foreign investors. For example, in Indonesia, mining is carried out by companies under special contracts (Contracts of Work), according to which mining enterprises are excluded from the scope of environmental legislation. There are reasons to assume that the easing of environmental regulation in the CIS countries in the 1990s and early 2000s was also carried out in order to attract foreign direct investment.

Table

The share of "organic investment" in direct investment, leading investor countries abroad in comparison with the share of "environmentally dirty" investments in gross investments in fixed assets at in-country investors, %

Investor country	Share of "environmentally dirty investments"* in the country's direct investments abroad:				The share of "environmentally dirty investments" in gross capital investment in fixed assets within the country itself:			
	from the total volume for all industries		of the total investments in the manufacturing industry		from the total volume for all industries		of the total investments in the manufacturing industry	
	2012	2013	2014	2015	2016	2017	2018	2019
France	15	15,5	36,5	39,6	4,9	7,0	31	36
Germany	21	17, 2	46,3	42, 4	8	44	39	42
Japan	10,5	9,6	30,9	28,9	-	-	-	-
Great Britain	15	16,8	29,7	37,0	2,8	2,7	19,2	21
USA	14,5	15,6	31,3	35,1	4,9	6,111	33	43,3

The hypothesis of "freezing" of environmental regulation (regulatory chill hypothesis). This hypothesis is closely related to the previous one. Proponents of the "freeze" hypothesis do not claim that countries are relaxing their environmental regulations in order to attract foreign direct investment, but point to the fact that governments may refuse to further improve environmental regulation for fear of losing their competitiveness. According to the "freeze" hypothesis, in developing countries where environmental regulation is virtually non-existent, it may never be developed. Since it is not statistically possible to evaluate data on any failed measures to tighten environmental management requirements, this hypothesis can only be tested on the basis of situational analysis. Indeed, there are frequent examples of governments refusing to improve environmental management for fear of losing foreign direct investment. For example, a tax on greenhouse gas emissions in the EU, the US and Australia, despite attempts, has not yet been introduced, and a significant role in

blocking this measure was played by multinational oil and gas corporations.

Similar examples are observed in developing countries. In Brazil, for example, local regulators refuse to tighten environmental management standards for the leather industry because of concerns that its products may not be competitive compared to higher - quality products from Europe and cheaper ones from Asia.

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A positive effect of foreign direct investment on the environment occurs when the investor company strives for a single corporate standard of environmental management, and it is stricter than the national regulation of the host state. For example, in Russia, of all the oil and gas companies, TNK-BP, which is 50% owned by a foreign investor, is the most active in cleaning the soil from oil pollution that it inherited along with its deposits from the Soviet times.

However, even if the best available technology is applied, the environment of the host state may be significantly affected if the production volumes of TNC subsidiaries are large.

The task of state regulation in the environmental sphere is to ensure that the pace of tightening environmental standards and improving the environmental management system of companies does not lag behind the

pace of increasing their negative impact on the environment. Depending on whether this task is completed, the scenarios of TNCs' impact on the environment in the future also depend: from the aggravation of the environmental crisis to the achievement of the sustainable development goals.

3.2 Forecast and recommendations for environmental management of TNCs in the CIS countries

Thus, in the short and medium term, foreign investment in our countries will continue to be associated with an increased burden on the environment. In this scenario, the development of the situation with respect to environmental impacts of TNCs to a considerable extent depend on the actions of domestic legislative and Executive authorities in the sphere of environmental regulation, and macroeconomic and political situation.

Scenario one: the status quo. If the existing contradictions in environmental legislation and the low level of environmental administration persist, the negative effect on the environment of the CIS countries will increase. The improvement of the environmental management system of TNCs will be mainly influenced by market factors. First of all, they will improve the requirements of foreign consumers of TNC products, their creditors and other business partners. However, the international audience does not always pay due attention to the negative impact of TNCs on the environment in host countries, especially if they are "peripheral" States. Therefore, foreign investors who do not have a detailed planning horizon will apply the worst environmental practices.

While maintaining macroeconomic and political stability in the CIS countries, the country may increase the inflow of foreign direct investment from strategic investors with medium - and long-term planning horizons. Such investors are characterized by a desire to apply European and international environmental management standards and best available technologies and practices, regardless of the current legislation of the host country. In the event of macroeconomic and political destabilization, the flow of capital from strategic and socially and environmentally responsible investors will stop. On the contrary, some of them may wind down their activities in our countries. At the same time, it is impossible to increase the environmental efficiency of the domestic transport industry and housing and utilities sector without updating the fixed capital through large-scale investments by domestic and foreign investors.

While maintaining the status quo in the field of environmental

regulation and the General investment climate, it is also difficult to implement worldwide environmental management standards in the practice of domestic companies. As mentioned above, an imperfect environmental management system in the country leads to a loss of international competitiveness of domestic companies and the national economy as a whole.

The second scenario: stricter requirements for the implementation and improvement of environmental management. Most studies show that stricter environmental legislation in itself does not, as a rule, lead to an outflow of foreign investment or reduce the investment attractiveness of the economy of a particular state. Other factors that shape the national investment climate are much more important for investors, primarily macroeconomic and political stability, tax legislation, the degree of bureaucratization of economic activities, etc.

The main consequence of improving environmental regulation and administration in Kazakhstan will be to reduce the specific negative impact of foreign investors and domestic companies on the environment. In addition, stricter mandatory requirements for environmental management of local companies may lead to an increase in their international competitiveness in this area.

The main question is how to improve the environmental practices of domestic and foreign companies in the CIS countries. On the one hand, the best available technologies are often expensive. On the other hand, from a strategic point of view, the costs of their acquisition and implementation are justified. Moreover, in conditions of high prices for raw materials, funds for environmental purposes can be found without prejudice to other areas of investment activity. At the same time, an overall increase in prices for goods produced on the basis of best environmental practices is almost inevitable, although it may be very limited.

To implement this scenario in the CIS countries, it is necessary for officials, managers and employees of companies, scientists and other interested parties to form an objective understanding of the role of environmental management in the activities of TNCs at different levels of regulation of the modern world economy. The exchange of experience and environmental cooperation between domestic and advanced foreign companies, as well as local and foreign authorities, is also important.

Priority measures for improvement of state system of environmental supervision are to restore the legislative framework for environmental payments, codification of environmental law, environmental restoration of an independent state Agency, and creating a domestic legal base for participation of Kazakhstan in international trade in quotas for greenhouse gas emissions

2008-2012 under the Kyoto Protocol to the UN framework Convention on climate change.

When both the first and second scenarios are implemented, the final negative effect of companies' activities on the environment depends on whether the growth of economic activity or the introduction of best environmental practices will occur at a higher rate. If the volume of economic activity increases rapidly without improving technologies and environmental practices, the environmental situation in countries may deteriorate significantly. At a moderate pace of transition to best environmental management practices, the negative effect on the environment will remain the same or increase slightly. Finally, with the most optimistic scenario, that is, rapid implementation of global environmental management standards and best available technologies and large-scale investments in solving environmental problems, the state of the environment can improve, as has happened in many developed countries at the post-industrial stage of development.

3.3 Problems of improving the national environmental audit taking into account global trends

In connection with the strengthening role of environmental legislation in the world, it is necessary to clearly distinguish all institutions that in any way affect the strengthening of the environmentally friendly situation in our country, and to analyze the legal norms that provide conditions for the development of a stable policy in the field of environmental protection.

In the conditions of market relations, information about the state and performance of economic entities is the subject of attention of various industries. It is necessary to promptly monitor the course of economic processes, effectively manage property, and prevent negative consequences. In order to make sure that the company operates in accordance with the requirements of current legislation and objectively reflects the state and performance of an economic entity, it is necessary to attract specialists with appropriate qualifications. Historically, such qualifications have been held by auditors.

Environmental audit as a mechanism for environmental management was developed in economically developed countries such as the USA, Canada, Great Britain, Germany, the Netherlands and others in the 70s. Environmental audits began in the United States primarily by chemical companies to confirm compliance with stricter environmental regulations. At

the same time, environmental audit began to develop as a business branch of the environmental industry. Over the past 10 years, these countries have developed environmental audit concepts and adopted national standards and regulations in the field of environmental audit. The main principles and provisions of environmental audit are set out in the European Union Guidelines on environmental management and environmental audit No. 1836/93 (EMAS), adopted in 1993. since 1996, international standards ISO 14000-14010, 14011, 14012 have been in force, defining the General principles and procedures of environmental audit, as well as guidelines for its conduct.

The main goals and objectives in the field of environmental audit, taking into account international practice, include:

- collecting reliable information about the environmental aspects of the production activities of the object of environmental audit and forming conclusions of the environmental audit on its basis;
- establishment of compliance of objects of environmental audit with the requirements of legislation on environmental protection and other criteria of environmental audit;
- assessment of the impact of the environmental audit object on the state of the environment;
- assessment of the effectiveness, completeness and validity of measures taken to protect the environment at the environmental audit facility;
- assistance to economic entities in independently regulating their environmental policy, forming priorities for implementing preventive measures aimed at meeting environmental requirements, norms and rules;
- creation of a tool for implementing the main directions of environmental management and sustainable development;
- integration of activities in the field of environmental protection with other areas of activity.

Gradually, amendments are being made to our legislation concerning the development of this institution. Thus, according to article 134 of the Environmental Code, an environmental audit is a review of environmental reporting of audited entities aimed at identifying, assessing environmental risks and developing recommendations to improve the level of environmental safety of their activities, as well as compliance with other audit criteria.

The environmental Code of the Republic of Kazakhstan also establishes another institution that should, in theory, help companies that use natural resources to start their activities. Environmental expertise is the determination of compliance of economic and other activities with

environmental quality standards and environmental requirements, and the feasibility of implementing the object of expertise in order to prevent possible negative impacts of this activity on the environment and related consequences.

Of course, environmental audit differs from environmental expertise - at least in that the auditors examine the actual production. Experts conducting environmental expertise, however, mostly have to limit themselves to analyzing documents, since their object does not yet exist at the time of the examination.

Considering the Institute of environmental assessment, it should be noted that it is carried out in order to limit the possible negative effects of the proposed activity on the environment; balancing the interests of economic development and environmental protection as well as preventing damage to third parties in the process of environmental management. However, in addition to the state, there is also a public environmental assessment to coordinate programs and documentation on compliance with environmental requirements. What is a public environmental assessment? This is a type of activity carried out on a voluntary basis by expert commissions established by public associations. The initiator of the public environmental assessment can be individuals or public associations whose interests are affected in the case of the implementation of the object of public environmental assessment. Expert of the public ecological expertise can be a natural person possessing scientific and (or) practical knowledge on the subject and brought by the organizer of public ecological expertise for the conduct of public examination. However, such public consideration of the environmental situation is also fixed in another institution: environmental impact assessment. Article 46 of the Environmental Code includes a very large number of documents provided for impact assessment. Based on the results of the environmental impact assessment carried out by the customer of the planned activity, a statement on the environmental consequences of the planned or ongoing activity is prepared and submitted as part of the assessment materials. It is obvious that the submission of all documents serves as the basis for preparing a decision on the permissibility of implementing the planned activities of a natural resource company. For example, it is interesting that the package of documents also includes materials on public opinion accounting, which are drawn up in protocols and contain conclusions based on the results of public discussion of the environmental aspects of the planned activity. The inclusion of these documents may slow down the environmental impact assessment process, thereby delaying the start of companies' operations. After all, we have

already seen such a procedure in the process of conducting a public environmental assessment, the results of which are of a recommendatory nature. Thus, there is a need to review these norms to avoid duplication of functions of institutions for environmental impact assessment and environmental expertise. Such overlapping of the same tasks in different institutions only complicates the process of obtaining permission to start an expert activity for many companies. It can be assumed that excluding the need to collect materials on public opinion from the Institute of environmental impact assessment will be justified and will reduce the development of bureaucratic processes in the country, taking into account the fact that there is already an equally competent procedure for public environmental assessment.

State environmental expertise is carried out by the authorized body in the field of environmental protection and local Executive bodies within their competence. Another thing seems to be a bit of a surprise. Thus, according to paragraph 3 of article 64 of the Environmental Code, the subject of disagreement in the field of environmental expertise cannot be a negative conclusion of the state environmental expertise. However, the two previous paragraphs of this article provide for the possibility of resolving disputes through negotiations or in court. Consequently, a negative conclusion of the state environmental assessment entails a ban on the implementation of the activity being examined, which is a restriction on legal personality and freedom of business activity. These rights are enshrined in article 13 of the Constitution where everyone has the right to recognition before the law and has the right to defend their rights and freedoms by all legal means, including the right to judicial protection of his rights and freedoms. And paragraph 3 of article 64 of the Environmental Code does not restrict the right of everyone provided for by the Constitution of the Republic of Kazakhstan to protect their rights within the law, including judicial protection. As you know, the idea of adopting a single legal act as an Environmental Code came in order to bring Kazakhstan's legislation closer to the standards adopted in the world practice. By adopting this rule, in my opinion, the state will only create more obstacles to the development of well-regulated business activities of many national and foreign companies in the event of disputes. Thus, it seems necessary to include a negative conclusion of the state expertise as a possible subject of disagreement during the appeal.

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Also completely unexpected is paragraph 5 of article 147 of the Environmental Code, according to which environmental auditors and environmental audit organizations are required to report to the authorized state bodies on violations of environmental legislation detected as a result of mandatory environmental audit. The question arises, how will the Institute of environmental audit exist when this norm is included in the Environmental Code, and how effective will a contract with an environmental auditor or organization be if it is impossible to specify all the terms of cooperation in the service agreement?

I would like to note that environmental audit should be considered as a tool designed to assist the nature user in detecting violations of environmental requirements and so-called "hidden" problems that affect or may negatively affect the environmental aspects of its activities. Let's imagine the situation with objects that have been completed or are under construction without a positive conclusion of the environmental assessment. This is when the Institute of environmental audit comes to the rescue as a tool to protect the interests of customers. After all, the purpose of an environmental audit is just to confirm compliance with the requirements of environmental legislation in the design and construction of an object. By implementing the norms of the Environmental Code, we want to adopt the

experience and practice of developed countries to create a balance between the interests of subsoil users and the state. However, by making it the responsibility of an audit organization to submit reports to state authorities with the subsequent "opportunity" for the company to receive a claim from the state, it violates the basic principles of audit adopted in many developed countries: confidentiality of information and documents obtained during the audit. Moreover, everyone knows the principle of work of eco-auditors as objectivity. This, in turn, means not just independence of the management of the audited entity, the customer, as well as the management of the organization performing the audit; namely, competence in environmental protection and rational use of natural resources, as well as the specifics of the audited object, which is confirmed by the availability of relevant documents. All these principles of environmental audit should be aimed only at one thing: if there are any shortcomings in the work of the company-nature user - to help detect and eliminate them.

Environmental requirements in force in the state must be justified, understandable to each participant in environmental legal relations and feasible. A relationship of trust and mutual responsibility should be established between the state and nature users. This balance of interests should also be clearly spelled out in our code.

Therefore, the use of various types of enforcement measures may be the result of environmental control, but not environmental audit.

For example, in Russia, an environmental audit may reveal an unjustified excess of environmental payments, the illegality of applying environmental payments to an enterprise, or the illegality of applying sanctions to an enterprise, and the audit report will be the basis for their cancellation. They all realize that it is better to conduct an audit voluntarily, having received confidential information from the auditors and use it for preventive purposes, than to wait for a comprehensive audit or mandatory audit, which will inevitably lead to the application of sanctions. Realizing that there is no need to copy the legislation of other countries on the one hand, on the other hand, we must understand that there is a real opportunity to analyze and adopt only the best for our country. In this regard, it is necessary to revise the rules on environmental audit in the direction of perception of its means of improving the image of the enterprise and its products in the eyes of the public and consumers. Thus, it is assumed that this should be the understanding of the institutions of environmental audit and environmental expertise, which will certainly create a favorable environment for the development of environmentally friendly business for companies that use natural resources without unnecessary problems.

CONCLUSION

The conclusions that can be drawn from the research are unambiguous. At the post-industrial stage of economic development, production and consumption processes are undergoing a stage of "greening". Increasing the role of the environmental factor has become necessary and possible for two reasons: the aggravation of the crisis in the relationship between man (especially industrial companies) and nature, and the accumulation of a sufficient level of capital, investment and technological developments. Environmental management has become a new dynamic factor of competitiveness of goods, companies and States. As a result, the role of the environmental factor in the activities of transnational corporations increased significantly in the 1970s and 2020s.

The greatest impact on the environment is caused by raw materials industries, as well as transport and housing and utilities. In General, the absolute majority of economic sectors that have the most significant impact on the environment and are associated with high insured and uninsured risks are characterized by a high degree of transnationalization. However, many of these industries have a high concentration of transnational production and capital.

In economic theory and practice, there are different points of view on the impact of economic activity on the environment. The most dynamically developing approaches are "ecological technocracy" and sustainable development, since they offer economically and socially acceptable ways out of the environmental crisis.

The need for state regulation in the environmental sphere is due to the so-called market failures. At the interstate level, environmental regulation is carried out by regional and global intergovernmental organizations. The most influential global organizations that implement the system of environmental regulation measures are the UN (including the World Bank as a developer of credit and investment methods) and the WTO, and their positions on many aspects of the environmental activities of States and companies differ significantly.

The environmental policies of regional intergovernmental organizations vary significantly depending on the environmental goals and objectives of a particular group of countries. There are particularly large differences between the environmental policies of regional organizations in developed countries (EU, NAFTA) and developing countries (for example, SADC).

As a result of the deterioration of the environmental situation around

the world and the emergence of state and supranational environmental norms and standards, the market conditions of business have also changed. Private companies, including TNCs, have faced the need to develop their own environmental policies.

The corporate environmental management system is changing dynamically, and the internal standards of individual companies are often higher than the environmental requirements of developing countries and countries with economies in transition. At the inter-firm level, national and international business associations, primarily the international chamber of Commerce and the world business Council for sustainable development are responsible for coordinating companies' environmental management practices.

Unlike companies operating in a single country, multinational corporations need to consider the consequences of their environmental activities not only at the national level, but also at the international level. To assess these consequences and compare the results of environmental management of different companies it is most appropriate to use the following data:

- 1) on reducing or increasing various quantitative indicators of negative impact of companies on the environment (this is important for the analysis of current environmental practices);
- 2) decrease or increase in various quantitative indicators of the use of natural resources (this is also important for the analysis of current environmental practices);
- 3) companies' choice of technologies, equipment and know-how in investment decisions in comparison with the best from an environmental point of view (this is important for predicting future environmental practices).

Financial indicators of the company's environmental management allow us to judge its effectiveness only on a very limited scale.

TNCs and other business entities make decisions in favor of practices that are more or less acceptable from an environmental point of view, under the influence of a large number of factors. These factors can be grouped into four groups:

- 1) state regulation in the environmental sphere at the local, national and international level;
- 2) consumer requirements for the environmental properties of goods and the environmental practices of their manufacturers;
- 3) environmental policy of competing companies;
- 4) environmental requirements of business partners (not clients) and associations, including in the field of insurance and credit. However, the

factors combined in these four groups are not completely exogenous for TNCs. On the contrary, TNCs, as important players in the global economy, take an active part in their formation.

The examples considered in this monograph show that the responses of different TNCs to similar changes in four groups of factors are not the same. Some companies under the influence of "greening" regulation, demand and requirements of business partners are moving towards the best practices of environmental management and use the environmental component in the competition. Others, on the contrary, try to counteract or restrain the "greening" of external factors, and their economic activities gradually become the worst environmental practices.

Attempts by economists to find out what trends in environmental management of TNCs are prevailing have led to the creation of several hypotheses. Among them, there are completely different assumptions: the hypothesis of investors searching for "havens" with the least developed environmental regulation (pollution havens / industrial flight / race to the bottom hypothesis); the hypothesis of "freezing" environmental regulation (regulatory chill hypothesis); the hypothesis of the positive impact of foreign direct investment on the environment (pollution halos / race-to-the top hypothesis).

According to the studies reviewed, none of these three hypotheses can yet be statistically confirmed or disproved. However, the situation analysis shows that in some cases each of the trends may occur. At the same time, even within the same industry and one "set" of countries of presence, different TNCs can demonstrate completely different results of environmental activities and make choices in favor of solutions with different effects on the environment.

In the light of the above, it seems that the environmental management of each individual company is largely determined by the corporate planning horizon. The analysis shows that the choice of TNC management in favor of short -, medium- and long-term strategies in the environmental sphere depends on three factors:

- 1) the phase of the company's life cycle;
- 2) the company's capital structure; and
- 3) the "portfolio" of available technologies and equipment.

All three factors are closely interrelated, and the phase of the company's life cycle is the most versatile characteristic.

Accordingly, the weakening of environmental regulation cannot cause a significant inflow of foreign investment, since the environmental factor is of critical importance only for the most "young" and "old"

companies, which usually do not struggle to enter new markets. Loosening environmental regulations in each country may provide certain advantages for the development of "young" national companies, but it will not prepare them for competition in more "green" foreign markets.

Domestic companies that are at the early stages of the life cycle, in their projects, as a rule, adhere to the model of environmental management, focused on compliance with environmental legislation, and do not go to the development of corporate environmental standards.

The system of environmental monitoring and reporting in Kazakhstan is imperfect, and statistics are unreliable. The public is not sufficiently informed about the environmental situation. The lack of effective environmental regulation that is comparable to the standards of developed or newly industrialized countries can lead to a loss of competitiveness.

Depending on the horizon of their corporate planning, TNCs operating in Kazakhstan adhere to various environmental management options. There are frequent cases of violations of Kazakhstan's environmental legislation by foreign investors who do not have strategic interests in the country. At the same time, there are examples when the internal corporate standards of foreign companies are stricter than the domestic environmental legislation.

In the short and medium term, foreign investment in our country will continue to be associated with an increased burden on the environment. Scenarios for the development of the situation with regard to the environmental consequences of TNC activities depend to a large extent on the actions of the domestic legislative and Executive authorities in the field of environmental regulation, as well as on the macroeconomic and political situation in the country. Despite the General trend towards improving the environmental management systems of domestic and foreign companies, in the future, as at present, differences in environmental management of different corporations will remain even within the same industry.

Therefore, in order to solve current environmental problems and prevent possible crisis events in the future, it is necessary to tighten national environmental legislation and harmonize it with international standards. As numerous studies show, while maintaining macroeconomic and political stabilization, greening legislation will not lead to an outflow of foreign direct investment from the country.

It is extremely important that officials, managers and employees of companies, scientists and other interested parties have an objective view of the role of environmental management in the activities of TNCs at different levels of regulation of the modern world economy.

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MONOGRAPH

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