

SOME PROBLEMS OF THE FUNDING OF THE LOCAL PRODUCTION SYSTEMS: ENVIRONMENTAL ASPECT¹

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The paper is devoted to the problems of formation of financial mechanism of environmental protection in the framework of local production systems. The authors have identified main sources of costs for environmental purposes and analyzed the trend of reducing fiscal costs of environmental protection. A special emphasis has been placed on the legal aspects of using payments for negative environmental impacts, including the abandonment of targeted use of payments to the budget as a pollution fee. The importance of environmental funds in the financing of environmental activities has been shown; the importance of program-oriented approach to solving environmental problems is marked. The possible elements of the financial mechanism for the implementation of environmental protection measures have been proposed. The main difficulties including stimulating effect in the economic mechanism of nature conservation and environmental protection have been considered.

Local production systems (LPS's) are territorial-industrial combinations characterized, first, by the presence of its own economic capacity for self-development of the territory and ensuring its competitiveness. Only in this case, we have the necessary preconditions for the progressive modification of the production and spatial structure of the economy within the limits of LPS's, for the growth of their level of economic development and for the creation of conditions for social prosperity.

Secondly, LPS's must have an efficient management system, in which economic complex of the area, its social services and the natural environment are considered as a control object. With this as the subject of management can act the public authorities, local governments, and special management bodies for the implementation within the LPS's of any long-term projects and programs. Management of local production systems should be understood as an activity to regulate the processes of socio-economic development of the area in accordance with a pre-designed program and aimed at achieving the goals of improved quality of life. Under conditions of economic crisis, an important task of management bodies is to create tools to encourage the output of the region's economy of the depression and the providing conditions for development. Obviously, the development of regions, surviving depression and their further prosperity should be stimulated by the authorities.

Third, the LPS's are characterized by the existence of various public (government) and private institutions that perform, in particular, the various functions for the provision of educational services and training, research and implementation of innovation, securing funding, and others.

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Thus, the formation and functioning of LPS depends on many factors, including:

- economic (economic and geographical situation and the level of infrastructural development of the territory, transport, energy, innovation policy, the investment policy and territorial forms of social organization of production, etc.);
- social (including human capital, labor, employment, social protection of the population, the demographic balance, etc.);
- environmental (natural-resource potential, ecological potential, human impact on the environment, etc.);
- institutional (legal system and rule of law, judicial system, scientific and technical, financial and investment aspects, the system of governance, the system of market infrastructure, including credit and financial and other aspects, the system of education and science, cultural and religious values, etc.).

One of the important aspects of the study of the LPS's is to provide reliable financing process of their operation. In this article, we will focus on the problems of the formation of the system of financing environmental activities typical of the different levels of government, including the level of the LPS's.

In the field of environmental protection level of the local production systems is concentrating financial resources of various origins - from state allocations of funds to individual industries and companies – sources of pollution.

The main purpose of the economic mechanism in the field of the environmental regulation is not only providing accumulation of funds and compensation of expenses for environmental protection, but also (it's more importantly) stimulation of environmental activities, strengthening of the economic interest of industrial facilities in the rational use of natural resources and reducing pollution, in the organization of waste management and the use of secondary resources, etc. One of the important elements of the mechanism of the state environmental policy is the funding system. From as far as it is reliable and effective, depends largely on the state of the environment in the country and its regions.

Financial mechanism of protection of the environment is a complex of various financial and economic instruments aimed at promoting of environmental measures. These levers include an environmental tax policy, the system of payments for natural resources and negative impacts on the environment, environmental insurance, improving pricing for the products of industries that exploit natural resources, and other environmentally oriented industries, especially for environmentally friendly products and technologies, etc .

The purpose of the financial mechanism for the protection of the environment is to improve the environmental situation in the country with minimal material, financial and human resources through the provision of favorable economic conditions for environmental activities of the enterprises and industries. It is clear that the financial mechanism of nature management in any country reflects conducted by the state environmental policy.

To achieve these objectives it is necessary first of all to solve the following tasks:

- enhance the role of budgets of different levels of funding environmental programs, environmental activities and environmental government agencies; improve the system of public environmental funds;
- implement of the system of environmental taxation and compulsory environmental insurance schemes;
- clearly define the sources of funding for environmental activities between the company's own funds, extra-budgetary and budgetary sources, as well as to ensure the reliability and sufficiency of the funds in the market conditions.

In countries with developed market economies with typically a significant advancement in the field of environmental policy, the hallmark of the existing system of environ-

mental management is the use of economic regulators to promote environmental management while maintaining and strengthening the state and public control and regulation in the field of environmental environment.

Economic methods of environmental regulation include a set of measures aimed at changing the attitudes of economic actors in a direction of changing favorable to the state of natural resources and the environment, by affecting the cost and benefits of the various options that are available to participants of economic activity.

The main purpose of economic methods is primarily in providing incentives of the environmental activities primarily through the introduction of environmentally friendly and environmentally sound technologies, and to find ways to minimize the economic costs which will be incurred by the company in order to achieve the desired state of the environment and its individual components.

Financing environmental measures in developed countries is both at the national and at the regional and local levels through national budgets, expenditures of regional and local authorities, facilities companies and enterprises. The main sources for expenditures for environmental purposes, as a rule, the government grants, loans, and loans with interest, fees and penalties for discharges and emissions, administrative fees, costs of environmental nature, payments for the use of natural resources, grants from the state and other tools (Figure 1).

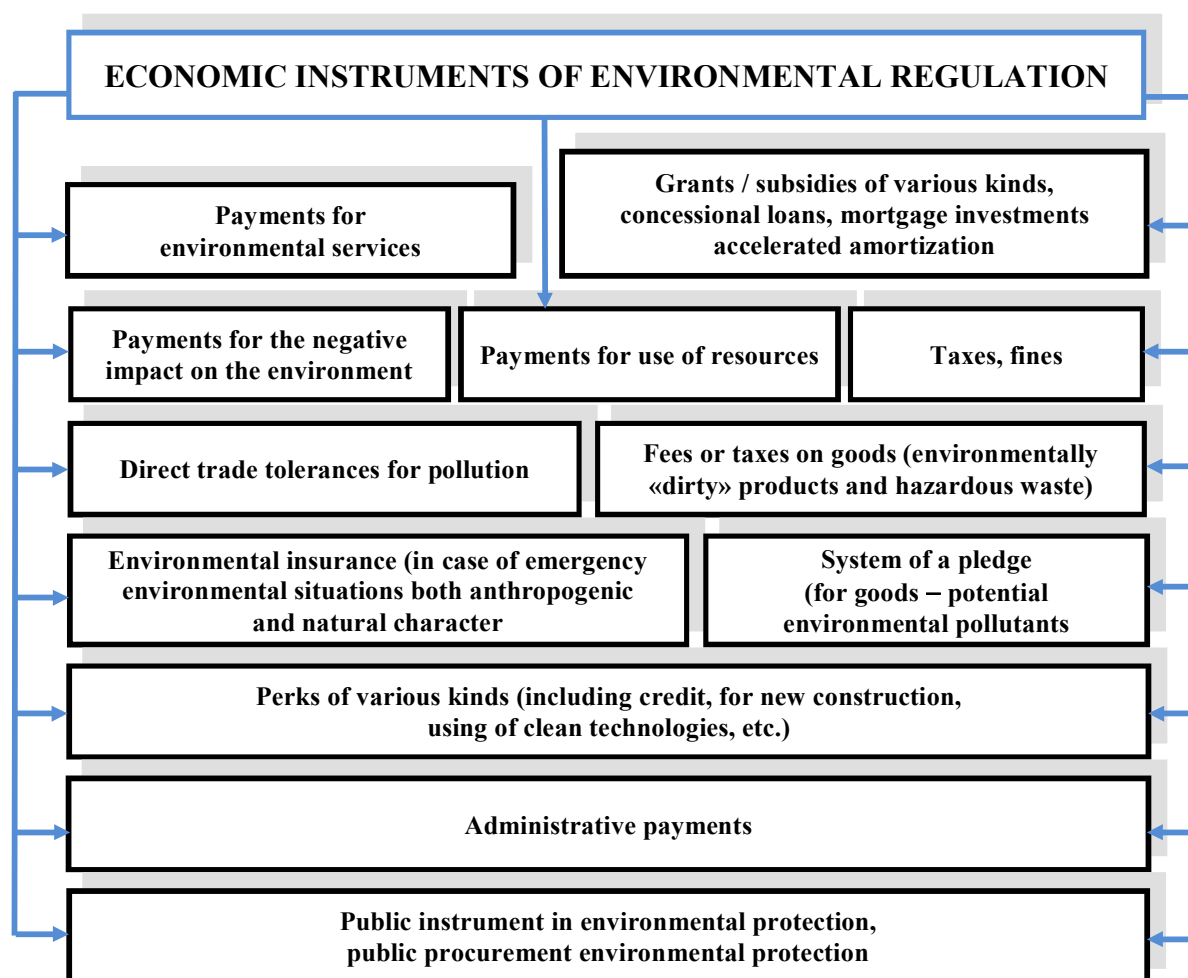


Fig. 1. Tools of the financial mechanism of nature management in developed countries

In this case, the experience of developed countries shows that the focus is increasingly on not restrictive measures and punishment, but rewarding the efforts of those natural resource users whose economic behavior is to create the most favorable environment.

The existing financial mechanism of environmental protection in Russia is fragmented and consists of individual structural units. It consists of the following subsystems:

- financing of measures on the protection of the environment;
- forecasting and development of environmental programs;
- environmental pricing and taxation;
- payment for natural resources and environmental pollution;
- environmental insurance, etc.

Despite the importance of these sub-systems in environmental financing the degree of development and practical use of them is different, some of them have not yet been properly developed. To date, the basis of the mechanism of financing environmental protection constitute the payments for natural resources and payments for negative impact on the environment, including payments for emissions of air pollutants, water pollution, disposal of waste production and consumption, contamination of the subsoil and soil, etc. (Figure 2).

The introduction of charges for the use of natural resources and pollution of the environment in the Russian Federation was the result of changing relationships in the field of the nature management in connection with the transition to market economic principles. In this regard, one of the tasks of the national environmental policy is the organization of the work to ensure compliance with the principle of payment for environmental management. However, this principle does not always adequately reflected in the legislation on taxes and fees, which affects the receipt of resource payments to the budget of the country.

The implementation of the financing of environmental programs and environmental activities in the Russian Federation provides the possibility of using financing different sources, whose role varies. Among these sources, we can identify: budget funds (federal, regional and local budgets); funds of enterprises, institutions and organizations; environmental funds; environmental insurance funds; bank loans; voluntary contributions of the population; foreign legal entities and individuals, and other sources.

In general, the current Russian system of environmental financing is far from perfect and can not boast of any extensive array of different instruments and techniques, no significant grants from.

Since the early 90s there is a tendency to reduce budget expenditures for environmental protection in Russia. So, in 1995, for this purpose has been allocated 0.6% of the expenditure side of the budget, in 1996 it was 0.5%, in 1997 – 0.4%, in 1998 – 0.5% 1999 – 0.87% of the expenditure side of the federal budget.

The last decade government spending on environmental protection were scanty value being in the range from 0.14 to 0.2% of total federal spending. In the federal budget for 2011, the costs of environmental protection are provided in the amount of 14.5 billion rubles. It corresponds to 0.14% of the total expenditures or 0.03% of GDP (compared to developed European countries, the level of environmental costs estimated in the range of 4–6%, in Japan – more than 8% of GDP) [1–3].

At the 2013 budgetary allocation for environmental protection in the Russian Federation are expected to reach 16.7 billion rubles or 0, 12% of the expenditures of the federal budget, which corresponds to 0.02% of GDP.

The plans of the Government of the Russian Federation is scheduled to increase to 2023 the share of the costs of environmental protection to 0.3% of the expenditure side of the federal budget, the problems, of course, does not solve. According to environmental experts, only to stabilize the environmental situation is required at least 2.5%, and for improving the situation need the facilities in the amount of 4%.

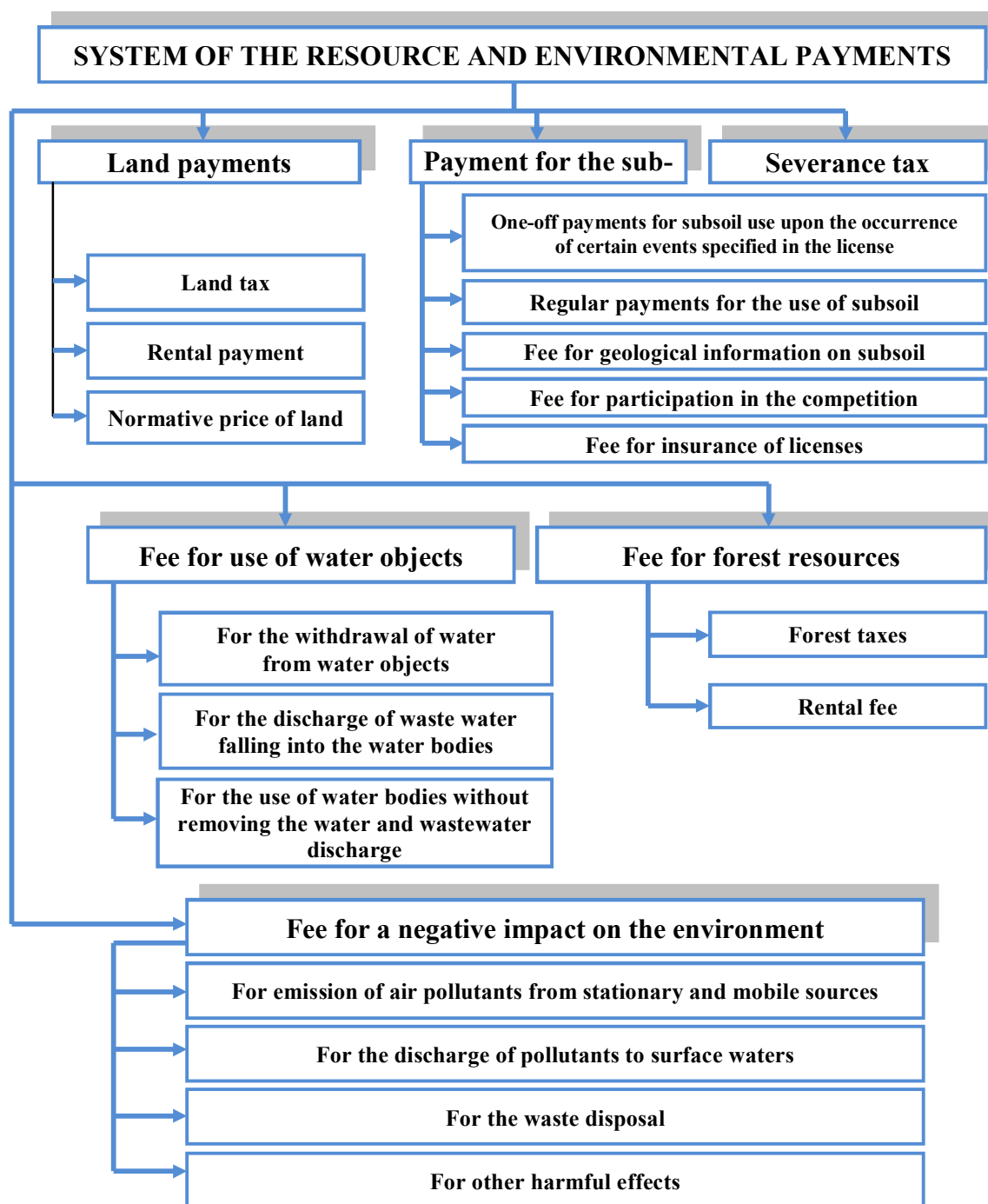


Fig.2. Resource and environmental payments in the Russian Federation

In 2000–2001 was liquidated Federal Environment Facility and, although formally environmental funds of the subjects of the Federation (regional funds) and district (municipal and local) environmental funds are not abolished, but their activity in the majority of cases declined. Thus, the environmental activities lost, though relatively small, but reliably collected target means at the federal, regional and local levels.

The final blow to this source of funding caused the collapse of the system of payments for environmental pollution due to environmental funds were formed. At the same time, through a system of environmental funds has financed provision provision by equipment Inspections of analytical control, works on environmental monitoring, environmental re-

search, environmental education programs, support of the reserves and other protected areas, a publication of environmental literature and other kind of environmental practices. After the destruction of the system of environmental funds these activities ceased in the vast majority of the subjects of the Federation.

In addition, under the conditions of Russian flexible mechanisms of environmental financing in the form of a market for pollution rights, environmental risks insurance and others is not being used.

In general, the existing system of government target environmental funds justified itself and, in our opinion, it is necessary its recovery. Means of such specialized funds could be one of the sources of funding of federal programs in the environmental field. Today, there is a reduction of funding and the closure of federal target environmental programs.

The abolition of federal target programs that have been funded primarily from federal and regional budgets (for example such as «Revival of the Volga», «Ecology and Natural Resources of Russia», «Waste», «State support of state natural reserves and national parks», «Protection of Lake Baikal», «Security and Development of Nuclear energy», «Energy Efficient Economy», etc.) has led to a decrease in the targeted budget funding for corresponding directions in the areas of environmental protection, which should be under constant supervision and care of the state. Since 2004, in the country is not realized none environmental program. Despite the fact that the current in the Russian federal target programs for the most part ineffective, and a number of them exist only on paper, under the closure were determined primarily environmental (or connected with protection of the environment) programs. This once again demonstrated setting the priority of the economy over the environment.

In the budget for 2013–2015. among federal target programs there occur only two environmental – Federal Program «World Ocean» and «Protection of Lake Baikal and the socio-economic development of the Baikal natural territory for 2012–2020». The share of program-oriented approach to solving environmental problems during this period is only 13–15% of the budget allocation.

Another important issue is connected with the fact that there is still the issue of payments for negative impact on the environment is not regulated in legal terms. The relevant law has not been adopted so far, although its necessity follows from the federal law «On Environmental Protection» 2002. The current system of environmental payments, not having the necessary legal framework, essentially exhausted itself and is now playing a purely symbolic role – especially because of the exceptionally low base rates. Although in the 90-ies the system is practically and did not perform a regulatory function in the part of the capital environmental costs (due to the economic crisis and the difficult economic situation of enterprises), but it is done quite well with that function in the part the current activities of enterprises and served fiscal function. Now this system of environmental charges is based on the extremely low base rates (approximately 10% of the rates taken in Kazakhstan, Belarus, Moldova, Georgia, and only about 2% of the rates acting in most countries of the European Union). That does not stimulate enterprises to implement environmental activities.

It should also be noted, and such, in our view, an extremely important moment (again, who had a negative impact on the environmental sphere) as a rejection of the use of funds incoming to the budget as payment for pollution. If, before the adoption of the new Law «On Environmental Protection» in 2002, the card was designed exclusively for the purpose of restoring damaged environment, which was confirmed in the previous federal law «On Environmental Protection» of 19 December 1991, then after the cancellation of the last and adoption of the new law regarding the prohibition of the use of payments for pollution of the environment for any purpose, other than environmental, disappeared.

Later, a similar approach was used in making new versions of the forest, water and other codes and federal laws. As a result, the sphere of environmental protection in Russia, has always funded at an unacceptably low level, and lost what little that was. According to Ministry of Economic Development of the Russian Federation, currently the payment within the standards for emissions (discharges) of pollutants and waste disposal is only 0.04–0.05% of the cost of industrial products, which actually imperceptibly as stimulating factor or punishment for environmentally hazardous activities.

Apart from the aforementioned shortcomings of the system of payments for negative impact on the environment, the practice of using them also showed that the set of substances for which payments were set far from complete. Besides that, there are major flaws with the point of view of the inflation factor: the value the correction coefficient is incomparable with the actual rate of inflation. As a result, the system of payments for negative impact on the environment, that is intended to be used as one of the sources of financing of the environmental sphere, and also to some extent, encourage enterprises to implement environmental protection measures, in reality (as a result of successive emasculating its essence) does not perform any fiscal or regulatory, much more stimulating, functions. The value of environmental payments should be such that not only create strong incentives for effective environmental management (and thus for the introduction of resource- and energy-saving technologies), but also be compatible (in terms of technical and technological feasibility of attainability of ecological and economic parity) with the conduct of economic activity in all sectors of the economy. In addition, these payments must receive sufficient funds to provide targeted funding for environmental protection.

Not correspond to the actual economic assessment and prevailing in the Russian system of payments for the use of natural resources. The level of these payments artificially low, and significantly (at least one order of magnitude), which proves ineffective implementation by the state the function of owner of the natural resources when huge part of the revenues from natural resource passes by budget.

In light of this, it seems necessary, first of all, the widespread introduction and development of the following elements of the financial mechanism for the implementation of environmental measures [4, 5]:

- establishing tax privileges for environmentally responsible companies who outsource production to the best available technology (in particular, this may be exemption such enterprises from value-added tax (VAT) for a period of technical and technological re-equipment of fixed productive assets, ensuring resources saving and environmental safety of functioning production, etc.);
- the establishment of higher taxes for environmentally dangerous products and kinds of activities;
- preferential lending (for example, on the creation and implementation of new resource-saving and environmentally friendly technologies and equipment);
- accelerated amortization of the fixed productive assets of the environmental appointment;
- establishment of price premiums for green products or for the use of environmentally friendly equipment, etc.;
- introduction of the various kinds of the payments that could perform stimulating, compensatory, punitive functions, as well as regulatory, above permitted standard and other functions.

Use of regulators to encourage the greening of production, transition to the advanced technology, requires of modernization of tax and budget legislation. It is absolutely necessary to establish clear understandable rules for investors, for producers who are planning any economic activity, will clearly understand what would be the economic and administra-

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tive implications of the lack of attention to the environment. Require as well a revision of penal sanctions for environmental offenses, the level of which is now so low that companies simply ignore environmental requirements. The problem consists first of all in the fact that on the one hand, to generate interest of business in environmental activities (including through the modernization of production and the introduction of new technologies, environmental innovation, etc.), and, on the other hand, environmental violations should be strictly followed the rigid responsibility, with using the appropriate penalties. In this case, success is possible only under condition of achieving a balance between sanctions for environmental violations and receiving the benefits of environmental activities. Greening the tax system will give an additional impetus for conducting the structural and technological policy, in particular, for the transition from the use of natural materials to using recyclable materials and waste.

Of particular note is the problem of development of economic mechanism of stimulating rational nature management and environmental protection, promotion and support of environmentally responsible business. As already mentioned, formed in the Russian mechanism of the environmental regulatory does not have a stimulating effect. This is manifested, in particular, in the imperfection of estimates of taxable base of using natural resources, including low interest rates of the payment for the use of natural resources and the restoration of natural resources; at extremely low base rate payments for negative impact on the environment; in unjustified reduction in the payment rates for the use of natural resources and their reproduction by individual of natural resources users; in an underestimation of the value of natural resources, the substantial absence of payments for re-use of collateral and natural resources.

Without the development and implementation of the relevant elements in a system of levers and methods of management a shift towards active transition to resource-saving and environmentally friendly technologies can not be achieved.

It's necessary the direct economic interest of business in solving environmental issues and the state's task - to create this interest, to support resource-and energy-efficient technologies and products, including through the introduction of market regulators in the field of environmental protection, which would stimulate enterprise actually reduce anthropogenic pressure on the environment, introduce modern resource-saving and environmentally friendly technologies. Business needs to understand that environmental protection – is not only an additional burden on the budget of the companies, but also one of the conditions to improve product quality, increase its competitiveness in world markets.

Under the conditions of Russia absolutely do not used the flexible mechanisms of environmental financing in the form of a market for pollution rights, environmental risks insurance, etc.

It is clear that the transition to eco-oriented technology – an extremely complex process that requires not only a huge time and money, but also the political will of the government. Such a transition is impossible without adequate serious preparation for the implementation of measures, including legislative and regulatory support, development of new technical and technological solutions, creating an effective economic mechanism of environmental regulation, etc.

Modern crises are making significant features in the relationship of the economy and the environment. Impact of the crisis on the state of affairs in the environmental field is usually two-fold character, causing on the one hand, environmental degradation, and on the other hand - its relative improvement, allowing to reduce the load on the environment.

Decline in production, reduction of transportation leads to a reduction in emissions and discharges, as well as reduced energy demand, which in turn leads to a decrease in revenues of carbon dioxide and mitigate the greenhouse effect.

However, such a reduction in environmental impact is temporary and, as experience shows, as the crisis pressure on the environment not only restored to the same level, but, as a rule, much stronger. This occurs, in particular, because of the desire of enterprises during the economic crisis, to reduce production costs, saving on all reflected in the reduction of industrial and environmental safety of the facilities. In addition, during the crisis of power, especially in the local level, local authorities often mitigate environmental requirements in relation to individual producers and generally weakened control by the environmental authorities. As a result of the ecological situation in the region is usually much worse.

The decline in production is accompanied by a decline in the financial resources from the producers, forcing companies to seek out additional sources of internal funds. This is most often seen in curtailing environmental activities, as it is not directly involved in the main production process and the company will first try to save on the environmental costs, which leads off environmental equipment, saving on electricity, expensive reagents, etc. This was shown by the experience of the crisis of the 1997–1998's in Russia, when the reduction of environmental pollution was far inadequate drop in production, and in some cases there was a marked deterioration of the environmental situation.

During the crisis, reducing the cost of environmental protection is specific not to the production level, but also to all levels of territorial administration – from federal to local, leading to partial or complete curtailment of environmental programs.

Along with this economic crisis generates and some opportunities to solve environmental problems [6, 7, 8]. First of all, participation of the state in solving economic problems increases and thus the opportunity for radical structural and technological change, the transition from resource-based economy to an innovative environmentally sustainable economy are appeared.

Reduction of financial resources at the federal level may force the authorities to review the energy policy of the country and abandon the expensive and environmentally hazardous projects for the construction of new (often highly questionable in terms of their economic and environmental studies, and did not pass most of the state environmental expertise) hydro- and nuclear power plants, as well as the implementation of many other nature-large projects.

The structural transformation of the economy require significant investment and time to implement them. The action of the Russian government to rescue the major energy and metals companies show not only the consolidation of the commodity nature of the economy, but also lead to a shortage of funds for investment in the modernization and diversification of production. As a result, instead of the formation and development of high-tech industries and, as a consequence, the reduction of environmental pollution and waste of natural resources, we will have the opposite effect.

The consequences of economic crisis in Russia, especially in Siberia, the impact on the ecological situation faster and stronger, if a significant missed opportunity to modernize production, which resulted from new technologies industry can become the new «environmental» track. However, one can not ignore the fact that in today's crisis, the Russian company in the search for additional sources of finance are not on the way to finding the best technical solutions, and cost savings, and especially the environment. Therefore, it seems that the appeal of the country's leadership for Russian companies to exploit the situation to the modernization of production (including environmental) is unlikely to be heard by them, and after the crisis should expect any significant increase of human pressure on the environment.

In keeping with today's financial crisis is problematic to expect a radical change for the environment for the better. It is also important to consider that environmental problems require, as a rule, long-term solutions, which focus on the crisis reduced.

An important aspect of financial support environmental measures in times of crisis (and not only) is that the lack of funds to main production activities pushes aside everything else, first of all, the environment. At the same time, environmental protection measures, as long-term, require long-term investment for a fairly large investment lag when payback not only requires long periods, but it can not be achieved at all (for example, under the existing criteria of investments, ignoring usually economic damage from pollution).

Under current conditions in Russia of the functioning the financial system, when one of the biggest problems is the lack of funding so-called «long» money (i.e. funds to banks for more than one year), environmental sphere remains outside the immediate interests. One solution to this problem is to use these new financing mechanisms, as collective investors (mutual funds), as well as syndication and bond issues [9]. The advantages of these sources of funding are, first, their low cost compared to commercial loans, and second, their big attraction for investors through the use of new technologies, the effect of participation, transparency, operating international reporting systems, improve the quality of products and services and ensuring the environmental safety of the production.

In the end, what environmental scenario would have the best chance for the implementation will largely depend not only on the legislative and regulatory support, forming an effective economic mechanism of environmental regulation, and many other conditions, but also the political will of government officials, their real steps on the use of modern situation for the modernization of the economy. It should be added that in today's market the current level of environmental protection and resource saving technologies and determines the competitiveness of the Russian economy in the world (or rather, its lack of competitiveness). At the same time, the increasing demands for environmental quality and safety of products, the transition to the integration of environmental parameters of the technologies used for the production of products, is one of the important directions of increasing international competition.

Environmental innovation development can not only gradually reduce the level of negative human impact on the environment, but also bring benefits of environmentally responsible business (which requires the establishment of appropriate economic rules of the game), contributing to the overall output of the country on a sustainable path of socio-economic development. In turn, the choice of the ways out of the crisis give a chance and allows the state to conduct structural and technological restructuring of the economy in favor of resource-saving and environmentally safe production and establishment of an environmentally sustainable and innovative development of the country and its regions. One of the conditions for successful development in this direction and to achieve good environmental situation as a necessary element of a decent quality of life and health is to ensure coherence of the regional government, business and the public in the field of environmental protection.

Contemporary crisis showed that the state must be present in the economy, not so much as an owner, how much and above all as a regulatory and guiding force. It is not only the failure of the market, the need to internalize the external effects, including those related to environmental pollution. Launch large-scale processes such as modernization and innovative transformation of the economy by government forces only.

In general, the problems of modernization, facing the Russian economy, require a change of value criteria for a wide range of relationships, including relationships with the natural environment. Then reduces to only upgrade technological aspects seem unpromising without creating appropriate institutional environment, one element of which is to build relationships with the natural environment. A new paradigm in the field of environmental protection, based on the concept of sustainable development, proceeds from the awareness of the need to reject consumer attitude towards the environment and building a partnership with her. Environmental and economic consequences of such a partnership, arising from

the consistency of the coexistence of natural, technical and human capacities are obvious. It is not just about the transition to resource-saving and environmental-oriented technology with all its consequences for the economy, the environment and humans, but also the formation of an environmental ethic, respect for the natural environment, the strengthening of the principles of eco-efficiency and environmental justice.

In other words, it is necessary to change the criteria and to form an adequate institutional framework otherwise the modernization of the economy is doomed. Institutional reforms should be aimed at creating a new and better legal and economic mechanisms to regulate the interaction of different levels of government and natural resources, subject to the mandatory inclusion of environmental requirements in the procedure for assessing the socio-economic benefits of management decisions.

In general, formed to date, financing in the Russian in the sphere of environmental protection (including budget) does not provide sufficient economic mechanism of respect for the right of citizens to a healthy environment. At the same time, environmental goals can be only really be prioritized and effective when for their achievement will be allocated prioritized resources.

REFERENCES

1. http://www.budgetrf.ru/Publications/Schpalata/Zakluchenia/ACH_ZAKL200911041925/ACH_ZAKL200911041925_p_008.htm. - Data of the Accounts Chamber of the Russian Federation.
2. <http://info.minfin.ru/fbrash.php/> Data of the Ministry of Finance of the Russian Federation and the Federal Treasury.
3. **Budgetary** allocations of the federal budget under the «Environmental Protection»). URL: <http://protown.ru/information/hide/6375.html>.
4. **Burmatova O.P., Sumskaya T.V.** Financial mechanism of environmental management. // Materiały VIII Międzynarodowej naukowo-praktycznej konferencji «Europejska nauka XXI wiek – 2012», 07–15 maja 2012 roku. Vol. 7: Ekonomiczne nauki. Państwowy zarząd / [red. nacz. S. Gorniak]. – Przemysł: Nauka I studia, 2012. – P. 26–31. – URL: http://www.rusnauka.com/14_ENXXI_2012/Economics/15_108261.doc.htm
5. **Burmatova O.P.** Problems and prospects in the field of environmental finance. // Bulletin of the NSU. Series: Socio-economic sciences. – 2005. – T.5. – Issue 2. – P. 36–48.
6. **Bobylev S.N., Zakharov V.M.** Crisis: the economy and the environment. – Moscow: «Printing Levko», Institute for Sustainable Development / Center for Russian Environmental Policy, 2009. – 84 p.
7. **Burmatova O.P.** Innovative aspects of the environmental safety of the region in conditions of financial and economic crisis. // Russian region: innovative developments in conditions of the global financial crisis. All-Russian Scientific Practical Conference. – Volgograd: VAGS, 2010. – P. 481–484.
8. **Priorities** of the National Environmental Policy of Russia / ed. V.M. Zakharov. – Moscow: «Printing Levko», Institute for Sustainable Development / Center for Russian Environmental Policy, 2009. – 152 p.
9. **Vasilenko V.A.** Innovations in resource provision of environmental measures). URL: http://www.ogbus.ru/authors/Rodionova/Vasilenko_2.pdf.