THE ROLE OF FINANCIAL SECTOR IN PROVIDING SUSTAINABLE DEVELOPMENT GOALS

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Abstract. The article contains the analysis of the current ecological situation in the Republic of Bashkortostan as an oil production region of Russia. It was emerged that the decrease in emissions from means of transport caused by change in the calculation methodology. The statistical data on environmental control costs and payments for the use of natural resources in the Russian Federation for the period from 2008 to 2016 years have been analyzed. The measures aimed to create favorable conditions for the sustainable social and economic development of the region have been determined. The authors proposed alternative sources of financing the environmental protection: the issuance of ecological («green») bonds and the attraction of ecological deposits to finance environment-oriented investment projects. The main significant investment directions of the funds, obtained due to the emission of domestic ecological loan bonds, corporate ecological bonds and concessional environment-oriented bonds have been identified.

1. Introduction
The current ecological situation in the Republic of Bashkortostan (hereinafter, RB) is mainly determined by its resource-industrial potential. For many years Bashkortostan is one of the main oil-producing regions of Russia. The energetics, oil refining, chemical, gas and petrochemical industries, and oil engineering were developed on the basis of oil production.

From an ecological point of view, the Republic of Bashkortostan is determined as a complex region, since a significant concentration of harmful industries in machine engineering, chemistry, petrochemistry contributes to air and water pollution more than in neighboring regions of Russia. As in most regions of Russia, the ecological situation in RB becomes worse, since the process of harmful substances accumulation in the environment takes place, new substances are synthesized, the effect of which on humans has not been studied yet. The self-purification limits of biocoenosis near the industrialized territories are often exceeded.

The man-caused factors of the ecological disaster zone appear in the development of old oil and gas fields and around oil refineries (fresh ground waters in the south, west and north-west of the republic are unsuitable for drinking and household). There are problems of lands and water pollution with
heavy metals in the mining industry of the Trans-Urals, almost permanent smog over major cities (sources - mainly motor transport and oil refineries), expanding of fresh water contamination areas (including springs) within boundaries of cities and large settlements without sewage networks and treatment facilities, the drying of forests due to the decrease of the groundwater level, the reduction of biodiversity, the locally increased radiation background on the oil industry, development of cities without taking into account environmental factors, etc.

2. The problem statement or Material and methods

In civilized countries, the main tool forcing the enterprises that harm the environment of the urban territory, to modernize production and comply with environmental legislation is the system of fines and administrative measures. In Russia offenders of the atmospheric air protection rules are threatened only by the imposition of administrative fine from 180 thousand to 250 thousand rubles, or the suspension of production activities for a period up to 90 days. In 2016, the Ministry of ecology of RB for air pollution imposed in the Republic 26 administrative fines for the sum of more than 1 million rubles. Also the activities of 7 legal entities and individual entrepreneurs were suspended for the harmful substances emission into the atmosphere without special permit.

The amount of fines imposed on polluting industries is simply ridiculous considering their multi-billion dollar turnover. It is easier for the companies to pay the fine than to spend money on replacing expensive equipment or installing filters.

In Russia the existing financial mechanism of environmental protection is disorganized and consists of separate structural units. It can be conditionally divided to the following subsystems: financing of measures for the protection of the natural environment; forecasting and preparation of environmental programs; environmental pricing and taxation; the payment for natural resources and environmental pollution; environmental insurance. Despite the importance of the named subsystems in environmental financing, the degree of development and practical use of them is different, some of them have not yet received due development.

In recent years, the economic community paid a lot of attention to the problem of studying the financing of environmental activities in Russia. A lot of scientific work has been devoted to the development of the environmental taxation directions in Russia, the calculation procedure and environmental taxes payment, among which it is necessary to mention the works of Maiburov I A, Gorsky I V, Tischenko A N, Devereux M P, Bashkirova N N, etc. [1-3]

Informational and empirical base of the research are: the Constitution of the Russian Federation, federal laws, Decrees of the President of the Russian Federation.

The statistical and comparative historical analysis was based on the data of the State Statistics Committee of Russia, the Ministry of Finance of the Russian Federation, and the Federal Tax Service of Russia; the regulatory and legislative base of the Russian Federation on incomes and expenditures of the Russian budget system, periodicals, expert and analytical centers and institutes, scientific and practical conferences.

3. Results and discussion

There are a number of serious environmental problems in the Republic of Bashkortostan.

First, the air pollution, which is directly linked to increased levels of productivity in the economy of the Republic of Bashkortostan. The main emissions about 70% from mobile sources account for enterprises of the fuel and energy complex (oil refining, petrochemical, oil mining and electric power industries). Moreover for the last six years, the emissions from industrial enterprises in the Republic have not practically reduced. So, if in 2008 the emissions of polluting substances into the atmosphere amounted to 417.4 thousand tons, in 2016 they reached 448.9 thousand tons. This means that the existing production capacity in the Republic of Bashkortostan must constantly upgrade and the best available technologies must be used in the field of environmental protection. The decrease in emissions from mobile sources from 713.4 million tons in 2008 to 334.7 thousand tons in 2016 caused by change in the calculation methodology.
Second, it is the pollution of water basin. In RB the main influence on surface water bodies provide industry and housing and utilities sector. The share of enterprises of fuel and energy, chemical and petrochemical complexes in 2016 accounted for more than 57.7% from the total volume of sewage waters discharge into surface water bodies in the Republic, the share of housing and utilities sector is 34.0%.

The share of polluted sewage waters in 2016 was about 63% (305.1 million m$^3$) from the total volume of sewage waters discharged to the water bodies of the Republic. The share of sewage waters classified as «insufficiently purified» in 2016 was more than 99% (304.89 million m$^3$) from the volume of sewage waters, classified as «contaminated» [4].

The water bodies contamination in the Republic is primarily connected with the inefficiency or lack of treatment facilities. The main reasons for their inefficient work, as in previous years, are the use of obsolete technologies and the deterioration of basic production assets. The existing treatment facilities, even if they are operating in the design mode, do not reach the established quality standards for water bodies, and the entire amount of sewage waters that have been treated cannot be classified as «normatively purified».

At the same time for the last 6 years there has been a gradual reduction in the volume of polluted sewage waters discharge into the water bodies. So, in 2010 the sewage waters volume in this category was 380.85 million m$^3$. Moreover, the share of contaminated sewage waters in 2010 amounted to about 70% from the total volume of waste waters discharged in water objects of the Republic.

This is achieved due to the implementation of environmental protection measures, mainly through the introduction of new or reconstruction of existing treatment facilities.

Third, it is the contamination of urban territories by household waste due to:
- imperfection of environmental protection legislation;
- high deterioration of the process equipment;
- the use at the enterprises of the Republic of high-waste technologies;
- low rate of introduction of modern resource and energy-saving technologies.

The amount of waste generation from 2008 to 2016 increased from 42.82 to 44.95 million tons. The share of used and neutralized waste in total volume of generated waste in 2016 remained on the level of 2008 and equal to 17%. The amount of waste generation of I - IV hazard classes for the last 9 years has decreased by 25%, and the share of used and neutralized waste in total volume of generated waste of I - IV hazard classes has increased from 55.4 to 61.3%.

The development of the waste management system of production and consumption in the territory of the Republic of Bashkortostan will allow by 2020 to increase to 72% the share of used and neutralized waste in total generated waste volume of I - IV hazard classes.

Former industrial development of the Republic led to the fact that at the moment, on its territory there are objects of accumulated environmental damage of previous years, which puts the population health at risk. The most important tasks at present are the neutralization and the subsequent involvement of these facilities in the economic development of the region. Implementation of the state program «Ecology and natural resources of the Republic of Bashkortostan» (hereinafter - state program) aims to create favorable conditions for sustainable social-economic development of the region and ensuring the implementation of the powers transferred to the Federal laws to subjects of the Russian Federation.

The state program provides a complex of interrelated technical, organizational, technological, economic and environmental protection (ecological) measures with appropriate financial, regulatory, scientific and informational support in accordance with the legislation.

In accordance with the Principles of the state policy in the field of ecological development of the Russian Federation for the period up to 2030, the strategic goal of the state policy in the field of ecological development is the solution of social-economic problems, providing ecologically oriented economic growth, preservation of favorable environment, biological diversity and natural resources to meet needs of present and future generations, realization of the right of every person to favorable environment, strengthening the law in the field of environmental protection and ecological safety.
Taking into account the priorities of the state policy in the field of environmental protection, the objectives of the state program are defined:

- to develop the water sector in the Republic of Bashkortostan;
- to conserve and sustainably use the natural resources of the Republic of Bashkortostan;
- to develop the waste management system of production and consumption in the territory of the Republic of Bashkortostan;
- to maintain a favorable ecological situation in the Republic of Bashkortostan.

To achieve the objectives of the Program envisages the following tasks:

- to increase the level of water supply for the population and its protection from floods and other negative water impacts;
- to conserve natural resources and biodiversity;
- to create the infrastructure for ecologically and sanitary-epidemiologically safe collection, recycling (utilization), neutralization and disposal of waste;
- to reduce the total anthropogenic load on the environment.

The implementation of these complex events requires substantial financial resources.

The volume of resource provision for the state program includes the budgetary appropriations of the Republic of Bashkortostan, the federal budget (subsidies and subventions), local budgets of municipal areas and city districts of the Republic of Bashkortostan, as well as funds from non-budgetary sources.

The total amount of financial support of the national program in 2014-2020 will amount 14048293.0 thousand rubles.

It should be noted that in the present time, for the enterprises as users of natural resources and local government institutions there are no material incentives for the construction of sewage treatment plants, gas-purifying equipment, land reclamation, etc., Complaints for environmental damage filed very seldom. The principle of «polluter pays» is not effective due to the insignificance of tariffs and penalties, absence of the plant operation interruption in case of environmental violations. Modernization of the economy requires a lot of money that can be allocated to a private owner only under government pressure and public opinion.

The creation of a sustainable system of the environmental sphere financing in Russia actualizes the importance of alternative sources of financing for environmental protection, such as: formation of nature protection funds, innovative environmental funds, nature conservation funds of enterprises; formation of ecological storages; ecological insurance; system of ecological concessional investment loans, etc.

All listed sources of financing for environmental protection are summarized under a common concept of «green financing».

The world practice is already familiar with this experience [5, 6]. For example, ecological or «green» bonds (pollution control revenue bonds) are issued by the state, municipal authorities, corporations, international financial institutions for financing projects on environmental protection:

- the World Bank Treasury, together with the Environmental Department, has been issuing «green» bonds since 2008 to support the World Bank credit activities for environmental projects to mitigate the effects of climate change and adaptation to its change. For more than 9 years «green» bonds were issued at amount over 6.4 billion dollars (more than 67 transactions in 17 currencies) [7];
- american corporations are issuing «green» bonds to finance the construction of treatment plants since the 1980s [8, 9];
- in November 2013, «green» bonds were released at market by three large global corporations: the French energy group EDF, the Swedish real estate company Group Vasakronan, and one of the largest American banks Bank of America Merill Lynch. Securities were in good demand from investors, despite the fact that, for example, if the rate of income was 1.359%, than Bank of America Merill Lynch placed bonds for $ 500 million [10]. Funds received from the «green» bonds issue, were aimed at financing different scale of investment projects, in particular the construction of an ecological farm in China and hydroelectric power plants in Chile, etc. [11]
The issuance of debt securities, which link the future of the green economy in 2016 grew by 120%, covering 1.4% of the world financial market and making $93.4 billion, largely thanks to an influx of Chinese borrowers on to the market. They account for a third of all bonds that helped to raise $32.9 billion for environmental projects. According to the Moody's Agency, the environmental bonds in 2017 will be released twice more - at $206 billion.

Green bonds are the debt instruments used to raise funds for projects related to renewable energy, energy efficiency, environmentally friendly transport or low-carbon economy. Such bonds worldwide are issued not only by banks and private companies but also by governments, municipal and local authorities. The first regional bonds were issued by the American state of Massachusetts, and municipal ones - by Gothenburg (Sweden). They were followed by the Canadian provinces Ontario, New York, Johannesburg (South Africa) and others. The major event in early 2017 was the release of environmental bonds by France government: their total value amounted to $7.5 billion, which will focus on investment in clean energy and projects to combat global warming.

Green bonds until 2016 were considered obsolete financial instrument for Russia. However, the prices decline for the hydrocarbon fuel and the global trend in the development of clean energy affected the trends in the Russian economy.

In Russia, the concepts of «green bond» and «trust bond» are missing in the regulatory framework. The Bank of Russia is considering implementation of green financing scheme, taking into account the existing international experience.

If the Central Bank of Russia will change instructions and will set a low reserve requirements for green bonds, a new class of financial assets can appear in Russia that will significantly enhance the development of infrastructure and debt capital market.

Despite the fact that Russia has still not ratified the Paris climate agreement, for further modernization and maintaining competitiveness it will still have to increase energy efficiency and develop clean technologies that are in the initial stages of development and their implementation is capital-intensive. In this regard, «green» bonds can be successfully used to raise capital in new businesses and projects.

The issuance of corporate ecological bonds will allow companies to fulfill their social obligations to the society to support environmental safety activities at the expense of the profits to invest in ecological and energy-efficient production and the creation of ecological products (goods, works).

To ensure attractiveness for investors, the interest rates on corporate environmental bonds should be at the level of ordinary corporate bonds.

Examples of the use of corporate ecological bonds in Russia are also rare. For example, the project realization for the enhancement of the river water area and the gulf of Saint-Petersburg allows providing treatment of wastewater at the 95% level. The project was carried out by the company «Vodokanal of Saint-Petersburg» on the conditions of co-financing, as well as accounting for ecological bonds for a total amount of about 5 billion rubles for a period of five years, which provided funding for about one third of the project.

Thus, in connection with the increase of the worldwide interest in environmental issues, financial institutions are able to structure and invest in the protection of the environment, become more and more popular. According to the authors opinion, financial support for the transition to a sustainable economy is intended to ensure socially responsible investment and mainly specialized bonds («green» bonds) issued by corporations, governments and international financial institutions.

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