# Environmental Problems and Entrepreneurship in the Region

*Valentina B.* Dzobelova[1], *Kirill P.* Grabovy[2], and *Darya Borisovna* Belinskaya[3]

[1]North-Ossetian State University named after K.L. Khetagurov, Vatutina str., 44-46, 362025, Vladikavkaz, Russia
[2]Moscow State University of Civil Engineering (National Research University), Yaroslavskoe sh., 26, 129337, Moscow, Russia
[3]Russian Biotechnological University, Volokolamsk sh., 11, 125080, Moscow, Russia

**Abstract.** Ensuring environmental protection, rational use and reproduction of natural resources is one of the key constitutionally significant benefits that form the basis of long-term socio-economic development, determine the material basis for the development of future generations. The solution to this problem can be achieved through various tools, in particular through the development of an environmentally oriented business. This article discusses the key features of environmental entrepreneurship at the regional level.

## 1 Introduction

In recent years, the Russian Federation has joined the global environmental movement, and today we can already talk about the creation of a separate sector of environmental business. The problem of waste disposal and the creation of a circular economy is being discussed at the highest level, currently the national project "Ecology" is operating, designed for the period from 2019 to 2024 and designed to create a system for the secondary processing of materials prohibited for burial. In particular, the task was set to reduce the amount of non-recyclable waste by 50% by 2030. To implement these tasks, it is necessary to attract medium and small businesses, and in this regard, the question of the profitability of environmental entrepreneurship and its future prospects is acute.

In Russia, interest in protecting the environment is increasing every year, and the result of this interest is the creation of public organizations whose activities are aimed at organizing the separate collection of waste and promoting the principles of Zero Waste, which provides for the maximum use of recyclable materials. The Russians sort waste and take it to separate collection points, demand that local authorities open such points in every district of the city, make demands to preserve the natural environment and reduce the negative impact from industrial facilities. Thus, today in society there is a demand for environmental friendliness and the creation of new standards in relation to the environment.

In 2000, at the Inter-Parliamentary Assembly of the CIS Member States, for the first time, a definition of environmental business and entrepreneurship in Russia was given. This area included enterprises that produce products for environmental protection or create technologies and products designed to protect and preserve the environment. Ecological businesses include enterprises operating in the following areas:

- recycling of waste and release of new products;
- development of environmentally friendly technologies and production of equipment designed to reduce harmful emissions in the industrial production process;
- introduction of environmentally friendly technologies in the production process.

## 2 Materials and Methods

Ecological business has a number of features associated with the use of innovative technologies and the social significance of the products produced. At the same time, the cost of the final product is always higher due to the use of modern technologies and materials, and a competitive advantage is achieved by meeting the needs of society and offering fundamentally new qualities of products on the market. It is obvious that in such an area it is necessary to show flexibility in the organization of production processes, which is typical, first of all, for medium and small businesses.

An environmental business must meet the requirements of a market economy: provide sustainable profits and have a stable sales market. Given the social significance of environmental business, it should have state support measures in the form of budgetary allocations for the introduction of new technologies, preferential lending schemes, exemption from customs duties and value added taxes.

The interest of the state in the development of environmental entrepreneurship should be in the following measures:

- tightening of national environmental standards;
- expanding the market for ecological products;
- carrying out activities to involve the population in the environmental agenda and encourage manufacturers to produce environmentally friendly goods;
- improvement of state regulation of environmental entrepreneurship in the regions.

In economically developed countries, support for environmental initiatives from the state leads to the activation of economic incentives in the field of greening regional development with a priority in such areas as eco-technologies, innovative production methods, green energy, reuse of resources, waste recycling. As a result of cooperation between the state and private business, there is coordination of participants in the environmental market, public procurement taking into account the environmental component, an increase in the social status of environmental business and an increase in its role in the country's economy.

## 3 Results

Currently, in Russia, there are more than 80 billion tons of solid waste and about 120 million tons of industrial waste in landfills, storage facilities and dumps. At the same time, there are conditions in the country for solving major environmental problems related to the introduction of green technologies, the formation of resource conservation programs, and the creation of processing complexes. The activity of the state in this area is to create a regulatory framework and organizational conditions for the development of environmental entrepreneurship at the regional level [1].

An increase in demand for environmentally friendly goods and services is possible due to investment in projects to reduce the negative impact on the environment, waste recycling and the introduction of green technologies in industrial production. Within the framework of the national project "Ecology" with the participation of the state in 2019-2020. more than 50 enterprises engaged in waste disposal and processing were built or modernized. The national project includes the project “Integrated MSW Management System”, which provides for investment in the creation of processing enterprises. Despite the important decisions made at

the federal level, problems remain in the regions related to insufficient regulation of the environmental business. First of all, this is the insufficient use of market relations,

The development of environmental business in the regions implies an appropriate focus of the budget policy, the priority of environmental products and services, promotion of the creation of innovative eco-technologies, support for organizations that carry out developments in the field of ecology. Also, measures to support environmental entrepreneurship include such activities as holding exhibitions promoting environmental products, developing environmental education for civil servants, and organizing interregional and international environmental projects.

An analysis of the demand for environmental initiatives suggests that this indicator is not directly related to the standard of living. It is erroneous to believe that environmental problems are more of concern to residents of megacities who have resolved their pressing issues and have the opportunity to deal with social issues. In fact, the most interesting environmental solutions are emerging precisely in regions where people create public organizations engaged in separate waste collection, and entrepreneurs are ready to create innovative environmental products.

In Russia, small and medium businesses in the regions are interested in environmental issues due to insufficient attention from local authorities, who have a limited budget and are not ready to address environmental issues. Entrepreneurs are ready to create new products, use modern environmentally friendly materials and introduce innovative technologies that reduce the impact on the environment.

An important issue is the potential audience for eco-friendly products, which are more expensive than similar products made from traditional materials. According to the consulting company PWC, 86% of Russians are ready to pay more for environmentally friendly products, 46% are willing to overpay for environmentally friendly packaging of traditional goods. Of the respondents, 79% are ready to buy environmentally friendly non-food products for a slightly higher price.

Also, studies show the groundlessness of the opinion that environmentally friendly products are primarily chosen by young people. In different age groups, there is approximately the same number of those who are willing to pay more for eco-friendly products, and only in the group of people over 52 years old the number of supporters of eco-friendly products drops sharply. However, experts believe that the older generation can also join environmental initiatives, because these people lived in the Soviet Union, where much attention was paid to the collection of glass containers and waste paper: these materials were recycled, and the state paid the population a small reward. With proper information and proper implementation of environmental initiatives, people of different generations will be able to join them.

The profitability of an environmental business depends on the specific type of activity. Ecological raw materials have a high cost, but the cost of the final product depends on the complexity of production processes, the use of innovative technologies, and the sales market. Thus, clothing made from eco-fabrics will have a high cost, and for its implementation it is necessary to look for consumers who are ready to purchase it. The production of eco-friendly packaging is much cheaper, and the sales market is quite large.

## 4 Discussion

One of the popular directions in the organization of regional environmental business is the disposal and recycling of waste. This type of activity has a number of advantages:

- the presence of a large number of inexpensive raw materials;
- support from local authorities interested in solving environmental issues;

- high profitability, which can amount to 30-60% of income for each ruble of investment.
- the ability to start work with small volumes and, accordingly, open a business with minimal initial investment.

If in megacities separate collection and recycling of waste is carried out by large companies or it is within the competence of city authorities, then in the regions this area is often absent or poorly represented, which provides an opportunity for the emergence of new companies that will not have to face competition when entering the market.

Waste collection and recycling business has the following features:

1) For separate collection, marked containers for glass, plastic, metal and other fractions are installed. The installation of containers must be coordinated with the municipal authorities.

2) For temporary storage and sorting of waste, it is necessary to equip an appropriate room.

3) Sorting is carried out into fractions, which are subsequently sent for processing. When using separate containers, the sorting process is simplified, but it cannot be abandoned due to the fact that the population is not yet accustomed to the system of separate collection and does not always follow the sorting rules.

4) The amount of waste is very large, and its cost is negligible, but for the stable receipt of waste, it is necessary to conclude agreements with the owners of landfills and landfills.

5) Due to the low development of the separate collection system, difficulties arise in obtaining individual fractions. At the same time, organizing your own collection point may turn out to be an inefficient and unprofitable measure. Thus, depending on the region, it may be beneficial to work with only one type of waste material.

6) When organizing your own waste processing production, you can get secondary materials, the cost of which is much higher compared to the cost of raw materials. However, the organization of production is associated with obtaining permits and entails an increased level of responsibility.

7) Obtaining a license to open a waste processing business depends on their category and level of toxicity. In total, there are five hazard categories of waste materials, all information about hazard categories is in the Federal Waste Catalog (FKKO).

8) For medium or small businesses, it is important to open a mini-enterprise, which does not require a large room and significant areas for temporary storage of raw materials.

In the process of processing, special equipment is used: grinding and crushing machines, loaders, sorting lines. Currently, both imported and domestic equipment are available, which are characterized by a lower cost.

Along with cheap waste, recycling companies acquire expensive waste materials that can be used to produce high-value goods. Such materials include: metal, glass, batteries, concrete, waste paper, plastic, car tires.

The global market for environmental technologies is growing steadily, and this trend has affected the Russian Federation in recent years. We single out the main areas in which the introduction of innovative environmental technologies is most relevant:

- environmental protection projects aimed at measuring and analyzing air and water pollution, as well as methods for their purification.
- search for resource-saving technologies and the possibility of recycling products of mineral processing;
- search for alternative energy sources;
- development of industrial safety monitoring methods;
- creation of analytical and information systems that reveal the negative impact of industrial facilities on the environment;

- development of social programs designed to promote environmental norms of behavior.

Currently, many large Russian companies do not have a system of sustainable development and they can take advantage of the proposals of representatives of medium and small businesses for the development and implementation of environmental technologies. At the same time, industrial enterprises prefer to work not with projects at the stage of their development, but with ready-made technologies, the performance of which has been confirmed at the level of laboratory tests and tests in real conditions. Measures to reduce the impact on the environment remain the main requests in the field of environmental friendliness of production, and the main customers are enterprises in the oil and gas sector, electric power, metallurgical and chemical companies.

In particular, electric power companies using traditional gas and coal plants are striving to reduce the unit cost of generating electricity with fuel. Metallurgical enterprises solve the problem of production waste: since the slag contains a large percentage of iron, it is necessary to use technologies for recycling and further use in areas such as road construction [2].

In 2020, the Skolkovo Foundation, with the participation of the Ministry of Natural Resources and Ecology of the Russian Federation, the Ministry of Construction and Housing and the Ministry of Energy of the Russian Federation, launched an accelerator for technology startups in the field of ecology GreenTech Startup Booster. This is a global project that helps eco-startups enter the market and find partners among large industrial companies.

The accelerator allows large companies to solve the problems of finding and implementing innovative technologies, software, new methods of analysis in the field of environmental protection, the use of alternative energy sources, and industrial safety. The GreenTech Startup Booster program gives a chance for the development of environmental projects, and for representatives of large businesses it is a tool for sustainable development through the use of new technologies in the field of ecology.

One of the participants in the program is the Yekaterinburg company WiseSoil, which has developed a technology to increase the efficiency of biogas plants, which allows increasing the production of biogas from organic waste by 30%. This technology is successfully operating in Russia, Finland, USA, Czech Republic and South Korea. The Ecopack company, located in Nizhny Novgorod, has created and launched the production of a completely degradable film, consisting of starch and other components that quickly decompose under the influence of natural factors and are environmentally friendly. The company received proposals for the construction of plants for the production of environmentally friendly packaging in Russia. France, Austria and Kazakhstan. [3]

Despite the wide range of forms of environmental entrepreneurship that exists in Russia, a number of problems currently hinder its development:

- imperfection of legislation in the field of regulation of nature management and environmental protection;
- underestimated cost of natural resources, which affects the attractiveness for investors of projects for the production of products or the generation of energy from secondary raw materials;
- insufficient support for environmental projects by regional authorities in the form of loans, subsidies and tax incentives;
- insufficient investment in the field of environmental entrepreneurship by commercial organizations.

Thus, in the Russian Federation there are conditions and opportunities for the development of successful environmental entrepreneurship in the regions. The most promising areas are waste recycling, the production of sustainable packaging, the generation of energy using recycled materials, the creation of technologies to reduce the negative impact on the environment in the industrial production process. However, the implementation of

these areas is hampered by the lack of sufficient investment in the field of environmental business in the face of economic uncertainty.

## 5 Conclusion

In order to support environmental business, it is necessary to take measures to increase investment by the state and create conditions for interest in environmental projects from private investors. In particular, an important measure would be the provision of loans at a rate not exceeding the rate of the Central Bank and the provision of targeted loans for projects related to the creation of innovative technologies in the field of ecology. Also, priority measures could be the provision of tax incentives in connection with the purchase of equipment used to reduce the negative impact on the environment, and a reduction in the tax rate for companies involved in the creation of innovative environmental technologies.

In addition to financial and legal assistance, the following measures could contribute to the development of environmental business:

- organizing an infrastructure that provides the necessary resources, services and information for participants in the environmental business;
- active support of environmental business by regional and municipal authorities;
- exemption from municipal taxes for organizations involved in the elimination of damage caused to nature;
- creation of regional funds that could take part in the financing of environmental projects, including through voluntary contributions from large enterprises and fines for violating environmental legislation.

The implementation of these measures will help improve the environmental situation in the regions.

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