

Instruments for financing and investing the "green" economy in the country's environmental projects

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Abstract. This article examines the issues and problems of ecology and climate change that concern an increasing number of people. In Russia, in particular, the attention of Russian companies and the government to the problem is increasing. Green finance is a tool that allows for a carbon transition to a green economy, providing extra-budgetary sources of funding for projects that provide this transition. To facilitate the transition of business to the principles of sustainable development, the Ministry of Industry and Trade of the Russian Federation has supplemented the compensation program for green bonds with green loans, and banks are developing new mechanisms to provide companies with a clear tool for co-financing environmental projects.

1 Introduction

Despite the matured need to activate "green" finance in Russia, there is a lack of clear criteria for the transition from the current model of economic development in Russia to the model of "green" economy, providing the economy with green finance. Legislative changes in relation to the best available technologies are only part of a sustainable and natural economy, so it is necessary to develop the methodological foundations for the development of "green" finance. The experience of placing the first issue of "green" bonds in Russia has shown that there is a clear analysis of the activities of rating agencies in this direction, however, they lack competence in the field of assessing climate and environmental effects [1-5].

There is also an inverse relationship: those who can calculate environmental and climate effects do not have the skills to assess financial risks.

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Sustainable development, the position of the "green" economy is relevant for Russia, these phenomena are subject to careful study by the scientific community. As for "green" finance, it is worth noting much less development and, as a result, the presence of a number of problems that require detailed study.

2 Methods

At the time of writing, the methods of logical generalization and a systematic approach to the analysis of green bonds were used. When writing this article, we used data from green finance and investing in environmental projects.

3 Results

The inevitability of state regulation of the green economy and the development of green finance is obvious. The financing of the "green" economy should be carried out by the business itself. The task of the state is to create and apply stimulating tools for the development of "green" industries, to discourage projects that do not fall under green priorities [6-8].

The instruments for financing environmental projects and environmental protection include the following (table 1). Note: developed by the authors.

Table 1. The instruments for financing environmental projects and environmental protection.

№	The tool	Source
1	green insurance	https://www.iii.org/article/green-insurance
2	green bonds	https://www.investopedia.com/terms/g/green-bond.asp
3	green loans	https://www.mondaq.com/asset-finance/961236/green-loans
4	green banks	https://greenbanknetwork.org/
5	Global Environment & Technology Foundation	https://www.getf.org/
6	GPIF Government Pension Investment Fund	https://www.gpif.go.jp/en/investment/esg/EDC_EG.html
7	Green targets: A Tool To Compare Private Sector Banks' Sustainable Finance Commitments	https://www.wri.org/finance/banks-sustainable-finance-commitments/

The term 'green loan' has become increasingly omnipresent in economic and market discourse. A green loan is a form of financing that seeks to enable and empower businesses to finance projects which have a distinct environmental impact, or rather, which are directed towards financing 'green projects'.

A green bond is a type of fixed-income instrument that is specifically earmarked to raise money for climate and environmental projects.

Green insurance is a variety of insurance benefits and products for environmental projects in business, where taking measures that are safe for the environment, that is, "greening", can help save on insurance costs [9].

Green Banks facilitate private investment into domestic low-carbon, climate-resilient infrastructure. Over a dozen national and sub-national governments have created public Green Banks in recent years.

The Government Pension Investment Fund (GPIF) and Export Development Canada (EDC) formed a partnership in late 2020 to promote and develop sustainable capital markets with a focus on green bonds, as well as the inclusion of ESG valuations in fixed income investments [10-13].

Green EDC bonds will be issued in accordance with the Principles of Green Bonds, which are administered by the International Capital Market Association (ICMA), the bonds provide GPIF asset managers with investment opportunities to contribute to the creation of a sustainable society.

By July 2019, 23 of the world's 50 largest private sector banks had committed to sustainable financing. Through these commitments, banks allocate a target amount of funding within a specified time frame for sustainable operations.

In the field of green investment in Russia, companies can be divided into groups:

1. The first group – companies that have provided information on their websites about their "green" investment projects. By type of economic activity, the data are as follows: 28% were companies in the electric power sector, 14.29% were in the chemical and petrochemical industries, telecommunications and communications, mechanical engineering, the oil and gas industry, and the banking sector.

2. This group consists of companies that invest in environmental protection measures aimed at minimizing the negative impact on the environment.

3. The third group consisted of companies that do not provide specific information on their projects on their websites, but position the implementation of environmental measures or focus on the implementation of the principles of accounting for environmental risks in their activities.

4. The next group includes those companies that do not link their activities today (based on information on official websites) with the implementation of "green" projects and "green" financing. Structurally, these companies are located in the group as follows: mechanical engineering – 17.86 %; wholesale trade and the oil and gas industry-10.71 % each; electric power, chemical and petrochemical industries, transport and logistics, retail trade, engineering - 7.14 % for each line of activity; ferrous and non-ferrous metallurgy, service companies, construction, housing and communal services, agro-industrial complex and banks – 3.57 % each.

The final conclusion based on the results of this analysis is as follows: 62.5% of the total number of companies studied in Russia do not currently consider the possibility of implementing "green" projects and processes of "green" financing (group 4); 10.6% – only declare "green" positions (group 3); 24% of companies make "green" investments in environmental protection measures (group 2); and only 2.7% of companies (group 1) can be fully attributed to "green" [14].

Noting a certain readiness of the Russian business community to move to the position of "green" investment, the Bank of Russia is already forming the main elements necessary for the formation of the market of "green" finance. Since the pilot issue of "green bonds" has shown good results, special emphasis is placed on this instrument. A preliminary independent external evaluation of the issue of "green" bonds, carried out by issuers voluntarily, is recommended. The expert assessment evaluates the compliance of the planned issue of "green" bonds with the standards of climate bonds, the standards of "green" bonds – this allows us to assess the risks and the targeted nature of the investment.

The federal environmental project for recovery of the river Volga had the highest share of federal budget expenditure in 2019, measured at 72 percent (fig 1).

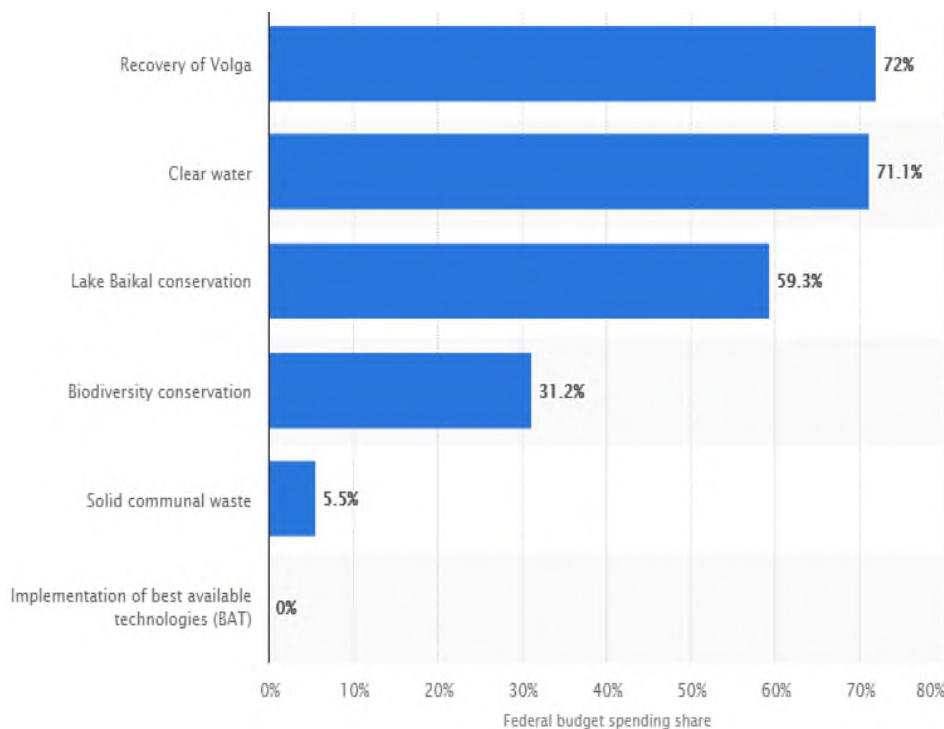


Fig. 1. Distribution of federal budget expenditure on national environmental projects in Russia in 2019. Source: <https://www.statista.com/statistics/1176773/federal-budget-expenditure-share-environmental-projects-russia/>

The budgetary spending of the project "Clear water" amounted to over 71 percent of the project's total expenditure in 2019 [15].

It should be noted that a "Road Map" has been created, which aims to form a market for "green" finance. Main events:

1. Development of the ideology and concept of regulatory bodies at the national level.
2. Formation of a methodological center for management in the field of "green" finance.
3. The formation and adoption of the principles, standards and taxonomies.
4. Development of a verification system for "green" financial instruments.
5. Formation and development of the infrastructure of the "green" finance market.
6. Creation and promotion of a system of measures of state support for "green" bonds.

The best world practices that exist in the field of application of the developed mechanisms of state support for "green" investment are as follows:

- application of environmental taxes and fees on a differentiated scale;
- with increased coefficients for those activities that are classified as "carbon-intensive" and benefits for representatives of "green" business;
- weighted system of electricity tariffs;
- availability of direct state funding for investments in "green" projects;
- availability of direct government lending to businesses;
- subsidizing by the state to green business structures a certain share of the costs of those loans that provide for the implementation of "green" projects;
- state subsidies to credit institutions for part of the loans issued for green projects.

It should be noted that green finance market instruments are widely used in the world practice:

- "green" banking. For banks, lending to "green" projects is part of socially responsible investment;
- "green" bonds. These instruments demonstrate active growth in Europe, which confirms the possibility of applying them in Russian practice;
- "green" certificates. Certificates are available both in documentary and electronic form. They are the subject of purchase and sale between several parties [16].

In Russia, there is a need to create a single methodological center that can combine both economic competencies and ESG factors in order to achieve two general goals of society's development – stable economic growth, preventing the increasing degradation of the planet's natural environment, and achieving human harmony with Nature.

4 Discussion

Green finance systems are gradually emerging in different countries, and a similar system is necessary and should appear in Russia. Now the green finance sector is much more developed and in demand in the world [17].

The financial opportunities that are present in the world for the development of environmental projects are as follows:

- network renewable energy sources – 6 trillion rubles. USD in the period up to 2040 –
- isolated RES – 25 trillion. USD in 2025;
- "Green" buildings – 300 billion. USD annually;
- Investments in "green" transport will increase to 900 billion rubles. USD per year by 2025;
- Investments in water treatment infrastructure – 13 trillion rubles. USD by 2030

Let's outline the main international results in the field of "green" finance. First of all, the positions of sustainable development and "green" investments are moving from the national level to the corporate level. The most significant projects in the field of "green" investment are:

- The International Coalition for an Environmentally Responsible Economy (1989), which focuses on mobilizing investors and the business community to create a progressively developing ecological economy. The coalition brings together 146 institutional investors.
- Global Initiative (1997) to develop a standard for sustainable development reporting.
- UN Global Compact (1999) - this initiative is aimed at promoting sustainable economic growth and increasing the level of environmental responsibility of business.

By August 2018, the initiative was supported by 13,270 companies from 166 countries.

- The network of central banks and financial supervisory authorities for the development of "green" financing (2017) - created with the aim of concentrating capital for the development of the environment, and also manages the climate risks of the financial market.

- Index of Inclusive Development (2018) - covers 12 indicators, created for the purpose of comprehensive information about the sustainable economic development of countries.

- International Green Bonds Initiative (2018). Its participants position the implementation of projects with a focus on sustainable development, taking into account the preservation of the environment, and undertake to finance the projects they develop with the help of "green" bonds.

As of March 2019, 46 percent of Russians stated that dealing with waste was one of the top three environmental issues facing Russia, the most of any category, according to data published by Ipsos. By contrast, only two percent of respondents believed soil erosion to be a major environmental issue.

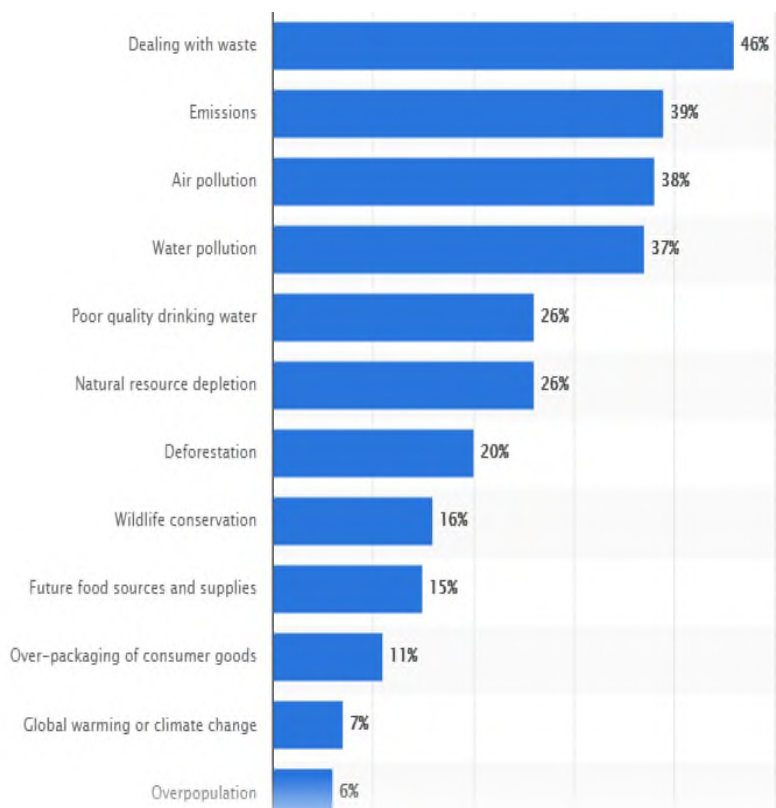


Fig. 2. What are the three most important environmental issues facing Russia today? Source: <https://www.statista.com/statistics/869107/russia-most-important-environmental-issues/>

5 Russia's waste problem

The countrywide issue developed due to the lack of a waste management strategy in Russia. Open-air landfills, which exceeded their capacities, were located close to living areas and disturbed the population with smell and pollution. The estimated number of illegal dumps in Russia was the fourth largest in Europe in 2019. The trash reform, which was aimed at modernization of the country's waste management infrastructure and introduction of garbage separation in Russia, started in 2019, but it was criticized for its slow progress and increased waste disposal costs. Russian attitude to recycling. The country accounting for 2.4 percent of the global municipal solid waste, Russia only starts to separate waste in households and practice plastics recycling, pressured by pollution, public frustration, and climate change. Over 80 percent of Russians were concerned with the use of plastic and non-recyclable products [5].

So for example, The European Investment Bank is one of the world's main financiers of climate action.

The decade 2021-2030 is critical to address our planet's climate and environment emergency. To achieve this, trillions of investment are required. We must: limit global warming to 1.5°C above pre-industrial levels by the end of this century, combat environmental degradation, halt biodiversity loss, and stop widening inequalities.

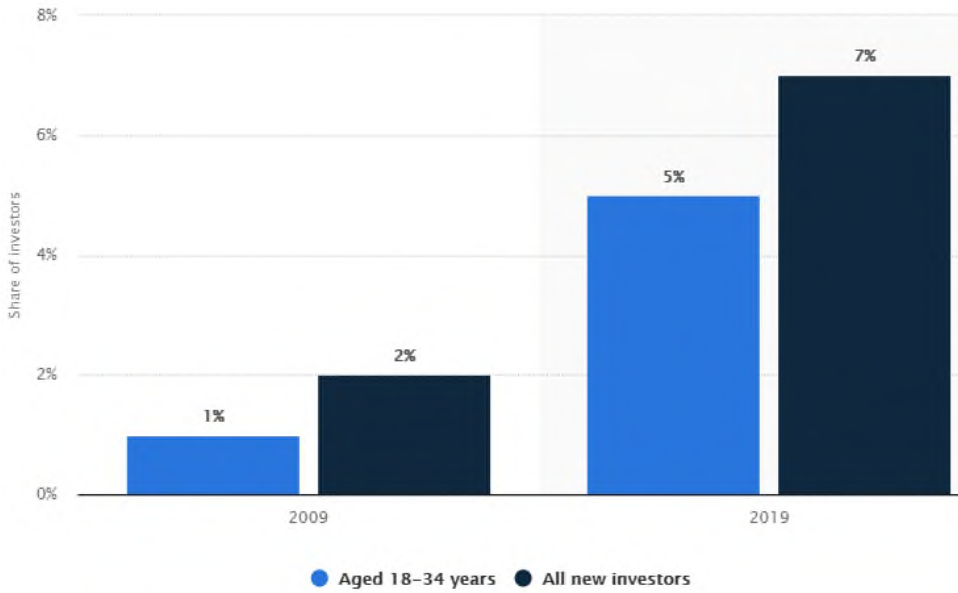


Fig. 3. Share of new investors who chose new investment for its ethical fund or product in the United Kingdom (UK) in 2009 and 2019. Source: <https://www.statista.com/statistics/1090714/share-of-people-who-chose-sustainable-investment-uk/>

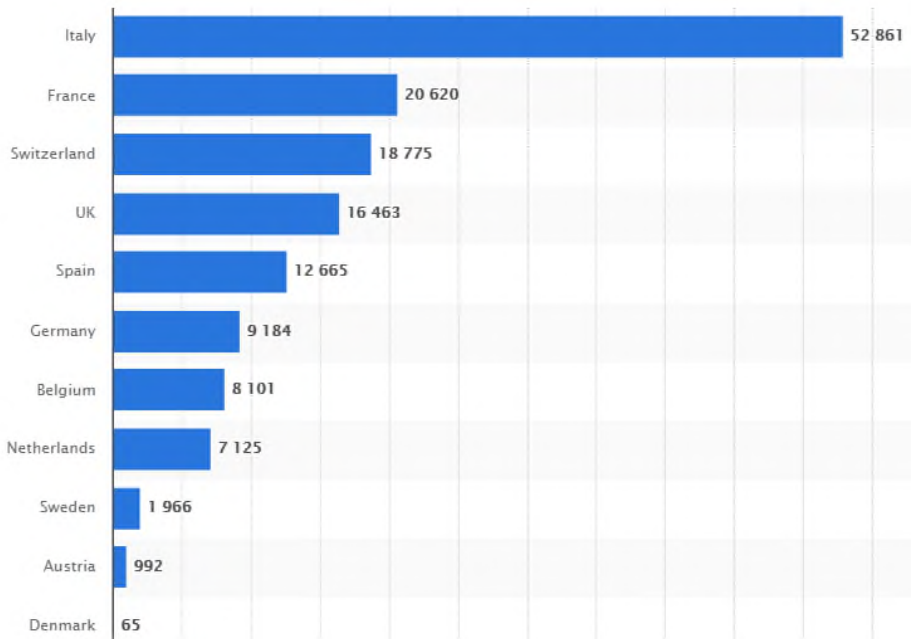


Fig. 4. Sustainability themed responsible investments (SRI) in Europe in 2017, by country (in million euros). Source: <https://www.statista.com/statistics/422438/socially-responsible-investments-europe-countries/>

Sustainable investment does not only include economic sustainability, but also social and ecological. Investors choose different ways to shape and refer to that segment of their

portfolio - other popular terms are socially responsible investment (SRI), environmental, social and governance investment (ESG), or sustainable development goals investment (SDG). Regardless of the exact wording of the product, popularity has been growing, and especially among young investors. As of November 2019, seven percent of the new investors aged 18 to 34 chose a new investment for its ethical fund or product. In comparison, among all new investors, only five percent did. More in-depth information can be found in the Statista dossier on socially responsible investments (SRI) in Europe [7-10].

Share of new investors who chose new investment for its ethical fund or product in the United Kingdom (UK) in 2009 and 2019 (Fig.3).

Sustainability themed responsible investments (SRI) in Europe in 2017, by country (in million euros) (Fig.4).

The statistic shows the value of sustainability themed socially responsible investments (SRI) in selected European countries as of 2017. With almost 53 billion euros worth of invested assets, Italy was the largest market for sustainability themed SRI investments in that year.

6 Conclusion

Thus, the analysis of trends in financing and investment instruments in the global economy, as well as the assessment of the volume of the "green" finance market that currently exists, allow us to consider the possibility of a decent existence of the green bond market in Russia. However, for the market development of green Finance are fundamental actions such as the development of a common terminology in the field of responsible Finance, regulatory procedures, the creation of a unified state policy in the field of green economy, green growth, and, consequently, green Finance.

Expenditures on the national project in the field of ecology will be almost doubled. In just three years, "1 trillion rubles will be spent on environmental protection for the first time. Environmental well-being is health, longevity of people.

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