



CURRENT STATUS OF GREEN FINANCE DEVELOPMENT IN RUSSIA AND PROSPECTS FOR SINO-RUSSIAN GREEN FINANCE COOPERATION

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Background

With countries around the world increasingly prioritizing climate change mitigation and sustainable development, the development of green finance is gaining momentum. Our institute is releasing a series of viewpoint articles on global green finance development, aiming to introduce the development of green finance in major economies worldwide to relevant stakeholders in China. The articles summarize the experiences and insights from various countries' green finance development and explore the prospects for cooperation between China and the examined countries in the field of green finance. This article, the fifth in the series, focuses on the current state of green finance development in Russia and explores prospects for Sino-Russian cooperation in green finance.

Spanning across Europe and Asia, Russia is situated in the northern part of the Eurasian continent, holding the title of the largest country in the world in terms of land area [1]. As of January 2, 2020, the population of Russia was 146,801,931 people [2]. Most of the population is centered in Russia's European region, along with the Ural Mountains and the southeastern area of Siberia [2]. Russia is situated in Eastern Europe and Northern Asia, and encounters notable climate variations. The weather in the western region of the East European Plain is relatively temperate, whereas Siberia experiences extremely cold winters [2]. The expansive geographical environment of Russia plays a vital role in shaping its economic activities, as it is estimated to hold more than 30% of the world's natural resources [3]. With its abundant natural resources, Russia holds the title for the world's largest natural gas reserves [4], the second-largest coal reserves [5], and the eighth-largest oil reserves [6]. This positions Russia as a significant player in the global energy sector [7].



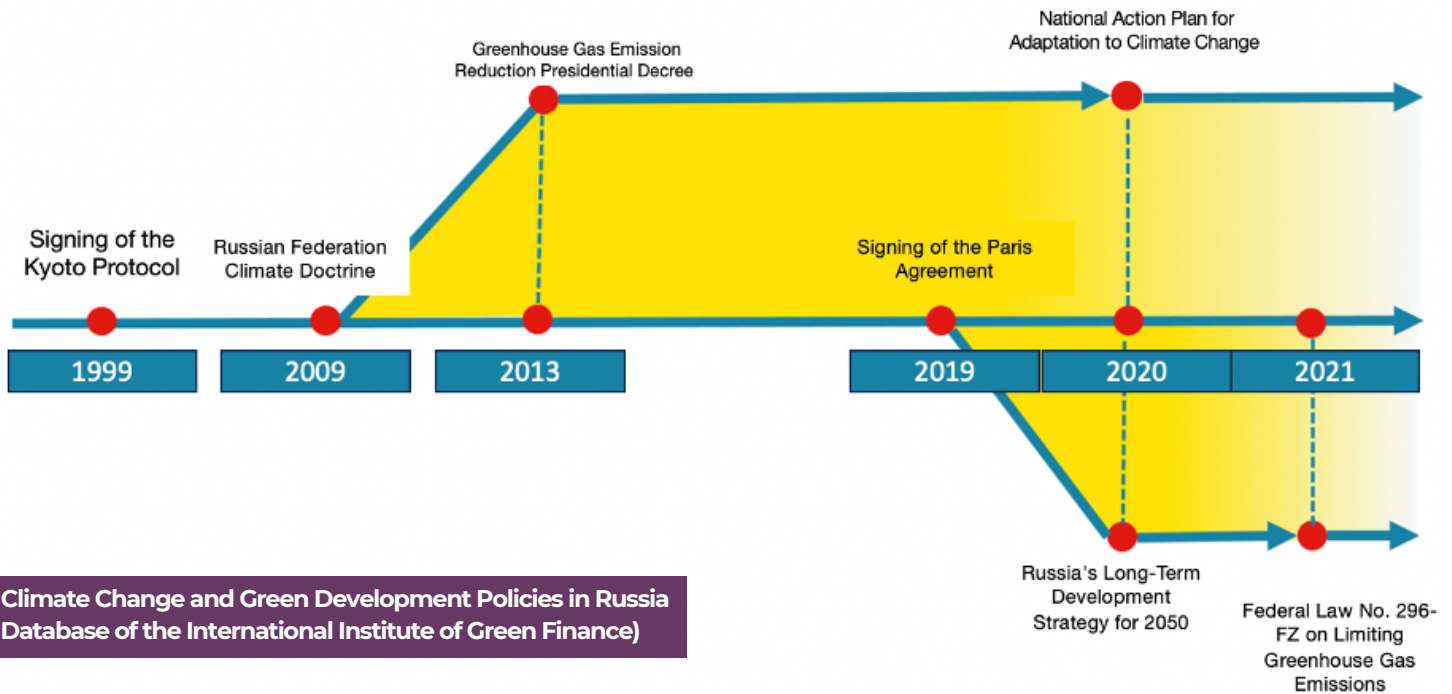


Figure 1. Climate Change and Green Development Policies in Russia
(Source: Database of the International Institute of Green Finance)

According to estimates from the Ministry of Natural Resources and Environment of the Russian Federation in 2019, the value of natural resources constituted 60% of the country's gross domestic product (GDP) [8]. With its vast reserves of natural resources, notably oil and gas, Russia has emerged as the fifth-largest economy globally and the eleventh-largest economy in terms of nominal GDP [9]. China and Russia have forged a strong partnership in recent years, collaborating closely in areas such as politics, security, health, and the economy [10]. July 16, 2021 marked the 20th anniversary of the signing of the Treaty of Good-Neighborliness and Friendly Cooperation Between the People's Republic of China and the Russian Federation. Chinese Foreign Ministry spokesperson Zhao Lijian conveyed his positive outlook on the future of China-Russia relations in the new era during a regular press briefing on the occasion of the anniversary [11].

Russia's response to climate change was initially less proactive, primarily due to its favorable natural resource endowments and the economic development model built upon them. Over time, Russia has progressed in its approach to addressing climate change and capitalizing on future development opportunities by establishing comprehensive and interconnected policies and regulations (see Table 1 and Figure 1).

In 1999 Russia became a signatory of the Kyoto Protocol, and ratified it five years later. In 2009 the President of Russia signed the Federal

Climate Doctrine, which had a declarative nature, providing essential guidance for subsequent climate change policies [12]. Later, the 2013 Greenhouse Gas Emission Reduction Presidential Decree 752 established a goal of limiting emissions to 75% of the total emitted in 1990 by the year 2020 [13]. The National Action Plan for Adaptation to Climate Change became a transitional phase and outlined economic and social measures to be implemented by federal and regional executive bodies by 2020 [14]. After signing the Paris Agreement in 2019, Russia released its Long-Term Development Strategy for 2050 the following year. The strategy outlined legislative drafts on carbon regulation, including provisions for monitoring greenhouse gas emissions and enabling companies to provide verifiable carbon reports [15].

Starting from 2023, the companies that contribute the most pollution are required to comply with the provisions of Federal Law No. 296-FZ, which mandates mandatory carbon reporting and the implementation of carbon offset plans [16]. The Russian government's current efforts to address climate change primarily center around requiring corporate-level carbon emissions reporting. This serves as a strong basis for future initiatives related to carbon emissions management and the implementation of carbon offset mechanisms or other market-based approaches.

Time	Name of the regulation	Enacting authority	Content
2009	Russian Federation Climate Doctrine	Signed by the President of the Russian Federation	The document establishes strategic guidelines for Russia's response to climate issues and provides the foundation for future climate policy development and implementation.
2013	Greenhouse Gas Emission Reduction Presidential Decree	Presidential Decree	The decree adopts greenhouse gas emission targets, stipulating that by 2020, greenhouse gas emissions should not exceed 75% of the total emissions in 1990. It primarily includes three measures: reporting of greenhouse gas emissions by businesses, analysis of greenhouse gas emission scenarios, and provisions for future development of carbon regulation.
2020	Russia's Long-Term Development Strategy for 2050	Ministry of Economic Development of the Russian Federation	To align with the Paris Agreement, this strategy provides a legal framework and methodological basis for economic and technological transformation, national greenhouse gas emission regulation, and climate monitoring systems. Additionally, it indicates that the Russian government is discussing legislative drafts related to carbon regulation, including subsidies for low-carbon technologies, monitoring greenhouse gas emissions, and providing verifiable carbon reporting for companies.
2020	National Action Plan for Adaptation to Climate Change	Executive authorities of the Russian Federation	The National Action Plan for Climate Change Adaptation during the period up to 2022 outlines the economic and social measures implemented by federal and regional executive authorities in order to reduce the vulnerability of the Russian population, economy, and natural objects to the impacts of climate change, as well as to seize the opportunities arising from these changes. The National Action Plan includes institutional, organizational, and methodological measures for developing a national approach to climate change adaptation.
2021	Federal Law No. 296-FZ on Limiting Greenhouse Gas Emissions	Federal Courts of Russia	The law establishes the legal framework for the regulation of economic and other activities related to greenhouse gas emissions in Russia. Specifically, the document outlines the legal basis for (1) mandatory carbon reporting for the most polluting companies, scheduled to commence in 2023, and (2) the development of carbon offset programs.

Table 1. Policies on Climate Change and Green Development in Russia
Source: Database of the IIGF, CUFE

Current status of green finance development in Russia

Green finance-related policies

At present, Russia has not implemented specific policies related to green or sustainable finance. Green finance policies in Russia are primarily derived from broader environmental and economic policies. Below are analyses of policies that have a close connection to green finance, encompassing areas such as green bonds, green credit, green insurance, and environmental information disclosure.

In September 2018, the Ministry of Industry and Trade and the Ministry of Natural Resources and Environment of the Russian Federation issued a policy bill for the "Introduction of Best Available Techniques" project. The main emphasis of this project is on environmental technologies, and its primary support comes from green bonds. According to statistics, the Russian Federation's

Ministry of Finance allocated a budget of 27.44 billion rubles for the National Environmental Project based on applications received. Out of this budget, 27.3 billion rubles were allocated to support businesses in transitioning to best available techniques through the issuance of green bonds, while 140 million rubles were allocated for establishing an assessment system and expert organizations for best available techniques [17].

On December 14, 2010, the Government of the Russian Federation issued Decree No. 1016, which "Approves the Rules for Selecting Investment Projects and Principals, as well as Providing State Guarantees for Loans or Tax-Exempt Loans Raised for Investment Implementation" for investment projects related to energy efficiency and energy conservation in the housing and utilities sector and industrial sector [18].

For clean (energy) investment projects, their investment risks can be guaranteed by the country's credit endorsement. This policy is similar to the "specialized guarantee" incentive policy for green credit as outlined in the "Guiding Opinions on Building a Green Financial System" issued by seven ministries and commissions, including the People's Bank of China in 2016. As of August 1, 2021, this policy has provided credit guarantees amounting to 59,057.47 rubles [19].

The Ministry of Environmental Protection and Natural Resources was the first to introduce insurance mechanisms in environmental protection and management. Environmental insurance was introduced in Russia through the Environmental Protection Law in 1991 and was piloted in some regions during the 1990s. Within the pilot framework, local environmental protection and management agencies, natural resource users (enterprises), and insurance companies collaborated to develop regulatory and procedural guidelines for various components of environmental insurance. This involved assessing environmental hazards and risks of industrial facilities, determining insurance rates and premium payment methods, as well as collecting and allocating funds for preventive measures [20]. After a period of practice in green insurance, on January 10, 2002, a relatively unified law specifically for green insurance was promulgated: the "Federal Law on Environmental Protection." This law defines the concept of mandatory environmental insurance and its objectives, goals, and principles, and establishes its financial mechanism, providing a legal basis for environmental hazard assessment, environmental information disclosure, and management [20]. Lately, the Russian Ministry of Natural Resources and the Environment has been emphasizing the expansion of insurance coverage in particular environmental sectors, including water resources, land resources, and forest resources [21].

On December 18, 2012, the Russian federal government issued an action plan for implementing the "Principles of the State policy in the area of environmental development of the Russian Federation for the period up to the year 2030". The plan included measures related to green finance, primarily aiming to establish a national mechanism for voluntary environmental responsibility disclosure by organizations. It also proposed transitioning state-owned enterprises to mandatory non-financial reporting in the field of environmental protection and environmental safety in accordance with international standards. Additionally, the plan suggested incorporating voluntary non-financial reporting from selected environmental protection organizations into the annual

national report on state and environmental protection in the Russian Federation [22]. The Moscow Exchange (MOEX) has updated its company ESG governance guidelines, incorporating sustainable development as a cornerstone of the corporate governance framework. The guidelines provide fundamental guidance on creating social and environmental impacts [23]. In July 2021, Russia signed legislation requiring companies to report their greenhouse gas emissions to achieve carbon regulation. Starting from January 2023, a mandatory carbon emissions reporting system will be introduced for certain companies [24].

Green finance market

Russia's green finance market is relatively limited compared to other G20 countries, but it has been growing rapidly in recent years.

Green bonds are the primary tool of green finance in Russia, while the utilization of other financial instruments remains limited, with some still in the planning phase. This overview will outline the recent developments in Russia's green finance market, covering aspects such as green bonds, green credit, green insurance, environmental information disclosure, and the carbon market.

Green bonds

The development of green bonds in Russia began in 2018, primarily issued on the Moscow Exchange. In December 2018, Resursosberezhenie KhMAO issued the first Russian green bond, which was used to invest in sustainable waste collection and processing [25]. As of 2020, the cumulative green bond issuance in Russia amounted to \$1 billion [26]. On September 1, 2018, when the Moscow Exchange was preparing to issue green bonds, approximately 50 companies from various industries (including energy, metallurgy, construction, petrochemicals, housing, and utilities) intended to issue green bonds. These bonds, with over 420 issuances, had a total value of 6.5 trillion rubles. The planned green bond issuances were 37, with a total value of 1.3 trillion rubles [27]. Regarding investors, there was significant participation from foreign investors. For instance, in May 2019, when the Russian Railways sold green bonds, over 70% of them were bought by investors from Europe, Asia, and the United States [28]. The Moscow Exchange has made significant efforts to promote the development of green bonds, which include such measures as enhancing market transparency, providing investment channels for foreign investors, and encouraging companies to disclose their environmental information.

Sustainability Index	Time	Institution/ Organization	Content	Content
Responsibility and Transparency Index	2014	Russian Union of Industrialists and Entrepreneurs	The index assesses the extent to which corporate social responsibility disclosure meets the ideal level.	The index is calculated based on a collection of 50 indicators, encompassing factors such as labor productivity, labor remuneration, employee training expenses, greenhouse gas emissions, energy efficiency, and additional relevant metrics. These indicators collectively represent different aspects of corporate responsibility, encompassing economic, social, and environmental dimensions, as well as the management quality in CSR and corporate governance.
Vector of Sustainable Development Index	2014	Russian Union of Industrialists and Entrepreneurs	The index functions similarly to the directional movement index, serving to identify market trends created by sustainable development enterprises.	The index is based on the ratio of positive to negative signals, indicating the change process of the reported data array over a period of 3 years. It reflects 10 key indicators of positive and negative signals related to the social impact outcomes of corporate economic, social, and environmental aspects: labor remuneration, social support for personnel, social investments, energy usage, water utilization, waste management, etc. The calculation is built on the information from leading company reports within the Responsibility and Transparency Index.
ERAX Stock Index	2012	Environmental Rating Agency	The Environmental Stock Index	The index consists of 75 Russian companies' stocks that have achieved better rankings based on five criteria: energy and resource efficiency, technological efficiency, ecosystem efficiency, efficiency dynamics, and transparency. The weight coefficients for these companies are set inversely proportional to their rankings. In other words, the higher the position, the greater the weight the company's capitalization carries. This condition allows ERAX to serve as a legitimate benchmark and measurement standard for stock trading and its derivatives.

Table 2. Russian Sustainable Development Securities Index

Additionally, the Moscow Exchange and the Russian Union of Industrialists and Entrepreneurs daily publish the results of the "Responsibility and Transparency" and "Vector of Sustainable Development " sustainability indices based on relevant corporate ESG activities (see Table 2) [29].

However, it should be mentioned that at present, Russia lacks a standardized system for identifying green bonds, and there are instances where certain criteria are not compatible [30]. Consequently, the Moscow Exchange has not yet established a mechanism to assess the degree of "greenness" for bonds. As a solution, the exchange recommends that issuers adhere to the Green Bond Principles established by the International Capital Market Association (ICMA) when issuing green bonds [31]. As of April 26, 2021, significant progress has been made in this area, with the issuance of the "Green Bond Endorsed Projects Catalogue (2021 Edition)." This catalogue has

successfully integrated and aligned with the guidelines from seven key ministries and commissions in China, including the National Development and Reform Commission's "Green Industry Guidance Catalog (2019 Edition)," the People's Bank of China's "Special Statistical System for Green Loans (2019 Edition)," and the China Banking and Insurance Regulatory Commission's "Green Finance Statistical System (2020 Edition)." This integration has resulted in the establishment of a fundamental and unified set of criteria for identifying green projects supported by green bonds in the market.

Green loans

Currently, Russia does not have specific policies for green loans targeting banks. Green loans are mainly supported in the form of loans provided by development funds and certain banks' market practices. The IDF (Russian Industry Development Fund) provides loans to support the development of new high-tech projects. It is an

accompanying incentive policy tool under the "Best Available Technology" project policy act.

The fund offers targeted loans at interest rates of 1%, 3%, and 5% annually, with a maximum loan term of 7 years and a maximum amount of up to 750 million rubles. These loans are aimed at implementing industrial technology projects that contribute to reducing environmental impacts and conserving resources and energy [30]. VTB Bank in Russia has granted Atomstroykompleks a 10-year credit line worth 2.55 billion rubles (equivalent to around 25.5 million USD) in the market. The purpose of the loan is to fund the establishment of an eco-friendly cement plant in the Sverdlovsk region. The plant's objective is to produce approximately 460,000 tons of environmentally sustainable construction materials on an annual basis [32].

Green Insurance

During the initial phase of green insurance development in Russia, the country faced challenges as it lacked essential statistical data on the environmental impacts of industrial accidents and had unique economic and geographical features. As a result, Russia didn't adopt foreign models outright but took the initiative to create a multitude of specific environmental risk assessment procedures and guidelines tailored to suit the objectives of environmental insurance [33]. In 2016, the "National Standard of the Russian Federation for Environmental Management Systems" was adopted and implemented in Russia. This standard aligns with the international standard ISO 14001:2015, "Environmental Management Systems: Requirements with Guidance for Use," particularly in the fields of environmental risk measures and risk management. Russia's national assessment standard offers practical instructions to organizations in creating, implementing, and supporting environmental management or improvement initiatives. Additionally, it serves as a foundation at the national level for developing green insurance products, incorporating procedures to recognize, anticipate, and manage environmental risks during the product design phase [34]. AIG offers an environmental liability insurance product tailored for industries, manufacturing, and other facilities. The comprehensive coverage includes protection against environmental liabilities as well as risks arising from unforeseen environmental changes [35].

It is worth noting that currently, green insurance is predominantly focused on particular industrial sectors, with a primary emphasis on oil and gas production and refining [36]. As a result, companies in these sectors in Russia have opted for self-insurance practices alongside their selection of third-party insurers available in the market. For instance, companies like OAO LUKOIL and its

subsidiaries have established reserve insurance funds to compensate losses associated with the effects of identified and eventual risks. The insurance costs are allocated as a separate line in their annual budget [37].

Environmental Information Disclosure

Previous legal documents specify the policy guidelines for managing environmental risk concerning the disclosure of environmental information. At present, two expert organizations in Russia are responsible for creating and overseeing non-financial reporting registries focused on sustainable development. One of these registries is the National Non-Financial Reporting Registry, which is managed by the Russian Union of Industrialists and Entrepreneurs. This registry houses environmental information disclosure reports submitted by registered companies. Consequently, the organization has curated a collection of non-financial reports, including electronic versions of reports officially published by companies operating in Russia and certain large multinational corporations. As of August 2, 2018, a total of 173 companies have been included in the National Non-Financial Reporting Registry, with 881 reports registered. The second registry pertains to participants in the infrastructure market involved in sustainable development and green investments. In 2018, the National Association of Concessionaires and Long-Term Infrastructure Investors (CoLTI) proposed the incorporation of ESG (Environmental, Social, and Governance) factors into investment analysis and decision-making for infrastructure projects. They also recommended the disclosure of their organization's activities in sustainable development and green investments in the non-financial reporting section. By 2018, ten members had supported this initiative and were listed in the registry [30]. On the market, there are various industry organizations that have developed corporate environmental responsibility measurement standards and environmental disclosure performance indices [30] (see Table 3). The release of these rankings and indicators has served as a benchmark for evaluating Russia's environmental information disclosure levels and has also encouraged companies to engage in environmental information disclosure activities.

Carbon market

Progress in the Russian carbon market began in 2021. In January 2021, the Ministry of Economic Development of the Russian Federation collaborated the government of the Russian region of Sakhalin to approve a roadmap for piloting a carbon trading system as early as 2022 [38].

Name	Time of founding	Organization	Content	Calculations description
1.The "Social efficiency at major Russian companies" ranking	2018	AK&M rating agency	The research involves studying the social and environmental activities of leading companies in Russia and analyzing their efficiency in terms of their impact on society, the environment, and ecosystems. The purpose of the ratings is to reveal companies that bring the greatest benefits to society while having the least environmental impact.	The participants were selected from a list of the top 300 industrial, energy, and transportation companies based on their revenue. The resulting ratings were calculated using two sets of indicators: the impact on the environment and the social impact of their activities.
2.The ESG rating of the Russian corporate sector	2018	Agentur Expert RA GmbH rating agency	Environmental, Social, and Governance (ESG) rankings enable companies to assess their ESG risk exposure and showcase the quality of their compliance with relevant practices to investors.	Based on ESG ratings, the environmental and social impact levels of the 50 largest companies in Russia by production in 2017 were evaluated, along with the extent of social and governance risks they faced. The evaluation was conducted using eight indicators.
3.The environmental responsibility rating of oil & gas companies	2014	CREON Group, World Wide Fund for Nature (WWF), Ministry of Natural Resources and Environment of the Russian Federation, and Ministry of Energy of the Russian Federation.	The primary objective of this rating is to support efforts in alleviating environmental pressures, improving fossil fuel consumption efficiency, and fostering socially responsible businesses in Russia. .	The rating includes three components: environmental management, environmental impact, and disclosure.
4.The environmental responsibility rating of mining and smelting companies	2017	World Wide Fund for Nature (WWF) Russia and the UNDP/GEF/Ministry of Natural Resources and Environment of the Russian Federation joint project.	The primary objective of the rating is to integrate biodiversity conservation into the policies and practices of the Russian energy sector. It seeks to strengthen corporate responsibility within mining and metallurgical companies and establish efficient feedback channels with industry stakeholders.	The rating comprises three components: environmental management, environmental impact, and disclosure.

Table 3. Rankings and Indicators of Environmental Information Disclosure Levels in Russian Companies
Source: compiled from publicly available information 1.<http://www.akmrating.ru/>, 2.<https://raexpert.eu>
3. <https://wwf.ru>, <https://wwf.ru>

The "Roadmap for the implementation of a pilot project to regulate greenhouse gas emissions in the Sakhalin Region" was launched to establish a carbon trading pilot system with the objective of achieving carbon neutrality in the eastern region by 2025. The roadmap aimed to develop regional inventories of greenhouse gas emissions and potential removals by August 2021. The proposed measures in the roadmap were anticipated to receive approval by June or July 2021. Sakhalin Island, situated in the Russian Far East, possesses abundant fossil fuel resources, multiple oil and gas fields, and two liquefied natural gas (LNG) receiving terminals. This initiative marks Russia's inaugural carbon trading pilot and positions the region as a pioneer in striving for regional carbon neutrality. The operational experience gained from this pilot is expected to offer valuable insights for the nationwide implementation and operation of Russia's carbon trading system.

International cooperation in green Finance

Russia's involvement in international cooperation on green finance is comparatively lower than that of other G20 countries. Its participation in various global green finance platforms and initiatives is limited and mainly concentrated around central banks, stock exchanges, and certain banking organizations.

In 2019, the Central Bank of Russia (Bank of Russia) joined the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) of central banks and regulatory institutions to enhance the analysis of climate risks within Russian banks. This move aimed to expand sustainable development and responsible investment tools based on internationally recognized practices [39]. Likewise, in 2019, the Moscow

Exchange (MOEX) strengthened its partnerships with significant international organizations, exchanges, and financial institutions. By joining the Sustainable Stock Exchanges (SSE) initiative, MOEX showcased Russia's dedication to advancing sustainability principles within the market, fostering constructive discussions between investors and issuers, and implementing exemplary practices in responsible business conduct [40].

In July 2013, VEB Bank (Vnesheconombank), a state-owned development bank in Russia, achieved a significant milestone by becoming the first Russian organization to join an international initiative focused on responsible finance: the United Nations Environment Programme Finance Initiative (UNEP FI). Its membership in UNEP FI was approved in the same year [41]. At the end of the same year, VEB Bank (Vnesheconombank) entered into a memorandum of understanding with international financial institutions, with the objective of enhancing cooperation across multiple sectors. The main emphasis was on advancing high-tech, eco-friendly, and secure industries, along with projects concerning waste and wastewater treatment. Working alongside international financial companies, VEB Bank devised mechanisms to assess the energy efficiency of investment projects and formulated approaches for calculating energy efficiency indicators [42]. Established in 2015, the Concessionaires and Long-term Infrastructure Investors National Association (CoLTI) was created to support the growth and development of Russia's long-term infrastructure investment market. CoLTI collaborates with the Principles for Responsible Investment (PRI) and plays a vital role in advocating responsible investment principles in Russia [43].

It is important to mention that the Russian state development institution VEB.RF collaborates with China in the field of green finance. VEB.RF played a pivotal role in representing Russia during the formation of the Intergovernmental Russian-Chinese Commission on Investment Corporation (CIC) in 2014, which was initiated jointly by the heads of both countries. The main objective of this commission is to facilitate the execution of non-energy investment projects while working towards reducing administrative and trade barriers between Russia and China. Moreover, the collaboration also seeks to address prevalent economic, social, and environmental challenges through joint efforts [44]. In 2020 Russia became a chairman of Shanghai Cooperation Organization, and VEB.RF as a key Russian development institution was assuming the role of the chairman of SCO Interbank Consortium. Within the framework of the presidency, they were planning to promote sustainable development strategic partnerships and collectively achieve the agenda of the 2030 Sustainable Development Goals [45].

To sum up, green finance in Russia is primarily manifested in policy documents related to green economic development and environmental protection. However, there is a lack of comprehensive and systematic policies specifically targeting green finance. The Russian green finance market offers limited products, with a predominant emphasis on green bonds. While there have been some initial efforts, there remains a significant disparity compared to other European countries like France and Germany. In terms of international cooperation, Russia has been involved in certain green finance collaborations, mainly through government organizations representing the country.

Compared to China, Russia's development in green finance is not as extensive and deep. However, due to its unique characteristics, it still deserves attention. The Moscow Exchange (MOEX) serves as a platform for issuing green bonds and has taken on many tasks related to the development of green finance in Russia. Russia is the world's largest exporter of hydrocarbons, such as fossil fuels. Half the market cap of the benchmark MOEX Index are companies in the oil and gas industry, and overall, 64% of the index is accounted for by companies from the extractive sectors [46]. In essence, Russia's approach to utilizing green finance to promote sustainable development or facilitate the transition from traditional fossil fuels could offer valuable lessons for regions in China that heavily rely on fossil fuels.

At present, the typical criteria for determining the eligibility of green financial market products, such as green bonds, revolve around assessing how the funds will be utilized. Emerging economies, represented by Russia's fossil fuel industry, heavily rely on "brown" assets and face challenges in transitioning to more sustainable practices. Existing green financial market tools are inadequate to meet the demands of their transition from carbon-intensive assets. In this context, the development of "Transition Finance" or sustainable-linked finance can become the focus of the next phase. In 2019, the Organization for Economic Co-operation and Development (OECD) proposed the concept of "Transition Finance." Transition finance offers financial assistance to economic entities, particularly brown asset enterprises, as they undergo the process of transitioning towards sustainable development objectives, enabling them to adopt low-carbon and zero-carbon practices. It is essential for traditional high-carbon emitting industries, including fossil fuel-based companies, to receive financial support to successfully shift towards a low-carbon model. Without this support, they could face significant financial difficulties and be at risk of bankruptcy. Simply eliminating high-

carbon industries without a well-planned industrial adjustment could lead to disruptions between sectors, stranded state-owned assets, and employment challenges for workers. In the long term, such an approach would hinder the smooth functioning of the economy.

China, as a significant emerging market and a global manufacturing center, has substantial carbon-intensive industries and economic activities that impact the environment. Similarly, Russia, as mentioned earlier, is a major player in energy production and consumption, heavily involved in coal, oil, and natural gas extraction. The understanding and research on transition finance are still in early stages worldwide, making it a crucial area for deep cooperation between these two countries. Specifically, two countries can share experiences in implementing projects related to transition technologies and financial practices, thereby fostering the development of transition finance markets in both nations. Through international cooperation, they can exchange development experiences and define their unique paths of growth, leading to the establishment of appropriate frameworks, standards, classifications, and management rules for supporting transition finance tailored to their specific requirements.

For Russia, the main focus should be on accelerating its green finance development. It can draw inspiration from China's green finance policy design and implement specific legal policies tailored to green finance. Additionally, Russia can benefit from adopting China's experiences in the establishment of green finance instruments.

As of the end of 2020, China held a leading position globally with a green loan balance of nearly 12 trillion yuan, while its green bond stock ranked second worldwide at 813.2 billion yuan [47]. By emulating China's widespread implementation of green finance instruments, Russia can effectively stimulate the growth of its own green finance market.

Based on the abovementioned analysis of both countries and their energy-rich status, it is recommended to China and Russia to strengthen their existing cooperation and increase their backing for technological and industrial advancements to achieve sustainable development, including exploring transition finance and other avenues of growth to promote sustainability in regions dependent on natural resources. Moreover, both states should actively share knowledge related to the development of green financial products and carbon emission trading markets. By leveraging existing relationship, China and Russia can further explore wider exchanges and practical collaborations in green economy and technology projects.

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Part 2

Recent progress of green finance in Russia, spanning the period from 2021 up to the present.

Currently the importance of the decarbonization agenda in Russia has diminished, as evidenced by businesses cutting their budgets for green initiatives by 22% [48]. Green investments made by Russian companies represent only around 1% of total fixed capital investments and approximately 0.2% of the Gross Regional Product (GRP). Despite this trend, it is crucial to emphasize that both public and private sector continue to uphold their long-term commitments to decarbonization and sustainable development.

Based on fundamental documents in Russia, green projects encompass various fields and initiatives such as nuclear power, transport infrastructure aimed at lowering CO₂ emissions, urban heat and power supply improvements, CO₂ capture in industrial and energy sectors, hydrogen and gas-powered transport, forest-climate projects, and advancements in agriculture[49]. Among these, the sectors that have been primarily prioritized and experienced significant growth in terms of green finance and investments in green projects are energy and transport.

Current Policy

Presently, Russia remains committed to supporting investment projects that have minimal environmental impact. As per Resolution No. 373 dated 11 March 2023, the scope of green initiatives eligible for preferential financing through special bonds or loans has been broadened. This expansion includes projects focusing on energy-efficient housing, the treatment and restoration of water bodies, the development of infrastructure for greenhouse gas capture and landfill gas utilization with subsequent energy generation. Additionally, energy-related sectors such as the modernization and repair of hydrogen transport infrastructure, battery production and recycling, and battery reuse initiatives have also been incorporated into the list of eligible projects for preferential financing [50].

At present, the primary documents guiding the advancement of sustainable finance in Russia consist of the green and adaptation project taxonomy created by VEB.RF and endorsed through the IWC platform. These documents are supplemented by the verification system requirements introduced by the Russian Government Decree No. 1587 on 21st September 2021.

The Bank of Russia is actively engaged in establishing standards and taxonomies while exploring opportunities for innovative financial instruments. Notably, in 2023, the Bank of Russia, in collaboration with the largest banks in the country, revealed plans for the development of green mortgage programs [51], with pilot programs set to be initiated later in 2023. A green mortgage involves a bank providing loans for the purchase of housing in buildings that meet the specified "green standard." To support this initiative, it is anticipated that green mortgages will be offered at reduced interest rates to borrowers, thereby assisting them in offsetting the higher costs associated with flats built using modern environmentally friendly and energy-efficient materials.

Furthermore, key stakeholders in the market are in discussions about launching targeted green project financing programs for multi-family housing construction. These programs aim to extend loans to developers, thereby helping to reduce the cost of raising funds for eco-friendly housing projects. To facilitate the implementation of the green mortgage initiative, Russia has approved a national green standard for apartment buildings (GOST R) starting from 1st November 2022. The GOST R was jointly developed by the Ministry of Construction, Housing and Utilities and DOM.RF. When formulating the standard, valuable insights from prominent international systems such as LEED, BREEAM, and DGNB were taken into account. This comprehensive standard comprises 81 criteria, with at least 16 of them being mandatory for a building to receive the "green" designation. The mandatory criteria encompass aspects such as achieving energy efficiency class A or higher, incorporating pre-finishing measures, and providing infrastructure for individuals with disabilities. By adhering to these criteria, apartment buildings in Russia can be recognized as environmentally friendly and meet the requirements for obtaining a green certification [52].

In July 2023, the Bank of Russia released an information letter titled "Recommendations for the Development of Methodologies and Assignment of ESG Ratings (Sustainability Ratings)." The primary objective of this letter is to foster consistency in methodologies and practices for assigning Environmental, Social, and Governance (ESG) ratings. The guidelines are designed to enhance the visibility, transparency, and comparability of ESG ratings, enabling more effective assessment and comparison of companies' sustainability performance [53].

In 2021, Center-Invest Bank in Russia made a significant milestone by publishing the world's first ESG balance sheet and ESG reporting of loan portfolios, utilizing the Russian SDG and National Projects metrics. Through the application of advanced analysis methods and automated data processing, the bank developed an innovative methodology to assess the balance sheet, loan portfolio, and customer payments based on SDG and National Projects metrics. The bank's approach took into account the national SDG metrics system, retail and corporate loan portfolio, Environmental and Social Policy, as well as the Procedure and Principles for the Placement of Funds Raised through Green Bonds approved by the Board of Directors. With these factors considered, Center-Invest Bank created a guide to align lending objectives with SDG metrics, allowing for the proper diagnosis of compliance. For loan classification, positive screening was employed to unambiguously identify loans that align with SDG objectives, while negative screening was used to categorize loans that do not fall within the SDG classification. This pioneering effort showcases the bank's commitment to incorporating ESG principles into its operations and highlights its progress towards sustainable financing practices [54]. The Bank demonstrates its commitment to sustainable finance by leveraging the funds of shareholders and other ESG investors, which constitute 14% and 4% of liabilities, respectively, to catalyze ESG projects, SDGs, and National Projects. By employing this strategy, the bank facilitates the transformation of client funds, representing 82% of liabilities, provided by the population and entrepreneurs of Southern Russia, into impactful investments for sustainable initiatives. Remarkably, for every ruble of investment contributed by ESG shareholders, the bank is able to generate five rubles of investments for SDGs and National Projects, magnifying the positive impact of their sustainable investments. This approach underscores Center-Invest Bank's dedication to driving sustainable development and fostering positive outcomes for the environment, society, and economy [55].

Green Finance Instruments. Current state

Green bonds

As of the present time, green bonds continue to be the primary instrument in the green finance market. In the first half of 2023, there were five Russian issuers that conducted five bond issues in the format of sustainable development, with a combined value exceeding RUB 28 billion. Moreover, over the period spanning from 2018 to 2023, a total of 24 issuers participated in 45 bond issues, which included green, social, and adaptation bonds. The overall volume of these bonds amounted to RUB 552.57 billion [56].

This highlights the growing trend of sustainable finance initiatives in Russia, with a substantial amount of capital being raised to fund projects that promote environmental and social sustainability.

The issuance of green bonds has proven to be a successful avenue for attracting financing for various projects across multiple sectors in Russia. These projects encompass areas such as energy, real estate, waste management, engineering, and transport. The issuers of green bonds include both federal and regional companies, reflecting a diverse range of participants in the market. Financed by green bonds, these projects are implemented both at the national level, with examples like Russian Railways, as well as in specific regions within the Russian Federation. Notable regions that have benefited from such financing include Khanty-Mansi Autonomous Okrug - Yugra, Moscow, St. Petersburg, the Republic of Adygea, the Stavropol kray, and the Astrakhan, Rostov, and Moscow Regions. Overall, green bond funds have been allocated to projects in 51 regions across Russia, amounting to a total of over RUB 223 billion [57].

An innovative and unique initiative in Russia involves the practice of attracting funding from individuals through "people's (patriotic) bonds." The concept revolves around allowing people to invest their money in instruments with meaningful purposes, such as improving parks or promoting environmentally friendly public transport. The platform, Finuslugi (Finservices), facilitates this process, providing a secure and efficient way for savers to select and invest in these bonds. The fundamental essence of this financial offering is its straightforwardness, allowing individuals to lend their funds and promptly receive returns (as easy as "three clicks" on a website) based on a particular commitment. People's Bonds offer higher interest rates compared to traditional savings accounts, making them an attractive investment option. For significant issuers, this approach presents an opportunity not only to raise funds but also to establish a connection with their brand. It serves as a means to build a base of investors with whom they can maintain productive relationships in the future. This innovative approach promotes financial inclusion and empowers individuals to support meaningful projects while earning returns on their investments [58].

The project has already been implemented in several regions of Russia. In the Kaliningrad Oblast, a series of people's bonds was issued, offering an attractive yield of 9%. More than 5,000 individuals chose to invest nearly 890 million rubles in these securities. The project has seen three bond issues completed, with a fourth one in the pipeline [59]. The raised funds from these people's bonds are effectively utilized to co-finance crucial environmental

initiatives, specifically focusing on cleaning up water bodies and addressing landfill issues. This hands-on approach allows citizens to witness the tangible results of their investments and contribute to positive environmental changes in their region.

Furthermore, in Moscow, the issuance of "green" bonds was initiated on 30 May 2023. These bonds offer a promised yield of 8.5% and a total issue volume of 2 billion rubles. The funds raised through this endeavor will be directed towards purchasing environmentally friendly public transport and financing other sustainable and eco-friendly projects [59]. Overall, the initiative showcases the growing interest and success in engaging citizens as investors in projects with meaningful environmental purposes, offering both attractive returns for individuals and benefits for the environment and society as a whole.

Green loans

The primary bank at the forefront of providing green loans in Russia is PJSC Sberbank. The bank offers two categories of loans that align with the principles of green finance. Firstly, they provide green loans that are specifically designed for financing projects aimed at minimizing their environmental impact. These projects adhere to Sberbank's green project taxonomy, which was established in 2020, and follows global best practices, including the VEB.RF taxonomy. Secondly, Sberbank offers ESG loans, a financial product where the borrower's interest rate is tied to their performance in meeting certain ESG indicators [60]. As of mid-2021, Sberbank had already disbursed RUB 75 billion in green loans, supporting projects in alternative energy and solid waste management. Additionally, the bank had issued RUB 55 billion in ESG loans [60], further demonstrating its commitment to supporting sustainable initiatives. By June 2022, Sberbank's portfolio of green loans had significantly expanded to RUB 395 billion. The growth was primarily attributed to financing previously launched projects, showcasing the bank's dedication to fostering sustainable development and incentivizing borrowers to adopt ESG practices [61].

Information disclosure

On 9th March 2021, Russia enacted the Federal Law "On Amendments to the Federal Law 'On Environmental Protection' and Certain Legislative Acts of the Russian Federation," which governs the provision of information to citizens and organizations concerning the state of the environment. As per this law, information on the state of the environment, known as environmental information, encompasses various forms of data, reports, or any other presentations related to the environment. This includes information on the past, current, and projected state of the

environment, pollution levels, ongoing and forecasted processes and phenomena within the environment, as well as the impact of economic and other activities on the environment, and activities pertaining to environmental protection, both ongoing and planned [62].

Under the established regulations, environmental information is considered to be publicly available, and access to it cannot be restricted, except for information classified as a state secret according to Russian legislation. Federal state authorities, state authorities of the Russian Federation's regions, and local self-government bodies are responsible for providing this information to citizens, legal entities, individual entrepreneurs, public associations, and non-profit organizations. Environmental information is made available to the public free of charge, with the primary objective of promoting transparency and ensuring that all stakeholders can access the information easily [62]. As per the Federal Law, federal executive authorities, executive authorities of the regions (constituent entities) of the Russian Federation, and local self-government bodies that have environmental information or authorized organizations acting on their behalf, are obligated to publish environmental information in the form of open data. The rules and guidelines for such publication are determined by the Government of the Russian Federation. This information is made accessible to the public through official websites on the Internet or state and municipal information systems. The published data includes various relevant details and elements related to the state of the environment, among other things.

Despite the enactment of the law aimed at promoting the accessibility of environmental information, the openness of information from mining and metallurgical companies has shown a decrease, according to a rating conducted by the World Wildlife Fund and ACRA RM. The study covers 39 of Russia's largest mining and metallurgical companies, out of which 20 companies participated by providing feedback during the rating calculations through conventional communication channels [63]. The study also found that among the 26 companies involved in accidents or facing disputable situations at the end of 2021, 16 of them offered comments and explanations on the incidents that occurred. This indicates an improvement in dialogue with the rating organizers compared to the previous year, as in 2020, only 10 companies responded with comments in similar situations [63]. The analysis of the year's data revealed that mining and chemical companies, as well as enterprises involved in extracting and processing ferrous and alloying metals, demonstrated a high level of transparency regarding their environmental impact. Among them,

companies involved in the extraction and processing of ores of ferrous and alloying metals exhibited the highest indicator, with 80% of relevant environmental information being made available. On the other hand, there was a decrease in the level of information openness in the mining and processing of non-ferrous metal ores, and the diamond industry saw a significant twofold decline in disclosed information.

The lowest proportion of disclosed quantitative indicators (less than one-third) was observed in the coal industry and precious metals mining. Curiously, this year's study incorporated an analysis of how basic data on environmental impact is provided by the participating companies' subsidiary assets. Of the 261 subsidiary assets analyzed, only 71 companies disclosed environmental data. According to analysts, this figure indicates a low level of transparency in this aspect [63].

Presently, there is a growing emphasis on the disclosure of environmental information, and this issue has garnered increased attention in Russia. During the annual Congress of the Russian Union of Industrialists and Entrepreneurs on 16th March 2023, Russian President Vladimir Putin put forth a proposal to introduce non-financial reporting for large companies regarding their social projects. President Putin highlighted that the disclosure of such information would positively impact the reputation and market position of commercial enterprises. As part of this initiative, President Putin also suggested establishing a prize to recognize the most socially responsible enterprises. Additionally, he pledged state support to companies that prioritize the well-being of their employees and contribute to public welfare [64]. Efforts to introduce mandatory non-financial reporting began in 2017, when the Ministry of Economic Development started working on a draft law. Under this proposal, companies with annual revenues exceeding RUB 5 billion would be obligated to disclose ESG reports. The reports would need to be maintained for a period of three years from the date of publication. Moreover, it was proposed to create a special open register to record these reports [64].

In response to the President's call for increased disclosure of environmental information, numerous banks and companies in Russia have taken the initiative to develop their own standards and services to enhance transparency. In July 2023, the National ESG Alliance and Interfax Group made a significant announcement regarding the launch of esg-disclosure.ru, which is Russia's first public service designed for comparing standardized non-financial reporting data of major Russian companies. The beta version of the esg-disclosure.ru portal already provides information on over 600 Russian companies that have disclosed non-financial indicators. The platform aims to

facilitate access to standardized data on ESG performance, enabling investors, stakeholders, and the public to compare and analyze the non-financial reporting of prominent companies in the country [65].

The company's standard profile on esg-disclosure.ru encompasses over 60 key indicators, organized into three categories: environment, corporate governance, and social policy. These indicators have been carefully selected in line with the recommendations of the Bank of Russia and were established through consultations with experts and the business community. In 2023, the service is set to be integrated with the Interfax Corporate Information Disclosure Centre website, as well as with SPARK-Register, a voluntary information disclosure service dedicated to Small and Medium-sized Enterprises (SMEs). This integration will enable clients of the SPARK-Interfax system to not only consider financial and operational indicators when evaluating potential partners, but also access and assess sustainability data [65].

By expanding the platform's capabilities and connecting it with well-established resources, such as the Interfax Corporate Information Disclosure Centre and SPARK-Register, the service further facilitates access to comprehensive and standardized ESG data for businesses and stakeholders. This initiative promotes transparency and sustainability, allowing organizations to make informed decisions while evaluating their partners' environmental, social, and governance performance.

Carbon market

In 2021, Russia took a significant step towards implementing the Paris Agreement by enacting Federal Law No. 296, which is focused on limiting greenhouse gas emissions. The law applies to regulated organizations and mandates them to maintain appropriate reporting on their greenhouse gas emissions. It establishes the foundational framework for the circulation of carbon units, which includes terms such as climate project, carbon unit, register of carbon units, and greenhouse gas inventory, among others. According to the law, greenhouse gas emitters are classified as regulated if their annual emissions exceed 150,000 tons of CO₂ equivalent. However, starting from 1st January 2025, this threshold will be lowered to 50,000 tons or less. Consequently, smaller production facilities will also fall under the scope of regulation, and they will be required to adhere to the reporting and emission reduction measures stipulated in the law [66].

Starting from 1st January 2022, the Sakhalin Oblast initiated an experiment with the goal of achieving complete carbon neutrality for the region by the year 2025. To facilitate this initiative, Federal Law No. 34 of

06.03.2022 sets a lower threshold for reporting organizations in 2023. According to this law, organizations will be classified as regulated if their annual greenhouse gas emissions reach 20,000 tons of CO₂ equivalent or more.

On 1st September 2022, Russia introduced a national registry of carbon units, which is a standardized electronic database established to ensure precise accounting of various emission reduction units (ERUs), certified emission reductions (CERs), assigned amount units (AAUs), and absorption units (AAUs). This registry serves as a platform for accurately recording the introduction, storage, receipt, transfer, acquisition, cancellation, and withdrawal from circulation of these carbon units. Additionally, the registry facilitates the transfer of ERUs, CERs, and AAUs. The primary purpose of establishing and maintaining this registry is to fulfill the requirements outlined in Article 7, item 4 of the Kyoto Protocol to the United Nations Framework Convention on Climate Change, as well as the Federal Law No. 128-FZ dated 04.11.2004 "On Ratification of the Kyoto Protocol to the United Nations Framework Convention on Climate Change." It also aligns with the implementation of the Order of the Government of the Russian Federation No. 215-r dated 20.02.2006 and the Comprehensive Action Plan for Implementation of the Kyoto Protocol to the UN Framework Convention on Climate Change in the Russian Federation [67]. In accordance with Government Order No. 367-r dated 1st March 2022, JSC Kontur serves as the operator of the carbon unit register, supported by Gazprombank and the Moscow Exchange [68]. Since the registry's inception, 6 climate projects have been successfully registered. As a result of these projects, a total of 96 carbon units have been issued. Moreover, there are plans to issue more than 1,037,792 additional carbon units in the near future [69].

The significant progress in the development of carbon market regulatory instruments has led to the emergence of numerous CO₂ verification practices. In 2022, the Novosibirsk Region achieved a notable milestone by becoming the first region in Russia to have its carbon balance not only calculated but also verified by an accredited body [70]. The Novosibirsk State University Climate Centre calculated the carbon balance of the Novosibirsk Region for the period 2017-2020. The resulting balance underwent verification and validation procedure in Yu. A. Israel Institute of Global Climate and Ecology (IGCE) [70]. In June 2023, ROSATOM successfully completed the first contracts for the verification of greenhouse gas (GHG) emission claims. As part of these contracts, ROSATOM conducted the necessary assessments and analyses on behalf of several enterprises situated in the Sakhalin Oblast [66].

JSC Rusatom Infrastructure Solutions (RIR) has been granted the authority to conduct validation and verification work on greenhouse gas emissions in Russia. The relevant body established within RIR received accreditation from the Federal Accreditation Service (Rosaccreditation) in September 2022. As of now, RIR is authorized to perform audits, assessments, and provide expert opinions on the validation and verification of greenhouse gas emissions for enterprises operating in 13 sectors. These sectors include the production, transmission, and distribution of electricity from various types of plants, as well as steam and hot water; production of oil, associated petroleum gas, and gas, and production of petroleum products. The scope also encompasses activities such as coal and lignite extraction and preparation, as well as the production of chromium, manganese, and nickel. Based on the conclusions and findings provided by RIR, companies in these sectors can develop strategies and initiatives to reduce their carbon footprint. This approach will not only lead to improvements in the environmental situation in cities but will also enable companies to save on environmental payments and implement climate projects [71].

On 26th September 2022, a significant event occurred in Russia as the first exchange transaction for the sale of carbon units took place on the Moscow Exchange. The successful implementation of this project was made possible through the active support of the Sakhalin Oblast Government and the Russian Energy Agency of the Ministry of Energy of Russia. Innopolis University served as the project validator, while Bauman Moscow State Technical University acted as the verifier. In this landmark transaction, to lots of 10 carbon units each, totaling 20 carbon units, were put up for trading on the Moscow Exchange. These carbon units were received by DalEnergoinvest LLC as part of the Sakhalin experiment. The carbon units were sold on the same day they were listed, namely, 26th September. Each carbon unit, equivalent to one ton of CO₂, was priced at RUB 1 thousand. The generation of these carbon units was made possible through the reduction of greenhouse gas emissions achieved through the implementation of a solar power generation facility near the Reidovo village on Iturup Island [72].

Nevertheless, Russia is actively engaged in discussions related to green initiatives within the framework of regional organizations such as the Shanghai Cooperation Organization (SCO), Eurasian Economic Union (EAEU), and others. These engagements demonstrate Russia's active participation in the ongoing dialogue and efforts to promote environmentally sustainable initiatives and policies at a regional level.

In January 2023, the Eurasian Economic Commission (EEC), VEB.RF, and the Green Finance Centre of the Astana International Financial Centre collaboratively developed a model taxonomy aimed at facilitating the financing of green projects within the Eurasian Economic Union (EAEU). The main objective of creating this model taxonomy is to promote and align the approaches of member states towards the systematic development of green finance instruments in the EAEU. Additionally, it seeks to ensure the free movement of capital within the union. The criteria established for identifying "green" projects in this model taxonomy mark a significant step in the integration association's efforts. It serves as one of the first criteria created for the EAEU and can serve as a foundational framework for the development or updating of national taxonomies within member states. The harmonization of approaches in green finance through this model taxonomy is expected to foster cooperation and collaboration among EAEU member states, encouraging investments in environmentally sustainable initiatives and further promoting the region's commitment to green finance and sustainable development [73].

As the focus on green finance and sustainable development grows globally, it is likely that more opportunities for collaborative green projects between Russia and its friendly countries will emerge, fostering positive environmental outcomes and strengthening international cooperation in the realm of green finance and sustainability.

Conclusion

While Russia may have experienced a delay in adopting green finance initiatives compared to some European and Asian countries, there is a noticeable and growing emphasis on sustainable development goals and the green agenda in the country. As part of this shift, there is a notable effort to develop an information infrastructure to facilitate the dissemination of news and knowledge related to green finance and green projects.

In particular, Russia has actively embraced social network Telegram as a platform for dedicated channels focused on green finance topics. One prominent example is the Telegram channel "100%_Green," authored by Svetlana Bik, which has earned high regard and is considered a leading

International cooperation

Experts have observed that businesses in Russia are currently showing a proactive interest in seeking partnerships with friendly countries. As a result, there is a noticeable trend of reorienting towards collaboration with the UAE, India, and China. However, specific data on joint green finance projects between these countries are not yet available.

source of information in the eyes of sustainability directors and professionals [74]. These channels play an important role in raising awareness, promoting discussions, and sharing insights about green finance initiatives and sustainable development efforts in Russia.

The increased attention to green finance and the development of information-sharing platforms signals a positive shift towards greater awareness and engagement in environmental sustainability, indicating a growing commitment to addressing environmental challenges and fostering green investments in the country.

ESG education in Russia is also witnessing a rise in popularity across various groups of applicants and trainees. It is now available in various formats, including bachelor's and master's degree programs, advanced training courses, professional retraining programs, and even individual disciplines, courses, and projects. This education is not only provided by universities but also by consulting companies and major market players.

To foster effective collaboration and idea exchange among stakeholders, expert ESG platforms are being established in Russia. These platforms serve as forums for developing strategies to address emerging challenges related to environmental, social, and governance aspects. In addition, Russia is actively creating platforms to recognize successes and achievements in ESG transformation. Various professional competitions and awards have been established, allowing both individual professionals and organizations to participate and be acknowledged for their contributions to sustainability and ESG initiatives.

This growing emphasis on ESG education, platforms, and recognition signifies a positive trend in Russia's commitment to sustainable development and responsible business practices. The increasing availability of ESG education and opportunities for stakeholders to engage and collaborate in addressing environmental and social challenges highlight the country's efforts to promote a more sustainable and responsible business landscape.

Indeed, the development of green finance in Russia, while gradual, is showing consistent progress. Many companies have recognized and embraced the potential opportunities presented by green finance instruments. Furthermore, the current policy direction in Russia is focused on promoting the objectives of sustainable development and the green agenda. This concerted effort demonstrates the country's commitment to fostering environmentally sustainable initiatives and aligning with global goals for a greener and more sustainable future. While there may still be challenges and areas for improvement, the overall trend indicates a growing

momentum towards integrating green finance principles into various sectors of the economy and advancing sustainable practices in Russia.

Given the rapid advancement of the green finance sector in Russia, significant opportunities for bilateral cooperation between China and Russia in this field have emerged. In May 2023, the Russian conglomerate Eurasia Development entered into a strategic agreement with China's One Belt, One Road Environmental Technology Exchange and Transfer Centre (B&RETTTC). This collaboration is designed to, among other objectives, facilitate the introduction of China's environmentally friendly technologies into the markets of the Russian Federation and the Commonwealth of Independent States (CIS) countries. This landmark agreement marks the first step in the bilateral relationship between the two nations in this domain. According to Eurasia Development, aside from the expansion of People's Republic of China (PRC) technologies into untapped markets, the agreement envisions a subsequent phase. This phase involves joint endeavors aimed at achieving global recognition and the solicitation of "green" financing for Russian enterprises from Chinese investment funds [75].

A crucial avenue for state collaboration in the realm of green finance lies in the advancement of renewable energy financing. China and Russia possess the potential to join forces in funding and nurturing renewable energy initiatives encompassing solar, wind, hydroelectric, and geothermal power generation. Leveraging green finance mechanisms, these collaborative efforts can attract vital investment and facilitate the transition toward more sustainable energy alternatives. Notably, recent reports indicate that China is demonstrating considerable interest in partnering with Russia to enhance their joint involvement in the renewable energy sector [76]. Furthermore, China's enthusiasm for cooperation extends to projects such as "Snowflake" in the Arctic. This initiative entails the creation of a fully autonomous, year-round facility devoid of diesel dependency. The facility's operations rely on renewable energy sources and hydrogen fuel [77], marking a substantial leap toward sustainable practices.

Another promising avenue for collaboration between China and Russia lies in the domain of carbon markets. Both countries are progressing in the development of carbon markets and emissions trading systems. By partnering, they can jointly establish and nurture these systems, creating a financial framework that motivates companies to curtail their carbon emissions. This approach not only contributes to environmental goals but also fosters the expansion of low-carbon industries. A notable statement from Russian Prime Minister Mikhail Mishustin emphasizes that Russia intends to sustain its hydrocarbon supply to China in the coming years [78]. This assertion

underlines Russia's strategic commitment to energy cooperation with China, even as both nations seek to strengthen their focus on environmental sustainability through initiatives such as carbon markets. This dual approach highlights the complexity of their collaboration, encompassing both economic and ecological dimensions.

China's Belt and Road Initiative (BRI) and the Eurasian Economic Union (EEU) provide opportunities for collaborative green infrastructure projects that promote sustainable development along these economic corridors, while also facilitating the transfer of green technologies between the countries, helping each other adopt and implement more sustainable practices. In addition, China and Russia can engage in a cooperative effort involving the issuance of green bonds. This approach enables the accumulation of capital for projects and initiatives that align with environmental concerns. Furthermore, the establishment of climate funds can bolster the advancement of green technologies, sustainable infrastructure, and strategies for adaptation to a changing climate. Of particular significance is the alignment of Russia's regulatory efforts in the green sphere with those of the People's Republic of China (PRC). Notably, the green finance taxonomy endorsed by the Russian Government through Decree No. 1587 in 2021 corresponds harmoniously with the PRC's framework [79]. This compatibility is expected to facilitate the issuance of green bonds on Chinese exchanges, exemplifying how regulatory congruence can pave the way for fruitful collaboration between the two nations in the field of sustainable finance. Cooperative endeavors can be concentrated on the financing of sustainable infrastructure projects, encompassing initiatives like energy-efficient buildings, enhanced public transportation systems, and advanced waste management facilities. Additionally, China and Russia have the opportunity to allocate resources towards educational programs and capacity-building initiatives centered around green finance. This proactive approach nurtures expertise and cultivates heightened awareness about the nuances of sustainable investment practices, contributing to the shared objective of promoting environmentally conscious financial strategies.

In essence, the advancement of the green agenda in both nations aligns with shared objectives involving "shared differentiated responsibilities" – distinct approaches to achieving common objectives – and "just transition" – the delicate equilibrium between environmental and socio-economic considerations. On 4 February 2022, Russia and China signed a Joint Statement of the Russian Federation and the People's Republic of China on the International Relations Entering a New Era

and the Global Sustainable Development [80]. This policy document identifies a wide range of areas for collaboration. The joint statement reaffirms the commitment of Russia and China to combating climate change in alignment with the principles set forth by the United Nations Framework Convention on Climate Change and the Paris Agreement, notably the principle of "common but differentiated responsibilities." Moreover, they anticipate developed nations to extend annual financial support of \$100 billion to developing countries for climate change mitigation. Both Moscow and Beijing stand united against the creation of fresh trade barriers under the pretext of combating climate change, underscoring their dedication to open international trade. The parties also express their willingness to champion international cooperation, contributing to the evolution of global biodiversity governance and catalyzing green transformation for the cause of global sustainable development [80].

Through collaborative efforts and the exchange of experiences, Russia stands to gain valuable insights from China's accomplishments, enabling it to take a more proactive role in the advancement of the green finance market. This involvement spans both the domestic sphere and the international arena, reflecting Russia's commitment to contributing meaningfully to the global promotion of sustainable financial practices.



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