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Complying with commitments on greenhouse gas emissions from 2021 to 2030 should not cost Russian industry more than RUB 65-100 bln.

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On the path to clean profits: Russia and the Paris Agreement

How Russia's environmental commitments influence the development of its economy

On September 21, 2019, Russian Prime Minister Dmitry Medvedev signed a government decree ratifying the Paris Agreement. The primary goal of the agreement is to prevent climate change and keep the increase in the global average temperature to "well below" 2 °C above pre-industrial levels (participating countries will pursue efforts to limit the increase to 1.5 °C). Climate scientists regard carbon dioxide emitted mostly by industrial facilities as the main anthropogenic factor driving global warming. In connection with this, the reduction of CO₂ emissions was established as the Agreement's target.

Prior to this document, the Kyoto Protocol (1997) required member countries to reduce greenhouse gas emissions by 5.2% relative to 1990 levels. The Paris agreement does not set global emission reduction standards, rather each participating country sets targets independently (it is assumed that participating countries will revise them every five years). There are no penalties for countries that do not meet set goals, although records are kept in order to assist these countries as much as possible. The agreement does not impose strict limits on the mitigation of CO₂ emissions. However, if they are not met, the participating country may incur reputational costs and face pressure from the global community and media. At the end of the minimum three-year membership period (not including the legal formalization period required to join), the member state may withdraw from the Paris agreement.

To meet the obligations under the agreement, Russia has committed to reducing greenhouse gas emissions "to 70-75% of 1990 emissions by 2030, assuming the maximum possible the absorption capacity of Russian forests."¹ Some believe that this commitment could have significant negative consequences for the Russian economy. These concerns come as a number of researchers² have noted the low absorption capacity of Russian forests in the country's carbon balance. In addition, the RSPP has expressed concerns that the introduction of a carbon tax could harm Russian industry³. According to ACRA, correctly assessing the absorption capacity of Russian forests is important in analyzing the potential risks of an economic growth slowdown as a result of participating in the Paris agreement.

According to Roshydromet, greenhouse gas emissions equaled 2.2 bln tons of CO₂ in 2017. Taking into account the 580 mln tons of carbon absorbed by the country's forests, this figure comes out to 1.6 bln tons. Even the most conservative estimates put current CO₂ emissions at 69% of the 1990 level, which was 2.3-3.1 bln tons according to various estimates (see Fig. 1). This does not violate the target range of 70-75%. Therefore, commitments as part of the Paris agreement

¹ The official document on nationally determined contribution of emissions is available here:

https://webcache.googleusercontent.com/search?q=cache:IASzO1b-V-8J:https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Russian%2520Federation%2520First/Russian%2520Submission%2520IND_C_eng_rev1.pdf+%&cd=2&hl=ru&ct=clnk&gl=ru

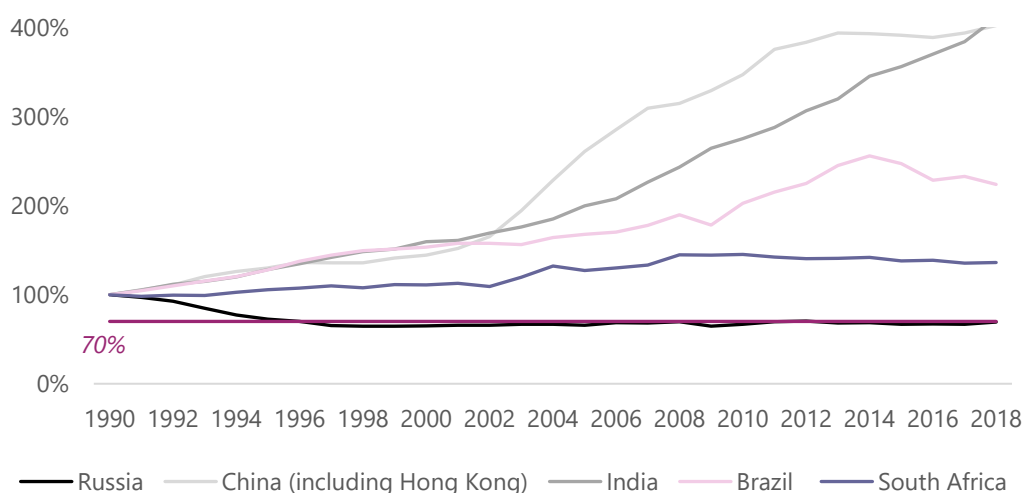
² Analytical overview of methodologies calculating emissions and absorption of greenhouse gases by forests from the atmosphere: A. N. Filipchuk, N. V. Malysheva, B. N. Moiseev, V. V. Strakhov. Forestry Information: online magazine — 2016, № 3, pg. 36–85.

³ <https://iz.ru/936877/2019-10-28/smi-soobshchili-ob-otkaze-pravitelstva-vvodit-predlozhennyi-chubaisom-nalog>

Most estimates are around 2.3 bln tons, which seems more reasonable to ACRA.

will not require Russia to take immediate actions to reduce greenhouse gas emissions, which gives the country an advantage over other developing economies that have significantly increased emissions since 1990. Emissions in India and China have increased by more than four times over the past 29 years, more than any other nation, with India contributing slightly more to this indicator than China. Emissions in Brazil have increased twofold, while the Republic of South Africa has seen a 1.4x increase.

Figure 1. Greenhouse gas emissions adjusted for forest absorption



Sources: BP, ACRA

Russia's approach to calculating the area of "managed forests" differs in many respects from those in Europe, leading to the forest area in the Russian Federation being significantly underestimated.

Different age categories for forests can pose an issue in calculating the area they occupy and their absorption capacity. Due to different interpretations of the term "managed forests" in Russia's land inventory⁴ and IPCC⁵ recommendations, 23% of Russian forests classified as reserve forests are excluded from the absorption capacity calculations. Moreover, current IPCC methodology⁶ counts older forests as noncontributory towards CO₂ absorption despite the fact that they account for 44% of Russia's total forests. Given these factors, the forest area in Russia can be considered understated. According to some researchers⁷, the absorptive capacity of Russian forests is underestimated by 350 mln tons.

In this regard, the clarifying the term "forest" and updating the methodology for calculating the volume of greenhouse gas removal by Russian forests are important in correctly assessing the country's forest area and its absorption capacity. In light of Russia's commitments in the Paris agreement, terminological and methodological shortcomings should be eliminated in order to strengthen Russia's position in negotiations with foreign partners. This is particularly important given the expected start of international trade in greenhouse gas emissions quotas in Russia, which could generate significant revenues.

⁴ National inventory report on anthropogenic emissions and removals by greenhouse gas absorbers not regulated by the Montreal Protocol for 1990-2016.

⁵ Intergovernmental Panel on Climate Change.

⁶ Guidelines for national greenhouse gas inventories, IPCC, 2006. Volume 4. Agriculture, forestry and other land uses: Institute for global environmental strategies.

⁷ Analytical overview of methodologies calculating emissions and absorption of greenhouse gases by forests from the atmosphere: A. N. Filipchuk, N. V. Malysheva, B. N. Moiseev, V. V. Strakhov. Forestry Information: online magazine — 2016, № 3, pg. 36–85.

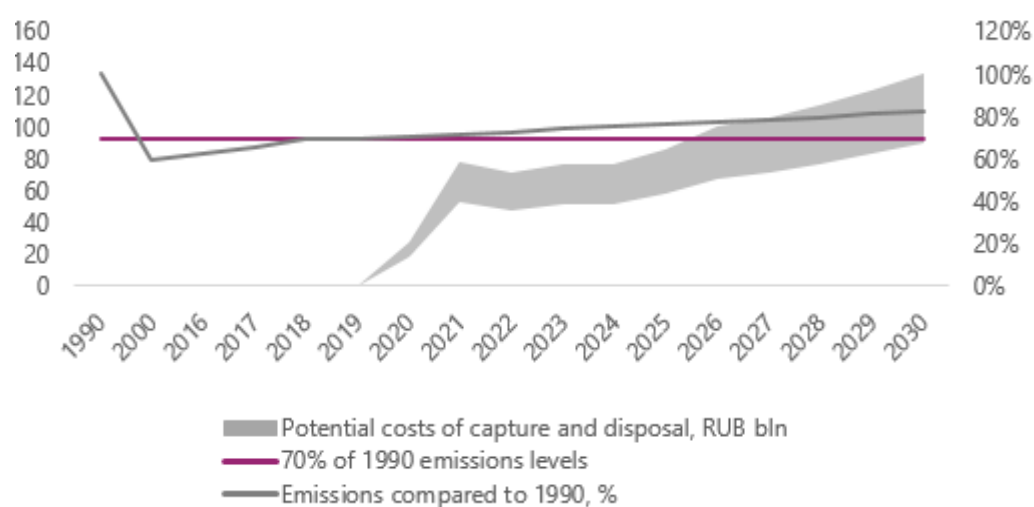
Quota-trading systems that are actively developing globally (so-called carbon exchanges, i.e. the purchase and sale of quotas for excess CO₂ emissions) look attractive for Russia. Currently, there are 20 such exchanges in the EU, US, and New Zealand. Seven pilot projects have been launched in China. Six more exchanges are scheduled to open in the next few years. The largest of them will be opened in China in 2020, where quotas for excess greenhouse gas emissions will be traded, the total volume of which will be 3.3 bln tons (30% of total emissions in China).

For Russia, the only known experience of selling emissions quotas was a deal in 2010 where Gazprom Neft sold carbon quotas worth about EUR 3.5 mln to Mitsubishi and Nippon Oil.

Such an exchange in Russia would open up new opportunities for the country, making it possible to not only redistribute emissions quotas between industrial enterprises within Russia and thereby improve the domestic balance, but also to sell excess quotas to other countries. The average current price in global marketplaces is about EUR 5 per ton of CO₂. However, according to OECD forecasts, CO₂ prices could grow to reach EUR 60 euros per ton by 2030. Based on the calculations of climate scientists, the balance of greenhouse gas emissions in Russia has a reserve of 350 mln tons per year of carbon dioxide compared to 1990 (taking into account the absorption of forests). Therefore, Russia's revenues from the export of excess quotas could reach up to EUR 1.8 bln.

The Ministry of Economic Development of the Russian Federation is currently developing a law "On state regulation of emitting and absorbing greenhouse gases and on amendments to certain legislative acts of the Russian Federation," as well as a draft Strategy for long-term development with low greenhouse gas emissions through 2050, which, among other things, assumes fees for exceeding emissions quotas. The business community and environmental agencies have not yet approved the draft. Nevertheless, ACRA believes that some fee for excess CO₂ emissions will still be established and that its size will be RUB 1,400-2,200 per ton. This estimate corresponds to the approximate cost of capturing and dumping a ton of CO₂⁸.

Figure 2. Potential costs of CO₂ capture and disposal if charges are imposed for emissions above 1990 levels



Sources: Federal State Statistics Service, ACRA

⁸ 2018 Progress report on the comprehensive climate doctrine plan of the Russian Federation through 2020, The Ministry of Natural Resources and Environment of the Russian Federation.

According to ACRA, fees on emissions exceeding 1990 levels are likely to cost Russian industrial enterprises RUB 65-100 bln per year from 2021 to 2030. ACRA does not believe that this will lead to a slowdown in the growth of the Russian economy. In addition, industrial enterprises transitioning to technologies that are more efficient may partially offset these costs.

For most companies, maintaining emissions below 1990 levels should not be a problem. Reducing the energy consumption of the economy is one of the key challenges facing Russian industry and some companies have already achieved visible results. Enterprises and investors are showing considerable interest in optimizing production and introducing new environmentally friendly technologies. In this regard, ACRA believes the prospects are considerable for Russian issuers to issue "green" bonds to finance environmental projects, including those related to the reduction of greenhouse gas emissions. Green bond issuance increased globally by 3% year-on-year in 2018 to USD 167.3 bln. In total, 44 countries have issued "green" bonds at the national level and the number of individual issuers in 2018 alone stood at 215. Given the interest in this area, issuing "green" bonds could become a significant source of financing for energy efficiency projects for Russian issuers, which would reduce greenhouse gas emissions.

Therefore, expecting negative consequences for the Russian economy from the Paris agreement seems unreasonable. Moreover, participation in the agreement can provide Russia certain political and economic benefits. For example, according to the results of expert assessments on the absorption capacity of Russian forests, Russia will be able to export quotas worth up to USD 2.2 bln per year.

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