



## Russia's ostrich approach to climate change and the Paris Agreement

Alexey Kokorin and Anna Korppoo

### Summary

- Despite the latest information from Russia's leading climate scientists, the country's political leadership does not acknowledge the importance of anthropogenic factors in climate change. This is in stark contrast to most other governments, which recognise that there is no longer any doubt about the human origins of climate change.
- Russia's leadership has nevertheless acknowledged the negative nature of changes in the climate and noted the growing risks to Russian territory. It also emphasises the need for adaptation, in contrast to its previous tendency to dismiss such risks.
- In the view of Russia's leadership, the global economic trend recognised by the Paris Agreement will generate risks for the national economy, but only in the distant future. This interpretation leads to a delay in adopting robust measures for low-carbon development, and explains the focus on short-term energy efficiency measures. Russia's GHG emissions target mainly reflects a business-as-usual approach to the development of energy efficiency.
- The leadership relies on Russian prognoses that the global fossil-fuel era will continue for the foreseeable future, and ignores recent signals that would advocate phasing out coal and oil. Carbon regulation is already included as a policy tool to introduce new technologies, but is to be launched on an economy-wide scale only in the late 2020-30s. Russia's main trading partners (China, Germany, Japan, Korea, India, and the Nordic countries) should communicate to Moscow, for example in bilateral meetings, BRICS, SCO and others, that climate change policies and regulations are being adopted by most countries, not least out of benign self-interest. In lagging behind now, Russia risks being unprepared for the post-fossil fuels era.

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## Introduction

Following the entry into force of the Paris Agreement, it is timely to look at trends in Russia, the world's fifth-largest GHG emitter. The Kremlin has altered its climate policy since 2013;<sup>1</sup> it now recognises the threats to Russian territory posed by climate change and emphasises the need for adaptation. Yet Russia's climate mitigation lags far behind the pace of global efforts, due to the leadership's 'ostrich approach' to phasing out fossil fuels, and its denial of the anthropogenic origins of climate change.

*Russia's climate mitigation lags significantly behind the pace of global efforts, due to the leadership's 'ostrich approach' to phasing out fossil fuels, and its denial of the anthropogenic origins of climate change.*

This paper examines these dynamics and discusses possible ways of encouraging Moscow to launch a more effective climate policy, with more ambitious emission targets, while at the same time protecting its fossil fuel based economy.

## Little confidence in climate science

A coalition of Russian climate science and environmental organisations has begun to raise awareness among the Russian public and stakeholders about the policy process of building scientific consensus on the origins of climate change. In 2015, several key research institutes jointly issued the Second Russian Assessment Report on climate change,<sup>2</sup> which resembles volumes 1 and 2 of the IPCC Fifth Assessment Report. As one of its key messages it underlines the predominance of anthropogenic causes of climate change during the 20<sup>th</sup> and 21<sup>st</sup> centuries – a fact still denied by many in Russia.

This coalition has generated a significant stream of information on the anthropogenic origins of climate change. Every two months, the Russian Hydrometeorological Service (Roshydromet) publishes the bulletin *Climate Change*. Following the initiative of the Presidential Climate Envoy, Alexander Bedritsky, the first All-Russian Climate Week was held from 15 May to 15 June

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<sup>1</sup> A. Kokorin & A. Korppoo, 2013. "Russia's post-Kyoto climate policy: Real action or merely window-dressing?" (FNI Climate Policy Perspectives 10, May). Lysaker, Norway: Fridtjof Nansen Institute (<https://www.fni.no/publications/russia-s-post-kyoto-climate-policy-real-action-or-merely-window-dressing-article906-290.html>).

<sup>2</sup> Second Assessment Report of Roshydromet on climate changes and its consequences on the territory of the Russian Federation. Moscow. Roshydromet. 2015. 1008 pp. (in Russian, with General Summary in English) ([http://downloads.igce.ru/publications/OD\\_2\\_2014/v2014/htm/](http://downloads.igce.ru/publications/OD_2_2014/v2014/htm/)).

2017.<sup>3</sup> It featured some 400 events publicising climate science, in particular, the anthropogenic origins of climate change, including a keynote lecture for policy-process stakeholders delivered at the Analytical Centre for the Government of the Russian Federation by Vladimir Kattsov, Director of the Main Geophysical Observatory and active IPCC author.<sup>4</sup> Nevertheless, a July 2017 opinion poll indicated that 70% of the Russian public associated severe weather alterations with climate change, but only 55% acknowledged the anthropogenic origins of climate change (35% attributed changes to natural variations).<sup>5</sup> The origins of climate change are widely considered to be a combination of natural and anthropogenic causes; 39% of those surveyed still considered the topic of climate change to be far-fetched and speculative. During the Q&A session at the International Economic Forum in St Petersburg in June 2017, President Putin himself explained the background to this:

It's [the Paris Agreement] about preventing temperature changes of two degrees, but we don't feel here [in Russia] that the temperature is getting hotter."<sup>6</sup>

At the Arctic Territory for Dialogue Forum in Arkhangelsk in March 2017, President Putin openly expressed doubts about the anthropogenic nature of climate change, emphasising adaptation instead:

I agree with those who believe that prevention [of climate change] is not the point, because it is impossible, as it may be related to some global cycles on the Earth or be of the planetary scale. The point is how to adapt.<sup>7</sup>

This can be considered as a deviation from Putin's previous approach: he had acknowledged the anthropogenic origin of climate change by signing the 2009 Climate Doctrine, a document that is clear on that point. More recent documents have confirmed the scientific doubts of the Russian leadership, however, and hence its backtracking on the issue. In the first national "Environmental Security Strategy" adopted in April 2017,<sup>8</sup> climate change tops the list of global challenges – but only adaptation is mentioned, while the anthropogenic origins of climate change go unrecognised. In 2017, the Implementation Plan of the Climate Doctrine was amended, mainly to focus on adaptation.<sup>9</sup> Further, the 2016 Russian Climate Action Plan<sup>10</sup>

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<sup>3</sup> See <http://en.kremlin.ru/events/administration/54498>

<sup>4</sup> Analytical Centre for the Government of the Russian Federation. 24 May 2017. Workshop: *Status of science knowledge on climate change: World and Russia – influence on activities* (<http://ac.gov.ru/events/012993.html>).

<sup>5</sup> WCIOM, Press-release # 3425, 24 July 2017 (<https://wciom.ru/index.php?id=236&uid=116325>).

<sup>6</sup> <http://www.dailymail.co.uk/news/article-4566764/Putin-thanks-Trump-withdrawing-Paris-Accord.html>

<sup>7</sup> V.V. Putin. Speech at the International Forum 'The Arctic: Territory of Dialogue', Arkhangelsk, 30 March 2017 (<http://www.kremlin.ru/events/president/news/54149>).

<sup>8</sup> *Environmental Security Strategy of the Russian Federation to 2025*, 19 April 2017 (<http://pravo.gov.ru/laws/acts/32/495554.html>).

<sup>9</sup> *On amendments to the implementation plan of the Climate Doctrine of the Russian Federation by 2020*. Resolution # 162-p of the Russian Government (31 January 2017).

<sup>10</sup> *Implementation plan for a set of measures to improve national regulation of greenhouse gas emissions and to prepare for the ratification of the Paris Agreement*. Resolution #2344-p of the Russian Government (3 November 2016).

delayed Russian ratification of the Paris Agreement, while specifying a very tight schedule for adaptation; a national adaptation plan is set to be drafted by mid-2018.

The leadership's recognition of climate-related risks on Russian territory is a positive sign in terms of the safety of the population, but it is associated mainly with dangerous trends in weather patterns. The science on long-term trends in 'abnormal' weather events is recognised by Russian society and the leadership – but remains detached from the effect of GHG emissions. Therefore, the awareness-raising efforts of the climate coalition need to focus on the origins of climate change. On the other hand, the domestic coalition is obviously lacking in influence among domestic stakeholders. For this reason the influence of other governments – Russia's leading partners such as Germany, France, Italy, Japan, China, India and the Nordic countries – is crucial to convincing Russia that there is no longer any scientific doubt about the central role of GHG emissions in causing climate change.

*The leadership's recognition of climate-related risks on Russian territory is a positive sign for the safety of the population, but the risks are mainly linked to clearly dangerous trends in weather patterns.*

## The Trump effect

Regardless of the country's weak mitigation track record and lack of ratification so far, Russia's leadership sees itself as following the Paris Agreement. In the words of President Putin,

We are scrupulous about environmental and climate problems... we are improving the national regulation of greenhouse gas emissions and are keen to ensure rapid and cost-effective reduction in emissions in compliance with the Paris Agreement.<sup>11</sup>

Reacting to the decision of US President Donald Trump to withdraw the United States from the Paris Agreement, the Russian President's spokesman stated unequivocally: "today there is no alternative [to this agreement]."<sup>12</sup> As pragmatically put by Sergey Donskoy, the Russian Minister of Natural Resources and Ecology, during the St. Petersburg economic forum, the impacts on trade are what matter the most:

Withdrawal of even a very large emitter, such as the U.S., does not mean termination of the Paris Agreement; for the Russian Federation, the ratification of the Agreement by trade partners other than the United States remains an important factor. We also [like them] are planning to implement climate policies domestically.<sup>13</sup>

Even though Russia appears unlikely to follow the US example regarding the Paris Agreement, Putin seems to understand Trump's worries. He has even indicated the possibility of adjusting

<sup>11</sup> V.V. Putin. Speech at the 23<sup>rd</sup> World Energy Congress. Istanbul, 10 October 2016 (<http://kremlin.ru/events/president/news/53062>).

<sup>12</sup> "The Kremlin Declares Commitment to the Paris Climate Accord" (<http://www.interfax.ru/russia/564790>).

<sup>13</sup> "Donald Trump Decides to Cancel Ratification of the Paris Agreement," 2 June 2017 (<http://kommersant.ru/doc/3314236>).

the deal, as “we still have time.”<sup>14</sup> As stated above, in 2009 the Kremlin had officially adopted the view that climate change was of anthropogenic origin. That the administration is now resuming its sceptical views on climate science seems to correlate with the arrival of Trump, known to be highly sceptical of climate science. For instance, in 2012 he tweeted:

The concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive.<sup>15</sup>

Since entering the White House, he has withdrawn the USA from the Paris Agreement, and references to climate change have been deleted from the US Environmental Protection Agency’s website.<sup>16</sup> Such a figure is likely to downgrade the importance of climate in the minds running the Kremlin; under these circumstances, Russia is unlikely to be considered as the worst global climate rogue. This provides fertile ground for Moscow to revert to its previous view, in line with the Russian public’s scepticism about climate science.

### The Paris Agreement in Russia: energy efficiency and economic concerns

Russia’s leadership sees the Paris Agreement as part of the global economic low-carbon trend, which entails risks to a national economy based on the export of oil, gas, metals and mineral resources. Russia consumes much more energy per unit of GDP than the world’s leading economies. This fact has long been a source of concern for the government, which in 2009 adopted the target of reducing the energy intensity of the economy by 40% (in relation to the 2007 level) by 2020. This target will not be achieved, however. The current energy intensity of the economy remains 6% below the 2007 level, declining by 5.4% between 2008 and 2014.<sup>17</sup> Indeed, according to the International Energy Agency (IEA), little change is expected until 2020 (Fig. 1).

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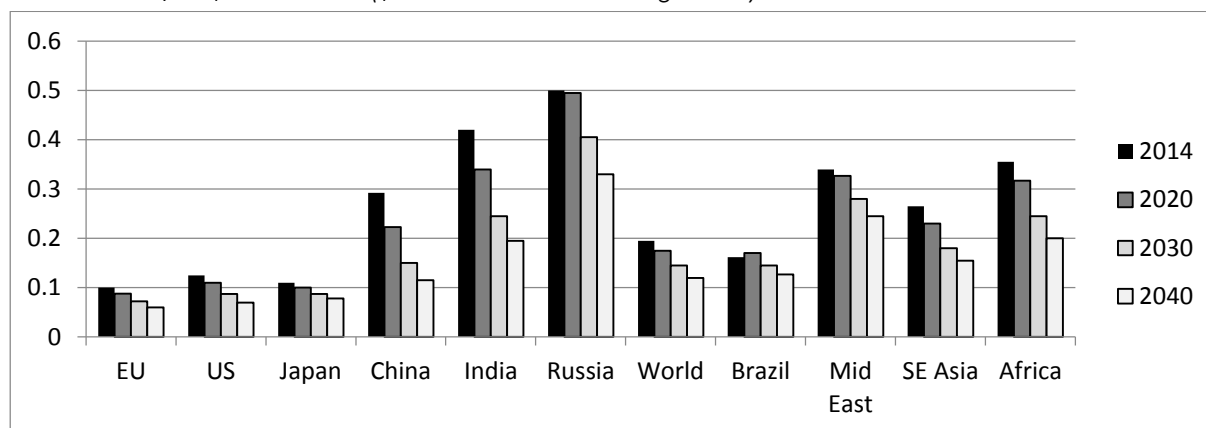
<sup>14</sup> *Daily Mail*, 2 June 2017. “Vlad the Entertainer: Putin jokes that Russians are grateful Trump left Paris Accord, saying surprise storm that hit Moscow can now be blamed on US president and ‘American imperialism’” (<http://www.dailymail.co.uk/news/article-4566764/Putin-thanks-Trump-withdrawing-Paris-Accord.html>).

<sup>15</sup> R. Harrington, “President-elect Donald Trump doesn’t believe in climate change. Here’s his platform on the environment”, *Business Insider*, 9 November 2016 (<http://www.businessinsider.com/donald-trump-climate-change-global-warming-environment-policies-plans-platforms-2016-10?r=US&IR=T&IR=T>).

<sup>16</sup> L. Smith, “Trump administration deletes the mention of ‘climate change’ from Environmental Protection Agency’s website”, *The Independent*, 21 October 2017 (<http://www.independent.co.uk/news/world/americas/us-politics/donald-trump-administration-climate-change-deleted-environmental-protection-agency-website-a8012581.html>).

<sup>17</sup> Energy Strategy of the Russian Federation by 2035. Ministry of Energy. Draft agreed by all ministries (version of 01.02.2017) (<http://minenergo.gov.ru/node/1920>).

Figure 1. IEA 'new policies' scenario: projected energy intensities until 2040  
toe/US\$ 1000 GDP (\$2015 market exchange rate)



Source: data from World Energy Outlook 2016. International Energy Agency, Paris, (<http://www.iea.org/newsroom/news/2016/november/world-energy-outlook-2016.html>).

The IEA's projection coincides largely with the Russian Energy Strategy's 2035 target of reducing energy intensity by one third of the 2015 level. This is discouraging: even if the current Energy Strategy goals are reached, Russia would remain a global outsider in terms of the energy intensity of the economy. Energy efficiency per se is not important for Russia, as its energy resources are abundant and prices are low, as recently highlighted by the Ministry of Economic Development at the Analytical Centre for the Government of the Russian Federation.<sup>18</sup> Without subsidies, the wholesale market price for electricity ranges from €€1.3-2.5 /kWh and pump petrol €€50-60 / litre. In 2005-10, energy efficiency was driven by the priority given to saving natural gas for export. Today, however, this is not the case: export is limited by the prices and policies of the importing countries. Although the situation in the global gas market has changed, the need to bridge the technological gap and to improve labour productivity has emerged as a strong driver.

The Ministry of Economic Development has explicitly expressed concerns about the national economy: the high energy intensity involved in production can reduce the competitiveness of Russian exports and should therefore be improved.<sup>19</sup> According to the ministry, new technologies and higher labour productivity can help attract investment; in their absence it would be difficult to generate more than 1.5% GDP growth per year.<sup>20</sup> The ministry also declared a third driver – low carbon development – and calculated its possible effects.

<sup>18</sup> Dmitry Vakhrukov (Deputy Director of Department of the Ministry of Economic Development). Analytical Centre for the Government of the Russian Federation. Round Table on Comprehensive Plan to Improve Energy Efficiency of the Economy of the Russian Federation, 10 August 2017 (<http://ac.gov.ru/events/013922.html>).

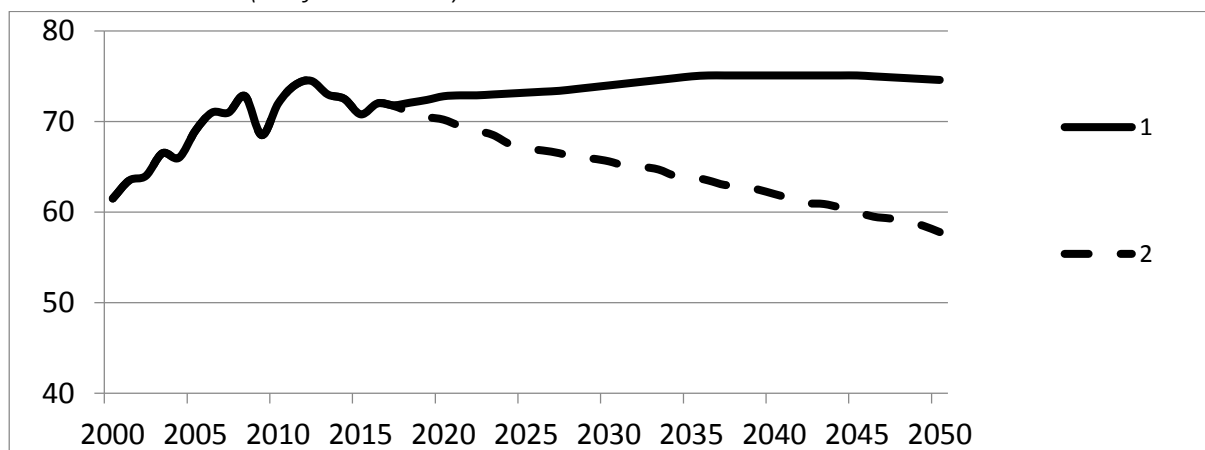
<sup>19</sup> Dmitry Vakhrukov (Deputy Director of Department of the Ministry of Economic Development). Analytical Centre for the Government of the Russian Federation. Round Table on Comprehensive Plan to Improve Energy Efficiency of the Economy of the Russian Federation, 10 August 2017 (<http://ac.gov.ru/events/013922.html>).

<sup>20</sup> E. Obukhova and K. Pakhunov. "This wave will be somewhat higher", *Expert* 17, 24-30 April 2017, pp. 33–34.

At the end of 2016, the Ministry of Economic Development presented to the Office of the Prime Minister two scenarios developed jointly with the Ministry of Energy and the Ministry of Natural Resources and Ecology, labelled “conservative” and “energy-efficient” (Fig. 2).<sup>21</sup> The first scenario builds on the “basic+” scenario of the draft “Projection of long-term social and economic development of Russia to 2035” authored by the Ministry of Economy. The second scenario includes the transition launched by the “Russian Energy Strategy until 2035” developed by the Ministry of Energy.

The first scenario predicts a 25% growth in primary energy consumption between 2017 and 2050, while the second expects stability of demand over the next few decades. The conservative scenario envisages that the energy intensity of the economy will reach 64% of the 2007 level, and the energy-efficient scenario 49%, by 2050. Both scenarios expect a very low share of renewable energy in 2050 – only about 5% of total energy consumption. The main difference between the scenarios is that in the conservative case, 80% of capital investments are allocated to energy resources extraction and transportation, while in the energy-efficient scenario the allocation is somewhat lower, at 65-70%. Capital investments in energy efficiency are forecast at 20% and 30-35%, respectively.

Figure 2. Russia’s energy-related GHG emissions to 2050, ‘conservative’ and ‘energy efficient’ scenarios (% of 1990 level)



1- Historical data and conservative scenario

2- Energy efficient scenario

According to the 2017 data, energy-related emissions in 1990 were 3,077 MtCO<sub>2</sub>-eq.<sup>22</sup> According to the 2016 data, which were used by the Ministry of economic development in the two scenarios, it was higher – 3,250 MtCO<sub>2</sub>-eq. Such minor discrepancies have no impact on the findings of this analysis.

Source: 1 and 2 are based on data of the Ministry of Economic Development.

<sup>21</sup> On development of scenario prognosis of GHG emissions by 2020 and perspective by 2030. Report of the RF Ministry of Economic Development to the RF Government (Office of the Prime Minister), 28 November 2016.

<sup>22</sup> UNFCCC. National Inventory Submissions 2017, Russian Federation, Common Reporting Format, 25 July 2017 ([http://unfccc.int/national\\_reports/annex\\_i\\_ghg\\_inventories/national\\_inventories\\_submissions/items/10116.php](http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/10116.php)).



Economic risks related to global mitigation measures are underlined in the Economic Security Strategy to 2030 (May 2017). The list of challenges and risks includes “the intention of developed economies to use their advantages in ... cutting-edge technologies as an instrument in global competition”, and “changes in the global energy demand, development of energy efficiency technologies, and development of ‘green’ technologies”. This recognition of both the economic risks and the major impact of the global low-carbon trend shows that developments in international climate policy are followed closely in the Russian administration. However, domestic mitigation policies and measures are limited to energy efficiency<sup>23</sup> – cutting GHG emissions is not a goal per se, given the perceived scientific uncertainties surrounding the anthropogenic origins of climate change. In fact, there is a bigger problem with domestic policy: its remarkable delay.

### Dramatic delay, weakened GHG targets

Russia's leadership only sees the economy's over-dependence on the export of fossil fuels in terms of a future, not an imminent threat, and the public is firmly convinced that it will take a long time for the global economy to switch from hydrocarbons. This belief is reflected in the global and Russian energy-sector projections of the “Energy Strategy by 2035”<sup>24</sup> and joint projections of the Analytical Centre for the Government and Energy Research Institute of the Russian Academy of Science. They forecast that the global energy sector will remain fossil-fuel-based until the 2040s;<sup>25</sup> in the scenario deemed most likely, global CO<sub>2</sub> emissions will increase by 16% for the period 2013-40, while the scenario with the lowest CO<sub>2</sub> growth foresees stabilisation in 2025, but with no reduction expected until 2040. The first is consistent with the IEA's global “New Policy Scenario”. Yet lower projection is crucially different from the most recent low carbon IEA projection, the “Sustainable Development Scenario” with reduction by about 40% by 2040.<sup>26</sup> The deviation is most stark in projections of Russia's renewable energy, other than large hydro. The IEA scenarios envisage an 8% and a 21% share of national electricity generation, respectively, while the Russian “Energy Strategy until 2035” forecasts only a 2-4% share. The “Energy Strategy until 2035” fails to prepare the country for the post-oil era, partly because it ignores global low-carbon options. It predicted that the oil price would reach 80-100

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<sup>23</sup> For instance, the mitigation section of the Climate Doctrine Implementation Plan was amended in 2017 only with regard to energy-efficiency activities. *On amendments to the implementation plan of the Climate Doctrine of the Russian Federation by 2020*. Resolution # 162-p of the Russian Government (31.01.2017).

<sup>24</sup> Energy Strategy of the Russian Federation until 2035. Ministry of Energy. Draft agreed by all ministries (final version of 01.02.2017) (<http://minenergo.gov.ru/node/1920>).

<sup>25</sup> A.A. Makarov, L.M. Grigoriev, T.A. Mitrova (eds), *Global and Russian energy sector development projection 2016*. Energy Research Institute of the Russian Academy of Science, Analytical Centre for the RF Government. 2016 (<http://ac.gov.ru/files/publication/a/10585.pdf>).

<sup>26</sup> World Energy Outlook 2016. International Energy Agency, Paris, November 2017.

USD2014/barrel and fossil-fuel-based electricity generation would remain at the current level of about 65% also in 2035. Russian CO<sub>2</sub> emissions remain stable, at roughly 70% of the 1990 level. Following this logic, Russia's Intended Nationally Determined Contribution (INDC) under the Paris Agreement was announced as *not to exceed 70–75% of the 1990 level with the maximum possible account of absorbing capacity of forests*.<sup>27</sup>

This reference to forests (land use, land-use change and the forestry sector: LULUCF) requires explanation. In 1990, LULUCF was a net CO<sub>2</sub> source, rather than the large net sink it has become today.<sup>28</sup> The main reason lies in the dynamics of the age-class composition of Russia's forests. Massive clear-cutting in the former USSR produced emissions from the 1960s to the 1980s, whereas subsequent reforestation generated young, fast-growing forests with large CO<sub>2</sub> absorption. However, today's forests are ageing, with a corresponding decline in absorptive capacity. According to forestry science,<sup>29</sup> as well as the most recent Russian Biennial Report to the UNFCCC,<sup>30</sup> the current net sink will drop to zero over the next 40 years. This decline can be halted only by radical changes in forestry practices and by protecting significant amounts of primary forests from commercial clear-cutting. The scenarios prepared by the Ministry of Economic Development (conservative and energy efficiency) combined with the LULUCF (Fig. 3) indicate that to comply with its INDC, Russia will either have to deviate substantially from the conservative scenario, or include LULUCF. Representatives of carbon-intensive industries have been insisting on the latter option.

Reliance on scenarios that forecast a very slow decarbonisation of the global economy crucially influences all mitigation measures in Russia. In particular, further development of the renewable energy (RE) sector is only envisaged for the future. The current primary goal of the sector is to launch the domestic manufacturing of cutting-edge RE equipment. Therefore, a main eligibility criterion for governmental support through the tending system of renewable energy (wind, solar and small hydro) is the level of 'localisation': the share of equipment produced or assembled in Russia in the total cost of equipment. Using the most cost-effective or best available RE technology would make a greater contribution to the share of renewable energy, however. For 2018-21, the government will support 2 GW in capacity of wind and solar; support to further 4 GW is foreseen by 2024. In 2016, Russian solar and wind capacity was a mere 700 MW, out of line with global trends. Government support is expected to bring the total of RE sources (including some 47 GW of old large hydro) up to some 4.9% of total end-use

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<sup>27</sup> UNFCCC INDCs as communicated by Parties (Russia has not yet ratified the treaty, hence not an NDC) (<http://www4.unfccc.int/Submissions/INDC/Submission%20Pages/submissions.aspx>).

<sup>28</sup> UNFCCC. National Inventory Submissions 2017, Russian Federation, Common Reporting Format, 25 July 2017 ([http://unfccc.int/national\\_reports/annex\\_i\\_ghg\\_inventories/national\\_inventories\\_submissions/items/10116.php](http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/10116.php)).

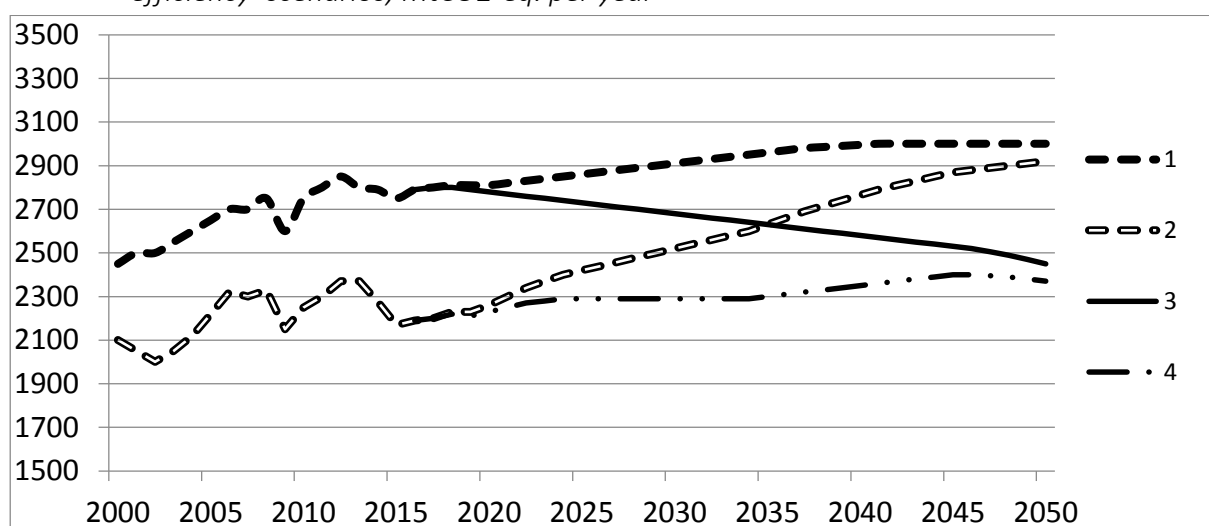
<sup>29</sup> For details see A. Kokorin, "Russia's Post-Paris Climate Policy: Slow Progress and Problems", *Russian Analytical Digest*, 2016 №185, pp. 9–14 (<http://www.css.ethz.ch/content/dam/ethz/special-interest/gess/cis/center-for-securities-studies/pdfs/RAD185.pdf>).

<sup>30</sup> UNFCCC. Second Biennial Report of the Russian Federation. 30 December 2015 ([http://unfccc.int/files/national\\_reports/biennial\\_reports\\_and\\_iar/submitted\\_biennial\\_reports/application/pdf/2br\\_rus.pdf](http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/2br_rus.pdf)).

demand by 2030, as against 3.6% in 2010. This represents an important step forward, but is very modest in comparison with the rest of the world.<sup>31</sup>

Notwithstanding, Russia's leadership is apparently sticking to its ostrich approach to global developments in renewable energy, ignoring the falling costs of electricity generated by RE. The best plants are currently generating some €2.1-2.6 /kWh,<sup>32</sup> which is close to the average costs of electricity generation in some parts of Russia. All the same, in June 2017, Vice Prime Minister Arkady Dvorkovich advised waiting until RE could become cost-effective in Russia as a whole.<sup>33</sup> Building such a delay into the Russian Energy Strategy seems very odd, in view of the favourable market conditions today.

Figure 3. Russian GHG emissions, all sources, to 2050 in the 'conservative' and 'energy efficiency' scenarios, MtCO<sub>2</sub>-eq. per year



- 1- Conservative scenario (excl. LULUCF)
- 2- Conservative scenario (incl. LULUCF)
- 3- Energy efficiency scenario (excl. LULUCF)
- 4- Energy efficiency scenario (incl. LULUCF)

According to the 2017 data, Russia's 1990 emissions were 3,768 MtCO<sub>2</sub>-eq. (excl. LULUCF), or 3,929 MtCO<sub>2</sub>-eq. (incl. LULUCF). According to the 2016 data, which were used by the Ministry of Economic Development in calculations under the two scenarios, the levels were higher: 3,940 and 4,105 MtCO<sub>2</sub>-eq. respectively. Therefore, minor deviations in percentage magnitudes are possible: however, with no impact on the findings of this analysis.

Sources: 1 and 3 are based on data of the Ministry of Economic Development; 2 and 4 are the authors' estimates based on Russia's Biennial Report to the UNFCCC

<sup>31</sup> IRENA, 2017. "Remap 2030 Renewable Energy Prospects for Russian Federation", working paper, IRENA, Abu Dhabi ([www.irena.org/remap](http://www.irena.org/remap)).

<sup>32</sup> New Energy Outlook 2017. Bloomberg New Energy Finance (<https://about.bnef.com/new-energy-outlook/>).

<sup>33</sup> "Dvorkovich called for no hurry with renewable energy sources", St. Petersburg International Economic Forum, Rossiiskaya Gazeta, 17 June 2017 (<https://rg.ru/2016/06/17/dvorkovich-prizval-ne-toropitsia-s-vozobnovliaemyimi-istochnikami-energii.html>).

There may also be a delay in adopting a low-carbon strategy and carbon regulation. According to the Russian Action Plan,<sup>34</sup> a “low-carbon strategy until 2050” is to be drafted by the end of 2019. Whether this can be achieved, however, is open to question, as the Federal Law on Strategic planning requires it to be based on a social and economic development projection and strategy for the same period – and such documents are being developed only for the period until 2035. A draft of a new Federal Law on Carbon Regulation is also expected in 2019, but there is no progress plan for its adoption, as is required to pass a law. Moreover, a *draft* may contain only principles and approaches, without concrete mitigation measures and GHG

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targets, which provides a weak basis for progress. Any practical measures are opposed by coal and other businesses currently relying on carbon-intensive technologies, and are therefore postponed – to the distant future. The Ministry of Economic Development’s

2017 three-stage plan provides an example.<sup>35</sup> For 2017–20 it primarily foresees the analysis and design of possible policy measures. Only after that will there be a move towards incentivising and implementing energy-efficiency improvements. The introduction of economy-wide carbon regulation, deliberately kept undefined for now, is not scheduled until after 2030.

Such delays in climate policies run counter to the global trends that already impact Russia. The expansion of coal exports to the Asian market, previously anticipated by Russian stakeholders, is now in serious doubt since China, Vietnam and other countries in the region have opted to prioritise alternative energy paths. Korea and Japan are not

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viewed as long-term buyers either, due to their plans for alternative energy. The extraction of Arctic offshore energy resources, long considered vital for the country’s economic future, has met obstacles. The development of the Shtokman gas field in the Barents Sea was cancelled because of cost issues, combined with falling prices in the global markets triggered by the emergence of shale gas. Later, falling oil prices placed a question mark over the profitability of other Arctic offshore projects. In the short term they have been delayed because of Western sanctions against Russia. Only one offshore project is in operation – the Prirazlomnoe field in the Pechora Sea. Also, Russian gas exports’ ‘turn to the East’, announced in 2014, is facing challenges. China’s need for Russian gas is being adjusted downward. It shows little interest for the Power of Siberia-2 gas pipeline, and may even seek a revision of the contract on Power of Siberia-1. Nevertheless, there will still be a large market for Russian oil and gas, including in Europe. But price pressure means that more expensive Russian sources will become less attractive so that keeping production and export on the very high level it is now may become

<sup>34</sup> *Implementation plan for a set of measures to improve national regulation of greenhouse gas emissions and to prepare for the ratification of the Paris Agreement*. Resolution #2344-p of the Russian Government (03.11.2016).

<sup>35</sup> Yu. N. Fedorov, “Measures planned by the RF Government to promote reduction of greenhouse gas emissions”. Roshydromet, Round Table “Global climate problems: relevance for Russia”, 24 May 2017.

economically unjustified. This underscores the need for a more balanced economic development policy. Furthermore, ample gas reserves makes it possible for Russia to maintain a strong position in the gas market in Europe and Gazprom uses climate as an argument for gas. However, the development of gas demand depends on many factors, and there is no broad agreement on the role of gas in Europe's energy future.

### The task of partner governments

Given the increasing pace of global decarbonisation, Russia needs carbon regulation and more robust national GHG targets now. In bilateral meetings, with BRICS, the SCO (Shanghai Cooperation Organisation) and at other summits, the country's main trading partners (China, Germany, Japan, Korea, India, the Nordic countries) should make it clear that today there is no doubt about the anthropogenic origins of climate change. This point has become especially important in view of the Trump administration's climate scepticism, in line with Russian attitudes. It is essential to convince Moscow that global developments have been proceeding more rapidly than expected in Russian prognoses, and Russia's GHG targets will need to be compatible with the goals of the Paris Agreement.

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The Chinese 'Belt and Road' initiative, with its emphasis on an environmentally responsible approach, could play a role here. For instance, Beijing has established environmental requirements for investments and low-carbon parameters for projects on Russian territory. This could help prove to Moscow that Beijing recognises the climate problem as being anthropogenic, and convincingly demonstrate that the global low-carbon trend is accelerating faster than expected. The Nordic countries, the Arctic science community, and Finland as the new chair of the Arctic Council, could inform authorities and businesses in the Arctic and Northwest Russia about climate facts and the ongoing economic changes that negatively affect the outlook for Arctic oil and gas. Nordic big business active in Russia, such as IKEA and Fortum, could also contribute by communicating these messages to their Russian partners. South Korea, the main buyer of Russian coal for energy generation, could discuss its U-turn from coal towards gas and renewables. Japan is in a position to underline that buying Russian coal is just a temporary measure, bridging nuclear and renewables. Germany, with its traditionally strong economic relations with Russia, could demonstrate its phase-out of coal and the shift from fossil fuels to renewables.

The possibilities for other countries to exert influence on Russia's climate positions may be less obvious. But routinely including climate issues on the agenda when main partner governments meet Russia could make a difference. Sending a consistent message across discussions could generate important pressure to follow the science-based international consensus. Russia did join the international chorus, at least in rhetoric, during the preparatory process prior to the Copenhagen climate summit, as demonstrated by the 2009 Climate Doctrine. Although the top-

level Russian leadership seems to have back-tracked since then, bringing Russia nearer the international mainstream again should not be considered mission impossible.

## Conclusions

Despite the latest information provided by leading Russian climate scientists, the country's political leadership has backtracked from its 2009 recognition of the anthropogenic origins of climate change. Yet the Kremlin has since acknowledged the negative impacts of climate change. Noting the growing risks to Russian territory, it now emphasises the need for adaptation, contrary to its previous tendency to ignore or minimise the risks.

Ignoring signals about the phase-out of coal and subsequently oil, the leadership still relies on Russian prognoses that the global fossil-fuel era will continue for the time being. The Paris Agreement is seen as part of a global economic trend that will generate risks for Russia's economy, but only in the distant future. This view leads to delays in implementing robust measures on GHG emissions cuts. Carbon regulation is included as a policy tool for implementing new technologies, but is planned for economy-wide launch only in the 2030s. The short-term focus remains on energy-efficiency improvements, with the current GHG emissions target mainly reflecting a business-as-usual scenario.

There is no doubt that Russia will comply with its 2030 INDC. However, this indicates neither a credible package of climate mitigation measures nor a high-tech, low-carbon economic development path. If GHG emissions remain above the current INDC (excluding LULUCF) in 2030, it would send a very serious signal of Russia lagging behind global low-carbon developments and not being prepared for the post-fossil era. Failure to recognise the urgent need for action, including the direct impact of the climate factor, might plunge the country into deep crisis, because a global decrease in oil demand could cut Russian revenues while the costs entailed by extreme weather events would increase dramatically. If Russia fails to develop domestic renewable energy in time this gap could be both financial and technological.