Climate actions

With its 5 per cent share, Russia is the fourth-largest emitter of greenhouse gases in the world (fifth-largest if the EU is considered as one). Russia is also the second-largest exporter of oil and the largest exporter of natural gas. The country is a key player in international climate diplomacy, is an Annex 1 party to the UNFCCC and the Kyoto Protocol, and in 2016 it signed (though has not yet ratified) the Paris Agreement.

After a sharp decline following the breakup of the Soviet Union, Russia's GHG emissions grew steadily in the early to middle 2000s, then fluctuated at 50–55 per cent (including land use, land-use change and forestry – LULUCF) or 69–72 per cent of their 1990 level (excluding LULUCF). In line with its Climate Doctrine and the commitment made under the Kyoto Protocol, in 2013 Russia adopted the domestic target of keeping GHG emissions in 2020 at 75 per cent of their 1990 level. The recent slowing down of the growth of GHG emissions is also due to the overall slowing economic growth as well as the initial effects of improved energy efficiency. WWF estimates that between 2000 and 2013 the carbon intensity of the Russian economy dropped by 20 per cent. The sectoral breakdown of emissions has remained relatively stable, with the energy-related share steadily exceeding 80 per cent. The contribution of motor transport and the waste sector has grown since the 1990s. Forests have continuously absorbed GHG due to the dramatic two-fold decline in commercial forestry, and the sink function of LULUCF was reinforced by the reduction in the area of cultivated land and the smaller-scale use of fertilisers.

According to the submission to the UNFCCC, in 2014 methane contributed 45 per cent of Russia's GHG emissions including LULUCF (36 per cent excluding LULUCF). The gas and oil sector are the principal sources of methane emissions in Russia, but both the share and the absolute value of this contribution depend on the approach to calculating the CO_2 equivalent of methane: the future choice of one of the currently debated technical targets of minimizing the average impact on the global climate may result in an order-of-magnitude difference in conversion factors, thus putting the share of methane anywhere between 25 and 75 per cent of Russia's GHG emissions.

In its INDC, Russia announced the 2030 target to reduce emissions to 70–75 per cent of the 1990 level, thus firmly decoupling them from continuing economic growth. As Russia accounts for 25 per cent of the world's forest resources, including 70 per cent of boreal forests, the target is made "subject to the maximum possible account of the absorbing capacity of forests" and explicitly includes LULUCF emissions and absorption in the INDC scope and coverage. Yet WWF projects that the gap between GHG emissions with and without LULUFC will dramatically narrow towards and beyond 2030 if Russia's unsustainable forestry practices remain unchanged.

Implementing the Energy Efficiency law, the State Programme for Energy Efficiency and Power Industry Development set a target to reduce energy intensity of the GDP by 13.5 per cent by 2020 from the 2007 level. (This is lower than the 40 per cent reduction target initially set for the same period; for comparison, the draft Energy Strategy until 2035 aims to reduce energy intensity by 6 per cent by 2020 and 37 per cent over the 2021–2035 period compared to 2014.) The programme was initially translated into multiple state-funded subnational programmes that have had a slow start, and currently over 90 per cent of the required funding is expected to originate from extra-budgetary sources. The deadlines for several measures such as meter installations and a ban on incandescent light bulbs have been extended. Due to new exceptions, the legislation on associated petroleum gas flaring currently excludes some 18–19 per cent of flaring (including the 5 per cent that is allowed from the start), and the exempted "small" and "new" oil fields further account for approximately 30–40 per cent of the total. Other major barriers to reduce flaring are imprecise metering and the lack of enforcement on large state-owned companies.

Renewable energy has for years been present in Russia (Kamchatka geothermal and Kola tidal power plants), and in 2010 Russia's first solar power plant was opened near Belgorod. The 2009 governmental order set the targets of 2.5 per cent electricity by 2015 and 4.5 per cent by 2020 to be produced from renewable sources (in 2013, the 2020 target was reduced to 2.5 per cent). A series of tenders have been run to attract investments, though the worsening economic conditions and regulatory gaps later led to some cancellations from the investors' side. Yet the construction and operation of the first new facilities began, and further investment plans were announced and are increasingly included in national and regional development plans. The 2016 Territorial Planning Scheme for the Energy Sector lists 15 large (above 100 MW) wind power projects of 4.5 GW in total (down from 7.2 GW envisaged in the 2013 edition) to be constructed in the 2017–2030 period. Yet overall investments and generation capacities remain limited (70 MW or 0.03 per cent of total installed capacity in 2016, not counting large hydropower which covers 20 per cent and is on the rise), and – combined with the abundance of natural gas on the market – point to modest near-future prospects of renewable energy in Russia.

Russian scorecard

- Country's share of global emissions
- Country's emissions per capita
- General climate action ambition

Mitigation commitment:

- Emissions reduction
- Decoupling from population growth
- Decoupling from economic growth
- Renewable energy

Adaptation action

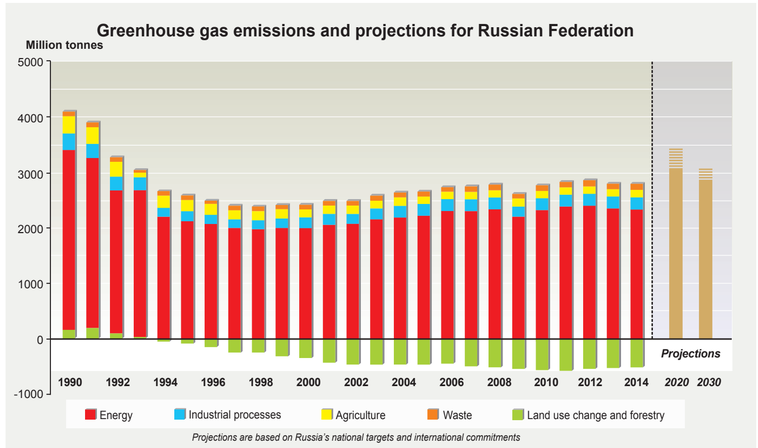
National climate policy actors

Policy leadership: Ministry of Economic Development, Ministry of Natural Resources and Ecology, Ministry of Energy

UNFCCC focal point: Roshydromet*
GHG inventory and projections: Roshydromet*
Carbon units register: Russian Information Fund*

Inter-agency / inter-sectoral coordination: working groups under the Administration of the President and the Ministry of Economic Development

* under the Ministry of Natural Resources and Ecology



Climate finance

Russia primarily counts on own financial resources and investment of Russian capital for climate action, although foreign investments are attracted too (for instance, Chinese capital on Russia's alternative energy market). Between 2010 and 2012 Russia generated 150 application for investment projects under the Kyoto protocol, with a total GHG reduction potential of 380 million tonnes of CO2 equivalent, of which 108 projects were approved by the Ministry of Economic Development. (In 2012 the GHG reduction quota was exhausted.)

Russia has engaged in a number of technical assistance projects in the field of climate change, many of which in cooperation with UN agencies. UNDP, attracting funds from the Global Environment Facility and bilateral donors, and matched from Russia's federal and local budgets, has had one of the largest climate portfolios in the country (about US $300 million since 2009). The organisation has helped Russian companies access international climate financing, supported energy-efficient technologies and practices in key economic sectors and regions, including the ongoing project to reduce GHG emissions from motor transport, and promoted low-carbon transport in Kazan and Kaliningrad. WHO has cooperated with the Ministry of Health on adaptation to climate impacts on health in the Archangelsk region. UNIDO facilitated technology transfer to reduce the consumption of hydrochlorofluorocarbons and, together with EBRD, contributed to the transformation of the market for industrial energy efficiency.

EBRD, IFC and the World Bank have implemented a number of projects to promote energy efficiency and reduce GHG emissions in various sectors, and to increase the scale of private involvement in renewable energy. The World Bank helped Rosneft reduce flaring as part of the Extractive Industries Transparency Initiative project, and currently administers a loan for the technological modernisation of Roshydromet including the management of climate data.

Among bilateral projects in the same spirit, the US supported the establishment in 2011 of a WMO-affiliated atmospheric observatory in Tiksi, Yakutia. Most recently the number of bilateral cooperation projects and programmes has decreased, and political sanctions have resulted in a de facto termination of many bilateral contacts.

As a donor, Russia has not provided funds to developing countries under UNFCCC and the Kyoto protocol, but it has helped build their capacities in climate observation and research by providing training opportunities at Russian specialised academic institutions. In 2015 Russia signed an agreement with UNDP to establish a US $25 million joint trust fund to finance a variety of sustainable development projects (including those addressing climate change) in developing countries, with the focus on former Soviet republics, and announced the intention to provide a US $5 million voluntary contribution to the Green Climate Fund.

Sources of information for the scorecard

Russian official publications, strategies, plans, legal and informational materials

Russian climate-related publications and data, including the 6th national communication to UNFCCC, the 2nd assessment report on climate change and its consequences in the territory of the Russian Federation, and data submitted to UNFCCC

Publications, materials and information of WWF Russia, EU Clima East, the World Bank, UNDP, the Green Climate Fund, ICTSD, Greenpeace, Russian and foreign energy companies, mass media, news agencies

Interviews with experts and stakeholders, Zoï intelligence and expertise

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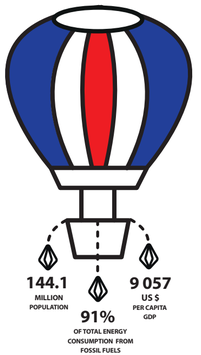
RUSSIA

CLIMATE FACTS AND POLICY

2 812 MILLION tCO_2e
[2,299 MILLION incl. LULUCF]

19.6 TONNES PER CAPITA
[16.0 TONNES incl. LULUCF]



Sources: 2015 national GHG inventory data submitted to UNFCCC, World Development Indicators of the World Bank
http://data.worldbank.org/indicator

POLICIES AND PROCESSES

Policy framework

Concept of long-term socioeconomic development
National security strategy
Climate doctrine and action plan
Concept of carbon regulation law (under development)

Energy strategy, energy efficiency law, state programme for energy efficiency and power industry development, regulations for renewable energy

Other sectoral and regional programmes, plans and legislation
Corporate programmes on climate-friendly and sustainable development

2020 targets

Pledge at UNFCCC COP 15 to keep GHG emissions at 15–25 per cent below 1990 level
National target to keep GHG emissions at 75 per cent of the 1990 level
Target to reduce GDP energy intensity by 13.5 per cent compared to the 2007 level
Target to increase share of alternative energy (sun, wind, small hydro) to 2.5 per cent

2030 targets and INDCs

Mitigation target
Base year: 1990
Conditional 2030 target: 70–75 per cent economy-wide reduction compared to base year, subject to the maximum possible accounting of the absorption capacity of forests

Adaptation priorities
Not defined in INDC; national assessments and communications to UNFCCC highlight i.a. the production and use of energy, construction, cultivation of crops, management of forest and peat fires, public health and the Arctic

CLIMATE ACTIONS

Total GHG emissions in 2014 at 29–44 per cent (excluding / including LULUCF) below 1990 level

Significant carbon sequestration by forests and land use

Improving energy and carbon efficiency

National carbon units register operational since 2006
Regular GHG inventory and emissions reporting to UNFCCC
Corporate MRV system to be established by 2017–2018

Active participation in international climate research

CLIMATE FINANCE

Primarily domestic financing of climate policy actions
Limited Russian and foreign private investments (corporate programmes, renewable energy)

108 applications for investment projects approved under the Kyoto protocol between 2010 and 2012
Technical assistance projects with the UN, development banks, international financing institutions

Building climate research capacities of developing countries
US $25 million trust fund with UNDP for sustainable development in developing countries (focus on former Soviet republics)
Intention announced in 2015 to provide US $5 million to the Green Climate Fund

Map produced by Zoï Environment Network, October 2016.

Energy and emissions

Fossil fuel energy installations and carbon emissions

CO_2 emissions from thermal power plants (coal/oil/gas), million tonnes per year:

- more than 10
- 5 – 10
- 2 – 5
- 1 – 2

Nuclear power-plant

Renewable energy installations and plans

Wind

Solar

Large hydropower plant (more than 1 000 MW installed capacity)

Installed capacity:

- More than 100 MW
- 50 MW – 100 MW
- 1 – 50 MW

Under construction (size according to planned capacity)

Oil and gas

Major oil pipeline / major gas pipeline

Major extraction area: oil / gas

Forests (high CO_2 absorption potential)

The principal climate policy actors within the government are the Ministry of Economic Development and the Ministry of Natural Resources and Ecology (together with the subordinated Russian Hydrometeorological Service). The Ministry of Energy oversees climate-related energy policies.

The Inter-agency Working Group on Climate Change and Sustainable Development under the Administration of the President supports the implementation of the Climate Doctrine and coordinates a wide range of international efforts including those related to the BRICS and the G20. The Ministry of Economic Development hosts the Inter-agency Working Group on Economic Aspects of Environmental Protection and the Regulation of Greenhouse Gas Emissions, which serves as a policy advice and consensus-building platform between the government and business on the future of carbon regulation.

Part of the Ministry of Economy working group is the influential Business Russia association. The environmental committee of the Russian Union of Industrialists and Entrepreneurs is also active in climate policy debate. The Climate Partnership of Russia comprises large enterprises favouring green development and carbon transparency and several Russian companies are members of the UK-based Carbon Disclosure Project (CDB).

Environmental NGOs such as WWF Russia, Greenpeace, the Socio-Ecological Union and Ecopolis are active in the climate field and play a notable role in forming Russia's climate policy.

Russia's academic community is active in international climate research cooperation, and has participated in a number of European programmes in the Arctic. Within the framework of the Council for Hydrometeorology of the Commonwealth of Independent States, Russia hosts the North-Eurasian Climate Centre.

Policies and institutions

Due to pressing challenges in other domains, strong reliance on fossil fuel and widespread climate scepticism, until recently Russia paid relatively little attention to climate matters. In 2008, the Concept of Long-term Socio-economic Development until 2020 addressed climate risks and set long-term priorities for mitigation and adaptation, and the 2009 and 2015 editions of the National Security Strategy mentioned climate change as a security threat. The 2009 Climate Doctrine presented Russia's comprehensive vision of climate change and actions to address it.

Following the 2015 UN climate change conference in Paris, the government requested a concept of a carbon regulation law by 2018 to outline practical measures for future carbon regulation. A draft of the national low-carbon development strategy exists, though so far lacks official standing, and – despite opposition from parts of the business community – carbon regulation is increasingly seen as a means of promoting much-needed innovation and modernisation. At present, mitigation is guided by the government's 2014 action plan which i.a. requires the establishment of a system for emission monitoring, reporting and verification (MRV) at the corporate level by 2017 (for large companies) through 2018 (for smaller enterprises). Several Russian regions have adopted climate change mitigation and sustainable development strategies and action plans (sustainable transport in Tatarstan and Kaliningrad and sustainable forest management in Altai region, for example).

Russia is one of the most energy-intensive countries in the world, and energy efficiency and savings are seen as powerful mitigation measures. The Energy Strategy until 2030 (being revised to extend to 2035) defines measures and sectoral targets for reducing GHG emissions. The 2009 Energy Efficiency Law introduced the framework for specific measures including energy labelling, metering energy use, audits, a ban on incandescent bulbs, the setting of special tariffs, tax breaks and regional programmes. In 2013 the State Programme for Energy Efficiency and Power Industry Development until 2020 replaced the revised State Programme for Energy Saving and Energy Efficiency, although due to economic stagnation budget support was substantially cut. Since 2012 the government introduced a 5 per cent limit to the associated petroleum gas flaring during oil extraction, and in 2012 through 2013 a legal basis was established for boosting the renewable energy market (solar, wind, and small-scale hydropower).

Sector-specific measures to reduce GHG emissions are also included in state programmes and policies of other economic sectors, as well as in development plans of major state-owned and private companies and industrial groups.

Facing climate changes that are more pronounced than in many other parts of the world and that vary throughout the country, Russia's wide-ranging adaptation priorities include the production and use of energy; construction of buildings and roads (in particular in areas with thawing permafrost); cultivation of crops; management of forest and peat fires; public health; and impacts in the Arctic. Adaptation was not included in Russia's INDC, but a national adaptation plan is expected to be drawn by 2018. Ecosystem adaptation is part of the revised National Biodiversity Conservation Strategy. The first subnational adaptation strategy was prepared by Saint-Petersburg.

Impacts of climate change

1 – Estonia, 2 – Latvia, 3 – Lithuania, 4 – Armenia, 5 – Azerbaijan

Map produced by Zoï Environment Network, October 2016.

Heat, droughts, pests

- Severe drought impacts
- Major food producing and populated areas: risk of extreme weather and crop losses by 2030 / by 2080
- Spread of the colorado potato beetle
- Projected intensification of forest and peat fires

Water-related impacts

- Increasing risks of floods (specific rivers / regions)
- Projected water deficit
- Likely coastal flooding and erosion due to sea level rise
- Intensifying mudflows and avalanches

Ice and permafrost

- Projected loss of permafrost
- Risk of damage to built infrastructure due to permafrost thawing
- Reduction of glacial ice cover and of glacial river flow

Northern ecosystems

- Projected changes in tundra vegetation: present extent / projected extent
- Shrinking period of suitable conditions for the polar bear
- Increased risk of oil pollution due to intensified navigation along the North-East Passage

Public health

- Increasing parasite, bacterial and viral infections in people
- Increasing mosquito-carried diseases
- Shifting border of tick-carried diseases