WORLD METEOROLOGICAL ORGANIZATION

REGIONAL CLIMATE CENTRE MOSCOW

The WMO Regional Climate Centre Moscow (RCC Moscow), coordinated by the Hydrometcenter of the Russian Federation, generates and delivers data, products and services to nine members of the Commonwealth of Independent States (CIS).

The collaborating partners are the Main Geophysical Observatory, the Institute of Global Climate and Ecology, the All-Russian Institute for Hydrometeorological Information, the Main Computational Center of Roshydromet, the National Institute of Agricultural Meteorology, and the National Meteorological and Hydrological Services (NMHSs) of the members of CIS.

Linkage with WMO Regional Climate Centres

RCC Moscow serves as a Node for Seasonal Prediction (RCC Node-SP) in the Regional Association VI (Europe) RCC Network. It collaborates with RCC Tokyo, RCC Beijing and the Arctic RCC Network.

Linkage with WMO Regional Climate Outlook Fora

RCC Moscow coordinates and organizes the North Eurasian Climate Outlook Forum (NEACOF).

Mandatory functions

All WMO RCCs fulfill a set of mandatory functions related to seasonal prediction, climate monitoring, data services and training. Listed below are those performed by RCC Moscow.

Seasonal prediction

- Monthly and seasonal predictions of key parameters such as air temperature, rainfall, sea surface temperature, air pressure, wind at different levels, etc.
- Seasonal predictions of atmospheric circulation indices such as the North Atlantic Oscillation, the Polar and Arctic Oscillations, etc.
- Regional Climate Outlook Forum consensus forecasts of precipitation and air temperature
- Verification of RCC Moscow prediction products

OVERVIEW

Domain of responsibility: Members of the Commonwealth of Independent States

Languages: Russian and English

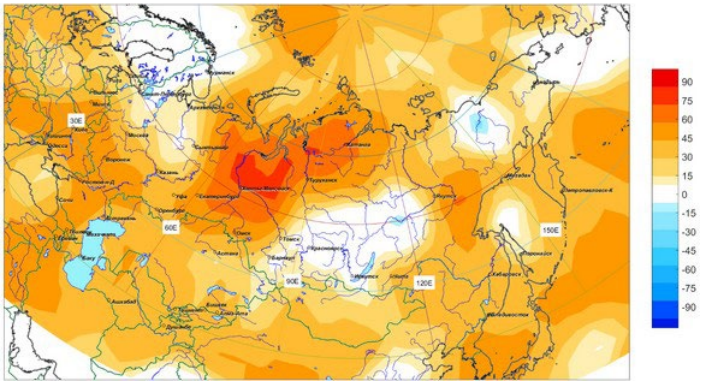
Status:

- Demonstration phase initiated: 2009
- Designation by WMO: May 2013

Climate features

North Eurasia lies mostly in a temperate zone, however, the region experiences many other climates with Arctic and sub-Arctic zones (the islands of the Arctic Ocean), a sub-tropical zone (Black Sea coast), and arid and semi-arid zones (central Asia).

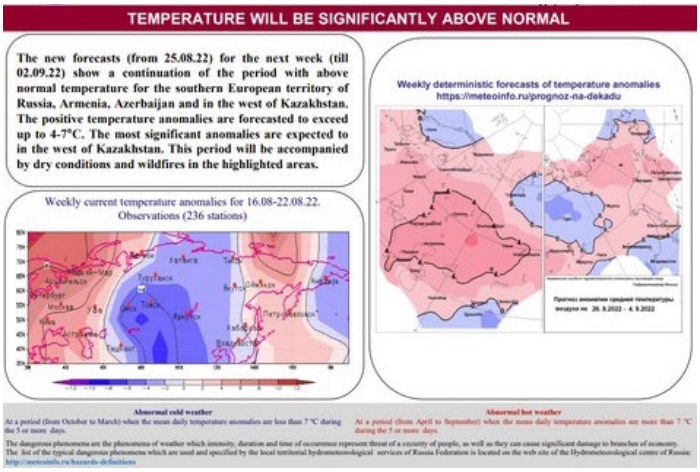
The regional climate of North Eurasia is strongly influenced by the sea-ice extent and snow cover. Permafrost covers about 60%–65% of the territory of the Russian Federation and climate change is accelerating thawing in the region.



Consensus forecast map of temperature anomalies for June–August 2022, using an objective approach based on data from six Global Producing Centres for Seasonal Prediction

Climate monitoring

- Seasonal and annual reports of precipitation and air temperature anomalies and long-term trends
- Monthly overviews of the main features of the atmospheric circulation in the northern hemisphere
- 10-day monitoring of atmospheric and soil drought
- Weekly Climate Watch Advisories



Climate watch advisory

Data services – Archives of observational data for surface air temperature and precipitation as well as climate normals are available on the RCC Moscow website.

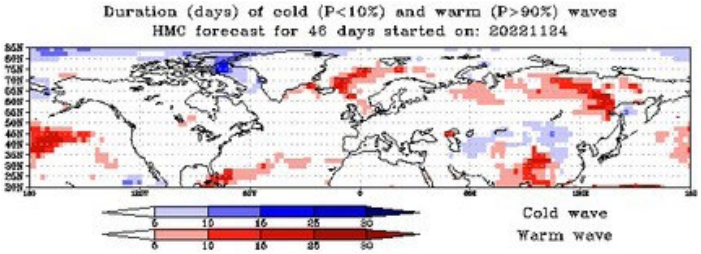
Training – RCC Moscow publishes manuals, guidance materials and tutorials and organizes training workshops. Training on seasonal prediction and climate monitoring are conducted in collaboration with the WMO Regional Training Centre in Moscow (RTC-Moscow).

Recommended functions fulfilled

WMO RCCs are recommended to perform certain functions. Listed below are those performed by RCC Moscow.

Climate prediction and climate projection – Twice a year, during NEACOF, RCC Moscow issues a bulletin on the possible consequences of temperature and precipitation anomalies on various socioeconomic areas – from the economy and water resources to agriculture, health, etc. – during the warm and cold seasons.

RCC Moscow provides extreme event forecasts on intra-seasonal timescales – that is to say, the duration of heat and cold waves, drought conditions, Extreme Forecast Index, Standard Precipitation Index, etc.



It also produces a 10-day drought bulletin during the crop growing season (May–September), based on ground agrometeorological station information.

Non-operational data services – Non-operational data services are carried out by the All-Russia Research Institute of Hydrometeorological Information.

Coordination

- Collaboration and coordination of climate service provision and climate-related operational and research activities among CIS NMHSs
- Interact with the CIS Intergovernmental Council on Hydrometeorology on climate issues
- Collaboration with neighbouring RCCs
- The organization of RCOFs and other multi-disciplinary workshops
- Training courses on climate product generation and analysis
- Assist NMHSs with the development of media and public awareness strategy on climate services

Training and capacity building

- Methodical support of specialists of CIS NMHSs with seasonal ensemble prediction
- Consultations with CIS NMHS climate monitoring and forecasting specialists
- Guidance on methodologies and product specifications for RCC Moscow products
- Teaching at the Moscow State University and the Moscow Timiryazev Agricultural Academy

Research and development – The main focus is on further development and improvement of regional climate prediction, including for extremes, through the use of the best available configurations of ensemble climate prediction system.