

THE NATIONAL ATLAS OF RUSSIA

In 2009, the National Atlas of Russia has been released.

The National Atlas of Russia (NAR) is a fundamental integrated cartographical product, designed to provide a comprehensive representation of nature, population, economy, ecology, history and culture of Russia; it is the national collection of scientifically processed and reconciled spatial-temporal information, applicable to all branches of the economy, management, education, science, and defense of the country. It is a special kind of cartographical product where the state, in all its aspects and spheres of its existence and development, represents the subject of mapping. The NAR consists of the following volumes: Volume 1 – “General Characteristics of the Territory”; Volume 2 – “Nature. Ecology”; Volume 3 – “Population. Economy”; and Volume 4 – “History. Culture”. Being an integral part of the NAR, each volume also stands on its own as independent map work.

Mapping in the NAR is achieved at four spatial-geographical levels: *global and Eurasian* (Russia in the world, Europe and Asia, CIS); *all-Russian* (federal, the Russian Federation as a whole); *regional* (federal districts and members of the Russian Federation, separate regions); *local* (entity oriented, specific cities and industrial units, most interesting in natural, cultural, economic and other conditions territories and sites).

The NAR includes maps, explanatory notes, satellite images with annotations, reference material, indexes of geographic names, etc. The atlas format is 43 × 29,5 cm; each volume has 496 pages.

The atlas has been released in two formats: printed and electronic.

The NAR has been commissioned by the Government of the Russian Federation. The Federal Agency of Geodesy and Cartography of the Ministry of Transport of Russia, as well as the NAR's Main Editorial Board managed and supervised compilation of the Atlas. A big number of organizations and enterprises affiliated with different agencies have been involved in this work.

Volume 1. “General Characteristics of the Territory”. Volume 1 of the NAR is an informational-cartographic and scientific-reference publication for experts from different fields of science, industry and culture, employees of the State government, teachers and students of academic institutions, as well as for the broad range of people in this country and abroad.

Volume 1 contains maps and text material grouped into six sections: Introduction; Formation, Exploration and Mapping of the Russian Territory; Federal Structure of Russia; Geographical Regions and Seas Surrounding the Territory of Russia; Reference Data; Index of Geographical Names.

The **“Introduction”** section contains information on organizations and individuals who participated in the creation of the Volume, physical map of Russia and political map of the world.

The section **“Formation, Exploration and Mapping of the Russian Territory”** describes the formation of the Russian territory from ancient times to our days. The results of exploration by pioneers, industrialists, explorers, scientists, and professionals are reflected in maps of the section. The section is culminated with the chronology

of the most important events, which led to changes of the country's territory and level of exploration, most important research activities (field and stationary) and dates of releases of important cartographic products.

The section **"Federal Structure of Russia"** reflects the contemporary, as defined by the Constitution of the Russian Federation, federal structure of the Russian Federation and administrative-territorial arrangements of every one of its members through maps, reference data and illustrative material (emblems and flags of the members of the Russian Federation).

The section **"Geographical Regions and Seas Surrounding the Territory of Russia"** presents geographical maps of Russia in its entirety, large geographical regions and their finer breakdown, individual local territories, and seas surrounding the Russian territory. The section is opened by a general geographical chart of Russia and consists of three subsections: The European Part of Russia, The Asian Part of Russia, and The Russian Sector of the Arctic. Each subsection contains a general geographical chart of the region at 1:7 500 000 to 1:10 000 000 scales; maps at a 1:2 500 000 scale that cover the entire Russian territory; maps at larger scales (1:1 000 000 and 1:500 000) for individual territories, maps of seas, surrounding the territory of Russia, and satellite images. Satellite images are supplied with annotations and address maps, placed on the same pages with the images.

The section **"Reference Data"** includes written material, tables, thematic maps with general information about Russia: physical environment, natural resources, population, economy, science, and culture. Thematic maps of the section characterize physical-geographical zoning of the country, subsurface geology, climate, soils, vegetation, specially protected natural areas, population (number, national and confessional structure), basic types of natural resources (mineral and fuel-energy, land, forest) and the economy.

The **"Index of Geographical Names"** presents an alphabetized (Russian language) list of all names of geographical objects that are used on maps of the Volume.

Volume 1 of the NAR has been released in two formats: printed and on a CD-ROM.

Volume 2. "The Nature. Ecology" is intended for wide use in economic, administrative, scientific, educational and other kinds of activities. The physical environment, natural resources and environmental condition of the Russian Federation represent objects of mapping in the volume. The volume contains maps, text and illustrative material grouped into 15 sections: Introduction; Evolution of the Environment; Geological Structure and Subsoil Resources; Relief; Climate; Continental Waters; Snow, Ice, and Permafrost; Seas; Soil Cover and Land Resources; Vegetation; Fauna; Landscapes; State of the Environment; Environment Protection; and Reference data.

The **"Introduction"** section contains cartographical and text material reflecting general characteristics of the environment and natural resources of the Russian Federation.

The section **"Evolution of the Natural Environment"** describes evolution of the geographical environment of Russia including climatic and hydro-meteorological characteristics and the development of fauna and vegetation for the last 150 thousand years.

The section **"Geological Structure and Subsoil Resources"** contains cartographic information on the geological structure of the territory of Russia, hydro-geological and engineering-geological conditions, and location of the basic types of mineral resources. The section includes a number of maps on protection of geological environment and distribution of unique geological sites.

The section **“Relief”** presents maps that describe geo-morphologic structure and zoning of the Russian territory and reflect general orography, relief hypsometry, and relief-forming processes.

The section **“Climate”** consists of a set of maps and charts that reflect spatial distribution of climatic characteristics over the territory of Russia.

The section **“Land water”** contains maps and charts displaying hydrographical network and catchment’s basins with the identification of surface and underground water resources.

The section **“Snow. Ice. Permafrost”** describes glaciological and geocryological conditions and snow-ice resources. It contains data on the evolution of modern glaciations and permafrost and hazardous snow-ice accumulation.

The section **“Sea”** contains information on physical, chemical, and hydrological characteristics of the seas surrounding the territory of Russia. The seas’ bio-resources are presented on maps of distribution of phytoplankton, benthos, animal plankton, trade seaweed, and sea animals and fish. The information on ecological conditions of seawater and seacoast is also provided.

The section **“Top-Soil and Land Resources”** includes maps and charts on general characteristics of basic soil types and information on land fertility, structure, water and temperature regimes, and process of soil degradation. A special place was designated for Russian chernozem (i.e., black soil) as one of the national treasures of Russia.

The section **“Vegetation”** has a set of maps reflecting modern vegetative cover. Special attention was given to vegetation resources.

The section **“Fauna”** contains information on species diversity of terrestrial and aquatic animals (mammals, fish, amphibians and reptiles) and birds.

The section **“Landscapes”** consists of maps and satellite images of modern landscapes with a description of landscape profiles and data on their seasonal rhythms and hydrothermal seasonal phases. Maps of physical-geographical zoning and maps of assessment of natural condition of life of people are also included.

The section **“State of Environment”** deals with dynamics of ecological conditions in Russia and has maps on various kinds of anthropogenic impact on the environment, including impacts of different industries (power, mining, processing, transport, agriculture, and forest exploitation).

The section **“Environment Protection”** contains maps related to environmental protection and management of natural resources. Specially protected natural areas of international, federal, and regional significance are described in greater details. Maps that show the nature protection system and participation of Russia in international nature protection conventions and agreements are of prime importance.

The final **“Reference Section”** includes a dictionary of terms and sources of information (published, cartographical, and statistical).

Volume 3. “Population. Economy” is designed for wide use in management and social, economic, scientific, educational, and other spheres of activity. The objects of mapping in this volume are Russian population and the economy and social-economic systems that they form through interactions. Text material, maps, and illustrations are grouped into five sections: General Description of the Russian Federation; Population and Social Development; Economy and Economic Development; Regions and Regional Development; Reference Section; each of the sections includes a number of subsections.

The section **“General Description of the Russian Federation”** provides maps describing modern place that Russia occupy

in the world based on various social and economic parameters, as well as changes in its geo-economical and geopolitical situation, territorial aspects of its system, and geographical factors of settlement and the economy.

The section **“Population and Social Development”** contains information on population characteristics, its social environment, and development. Accordingly, there are three subsections: Population and Settlement, Social Sphere, and Sociopolitical Development. In the subsection *“Population and Settlement”* thematic subjects are presented as follows: Distribution and composition of the population, its demographic characteristics and resettlement processes, urbanization and cities, labour market and employment, standard of living and population health. The subsection *“Social Sphere”* provides the status and dynamics of its basic segments, as traditionally reflected in geographical atlases (public health services, education, science, culture, and trade) and other areas (living conditions and municipal services, recreation, tourism, and sports). The subsection *“Socio-Political Development”* includes maps showing the level of social development of the regions of Russia.

The section **“The Economy and Economic Development”** consists of four subsections. The structure of the section is built on a logical transition from the general characteristics of the economy to a consistent description of its basic spheres: Manufacture – Infrastructure – Investment. Thematic subjects in the subsection *“Industrial Sector”* correspond to the basic branches of the “primary” (agriculture, forestry, and fishing and hunting) and “secondary” (industry and construction) sectors of the economy. This subsection concludes with maps on domestic and foreign trade that allows products produced in different industrial sectors to be sold on domestic and foreign markets. The subsection *“Services Sector”* provides the important information on the conditions of market economy in the services

sector, which accounts in modern Russia for about one-half of its gross domestic product. The subsection *“Infrastructure Sector”* describes branches of tertiary and quaternary sectors of the economy. From the traditional themes, the transportation sector is presented and described in the context of transport networks, as well as in the context of its separate branches (railway, automobile, water, etc.). The description of the telecommunication infrastructure, which is crucial to the modern society, has been added to the information on the communication sector. New themes also include maps on the information and market (including bank) infrastructure. The subsection *“Investment Sector”* presents thematic material that describe geography, structure, and dynamics of the investments, major investment programs, and investment climate in the regions (including legal matters).

The section **“Regions and Regional Development”** is dedicated to the regional component of the volume. A series of comprehensive social and economic maps reflecting social and economic structure of large geographical areas and the basic features of regional economy is given here. This section is also intended to reflect key long-term issues of Russia’s regional development. The section describes basic types of Russian regions (based on social and economic development level and type, presence of troubling issues or stability, long-term prospects for development, level of intervention or assistance from the state, and includes regions within the limits of budgetary federalism).

The final **“Reference Section”** includes the dictionary of terms and sources of information (published, cartographical, and statistical).

Volume 4. “History. Culture” is intended for wide use in scientific, educational and other fields. The main objectives are to consistently describe the historical development of Russia since the most ancient times to the present

era and provide modern spatial-temporal information on the country's cultural and natural heritage. The material of the volume is grouped into two sections: **"History"** and **"Culture"**.

The section **"History"** consists of 14 subsections placed in chronological order: *Ancient Cultures; Early Iron Age and the Great Migration of People; Ancient Russia in IX and the Beginning of XIII Century; Mongol-Tatar Invasion; Fight for Independence; Unification of Russian Lands in XIV – the first half of XV century; Russia in the Second Half XV–XVI Century; Russia in XVII Century; Russian in the First Half of XVIII Century; Russia in the Second Half of XVIII century; Russian in the First Half of XIX Century; Russian in the Second Half of XIX Century; Russia in the Beginning of XX Century. Soviet Period; and Russia in the Beginning of XXI Century.*

The section **"Culture"** consists of two subsections *Cultural and Natural Heritage of Russia* and *Modern Culture*. In the Section, culture is treated both as a public phenomenon and branch of social sphere the growth of which is based on historical events. The section contains aggregated information and data on cultural and natural heritage of Russia; it demonstrates the logic and ways of the spread and development of regional and national cultures, their relationships, and mechanisms of their interactions. The materials of the section may be used in national and regional programs on protection and use of heritage objects, preservation and restoration of historical-cultural and natural environment of Russian people.

Cultural heritage is one of the most important modern resources that determine the social-economic and social-cultural development of Russia in the World. The heritage includes not only cultural treasures, isolated architectural or historical-memorial sites, but also pristine natural environment, historical environment of the cities and rural settlements, special spiritual and material treasures reflected in folklore, trades and handcrafts, art

treasures and special forms of live nature and its environment, i.e., everything that reflects the history of the development of nature and culture and is recognized as valuable in scientific, economic, aesthetic, and educational respect and is viewed as national heritage.

Maps *World Heritage Sites within Russian Territory* features objects of the world cultural and natural heritage that are protected by UNESCO. This section is also subdivided into subsections.

The subsection *Cultural and Natural Heritage of Russia* is the largest and contains small and large scale maps that cover the entire Russian territory and its individual sites (including their detailed plans). The section contains maps with sites of architectural historic monuments under federal protection, memorials of war, cult architecture, civil and industrial architecture, monumental art, and estate architecture. The maps also show sites of folk art, trade, and handcraft (wood-, metal-, stone-, glass-, bone-, weaving-, knitting-work, etc.) In addition, this section contains maps *Russia in Works of National Writers* and *Russia in Works of National Painters*.

The subsection *"Modern Culture"* contains maps that reflect the system and type of activities according to the role of cultural establishments: museums, theatres, libraries, archives, and higher educational institutions. The information on cultural communications with foreign countries is also provided. The section is supplemented with data on activities for protection and restoration of objects of heritage with the names of institutions, enterprises, and public organizations engaged in the protection, restoration, and reconstruction of cultural heritage. The section is concluded with the map *"Cognitive Tourism and Sightseeing"* and reference data: indexes of terms and heritage objects and the chronological table.

Alexander N. Krayukhin,
Vladimir S. Tikunov

INSTRUCTIONS FOR AUTHORS, CONTRIBUTING TO “GEOGRAPHY, ENVIRONMENT, SUSTAINABILITY”

AIMS AND SCOPE OF THE JOURNAL

The scientific English language journal “GEOGRAPHY, ENVIRONMENT, SUSTAINABILITY” aims of informing and covering the results of research and global achievements in the sphere of geography, environmental conservation and sustainable development in the changing world. Publication of the journal will be aimed at foreign and Russian scientists – geographers, ecologists, specialists in environmental conservation, natural resource usage, education for sustainable development, GIS technology, cartography, social and political geography, and also – on field studies in the sphere of environmental science. Publications that are interdisciplinary, theoretical and methodological are particularly welcome.

Among the major sections of the journal will be: basics of geography and environmental science; fundamentals of sustainable development; environmental management; environment and natural resources; human (economic and social) geography; global and regional environmental and climate change; environmental regional planning; sustainable regional development; applied geographical and environmental studies; geo-informatics and environmental mapping; oil and gas exploration and environmental problems; nature conservation and biodiversity; environment and health; education for sustainable development.

I. GENERAL GUIDELINES

1. Authors are encouraged to submit high-quality, original work: scientific papers according to the scope of the Journal, reviews (only invited) and brief articles. Materials earlier published, or accepted to the publication in other editions, are accepted under the decision of the Editorial Board.
2. Papers are accepted in English. Either British or American English spelling and punctuation may be used.
3. All the **authors** of a paper should include their full names, positions, affiliations, postal addresses, telephone and fax numbers and email addresses. One author should be identified as the Corresponding Author. We encourage authors to include their photograph and main points of curriculum vitae.
4. The optimum volume of manuscript is 0,2–0,5 of author's sheet (or about 3000–5000 words). On occasion in coordination with edition can be accepted methodological, problem or reviews in volume up to 0,7–1 author's sheet.

II. MANUSCRIPT PREPARATION

1. Manuscript should be compiled in the following **order**: authors names; authors affiliations; title; abstract; key words; main text; acknowledgments; appendixes (as appropriate); references; authors (photo and brief CV).

2. Authors should use word processing software for manuscript preparation.
3. **Figures** should be produced as near to the finished size as possible. Pictures can be represented in formats of programs used for their creation: CorelDraw (up to 9 versions), Adobe Photoshop (up to 6 versions), Adobe Illustrator (up to 9 versions). Raster images should be not less 300 dpi in the natural size. Captions should be given as the separate list.
4. **Tables** should not be too bulky. Each table should have a short title. Tables are to be numbered separately from the illustrations. Each table should be represented as a separate file in an original format MS Word, Excel, etc.
5. **Caption** should follow the reference to figure. The same concerns to names of tables.
6. **References** should be numbered in the alphabetical order, using Arabic numerals. Whenever possible, total number of references should not exceed 10 points. References in the text should be denoted in Harvard (Author, year) system in square brackets, e. g., [Author1, Author2, 2008]. References should be complete in the following style:

Style for journal articles: Author(s) initials followed by last name for each author, year in brackets, paper title, publication name, year, volume / month, inclusive page numbers

Style for books: Author(s), year in brackets, title, publisher, location, page numbers

Style for contribution in a book: Author(s) initials followed by last name for each author, year in brackets, title of a contribution. In: Editor(s), title, publisher, location, inclusive page numbers.
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10. As Instruction for Authors can be changed, please, see the Last “Example of manuscript style” at <http://www.geogr.msu.ru/GESJournal/author.php>

III. MANUSCRIPT SUBMISSION

Authors are encouraged to submit manuscripts electronically. Electronic submissions should be sent as email attachments to GESJournal@yandex.ru

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