

**THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT
OF THE RUSSIAN FEDERATION**

**Federal State Budget Institution
Wrangel Island State Nature Reserve**

**MEDIUM-TERM
MANAGEMENT AND DEVELOPMENT PLAN
OF
FEDERAL STATE BUDGET INSTITUTION
WRANGEL ISLAND STATE NATURE RESERVE
2020-2024**

A short version.

**Moscow
2019**

On the basis of an analysis, consultations with specialists and invited experts, discussions with the nature reserve staff members and the results of the field works on the Wrangel Island in 2019, several documents were prepared, including an analytical overview, a SWOT-analysis of the nature reserve activities, a document with conclusions drawn from the analysis (Appendix 1) and a management and development plan for the next five years, 2020-2024. (Appendix 2).

STRATEGIC DIRECTIONS AND PRIORITY ACTIVITIES

Protection and conservation of natural complexes and historical and cultural heritage

More severe control over the nature reserve territory is needed after the opening of the Northern Sea Route resulted in increase of passing ships numbers. We should fight an authorized trespass to the territory with help of Earth remote sensing tools, with engagement of the Ministry of Natural Resources and Environment capacities, with close cooperation with air and marine traffic control centers, border governance and other administrative and power structures.

To conserve natural, historical and cultural heritage of the territory we should eliminate all the earlier made destructions and develop, test and implement specific technics to restore damaged natural ecosystems and historical and cultural complexes in areas of intensive anthropogenic disturbances.

One of the most important area of work is to monitor the state of populations, to restore and to manage (if necessary) population numbers of reindeer and musk oxen. One of the way to do it is to capture musk oxen and take them to the mainland of Russian northeast to establish a new population.

Scientific activities and environmental monitoring

Competent management and development should be based on adequate scientific grounds. The main object of all studies should be to solve problems emerging during the management process, e.g.:

- Applied studies (working out of recommendations on conservation and restoration of natural, historical and cultural complexes and objects; providing of conservation, educational and tourist activities).
- Organization of monitoring and monitoring of natural objects and complexes. (To begin with priority species, reference ecosystems, dynamics of key ecological factors and then go to monitoring of objects of historical and cultural heritage. In addition, elaboration and implementation of a GIS, a computer database and an data-processing system of our own.

Regulated tourism and environmental education

Special characteristics of the territory (isolation, inaccessibility, logistics challenges and, as a result, high cost of travels) and the fact that, first and foremost, people come to the nature reserve to discover virgin nature and the “absence of civilization” are responsible for small-scale tourist flows, evident up-market features of tourism, total predominance of cruise tourism, specific interests and motivation of tourists.

The main eco-educational activities are defined by a low rate of attendance of the nature reserve in the circumstances of high and still growing interest in Arctic in general and an evident “Arctic vector” of development of this country.

Development of international cooperation, promotion of the nature reserve up to the international level

Building up an image of the nature reserve as an object of World Natural Heritage, can and should encourage the development of all activities of the Federal State Budget Institution of Wrangel Island State Nature Reserve. Now we plan to pay more attention to this sphere than before.

Appearance in some official international lists, such as the Ramsar List, the List of UNESCO Global Geoparks, for example, can also enhance the image of the nature reserve. The territory meets all the demands to be included into the lists.

Development of infrastructure

Considering specific features of land and nature, set priorities and initial poor development of the territory (e.g. lack of a reliable communication system), the focus should be made on creation of modern infrastructure with the purpose of protection, ecological monitoring, scientific studies and educational tourism.

DEVELOPMENT PROGRAM AND ORGANISATION OF THE MAIN TYPES OF ACTIVITIES*ⁱ

Program of conservation and restoration of natural diversity

Goals: Conservation of unique typical natural complexes and high value natural objects in their natural state, maintenance of natural biological and landscape diversity.

Targets:

1. Monitoring of changes in nature, prompt reaction and quick management decisions in the face of threats of valuable natural complexes and objects loss.
2. Maintenance of natural complexes and objects in their natural state. Minimization of negative impacts of economic activities on natural complexes.
3. Elimination of accumulated damage, clearing the territory of anthropogenic debris, reclamation of disturbed land after scrap metal and other polluting objects are removed.
4. Introduction of energy saving solutions and alternative energy sources.
5. Formulation and implementation of activities to maintain ecological balance of natural complexes and to conserve biodiversity.

6. Preparation of measures to prevent or to cushion probable negative impacts of the expected geological exploration works and oil/ gas extraction, carrying out close to the protected water and land areas of the nature reserve.

Expected results:

Timely receiving of correct information on upcoming changes and probable threats.

Reduced pressure of economic or other activities on natural complexes on the nature reserve territory.

Timely response to negative processes that threaten natural complexes and objects. Formulation and implementation of action plans of management decision-making procedures.

Conservation of natural complexes and objects ecosystems in their natural state and in stable conditions.

Program of conservation and restoration of historical and cultural heritage

Goals: Conservation and restoration of historical and cultural heritage on the territory of the nature reserve. To ensure sustainable existence and exploitation of the objects taking into account ongoing climate changes and anthropogenic pressure increase.

Targets:

1. To conduct studies to evaluate the present condition, dynamics and predicted changes of the protected objects of the historical and cultural heritage of the nature reserve with due regard for natural, climate changes, and anthropogenic factors. Formulation of scientific-based methods of their conservation and exploitation.

2. Cadastral mapping of objects and spots (spots of expeditions' landing and stationing, etc.) of historical or cultural value, setting ranks of importance. Design of database interface to collect and to store data on objects of historical and cultural heritage.

3. Monitoring of the chosen objects. Systematization and processing of remote sensing data, of instrumental and visual monitoring.

4. Imposing different levels of protection regimes on each category of objects or separate objects according to the present or potential possibility and threats of their damage and/ or loss. The regime can impose restrictions on economic activities near objects or regulate tourists' visits, etc.

5. Elaboration and implementation of action plans of maintenance of historical and cultural monuments, including protection, conservation, restoration, renovation and field development of historic sites.

6. Practical use of studies results, monitoring and conservation of historical and cultural heritage in educational and other activities of the nature reserve, including their display to visitors.

Expected results:

Cadaster of sites of historical and cultural value. Program of their state monitoring, loads of data on their present state, state dynamics of selected objects of historical and cultural heritage

as a basis for evaluation and forecast of their state, making up scientific methods of their conservation and management. Activities of conservation and exploitation of historical and cultural heritage.

Program of protection service optimization and increasing of its effectiveness

Goal: Creation of an effective protection system of the nature reserve territory.

Targets:

1. Fight against unauthorized entries to the nature reserve territory, control over ships and aircrafts visiting the protected land and water areas of the nature reserve.
2. Prevention measures and detection of violations of the prescribed security arrangements on the territory of the nature reserve.
3. Upgrade of professional qualifications of staff inspectors.

Expected results:

Control over compliance with the prescribed security arrangements on the land and water areas of the nature reserve.

Timely receiving of information on violations and fast response.

Effective prevention measures against violation of the protected area regime, including awareness-raising activities, publications, instructive activities, information and borderline marks, etc.

Competent activities necessary for administrative paperwork, timely prosecution of trespassers.

Taking part in ecological monitoring: education of inspectors, quality data compilation on natural complexes and objects' state.

Improvement of education level, acquisition of necessary professional skills and experience, increase of qualification and interest in work, retention of high-value employees in the nature reserve.

Program of scientific research activities

Goals: evaluation of the present state, dynamics and predicted changes of protected reference and rare natural complexes and objects considering anthropogenic, climatic and natural conditions; practical use of the results in educational and conservation activities.

Targets:

1. Study of ecology, evaluation of populations of rare animal and plant species, of other species of economic/ social importance, of invasive and reintroduced species.
2. Study of reference, rare and unique (including disappearing ones) networks and ecosystems, which are of high importance to biodiversity and natural complexes conservation.

3. Study and assessment of anthropogenic impacts on the nature reserve and ecosystems under anthropogenic pressure (e.g. because of tourist activities).

4. Cataloguing and mapping of populations of biological species, natural complexes and objects.

5. Scientific grounds for the nature reserve protection activities, for other activities on biological and landscape diversity conservation, promotion of ecological awareness, development of educational tourism and recreational services to visitors.

6. Study of climate change impact on ecosystems, natural complexes and separate species outside the territory of the nature reserve.

Expected results:

Collection of adequate data on the state of natural complexes and objects on the land and water area of the nature reserve.

Preparation of recommendation on conservation and restoration of natural complexes and objects on the land and water area of the nature reserve.

Providing all principal focus areas and the nature reserve departments with quality scientific information.

Draft of recommendations on sustainable utilization of natural resources of the region.

Revealing results of responsible authorities, organization, etc., providing a framework for making competent decisions on different levels.

Program of ecological monitoring

Goal: conservation of biological and landscape diversity of the protected area based on long-term monitoring of natural order and dynamics of natural processes.

Targets:

1. Identification and specification of a list of indexes and indicators that give a rather full picture of the Arctic biodiversity, from separate species and their habitats state to ecosystems processes.

2. Implementation of up-to-date technologies (remote sensing, drones, thermal imaging, satellite tracking and tagging, etc.), staffing with corresponding equipment and facilities, training of personnel for increasing of fullness and effectiveness of ecological monitoring.

3. Collection and registration of actual data, longtime surveillance operations, compilation of “Nature Chronicle”.

4. Generalization and analysis of the data received during monitoring, extracting principles from natural processes and their causes, prediction of their further development.

5. Identification of significant trends and their causes.

6. Elaboration and implementation of an assessment system of territory state and emerging threats, which is based on the ecological monitoring data.

Expected results:

Receiving of the operation data on the state of the natural complexes and objects and their dynamic patterns.

Distribution of processed and generalized monitoring results.

Forecast of negative changes and emerging threats, immediate information sharing and providing all the nature reserve departments with accurate information.

Program of educational tourism development

The goal of the educational tourism development in the Wrangel Island Nature Reserve is to shape the idea among great masses of population of an actual role of the protected areas in conservation of biological and landscape diversity as a basic ground of biosphere, natural and cultural (in connection with natural) heritage, as well as their role in social and economic development of regions. This is expected to provide effective public support to the nature reserve and to the protected areas network in general, as an object of national patrimony.

Targets:

1. Analysis of the results of the nature reserve tourist activities during the previous period, updating of target groups of visitors and setting priority among them.

2. Selection of key objects for display to visitors:

- Unique (in aesthetic way as well) landscapes;
- Unique geological and paleontological objects;
- Objects of historical and cultural importance, including archeological ones;
- Most interesting representatives of flora and fauna.

3. Identification of areas of the nature reserve where education tourism is recommended to be developed, of scientific validation of their size, location and usage of these areas, possible restrictions coming from seasonal and other natural phenomena and from aims of visit to this territory.

4. Development of a tourist routing system on the land and marine areas of the nature reserve that would allow multiply types of educational tourism, meet the demands of different categories of visitors and optimize tourist flows.

5. Improvement of excursion program packages for different categories of visitors, with focus on watching wild animals in their natural habitats.

6. Scientific and information support of activities designed to develop educational tourism, creation of a problem-driven geographic information system (GIS) for educational tourism development planning, forecast and identification of options of minimization of negative impact on the natural complexes.

7. Proper information support of tourist activities with obligatory usage of the nature reserve corporate style, including site planning with information boards, issuing of relevant and interesting printed materials, presentation materials, information in mass media and in Internet.

8. Creation and modification of tourist infrastructure with obligatory usage of the nature reserve corporate style, including usage of modern high-performance ecological technologies.

9. Implementation of obligatory strategic and territory management plans of educational tourism development for each area with education tourism.

10. Tourist service expansion, formulation and implementation of a marketing strategy, development and promotion of different tourist products on domestic and international tourism markets, including participation in exclusive international events.

11. Human resourcing, proper training and upgrade qualifications of staff specialists, involved in educational tourism.

12. Identification of roles and stages of involvement in educational tourism activities of all the nature reserve departments in compliance with their competence.

13. Improvement of systems of control and monitoring in the sphere of educational tourism development.

14. Optimization of legal, scientific and methodological framework of educational tourism (contractual relations, theme packages, etc.)

15. Volunteer work expansion as an effective tool of educational tourism promotion and support of the nature reserve by civil society.

16. Development of international cooperation and experience exchange in the sphere of educational tourism.

17. Logistic and maintenance support of touristic activities.

18. Consolidation of social role of educational tourism, including attracting financial support to the nature reserve and to the region.

Expected results:

Optimization of the existing practice of meeting and serving tourists. Improvement of infrastructure, transport, logistic and maintenance support of touristic activities, including visitors' safety.

Creation of a management tool of touristic activity.

Providing proper scientific and other information to all the staff involved in the touristic activities. Improvement of information service of visitors.

Elaboration and implementation of new tourist routes, programs and proposals.

Extension of the list of tourist services.

Launch of advertising campaigns. Involving of tourist organizations into creation and promotion of tourist products of the nature reserve.

Increase of level and quality of tourist services.

Involvement of seasonal highly skilled volunteers into work with tourists.

Program of ecological and educational activities

Goal: to generate interest and positive attitude to the nature reserve in the region, in the country and on the international level. To inform about the role of the protected areas in conservation of biodiversity and ecological balance on the planet.

Targets:

1. Establishing partnership cooperation with educational, cultural, scientific and other organizations, involving contract work specialists.
2. Monitoring of public opinion of the most important groups of society concerning the nature reserve activities.
3. Development of different forms of ecological and educational activities aimed at population focus groups.
4. Preparation and distribution of our own materials: printed ones, souvenirs, presentations, etc.
5. Information support, creation of a reference-information system and information distribution (professional development of the nature reserve web site and social networks, etc.)
6. Organization of events (special campaigns, festivals, etc.) to attract attention to the activities and achievements of the nature reserve and to strengthen its image.
7. Museum expositions; permanent, replacement and temporary expositions on the regional, federal and international levels.
8. Improvement of methodological, material and technical basis of the ecological education. Focused work with teachers and students of the region.
9. Advanced trainings, teaching the nature reserve specialists how to deal with population and visitors.

Expected results:

Formation of a positive public opinion about the nature reserve and its activities, development programs, attracting public opinion to ecological problems and questions that the nature reserve is facing and solving.

IMPLEMENTATION OF THE DEVELOPMENT PLAN AND ORGANISATION OF THE NATURE RESERVE ACTIVITIES

It is impossible to implement any development plan and organize any activities without proper work organization, without providing the nature reserve with necessary actual information, without necessary human and material resources.

The nature reserve authorities and all its departments involved monitor the plan implementation on a regular basis, checking out if the main activities are fulfilled or not. The corrections are introduced into the plan if the situation changes.

Organizational support

Improvement of legal framework

Now drafting of regulatory documents and their further promotion in accordance with the regulations are required. It is necessary to regulate many aspects of the nature reserve activities with the aim to rationalize them and to increase their effectiveness. It includes publishing inner executive documents, instructions and regulations.

Optimization of organizational structure

The existing organizational and staff structure has some weak points and needs to be corrected. It is necessary to make a decision about establishing a **representational office of the nature reserve in Moscow**, as it is here where the greater part of operational questions and problems are solved. The nature reserve is to address this question to the Ministry of Natural Resources and Environment.

It is necessary to renew a composition of the Scientific and Technical Support Council of the nature reserve, its approval according to established procedures and its revitalization.

Moreover, at the working session on improvement of scientific research activities and ecological monitoring at the protected areas of Russian Arctic (March, 13-14, 2019), it was recommended to establish **Regional Scientific Commission of the Protected Areas** on the basis of the scientific commission of the Federal State Budget Institution of Wrangel Island State Nature Reserve. To formalize the status of the Scientific Commission, to ensure its functioning and organization of activities.

Staffing plan

There is a significant shortage of full-time staff members in the nature reserve. The shortage of qualified personnel is most acute in the Security Department, Science Department, Technical Department and Tourist Department. If possible, a post of Deputy Director for General Affairs should be included into the staffing structure.

Staff

To ensure the fulfillment of conservation, scientific, research, ecological and educational functions of the nature reserve and to achieve the set goals (including those, listed in this management plan) the staff of the nature reserve should be increased by minimum 10 people. It is necessary to provide justification of such change in staff number and to defend our position at the Ministry of Natural Resources and Environment. It is evident that now the staff members, especially those working on the island, are stretched to their limits and work to the point of exhaustion. That is a reason for high rate of staff turnover.

Minimal increase in staff members:

- Security Department: 5 persons (state inspectors);
- Science Department: 2 persons (a database and GIS expert, a botanist);
- Tourist Department: 2 persons (Head of the Department, a post of Deputy Director, and an expert on historical and cultural heritage);

- Administration Department: 1 person (a legal officer);
- Operational Support Department: 1 person (a mechanic).

Involvement of outsource people and organizations on a contract basis

Taking into account the actual financial and staff condition of the nature reserve, it is more reasonable to cover all the construction and maintenance questions with the help of part-time workers, contract brigades and volunteers.

Outsource personnel (experts in energy saving solutions and alternative energy sources) could help to solve questions on energy and electricity.

It would be more efficient if the greater part of scientific and monitoring activities was executed by outsource specialists working on a contract basis. To do this we should formulate the proposal and to distribute it among relevant scientific organizations. The document should contain a subject of research, expected results, information on time and locations of works, contract conditions (a typical agreement of scientific and technical cooperation, etc.)

Beside close cooperation with scientific organizations, now it is very effective to look for part-time workers through the Internet, placing job descriptions in relevant sections of the nature reserve web site.

Research and studies subjects should be of interest to the nature reserve, and foremost should be aimed at implementation of scientific, research and monitoring program, listed in this management plan.

Cooperative projects and programs

The nature reserve has a vast positive experience in working with different organizations, including international ones, to carry out scientific projects (polar bears, musk oxen, birds, etc.) It is recommended to continue this practice. To do this, we need to prepare relevant proposals to scientific, tourist, educational and other organizations. This form of cooperation is more relevant for international interaction.

Volunteering

The greater part of work, on the territory of the nature reserve as well as performed remotely, could be done by volunteers. Here are our current proposals:

1. Works on the territory of the nature reserve:
 - Construction works that do not require high level of qualification.
 - Loading and uploading activities.
 - Outdoor cleaning.
 - Infrastructure development of scientific stations and tourist routes.
 - Help to scientists in field works and monitoring.

- Help with tourists, including on cruise liners (in groups with the nature reserve staff): lecturing, demonstration of presentations, control over tourists so that they respect protected areas rules and obey safety regulations, accompanying tourists to the landing.

2. Works that can be done by volunteers (remote volunteering):

- Preparation and editing texts for printed materials, translation to foreign languages.
- Help in arrangement and organization of special theme events (exhibitions, promotions, festivals, etc.) in big cities like Moscow, St. Petersburg, Vladivostok, etc.
- Organization of educational theme lectures, presentations, demonstrations for schools, students and other audiences, using the nature reserve materials.
- Souvenirs manufacturing.

Information support

Information support of the nature reserve activities includes collection, storage and operational processing of information, necessary for ongoing and perspective activities. Qualified information support based on modern information technologies is essential for effective performance of the nature reserve in all main spheres, including science, ecological monitoring, protection, ecological education, tourist activities development, etc.

GIS with a number of e-maps must become an essential part of a unified information system. E-maps must contain information on topography, geological and geomorphological structure, soil and vegetation cover, economic, scientific, research, touristic and other infrastructures, space planning, etc. The system must include all the collected and stored data with spatial components such as places of registration of rare and other target animal species, distribution of visitors, negative impacts, tangible changes of natural complexes, etc.

It is recommended to add separate blocks to the information system for photo and video storage so that these materials could be easily found and used.

Outsource highly qualified specialists on a contract basis should be involved into the development of such information system. Maintenance, support, updating and usage of the system, preparation of materials and providing different departments with necessary information could be carried out by Scientific Department or, if possible, by purposefully created structure department.

Economic activity and material and technical support

Infrastructure development and site planning

The nature reserve infrastructure, almost completely ruined by the beginning of 2010s, started to re-shape approximately 5 years ago. These years have revealed problems and weak points of the newly constructed buildings, some of them now require major repairs.

Sites planning is one of the main problems that was not solved neither before nor during construction. This problem should be solved in the nearest future. For the moment, we have a list of necessary improvements for each site.

Financial support

Taking into account the economic situation in Russia and proceeding from the fact that the nature reserve is constantly multiplying types and volume of its activities, it is obvious now that we need to look for financial support to cover our conservation and other activities.

Federal budget. 95% of the current expenses of the nature reserve go to the staff salary with supplements. It is necessary to raise the payroll up to 50% to hire and include new staff members.

Grants. According to our experience, grant applications deliver credible results. It is necessary to prepare application drafts interesting for grant-giving organizations, create a database of such projects to be able to apply in time.

Charity. Donations from organizations, companies and individual supporters represent a very small part in the nature reserve budget; cases of support are rare.

Revenues from tourism. Successful development of touristic activities on the territory of the nature reserve can in future become the main and the only source of revenue. Sources of revenue can be different: infrastructure and transport rent, entrance fees, tourist groups' fees, fees for photo tours and shooting films on the territory of the nature reserve, licensing and payments from companies organizing tourist excursions to the territory of the nature reserve. The nature reserve is now working on the program of tourism development and improving infrastructure.

Revenues from scientific activities. The nature reserve possesses unique natural resources and broad experience in scientific activities. Elaboration of joint programs on studying and monitoring of natural complexes and objects, especially now, in the context of climate change, can make a significant contribution to the general funding of the nature reserve.

FINANCIAL, MATERIAL AND TECHNICAL SUPPORT, 2020-2024

Expenses, name of goods and services	Necessary annual budgeting (thousand, rubles)				
	2020	2021	2022	2023	2024
TOTAL	55 346	91 530	84 560	66 260	65 540

ⁱ *Each program contains a detail-annotated list of activities that should help to solve existing problems and to achieve the set goals. The lists are not included into this short version of the Management Plan.