BASIC PROVISIONS
of the Program for biodiversity conservation in the areas of Gazprom's activities on the Russian continental shelf in the Arctic

Biological diversity (biodiversity) refers to all forms of variability of life on Earth, from genetic diversity of species to the functioning of entire ecosystems. In this context, biodiversity involves not only rare or unusual species, but also the entire world of living organisms, from the most widespread species and their habitats to endangered species and the factors that pose a threat to their existence.

Biodiversity is integral to the efficient functioning of the environment and to the continued existence of the human population and the living conditions necessary for humans.

Biodiversity is influenced by various human-caused factors, which are classified into two categories, direct and indirect, and can result in reduction of species diversity.

Therefore, biodiversity conservation can be seen as one of the most important environmental challenges facing the humankind.

Of special importance is conservation of biodiversity in the Arctic region. The Arctic seas are a complex and dynamic system with fauna being one of its core components, as it is fauna that plays an important role in the system's existence and functioning. The seas of northern latitudes are generally characterized by a cold climate, which has a very distinct seasonality accompanied by corresponding changes in seasonal biological phenomena. Unlike the temperate climate zone, the Arctic has long winters and short summers, sometimes barely experiencing spring and autumn. The formation of the seasonal ice layer on the waters of freezing seas is crucial for all biological processes. Linked to the seasonality of climate is the migratory activity of a considerable part of the relevant biota. This, in its turn, determines the seasonal changes in the spatial distribution of the biota.

The Arctic is home to about 20,000 species, including 75 species of mammals (1.7 per cent of the global fauna), 240 species of birds (2.9 per cent of the global fauna) and around 3,300 species of insects (0.4 per cent of the global fauna). There are regional or local endemic species with a confined range; most of them are found in Eastern Siberia.

Russia plays a special role in preserving the Arctic ecosystems on Earth with their variety of species. About one-third of the entire area of the Arctic lies in the Russian sector. And this is exactly where the territories with the most vivid typical features of the Arctic zone's ecosystem complexes are located. Around 80 per cent of all species found in the Arctic and some 90 per cent of species peculiar to the Arctic live in Russia.

In line with the Environmental Policy and the Sustainable Development Policy of the Gazprom Group, the Company undertakes to do everything possible to preserve the climate and biodiversity and offset any possible environmental damage.

The Program for biodiversity conservation in the areas of Gazprom's activities on the Russian continental shelf in the Arctic (hereinafter referred to as the "Program") has been developed with the purpose of planning and implementing the measures aimed at the avoidance and reduction of impacts on the state of biodiversity during geological exploration, prospecting and production of oil and gas, construction or placement of development facilities of offshore fields or other infrastructure facilities of offshore fields, as well as transportation of hydrocarbon feedstock on the Russian continental

shelf, in the territorial sea, in internal sea waters, and in the adjacent coastal zones in the Arctic within the areas of Gazprom's activities.

The Program is a strategic-level planning document in the sphere of sustainable development and is being implemented pursuant to Clause 7 of Executive Order of the President of the Russian Federation No. 204 "On the National Goals and Strategic Objectives of the Development of the Russian Federation for the Period through to 2024" dated May 7, 2018, in fulfillment of the obligations assumed by Russia under the Convention on Biological Diversity dated June 13, 1992, and in line with Item 4 of the List of Instructions of the President of the Russian Federation based on the outcomes of the meeting on efficient and safe exploration of the Arctic No. Pr-1530 dated June 29, 2014.

Corporate biodiversity conservation programs are being developed as part of implementing the "Business and Biodiversity" initiative and in line with Directives of the Ministry of Natural Resources and Environment of the Russian Federation No. 25-r "On approving the list of flora and fauna species that are indicative of the sustainability of the marine ecosystems of the Arctic zone of the Russian Federation" dated September 22, 2015, and No. 35-r "On approving the Guidelines with regard to the structure and content of biodiversity conservation programs of commercial entities" dated November 25, 2019.

The Program is aimed at enhancing the efficiency of biodiversity conservation activities and developing the indicators of the sustainability of biodiversity in the areas of active geological exploration, prospecting and production of oil and gas, construction or placement of development facilities of offshore fields or other infrastructure facilities of offshore fields, as well as transportation of hydrocarbon feedstock.

Goal, objectives and principles of the Program implementation

The Program represents Gazprom's overall strategy of, plans for and striving towards enhancing the environmental management and protection system and reducing the potential impact on biological diversity (biodiversity); defines the approaches to the implementation of said activities during geological exploration, prospecting and production of oil and gas, construction or placement of field development facilities, and transportation of hydrocarbon feedstock in the areas of Gazprom's activities; and demonstrates Gazprom's responsibility for the conservation of biodiversity in the areas of its business activities.

Biodiversity conservation constitutes a component part of environmental planning and monitoring being carried out by Gazprom in order to determine environmental impacts and serves as the basis for continuous improvement of the Company's environmental activities.

The goal of the Program is to plan and implement the measures aimed at the avoidance and reduction of impacts on biodiversity, as well as at biodiversity restoration, during geological exploration, prospecting and production of oil and gas, construction or placement of field development facilities or other infrastructure facilities of fields, and transportation of hydrocarbon feedstock in the areas of Gazprom's activities.

The objectives of the Program are:

- to monitor the state of biodiversity in the areas of Gazprom's activities on the Russian continental shelf in the Arctic, in territorial sea, in internal sea waters, and in the adjacent coastal zones;

- to avoid and reduce the impact on the state of biodiversity during geological exploration, prospecting and production of oil and gas, construction or placement of field development facilities or other infrastructure facilities of fields, and transportation of hydrocarbon feedstock, including the impact on natural ecological systems, natural landscapes and their component parts that have retained their natural properties; as well as to plan and implement the offset measures aimed at the compensation of the damage caused to the component parts of the natural environment;
- to create an efficient system for the management of biodiversity conservation, sustainable use and restoration issues, including a set of measures aimed at preserving rare and endangered species of plants and animals and their habitats on the basis of environmental risk analysis and biodiversity monitoring, with such system encompassing the development of the Program and action plans, monitoring of the Program implementation, relevant reporting, and interaction between Gazprom, subsidiaries and other stakeholders;
- to enhance the effectiveness and efficiency of activities aimed at biodiversity conservation and restoration in the areas of Gazprom's activities on the Russian continental shelf in the Arctic, in territorial sea, in internal sea waters, and in the adjacent coastal zones, including the activities for the preservation and restoration of rare and endangered species of plants and animals and their habitats;
- to facilitate the creation of environmental consciousness within society, development of environmental education, promotion of care towards nature, and rational use of natural resources through shaping an environmentally responsible outlook of the employees of Gazprom and its subsidiaries, distribution of information about environmental protection and resource saving, development of the training and skills upgrading system in the sphere of biodiversity conservation for executives of a commercial entity and for specialists who are responsible for decision-making in the course of exploration and development activities of oil and gas fields that are able to cause an impact on biodiversity, provision of environmental education to employees and other specialists engaged by a commercial entity, as well as to the population living near the areas of Gazprom's activities on the Russian continental shelf in the Arctic.

The Program is based on the principles outlined in Articles 9 and 49 of the Constitution of the Russian Federation, as well as in Federal Law No. 7-FZ "On Environmental Protection" dated January 10, 2002, namely:

- to maintain a systematic approach during the implementation of biodiversity conservation activities which are aimed at the avoidance and/or reduction of the impact on biodiversity and elimination of the consequences of such impact, including offset of the damage caused to biodiversity;
- to preserve water bodies, catchment areas, aquatic biological resources, lands, soils, and biodiversity during prospecting and production of oil and gas and development of oil and gas fields on the Russian continental shelf, in the territorial sea, in internal sea waters, and in the adjacent coastal zones in the Arctic;
- to ensure a stable functioning of natural ecological systems, preservation of natural landscapes and specially protected natural areas, avoidance of any negative changes in the natural environment, preservation of the water regime that provides

the most favorable conditions for the reproduction of aquatic biological resources.

On the basis of the Program, the action plan for biodiversity conservation (hereinafter referred to as the "Plan") is drawn up, which is then included into the Program of environmental protection measures developed by subsidiaries in line with the requirements of STO Gazprom 12-1.1-027-2022.

The Program is developed on the basis of the following documents:

Federal Law No. 16-FZ "On the Ratification of the Convention on Biological Diversity" (hereinafter referred to as the "Convention on Biological Diversity") dated February 17, 1995;

Federal Law No. 33-FZ "On Specially Protected Natural Areas" dated March 14, 1995;

Federal Law No. 52-FZ "On Wildlife" dated April 24, 1995;

Federal Law No. 174-FZ "On Environmental Expert Review" dated November 23, 1995;

Federal Law No. 187-FZ "On the Continental Shelf of the Russian Federation" dated November 30, 1995;

Federal Law No. 30-FZ "On the Ratification of the United Nations Convention on the Law of the Sea and the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea" dated February 26, 1997;

Federal Law No. 191-FZ "On the Exclusive Economic Zone of the Russian Federation" dated January 17, 1998;

Federal Law No. 89-FZ "On Production and Consumption Waste" dated June 24, 1998;

Federal Law No. 155-FZ "On the internal sea waters, territorial sea and contiguous zone of the Russian Federation" dated July 31, 1998;

Federal Law No. 96-FZ "On Ambient Air Protection" dated May 4, 1999;

Federal Law No. 7-FZ "On Environmental Protection" dated January 10, 2002;

Federal Law No. 166-FZ "On Fisheries and Preservation of Aquatic Biological Resources" dated December 20, 2004;

Federal Law No. 15-FZ "On Amending Individual Legislative Acts of the Russian Federation relating to the Assurance of Transport Safety" dated February 3, 2014;

Water Code of the Russian Federation No. 74-FZ dated June 3, 2006;

Marine Doctrine of the Russian Federation (approved by Executive Order of the President of the Russian Federation No. 512 dated July 31, 2022);

Environmental Security Strategy of the Russian Federation for the Period through to 2025 (approved by Executive Order of the President of the Russian Federation No. 176 dated April 19, 2017);

Executive Order of the President of the Russian Federation No. 204 "On the National Goals and Strategic Objectives of the Development of the Russian Federation for the Period through to 2024" dated April 7, 2018;

Russian Government Directive No. 68 "On Approving the Procedure for Laying Submarine Cables and Pipelines in the Internal Sea Waters and in the Territorial Sea of the Russian Federation" dated January 26, 2000;

Russian Government Directive No. 87 "On the Composition of Sections of Design

Documentation and Requirements to Their Content" dated February 16, 2008;

Russian Government Directive No. 380 "On Approving the Regulation on the Measures for the Preservation of Aquatic Biological Resources and Their Habitat" dated April 29, 2013;

Russian Government Directive No. 384 "On the Issuance of Approval by the Federal Agency for Fishery of the Russian Federation with regard to the Construction and Upgrade of Permanent Works, Adoption of New Technological Processes and Performance of Other Activities That Impact Aquatic Biological Resources and Their Habitat" dated April 30, 2013;

Russian Government Directive No. 675 "On the Specific Features of the Creation, Operation and Use of the Installations, Facilities and Artificial Islands Intended for Aquaculture (Fish Farming)" dated July 21, 2014;

Russian Government Directive No. 1096 "On Federal State Environmental Control (Supervision)" dated June 30, 2021;

Russian Government's Order No. 769-r "On Draft Agreement relating to Cooperation with regard to Readiness and Response in the Event of Oil Pollution at Sea in the Arctic" dated May 13, 2013;

Order of the Ministry of Natural Resources and Environment of the Russian Federation No. 323 "On Approving the Strategy for the Preservation of Rare and Endangered Species of Animals, Plants and Fungi" dated April 6, 2004;

Order of the Ministry of Natural Resources and Environment of the Russian Federation No. 306 "On Approving the Procedure for the Maintenance of the Red Data Book of the Russian Federation" dated May 23, 2016;

Directive of the Ministry of Natural Resources and Environment of the Russian Federation No. 25-r "On Approving the List of Flora and Fauna Species That are Indicative of the Sustainability of the Marine Ecosystems of the Arctic Zone of the Russian Federation" dated September 22, 2015;

Directive of the Ministry of Natural Resources and Environment of the Russian Federation No. 35-r "On Approving the Guidelines with regard to the Structure and Content of Biodiversity Conservation Programs of Commercial Entities" dated November 25, 2019;

Sanitary Rules and Regulations SanPiN 1.2.3685-21 "Hygiene Norms and Requirements with regard to Assurance of Safety and/or Harmlessness of Living Environment Conditions for Humans";

Code of Practice SP 11-114-2004 "Site Investigation on the Continental Shelf for Offshore Oil and Gas Facilities Construction";

Code of Practice SP 101.13330.2012 "Retaining Walls, Navigation Locks, Fish Passing and Fish Protection Facilities. Updated version of Construction Norms and Rules SNiP 2.06.07-87" (approved by Order of the Ministry of Regional Development of the Russian Federation No. 267 dated June 30, 2012);

Code of Practice SP 502.1325800.2021 "Engineering Environmental Survey for Construction. General Regulations for Execution of Work";

Preliminary National Standard PNST 549-2021 "Environmental Protection. Surface and Underground Water. General Requirements for Protection from Pollution during Drilling

and Development of Offshore Oil and Gas Wells within the Continental Shelf and Territorial Sea";

State Standard of the Russian Federation GOST R 59782-2021 "Environmental Protection. Biological Diversity. Recommendations for the Formation and Implementation of a Program for the Conservation of Biological Diversity by a Commercial Organization";

State Standard of the Russian Federation GOST R 57007-2016 "Best Available Techniques. Biodiversity. Terms and Definitions";

Corporate standard STO Gazprom RD 1.12-096-2004 "Intracorporate Rules for the Assessment of R&D Activities";

Corporate standard STO Gazprom 12-1.1-027-2022 "Environmental Management System. Requirements with Guidance for Use";

Regulation on Procurement of Goods, Works, and Services by Gazprom and the Gazprom Group Companies (approved by Resolution of the Gazprom Board of Directors No. 3168 dated October 19, 2018).

Terms, definitions and abbreviations

The following terms, definitions and abbreviations are used in the Program.

Bacterioplankton – the bacterial component of plankton.

Benthos – the community of organisms that live on and in the bottom of water bodies.

Biocoenosis – the community of flora, funga, fauna, and microorganisms that has a particular composition and a certain pattern of interaction established both inside the community and with the environment.

Biodiversity components – living organisms, including flora and fauna resources, funga, microorganisms, as well as natural complexes and natural objects.

Biodiversity conservation principles – the fundamental rules that facilitate the conservation, sustainable use and restoration of biological diversity.

The following biodiversity conservation principles are distinguished:

- organismic, which ensures the preservation of organisms and their reproduction, as well as the conservation of genotypes;
- population, which ensures the preservation and restoration of the number and habitats of populations and makes it possible to maintain their health, as well as to preserve genetic diversity within the population, diversity of elements within the intrapopulation structure, and the uniqueness of the population;
- relating to species, which makes it possible to preserve and restore the number and ranges of species, the spatio-genetic structure of the species' population and the diversity of intraspecific forms;
- biocoenotic, which facilitates the preservation and restoration of natural communities and the diversity of species and functions within such communities, as well as helps support the natural formation of such communities;
- ecosystemic, which ensures the preservation and restoration of natural ecosystems and ecologically balanced natural-and-cultural sites and supports their natural development;

- territorial, aimed at the preservation of the territorial complexes of natural ecosystems, their diversity and spatial structure within the relevant territorial complex, as well as the preservation of diversity as regards ecologically balanced natural-and-cultural sites;
- biospheric, which ensures the conservation of biosphere, global diversity of species and global diversity of ecosystems.

Biodiversity indicator – a metric used to express the information about the state of biodiversity components, changes in their qualitative and quantitative characteristics, an adverse impact on biodiversity components, and other data on biodiversity components.

Biological diversity; biodiversity – all forms of variability of life on Earth, which is observed on three levels: genetic diversity (variety of genes and their variant forms, i.e. alleles), species diversity and ecosystem diversity.

Biological diversity restoration – restoration, for their sustainable existence and use, of quantitative and other characteristics of flora and fauna resources and funga, as well as restoration of the disturbed state of degraded natural complexes and natural objects, including ecosystems and habitats of viable populations in their natural environment, and with regard to domesticated or cultivated species – in the environment where they have gained their distinctive features.

Biota:

1) the whole collective of living organisms that has emerged over time and is living in a given large area limited by any barriers, such as biogeographical ones;
2) the community of organisms that inhabits any given territory regardless of the functional and historical relationship between such organisms (for example, a biota of an administrative unit, such as a country, region etc.).

Boundary of the area (water area) being impacted – the boundary of waters of the continental shelf, territorial sea, internal sea waters, and adjacent coastal zones within a licensed area or a group thereof where the activities of Gazprom (or its subsidiaries) are actually carried out in the course of geological exploration, prospecting and production of oil and gas, construction or placement field development facilities of fields or other infrastructure facilities of fields, as well as transportation of hydrocarbon feedstock.

Component parts of the natural environment – land, subsoil, soils, surface and ground waters, ambient air, flora, fauna, and other organisms, as well as the atmospheric ozone layer and near-Earth space, which, together, ensure favorable conditions for the existence of life.

Continental shelf – the seabed and subsoil of the submarine areas that extend beyond the territorial sea of the Russian Federation throughout the natural prolongation of its land territory to the outer edge of the continental margin.

Disturbance factor – impact of external stimuli on animals where they perceive such stimuli as a sign(s) of danger.

Disturbed environment – adverse changes in the components of natural environment and natural and natural-and-anthropogenic objects as a result of the impact of human-caused factors.

Environment – a sum of the components of natural environment, natural and natural-

and-anthropogenic objects, as well as man-made objects.

Environmental pollution – the introduction of substances and/or energy into the natural environment that, due to their properties, location or quantity, have an adverse impact on the environment.

Fauna – all the wild animals that inhabit, either on a permanent or temporary basis, the territory of the Russian Federation and live in conditions of natural freedom, and also those found in the natural conditions of the continental shelf and the exclusive economic zone of the Russian Federation.

Habitat – a type of a geographic area or natural home of an organism, population or species.

Ichthyofauna – the assemblage of fish within a water body, basin, zoogeographic region, or within a particular period of time.

Internal sea waters of the Russian Federation – waters on the side of the baseline that is facing toward the land and serves as the starting point for measuring the width of territorial sea.

Invasive alien species – the alien species the introduction and/or distribution of which create(s) a threat to biodiversity.

Landscape – the territorial system that consists of mutually interacting natural or natural and anthropogenic components and complexes of a lower taxonomic rank.

Load on landscape – anthropogenic impacts that cause changes in individual properties of landscape components, which may result in the disruption of the social-and-economic functions assigned to the relevant landscape.

Microorganism(s) – organisms that measure from 50 to 100 μm (for fauna species – less than 500 μm). Microorganisms include representatives of various kingdoms of organic life forms; they are classified into prokaryotes (bacteria, sometimes deemed to include blue-green algae, and archaea) and eukaryotes (microfungi, algae and protozoa). Viruses are sometimes considered to be microorganisms, too.

Minimization of environmental impacts – reduction or complete elimination of impacts exerted on the environment by facilities used for economic activities, which is achieved, inter alia, through the use of the best available technologies (technical methods) and introduction of low-waste technologies and/or zero-waste technologies.

Negative impact on biodiversity components – effects of business or other activities that cause adverse changes in biodiversity components.

Offset measures – measures aimed at the restoration, within the territory of business or other activities, of the state of the environment and biological diversity disturbed under the influence of human-caused factors, and mitigation of the damage caused to the environment, which are carried out by business entities in line with the relevant state permits and/or design documentation which was approved in the course of the state expert reviews and received approvals from the relevant government authorities, as is provided for by the law.

In the event it is impossible to restore biological diversity within the boundaries of a territory that was provided for business or other activities, the business entity may on a voluntary basis carry out measures aimed at the restoration of lost and/or disturbed biodiversity components outside of the territory within which business or other activities

are performed, doing so for the purpose of restoring the sustainability of the environment and replenishing its living organisms.

Organism – a living entity (a creature or a plant) that independently exists in a certain medium and bears genetic information on the main characteristics and features of the relevant species. In a living creature or plant, there are various organs functioning in a coordinated manner and systems working to sustain life. As an individual specimen, an organism is part of a species and population and is a structural unit pertaining to the population level of biological organization.

Ornithofauna – the birds of a specified region or time, considered as a whole.

Phytoplankton – the collection of microscopic unicellular colonial organisms (mainly algae) that live in sea and fresh waters, drift passively with the currents and are able to create organic material from inorganic compounds via photosynthesis with the use of chlorophyll, which is a pigment of photosynthesis.

Plankton – the diverse collection of organisms that live in water (or air) but are unable to actively propel themselves against currents (or wind).

Plant – autotrophic (except for parasitic plants), usually chlorophyllous–heliotrophic (except for the parasitic forms that have experienced a secondary loss of chlorophyll) organisms that reproduce via spores, seeds and vegetative parts, consist of cells with cellulose walls, and thus are unable to actively move.

Population – a group of individuals of a single species that is able to reproduce and is more or less isolated in space and time from other similar groups of the same species.

A population has biological characteristics inherent to the organisms it consists of and also possesses group characteristics inherent to the relevant population as a whole only. Just like an individual organism, a population grows, differentiates, and supports itself. However, such characteristics as fertility, mortality and age structure are measured only in a population as a whole.

Range – the geographical area within which a particular species, genus or other taxon of fauna, flora, funga, or microorganisms is distributed (has its habitat).

Rare and endangered species of animals, plants and fungi – species (subspecies, populations) of animals, plants and fungi duly listed in the Red Data Book of the Russian Federation and/or Regional Red Data Books of the Russian Federation subjects, as well as species (subspecies, populations) covered by the Convention on International Trade in Endangered Species of Wild Flora and Fauna of March 3, 1973.

Red Data Book of the Russian Federation (Red Data Book of Russia) – the official document comprising a set of data on the state and distribution of and the measures to be taken to protect rare and endangered species (subspecies, populations) of wild animals, wild plants and fungi that exist within the territory of the Russian Federation and its continental shelf and exclusive economic zone.

Red List (of the International Union for Conservation of Nature) – the most comprehensive list of threatened species developed by the International Union for Conservation of Nature.

The List contains the following categories:

Extinct (EX) – there is no reasonable doubt that the species is no longer extant;

Extinct in the Wild (EW) – survives only in captivity, cultivation and/or outside

native range, as presumed after exhaustive surveys;

Critically Endangered (CR) – in a particularly and extremely critical state;

Endangered (EN) – very high risk of extinction in the wild, meets any of criteria A to E for Endangered;

Vulnerable (VU) – meets one of the five Red List criteria and thus considered to be at high risk of unnatural (human-caused) extinction without further human intervention;

Near Threatened (NT) – close to being endangered in the near future;

Least Concern (LC) – unlikely to become endangered or extinct in the near future;

Data Deficient (DD);

Not Evaluated (NE).

Regional Red Data Book of the Russian Federation subject – the official document comprising the set of data on the state and distribution of and the measures to be taken to protect rare and endangered species (subspecies, populations) of wild animals, wild plants and fungi that exist within the territory of the relevant subject of the Russian Federation, including the species (subspecies, populations) listed in the Red Data Book of the Russian Federation that exist within the territory of the relevant subject of the Russian Federation.

Soil – an independent organo-mineral natural body being a product of natural historical development, which emerged on the surface of the earth as a result of long-lasting effects of biotic, abiotic and human-caused factors; consists of a solid phase of minerals and organic matter, as well as water and air; and possesses specific genetic-and-morphological features and characteristics that create the required conditions for the growth and development of plants.

Specially protected natural areas – areas of land and water surface, including the airspace above them, which have natural complexes and objects of a special nature conservation, scientific, cultural, aesthetic, recreational and health-improving value located within their boundaries, where there is a total or partial ban on economic activities in the territory of said natural complexes and objects imposed by virtue of relevant decisions of government authorities, and there is a special protection regime established in their territory.

Species – the group of organisms that have genetic similarity in terms of their morphological, physiological and biological traits, interbreed successfully and produce fertile offspring, are adapted to particular environment and occupy a particular natural territory, i.e. have a particular range.

Species diversity:

1) the number of different species that are represented in a given community or region; the diversity within a particular habitat is called α-diversity, and the total species diversity across all habitats within a particular region is called β-diversity;
2) the total number of species within a trophic group, community or ecosystem that determines the possibility of ecological duplication in the course of the transmission of the energy flow through the levels of the ecological pyramid.

The indicator of species diversity is considered to be the ratio between the number of species and their specific value indicators (abundance, biomass, productivity, etc.) or the ratio of the number of species to a unit of area.

Sustainability of the environment – the state of the environment which is compliant, as confirmed by expert judgment, to the relevant requirements in terms of the following: a) protected species of plants and animals, including the presence of their natural habitat required for their preservation in the long term and for ensuring that they are able to reproduce themselves as a viable component of their natural habitat of flora and fauna; b) specially protected natural areas, including the extension of their natural borders in the long term, which is required for ensuring a stable existence of the plants and animals typical for such territories.

Territorial sea of the Russian Federation – the area of sea immediately adjacent to the shores or internal sea waters, which extends for 12 nautical miles as measured from the baselines defined in Article 4 of Federal Law No. 155-FZ dated July 31, 1998.

The baselines from which the width of the territorial sea is measured are as follows:

- the low-water line along the coast as marked on nautical charts officially issued in the Russian Federation;
- in localities where the coastline is deeply indented and cut into, or if there is a fringe of islands along the coast in its immediate vicinity, the straight baseline connecting the outermost points of the outermost islands, reefs and cliffs;
- where a river flows directly into the sea, the straight line drawn across the mouth of the river between points on the low-water line of its banks;
- the straight line not longer than 24 nautical miles connecting the low-water marks of the natural entrance points of a bay or a strait between islands, or between an island and the mainland, the coasts of which belong to the Russian Federation;
- the system of straight baselines exceeding 24 nautical miles in length connecting the natural entrance points of a bay or a strait between islands, or between an island and the mainland, which historically belong to the Russian Federation.

Theriofauna – the mammals of a specified region or time, considered as a whole.

Zooplankton – aquatic animals that are unable to swim effectively against currents and thus drift with the currents.

SC – subsidiary company;

PS – pollutant substance;

IBAR – Important Bird Area of Russia;

LA – licensed area;

IUCN – International Union for Conservation of Nature and Natural Resources;

SPNA – specially protected natural area;

The Program is for implementation by the following subsidiaries of Gazprom:

- Gazprom Nedra;
- Gazprom Dobycha Nadym;

- Gazprom Dobycha Urengoy;
- Gazprom Dobycha Yamburg;
- Gazprom Flot;
- Gazprom Neft;
- Gazprom VNIIGAZ.

Requirements to the Program implementation management system:

The Program is implemented at two levels:

1. Gazprom, with the involvement of Gazprom VNIIGAZ, performs the following:

- development of regulatory and guidance documents aimed at biodiversity conservation;
- approval of target indicators for biodiversity conservation;
- establishment of internal and external connections as part of biodiversity conservation activities;
- control over the implementation of the activities aimed at the achievement of corporate goals and compliance with the Program, as well as efficiency analysis with regard to the activities.

2. At the level of SCs, the following is performed:

- provision of efficiency of biodiversity conservation measures;
- incorporation of the biodiversity conservation goal into the Environmental Policy of SCs within the framework of the overall development strategy of SCs and Gazprom;
- setting of target indicators for biodiversity conservation within the framework of the overall development strategy of SCs and the achievement of applicable target indicators;
- development of the Program implementation plans;
- incorporation of the biodiversity conservation requirements into the business processes of SCs;
- provision of the resources required for biodiversity conservation;
- creation of an information and motivation system for the employees of SCs at every management level, with such system serving to ensure the compliance with the established biodiversity conservation requirements;
- provision of support within SCs with regard to biodiversity conservation proposals received from governmental authorities, third-party companies and employees;
- involvement of the employees of SCs into biodiversity conservation activities in accordance with their job descriptions;
- analysis of biodiversity conservation activities and managerial decision-making on the improvement of their efficiency.

The main functions pertaining to the Program implementation are assigned to the subdivision responsible for the environmental protection in the relevant SC.

Other subdivisions, within the limits of their competence, take part in the development

of the Program and the Program implementation plans; the functions of such subdivisions are determined by the internal regulations of the relevant SCs.

The functions of subdivisions of SCs during the Program implementation, description of their business activities, as well as sources and types of the impact on biodiversity resulting from various kinds of activities are provided in the annex. The information on the boundaries of the areas (water areas) being impacted, which are covered by the Program, and zoning of such areas is provided in separate annexes that are not subject to public disclosure pursuant to the regulatory documents and internal regulations on the protection of confidential information.

Biodiversity status by regions where Gazprom operates

The Program accumulates the previous experience and best environmental practices of the Gazprom Group companies in a relevant region and sets out uniform requirements and approaches for ensuring the efficiency of operations in the long term. In the majority of the LAs mentioned in the Program, business activities will start in the future.

Methodology applied in the course of the Program implementation

An important biodiversity conservation tool used by Gazprom/SCs is the application of indicators, i.e. any values directly measured or calculated on the basis of the observations, which reflect the state of the environment and its response to the corresponding impact.

The following may serve as indicators:

- abiotic parameters, for example, presence of a toxic compound;
- characteristics of biological entities (indicator species).

Indicator species are biological entities which serve as markers or indicators with regard to other forms of biodiversity and/or reflect alterations in the state of an ecosystem and its processes.

Practically any organisms, as well as their populations and communities, can be bioindicators.

SCs shall determine indicator species in line with the provisions of the Convention on Biological Diversity.

The main requirements to the bioindicators and bioindication methods applied in the biodiversity conservation plans of SCs are as follows:

- promptness: the relevant studies must be relatively fast to perform and their results must be relatively fast to obtain;
- large scale: the entity serving as a bioindicator must be widely represented in various habitats and ecosystems (and should preferably be found there in a great number and possess homogeneous properties) and have a wide geographic range;
- adequacy of response: there must be a strong correlation between the response of the indicator and the degree of impact on the ecosystem, and as the impact intensifies, the response must be monotonic;
- presence of a rating scale: there must be criteria for a quantitative assessment of the degree of deviation from some "norm";
- low-input nature combined with efficiency: it must be possible to obtain quite

accurate and reproducible results without excessive financial and labor input;

- ease of practical use: the requirements to the qualifications of staff and scope and complexity of data collection and processing procedures must not be too high;
- noninvasiveness: the measurement procedure must not require withdrawal of a large number of rare, vulnerable, protected, commercial species or in any other way cause a considerable damage to a biota or habitat.

By their response to impacts, bioindicators are divided into non-specific (universal), which react in a similar way to a wide variety of impacts, and specific, which are selectively responsive to a particular type of impact (for example, to a particular class of PSs).

By their structure, bioindicators are classified as follows:

- single-parameter, which provide information on a single given component of an ecosystem (such as the abundance or biomass of benthos, number of responsive species, abundance of hydrocarbon oxidizing bacteria, etc.);
- complex (comprehensive), which reveal a particular property of an ecosystem by assessing its different components (for example, species diversity or saprobic index); and combined, which include several indicators and provide information on different components of an ecosystem or different aspects of its functioning.

A feasible approach is to use complex (comprehensive) bioindicators, which prove to be the most versatile and reliable tools, although it has to be noted that they are empirical, complicated and require collection of different kinds of data.

By the level of biosystem organization, bioindicators are classified into organism-level and suborganism-level, population level, community-level, and ecosystem-level. Within each of the levels, except for the level of ecosystem, indicators are also distinguished by the relevant living entities, i.e. the biota components involved, for example, a given species, a taxon of a higher rank (oligochaetes, bivalves) or ecological groups (phytoplankton, macrophytobenthos, macrozoobenthos).

The efficiency of bioindication is dependent on how its goals correlate with the specific features of the selected indicator entity (time of response peculiar to it, motility, degree of spatial connectivity, diversity of composition and ecological characteristics, position in food chains, the level of knowledge about the indicator entity, etc.). For example, indicators revealing the state of the communities living in the pelagic zone (phytoplankton, zooplankton and bacterioplankton), as well as microphytobenthos and microzoobenthos, are efficient for the indication of short-term impacts which cause reversible short-term alterations in the environment. This is due to the fact that the characteristics of such communities largely reflect the current state of a given ecosystem, and not its general state or its long-term alteration trends. SCs should rely on ichthyofauna, birds or marine mammals as bioindicators for a comprehensive assessment of the state of a given ecosystem in the cases where there is no need for assessing its specifics in individual parts of the water area or in biotopes; this choice of indicators is efficient as said groups occupy the highest trophic levels and thus reflect the ultimate response of a given ecosystem to the state of the entire food chain. The ingress of certain types of contaminants from a catchment territory is clearly reflected by the state of macrophytes (macroalgae and higher plants). However, it is generally accepted that the most convenient, informative and reliable bioindicator of the state of an aquatic environment and its human-caused alterations is macrozoobenthos

(macrofauna).

Indicator species are living organisms which respond to environmental alterations resulting from an impact of Gazprom's facility by their presence or absence, change in their appearance, chemical composition, and/or behavior. In the course of environmental pollution measurement, the information received from indicator species is often more valuable than that obtained from direct measurements of pollution by special instruments, as these instruments respond to the entire combination of pollutants at once. Besides, indicator species have a "memory", which enables them to reflect instances of contaminations accumulated over a long period of time.

For fauna species to be considered as ecosystem state indicators, they are required to meet certain criteria:

1) the species must be widespread and relatively numerous. Narrow-range species cannot be used as indicators, as they are found only within a particular territory. For species that are few in number, it is difficult or impossible to track the trends in their state;
2) the species must have close ecological ties with the main parameters of the surrounding natural environment and must be available for study (i.e. it must be easy to search for and detect the species and examine its alterations).

When determining biodiversity conservation priorities, it is reasonable for SCs to analyze the biota system in order to identify the most valuable components of the relevant ecosystem in ecological, economic and nature protection terms. The mechanism for determining biodiversity conservation priorities as part of the development and implementation of the Program is based on the analysis of the requirements set out in national and international regulations, strategies, norms, and practices.

Special protection is afforded to:

1) individual species and populations, as well as their habitats:
   - rare and threatened species;
   - exploited species;
   - species endemic to Russia;
2) territories where biodiversity of high value is found, including:
   - a habitat of significant value to critically endangered and/or endangered species;
   - a habitat of significant value to endemic species and/or species with a confined range;
   - a habitat that supports globally significant gatherings of migratory species and/or flocking species;
   - ecosystems that are seriously threatened and/or unique;
3) combinations of vulnerable ecosystems.

When examining the biota for identifying the most vulnerable and valuable species of flora and fauna, SCs are also recommended to single out the species and groups of species that fall into one of the below categories:

- species with a large portion of their global population living, in a particular season, in the region under consideration, – requires clarification;

- species that have abundant populations in the region under consideration, – requires clarification;
- species that, due to their biological peculiarities, have an increased vulnerability to the threats under consideration, – most applicable;
- species that have the status of specially protected, i.e. rare and threatened species listed in the IUCN Red List, the Red Data Book of the Russian Federation or Regional Red Data Books, – applicable.

When determining their indicator species, SCs shall use the list of flora and fauna species that are indicative of the sustainability of the marine ecosystems of the Arctic zone of the Russian Federation (approved by Directive of the Ministry of Natural Resources and Environment of the Russian Federation No. 25-r dated September 22, 2015). The list includes 61 species of algae, higher plants, invertebrates, fish, birds, and marine mammals. In order to account for the entire variety of species present in the areas of Gazprom's activities in the Arctic, including in Ob Bay and in the Pechora Sea where marine waters mix with river waters and both typical marine species and estuarine-and-freshwater species are found, included into the list shall be the species that are most typical for the areas being studied and serve as ecosystem state indicators for particular areas of the Arctic Basin. To that end, the results of Gazprom's LA monitoring, as well as literature data and biodiversity conservation programs of the Gazprom Group, shall be used.

List and description of flora and fauna indicator species, as well as biodiversity indicators

The list includes the species that satisfy the abovementioned parameters, the presence of which is mentioned in literature data and in the results of environmental monitoring within the respective LAs; the species that possess a conservation status in accordance with the Red Data Book of the Russian Federation and the IUCN Red List; as well as the flora and fauna species that are indicative of the sustainability of the marine ecosystems of the Arctic zone of the Russian Federation in accordance with the list approved by Directive of the Ministry of Natural Resources and Environment of the Russian Federation No. 25-r dated September 22, 2015, the presence of which within certain areas is confirmed by monitoring data or current scientific publications. The list of indicator species can be adjusted on the basis of the results of the biota inventory and monitoring studies.

Approaches to determining target indicators of the Program and activity efficiency indicators

An important tool for biodiversity monitoring is the use of indicators (target indicators), i.e. qualitative and quantitative characteristics of the biota (or characteristics of indicator species) that make it possible to assess its state and the extent of load exerted on it as a result of business activities, perform comparative analysis in space and time, identify the trends of changes, and make appropriate managerial decisions. The need for developing indicators to monitor the components of biodiversity has been repeatedly mentioned in a number of international conventions and programs. Environmental indicators are the main tool for evaluating the state of the environment in many countries of the world. Duly selected indicators that are based on sufficient time series of data not only reflect the main tendencies, but also contribute to the description of reasons and consequences of the existing environmental situation, as

well as make it possible to keep track of the environmental policy progress and managerial measures being implemented and assess their efficiency.

Gazprom/SCs shall define the target indicators for the Program taking into account the following requirements outlined in the Convention on Biological Diversity:

- ease of understanding;
- possibility of qualitative assessments;
- possibility of choosing relevant criteria or threshold values;
- scientific validity and statistic reliability;
- possibility of identifying spatial differences and time changes.

It is also important that the selected target indicators help monitor the achievement of goals under the Program for biodiversity conservation.

Target indicators of the Program and activity efficiency indicators with regard to the areas of Gazprom's operations in the Arctic

Due to the specifics of studying biodiversity in limited water areas, not all widespread biological indicators can be used for obtaining target indicators.

If one or several indicators deteriorate within the period of one or two years, the environmental protection divisions of SCs shall integrate additional activities in a newly developed Plan or make adjustments to the existing Plan. First of all, it is recommended to conduct additional monitoring of biodiversity which will make it possible to find out the reason why ecological conditions have been destabilized, and, if necessary, additional activities should be performed for the avoidance and minimization of the impact.

Requirements to drawing up annual/periodic plans of works on the Program implementation

Environmental protection divisions of SCs participating in the Program shall draw up the plan on the basis of the Program once every three years.

For each activity, the reason why it needs to be performed shall be indicated, namely:

- to reduce of the impact on biodiversity;
- to fulfill legal requirements and undertaken commitments;
- to comply with any notifications issued by supervisory authorities;
- to achieve target and planned indicators;
- other reasons.

Activities aimed at conservation, sustainable use and restoration of biodiversity, prevention of fauna loss, including as a result of oil and petroleum spills, and the timelines for completing the activities

Biodiversity impact mitigation hierarchy

Activities aimed at the conservation and restoration of biodiversity which are implemented at SCs participating in the Program are classified in accordance with the mitigation hierarchy.

In order to avoid the loss of biodiversity and reduction of the potential of ecosystem

services, the aforementioned hierarchy shall be implemented by SCs as the following comprehensive sequence of measures aimed at mitigating possible impacts: "to prevent and/or avoid impacts on biodiversity – to minimize and/or reduce direct and indirect negative impacts – to restore ecosystems, species and populations – to compensate for and/or offset residual impacts on biodiversity" (see Figure 1).

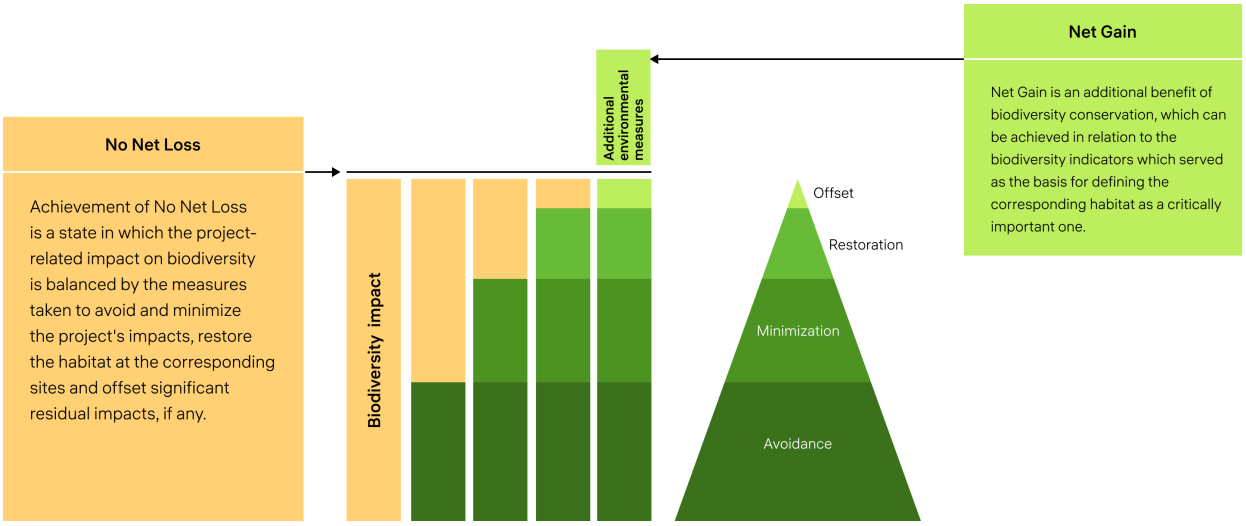

Figure 1. Impact mitigation hierarchy

The hierarchy includes the following:

1) prevention of undesirable impacts on biodiversity that includes:
   - predicted impact – the assessment of the predicted impact able to cause biodiversity losses, which is performed as part of the FEED stage;
   - avoidance – the measures taken from the very outset of business activities, such as more careful spatial or temporal placement of elements of infrastructure, in order to avoid impacts on certain components of biodiversity;
2) minimization of potential impacts – the measures taken to reduce the duration, intensity and/or extent of impacts that cannot be completely avoided;
3) restoration of disturbed ecosystems – the measures taken to rehabilitate disturbed ecosystems following exposure to impacts that could not be completely avoided or minimized;
4) offsetting residual impacts – "green investments": the measures taken to compensate for any significant residual adverse consequences that could not be avoided, minimized and/or remediated;
5) implementation of additional activities for biodiversity conservation: the measures taken to achieve an overall positive effect.

The first four categories of the mitigation hierarchy help achieve No Net Loss when the project's impact on biodiversity is completely compensated by the measures taken.

The last category – i.e. "green investments" – is investing monetary funds in the projects that are aimed at improving the state of the environment and biodiversity in order to achieve the Net Gain goal (Biodiversity Net Gain).

The monitoring activities belong to the category of preventive measures and are intended to provide information about possible changes in the state of biodiversity resulting from production activities.

The first stage of the Program implementation at any LA shall include the inventory of biodiversity which serves as the basis for compiling a list of the used indicator species and rare species, identifying important habitats, as well as specifying target indicators to be used and their values. The implementation of biodiversity conservation activities without a prior inventory of the biota may be ineffective.

The activities envisaged in the Program have been developed in order to achieve the goals of the Program taking into account the development stage of Gazprom's LAs in the Arctic.

Inventory of the biota

The Plan, which is drawn up by environmental protection divisions of SCs with the involvement of specialized organizations, shall include the inventory of the biota within the LA territory. This inventory will serve as the basis for finalizing the network of monitoring points and updating the list of indicator species, as well as adjusting the proposed biodiversity conservation activities. If possible, it is recommended to perform inventory works before starting the production activities at the licensed area and combine them with baseline assessment. Otherwise, the current state of biodiversity shall be recorded during the inventory procedure and compared with similar biotopes located in undisturbed areas.

The inventory of the biota can be performed within the scope of engineering environmental survey.

The inventory procedure of the biota shall ensure accuracy, completeness and reliability of the parameters characterizing biodiversity, as well as the presence of rare types of the biota and indicator species in the area where the Program is being implemented.

The goal of the inventory works is to receive updated lists of species of plants and animals, as well as indicator species and rare types of the biota in order to organize further works aimed at biodiversity conservation and to update the data specified in the Plans.

The inventory works have the following objectives:

- to identify to the maximum extent possible all species of plants and animals that exist within the territory/waters where the Program is being implemented;
- to identify rare types of the biota, record their habitats and accumulation places;
- to assess the presence of invasive species;
- to identify the accumulation and nesting places of birds that belong to indicator species, rare and protected species, as well as common and abundant species;
- to identify possible risks for biodiversity in the cases where the production activities are currently being performed at LAs;
- to select areas for the implementation of the activities that are aimed at the avoidance and minimization of impacts.

Indicator species, target indicators and other criteria associated with natural conditions that are specified in the corporate program shall be subject to compulsory adjustment

on the basis of inventory of the biota and taking into account the adaptation procedures when revising the Program and developing the Plans for SCs.

Activities aimed at the avoidance and minimization of impacts

Activities aimed at the avoidance of impacts are the top-priority ones among biodiversity conservation activities, with the most significant objectives being to identify and assess possible impacts and take the measures required to avoid them.

If it is not possible to avoid impacts, the required activities shall be performed to minimize the consequences and prevent the propagation of impacts to the nearby territories and waters.

The activities shall be included into the SCs' plans of works on the Program implementation taking into account the level of their priority which depends on the stage of current activities at the relevant LA, the current level of biodiversity security, and the ratio between the financial expenses incurred and the effect from the corresponding activity implemented.

Biodiversity monitoring

The monitoring carried out under the Program in the areas of Gazprom's activities on the Russian continental shelf in the Arctic is aimed at tracking the state of the biota and biodiversity indicators and identifying negative trends in order to take response measures when necessary. During biodiversity monitoring, additional indicator species or rare species can be identified; in this case, offset or restoration measures can be arranged in the future with regard to such species.

Due to the monitoring performed, the trends in the health condition and integrity of the populations of species, communities, biotopes, and ecosystems can be assessed in order to gain the information required for decision-making under the Program and in terms of individual activities. As a result, it becomes possible to use the adaptive approach to biodiversity management. Adaptive approach implies dynamic, systematic and continuous improvement of the policy and practice; this approach is based on the efficiency evaluation of the activities being performed to preserve indicator species, communities, habitats, and biodiversity in general. Monitoring also enables the analysis and assessment of the environmental impact (including cumulative impacts) from the business activities under the projects of the Company. During monitoring, the relationship between biological and non-biological component parts is taken into account, which provides important information on the composition, structure and functioning of complex ecosystems. The results obtained from the monitoring are a source of timely information on undesirable environmental alterations, which makes it possible to develop the measures required to avoid potential impacts.

The object of biodiversity monitoring is flora and fauna, including the following parameters:

1) the quantitative composition and species composition of fauna. The number of species detected during the monitoring activities is compared to the existing data on the corresponding indicator species for a specific time period. On the basis of the relevant analysis, a conclusion on the presence or absence of an impact is made;
2) the state of flora and fauna. During the monitoring activities, instances of diseases, suppression and other abnormalities are revealed. On the basis of the analysis of

the alterations identified, a conclusion on the presence or absence of an impact is made;

3) physical factors (chemical or physical pollution, disturbance, disruption of habitats) which influence the state of flora and fauna. Possible impacts from the biota components are determined via various analyses. On the basis of the analysis of the impact factors identified, an expert conclusion on the presence or absence of an impact is made;

4) biochemical tests for identification of heavy metals in the organs and tissues of animals and plants. On the basis of laboratory tests and comparison with the existing data, a conclusion on the presence or absence of an impact is made;

5) laboratory tests for identification of organic pollutants. On the basis of laboratory tests and comparison with the existing data, an expert conclusion on the presence or absence of an impact is made;

6) histological examinations for identification of abnormalities that arose from the impact of activities of an oil and gas company. On the basis of laboratory tests and comparison with the existing data, an expert conclusion on the presence or absence of an impact is made.

By its temporal and spatial scope, monitoring is classified into regular, which is biodiversity monitoring with extensive temporal and spatial coverage performed on water areas, and targeted, which is local detailed monitoring of indicator communities and populations performed by the methods specific to the relevant goals.

Control of abiotic factors of the environment that, to a large degree, determine the quantitative characteristics as regards communities of living organisms (meteorological parameters; hydrological and hydrochemical characteristics), is performed as part of environmental monitoring.

This type of monitoring is performed at LAs both as part of environmental monitoring of undisturbed surrounding areas (baseline monitoring) and industrial environmental monitoring. The main difference is in the frequency of monitoring and its connection to a particular stage of economic development of a given water area. Baseline monitoring serves to measure the baseline characteristics of LAs, which will then be used during industrial environmental monitoring. Before the start of geological exploration at LAs, i.e. before the economic development of a given water area actually begins, baseline monitoring is performed once every three to six years.

After the development begins, biodiversity observations are performed more frequently to gain a more qualitative and detailed assessment of the alterations in abiotic and biotic parameters of the ecosystem. These observations can be performed as part of industrial environmental monitoring.

The latest data used for biodiversity analysis must not be more than six years old.

Monitoring makes it possible to track not only alterations caused by the production activities, but also the effect from other measures of the "avoidance", "minimization", "restoration", and "offset" categories.

Monitoring shall be performed by the employees of SCs and/or by specialized companies on the basis of relevant contracts concluded with SCs. Biodiversity monitoring under the Program may be carried out in parallel with assessments of the environmental condition, including during engineering environmental surveys. It has to

be taken into account that, for determining the status of biodiversity, assessments of abiotic parameters are to be performed simultaneously with assessments of aquatic organisms.

Environmental education activities

Environmental education activities implemented at SCs include the following:

- information about environmental safety, the role of the Program in the social and economic life of the population and socioeconomic development, the state of the environment including the status of biodiversity, as well as the use of natural resources, is provided to employees, other specialists engaged by a commercial entity and the population living in the areas of business operations and areas impacted by business operations;
- scientific-and-educational and other activities devoted to environmental protection and rational use of natural resources, including biodiversity conservation, are organized and held;
- educational activities on environmental protection and rational use of natural resources, including their sustainable use and biodiversity conservation, are organized and held for employees, other specialists engaged by a commercial entity and the population living in the areas of business operations and areas impacted by business operations; other educational products are created (including publishing of educational literature and production of educational films).

One of the components of the Strategy for the preservation of rare and endangered species of animals, plants and fungi (Annex to Order of the Ministry of Natural Resources and Environment of the Russian Federation No. 323 dated April 6, 2004) is the implementation of educational and awareness-raising activities. This component of the Strategy aims to establish a high level of environmental culture in the country ("the will and ability of people to apply their environmental knowledge in practical activities"), as well as a reliable and careful behavior of people with regard to (an) individual species and the natural complexes being their habitat. Therefore, one of the main priorities in terms of environmental education activities needs to be to inform people about particular species.

Taking the targets of the Strategy into account, activities can be organized to discuss the best regional biodiversity conservation practices with the neighboring natural resource users and SPNAs of the region.

Direct communication with the population is also organized (such as information events (lectures, forums) and public hearings); educational and awareness-raising environmental activities have been implemented to engage the local population in the issues related to the rational use of natural resources and environmental protection.

By arrangement with local environmental authorities and other stakeholders, SCs carry out the following environmental education activities:

- training sessions on the avoidance of conflict situations with polar bears for the personnel and the local population;
- training sessions on the preparation of marine mammal observers;
- training sessions on the rescue of marine mammals and their disentanglement from nets for the personnel and the local population;

- training sessions on the response to oil spills and other emergencies for the employees and for volunteers from the local population;
- series of lectures on the animal biology and ecology of the regions where LAs are located;
- lectures on the animals listed in the Red Data Book(s) and the importance of complying with the established bird hunting periods;
- workshops/conferences/roundtables for exchanging the data obtained from the monitoring of regional species with the neighboring natural resource users and SPNAs of the region;
- lectures on the importance of plastics processing and on microplastics in the ocean; coastline waste collection;
- systematic work with schoolchildren and students of the relevant region; arrangement and maintenance of places where supplementary education in biology/geology/geography is provided; organization and support of contests;
- purchase of up-to-date literature and maintenance of its collection/joining local libraries and environmental communities;
- lectures for the local population on the results of the Company's activities carried out under the Program.

Requirements to the forms of control

The control over the implementation of the Program is exercised at the level of Gazprom, with the involvement of Gazprom VNIIGAZ. Routine control is performed as scheduled.

Contingent control is performed in the following cases:

- substantial damage is caused to biodiversity as a result of an accident;
- there are claims from state supervisory bodies, public organizations, etc.

The control serves to identify any instances of non-compliance with the existing requirements and biodiversity conservation obligations.

After a non-compliance is detected, the following procedure is to be observed:

- the nature and cause of the non-compliance are to be analyzed;
- the need for rectification and corrective actions is to be determined;
- the corresponding activities for eliminating the non-compliances and their causes are to be specified and their timeframes are to be set; the persons responsible for the performance of such activities are to be appointed;
- the corresponding activities are to be planned and implemented;
- monitoring of the implementation of such activities is to be carried out, and their efficiency is to be assessed;
- analysis is to be carried out in order to determine whether similar non-compliances are present in other subdivisions of Gazprom/SCs/subdivisions of SCs, and the corresponding activities are to be implemented.

The non-compliances detected shall be eliminated immediately where possible or within the shortest possible time. Generally, the head of the subdivision in which the relevant

non-compliance has been detected is responsible to organize the elimination of such non-compliance.

Each non-compliance shall be analyzed in order to determine its cause and the need for developing corrective actions to eliminate the cause, so that to make sure that the non-compliance will not reoccur in the future.

No corrective actions shall be developed if is there is a one-off instance of non-compliance which is accidental, does not directly harm biodiversity and does not create risks of non-performance of mandatory requirements and planned activities. For this kind of non-compliances, it is sufficient to develop and implement corrective measures aimed at the elimination of the non-compliances as such.

To eliminate the non-compliances and their causes, the relevant SC shall develop the plan of non-compliance elimination and corrective actions, which shall include the following:

- wording which describes the non-compliance, with a reference to a particular document, clause and requirement that has been violated;
- information on the cause of the non-compliance;
- activities aimed at the elimination (correction) of the non-compliance as such;
- activities aimed at the elimination of the cause of the non-compliance (corrective actions);
- timeframes for the implementation of the corresponding activities;
- persons responsible for the implementation of the corresponding activities.

The person responsible for the implementation of the corresponding activities in the relevant subdivision shall set out the results obtained from the implementation of the plan of non-compliance elimination and corrective actions in the report on the non-compliance elimination activities and corrective actions, which shall contain the information on the following:

- the non-compliance and its cause, as well as the activities planned;
- actual time to elimination of the non-compliance;
- actual duration of the corrective actions;
- efficiency of the corrective actions.

Within not more than 7 business days after the completion of all activities, the report on the non-compliance elimination activities and corrective actions shall be submitted to the persons who performed the inspection.

Reporting requirements

The reporting system is aimed at collecting, summarizing and analyzing the results of the Program implementation, adjusting the Program and action plans for biodiversity conservation, and providing information to governmental authorities and other stakeholders.

Progress reports on the Program are prepared at the level of Gazprom and SCs.

SCs perform the following activities:

- collect, process and prepare information on the implementation of the Program and

the Plans in the areas of their activities on the Russian continental shelf in the Arctic;

- prepare and submit progress reports on the Program;
- prepare proposals for adjustment of the Program and the Plans.

Activities performed at the level of Gazprom are as follows:

- to collect, process and store the reports; to analyze the information on the Program implementation in general;
- to use the data received to prepare reports on the effective implementation of the Program for submission to the Federal Service for Supervision of Natural Resources of the Russian Federation (Rosprirodnadzor) and other state government and administrative bodies;
- to prepare information analysis materials on biodiversity conservation in the Company;
- to prepare and implement proposals for adjustment of the Program and the Plans;
- to enhance the existing forms of reporting on the Program implementation.

SCs shall submit the interim Progress report on the Program before December 15 of the reporting year, and the final Progress report on the Program shall be submitted before April 1 of the year following the reporting year.

On the basis of the data received from SCs, the relevant responsible structural unit of Gazprom shall prepare the interim Progress report on the Program for the reporting year, doing so before February 10 of the year following the reporting year, and the final Progress report on the Program shall be prepared before June 1 of the year following the reporting year for submission to the Federal Service for Supervision of Natural Resources of the Russian Federation.

The Progress report shall contain the data on:

- the results of biodiversity monitoring in the areas of Gazprom's activities on the Russian continental shelf in the Arctic;
- the progress in achieving the target indicators of the Program;
- the adopted activities for biodiversity conservation;
- the efficiency indicators with regard to the activities implemented;
- the actual costs incurred for the Program implementation;
- the results of control, as well as any non-compliances detected and their elimination.

The Progress report on the Program shall be stored in hard copy and electronic form for five years after the end of the Program.

Requirements to scientific research, including adaptation procedures

Scientific research in biodiversity conservation serves to enhance the efficiency of the latter and ensure that the findings of special thematic studies and the best available technologies can be used to address the existing environmental issues.

Scientific research in biodiversity conservation is carried out under R&D programs of Gazprom (including at the requests of SCs).

It is recommended to carry out scientific research on the following topics:

1. Studies of the primary productivity of plankton against the background of the dynamics of hydrophysical conditions (circulation of water masses and penetration of salinity).
2. Studies of food resources available to fish, birds and marine mammals: communities of zooplankton and benthos in the feeding areas and in the places of accumulation of animals.
3. Scientific studies of marine mammals:
   - vessel-based surveys of marine mammals during environmental monitoring and other concurrent works;
   - aerial surveys of polar bears, ringed seals and white whales in the waters of Ob Bay in winter and summer;
   - installation of satellite tags on polar bears, walruses, white whales, and ringed seals to study their migration routes (record their specific paths) and the condition of the population;
   - collection of samples for toxicological analyses and biopsy samples from various species of marine mammals; subsequent laboratory tests;
   - provision of support to the scientific program titled "Study of cetaceans and pinnipeds and their habitat in the seas and internal waters of Russia in 2022–2026" run by Severtsov Institute of Ecology and Evolution of the Russian Academy of Sciences.
4. Provision of accompanying support for the surveys conducted with regard to the species composition and number of birds in the water areas of the Gyda National Park, the Yamal biosphere reserve and adjacent territories:
   - updates of the data on the number and composition of populations for each of the bird species found in the relevant areas;
   - bird census during migration and nesting;
   - collection of information on the behavior of animals and observations of hydrometeorological situation;
   - aerial surveys;
   - vessel-based surveys of ornithofauna as part of concurrent works.
5. Support to the regular expeditions undertaken by the Tyumen Branch of the Russian Federal Research Institute of Fisheries and Oceanography (VNIRO) and organization of additional surveys of ichthyofauna in Ob Bay, in particular with regard to rare and protected species, such as sturgeon and muksun, as well as the gene pool and biology of whitefishes.
6. Biochemical analyses to determine the content of proteins and lipids in the ichthyofauna species that form commercially exploitable fish concentrations in the Barents Sea.
7. Studies of the ornithofauna and ichthyofauna of the Nizhne-Obsky State Natural Reserve, which is a wetland of international importance and one of IBARs (No. YaN-005).

8. Participation in various environmental protection activities organized by federal and regional authorities, state research organizations and research institutes.

When substantiating the urgency of a request for R&D activities, the efficiency evaluation shall be performed in line with Corporate standard STO Gazprom RD 1.12-096-2004.

The specified scientific support shall include:

- scientific research papers (new inventions);
- scientific services (support in the adoption of new inventions and implementation of applied scientific activities).

Adaptation procedures are intended for adapting the research activities to the changes in the functioning of or alterations in work schedules, changes in the location of man-made facilities, observation sites and routes, weather changes, etc.

The list of adaptation procedures has been compiled with due consideration of the main possible changes in the research conditions, which can result from both changes in the natural environment and an uncertainty in the development forecast of natural and natural-technological processes connected to the detection of biodiversity and rare species of the biota.

Procedure for the interaction of the subsidiary companies of Gazprom with the federal executive bodies and executive bodies of the constituent entities of the Russian Federation, state institutions and public, educational, scientific and other organizations, as well as the population, during the implementation of the Program

According to requests from the Federal Service for Supervision of Natural Resources of the Russian Federation, in line with the Plan for the implementation by oil and gas companies of the adopted programs for the conservation of biological diversity of the marine ecosystems within the licensed areas located in the Arctic zone of the Russian Federation, Gazprom shall submit:

- the interim report on the effective implementation of the Plan for the reporting year – before February 10 of the year following the reporting year;
- the final report on the effective implementation of the Plan for the reporting year – before June 1 of the year following the reporting year.

The participants of the Program who perform biodiversity conservation activities shall interact with the federal executive bodies, executive bodies of the constituent entities of the Russian Federation, state institutions and public, educational, scientific and other organizations, as well as the population, in order to determine:

- stakeholders who have a relation to the development and implementation of the Program;
- the needs, expectations and demands of the stakeholders;
- the feasibility and possibility of transforming the needs, expectations and demands of the stakeholders into the obligations undertaken by SCs.

In accordance with the requests submitted to Gazprom/SCs by federal executive bodies, executive bodies of the constituent entities of the Russian Federation, state institutions and public, educational, scientific and other organizations, as well as the population, the

interaction may be arranged in the form of meetings, seminars, gatherings, discussions, and consultations.

When planning their interaction with the stakeholders, SCs shall take into consideration the provisions of the Cooperation Agreement between Gazprom and the Informational and Analytical Centre for Protected Areas Support (Roszapovedtsentr) dated September 19, 2019, which stipulates that the parties shall cooperate in drawing up biodiversity conservation programs to be applied during field development within Gazprom's LAs located on the Russian continental shelf.

Under the Cooperation Agreement, projects, including those within the framework of the Program for hydrocarbon development on the Russian continental shelf through to 2030 which is currently in force at Gazprom, are to be implemented on the basis of separate agreements, arrangements, contracts, and other instruments signed with the aim of developing cooperation in the areas covered by the Cooperation Agreement.

For the purposes of the Cooperation Agreement, the development of cooperation in the following main areas is envisaged:

- ensuring safe and efficient activities at the fields located on the Russian continental shelf;
- holding bilateral events to share experience in cutting-edge comprehensive methods of biodiversity conservation;
- interacting with regard to various biodiversity conservation issues;
- participating (if necessary) in the expert review of project-specific works on the development of biodiversity conservation programs and documents that are performed for Gazprom by third parties;
- coordinating interconnected projects for field development in Gazprom's LAs located on the Russian continental shelf.

For the purposes of efficient cooperation, the Agreement provides that:

- Gazprom and/or its affiliates intend to inform Roszapovedtsentr on active and/or planned projects, including those under the Program for hydrocarbon development on the Russian continental shelf through to 2030 which is currently in force at Gazprom;
- Roszapovedtsentr intends to provide the required resources and production capacities for the implementation of such projects, doing so under separate agreements signed with it.

The parties to the Agreement can cooperate in the following ways:

- regular exchange of information and data which are publicly available;
- when necessary, participation of specialists in scientific research and expeditions carried out during the development of offshore oil and gas fields;
- exchange of publicly available information obtained from scientific & research organizations and organizations which specialize in diffusing new technologies;
- support to the events aimed at increasing the efficiency of activities of each of the parties;
- implementation of joint seminars, conferences, training programs;

- any other forms of cooperation as may be agreed by the parties.

The above main areas and forms of cooperation may be supplemented and/or altered by written agreement of the parties.

An ongoing dialogue is maintained via feedback in the form of gatherings, discussions between representatives of SCs and Roszapovedtsentr, consultations, Internet forums, a transparent claims mechanism, a social dialogue established through the relationship with employees, and other forms of cooperation.

Requirements to the development of documentation for planning and performing Gazprom's business activities as part of the Program implementation

For the purpose of the Program implementation, the corresponding activities are envisaged during the development of the documentation for planning and performing Gazprom's business activities throughout the entire life cycle of production facilities.

Facility design development

Reduction of possible impacts on biodiversity aimed at avoiding environmental impacts and conserving biodiversity shall be envisaged at the design stage of geological exploration, prospecting and production of oil and gas, construction or placement of field development facilities or other infrastructure facilities of fields, and transportation of hydrocarbon feedstock.

Expert review of design documentation includes the assessment of environmental impact of any projected business or other activities. At this stage, particular attention is paid to the following:

- obtaining up-to-date and reliable (baseline) information on the species, scope of distribution and habitats of flora and fauna representatives (marine mammals, fish, birds, algae) within the territory of projected activities (including valuable and specially protected species), on the presence and degree of proximity of SPNAs to the territory of projected activities and on traditional land use areas of indigenous minorities of the North;
- taking the obtained information into account when selecting a site for various production and auxiliary facilities, as well as alternatives to the implementation of projected activities;
- identifying possible impacts of projected business or other activities on biodiversity conservation taking into account alternative options for the placement of production and auxiliary facilities, as well as for the implementation of projected activities;
- evaluating the significance of impacts on biodiversity that are expected from projected business and other activities (probability of risk occurrence; degree, nature, scale, and propagation of impacts; as well as forecasting of environmental effects and their related social and economic consequences);
- determining activities that reduce, mitigate or prevent negative impacts (including planning of activities to prevent and rapidly eliminate possible emergencies) and measures that preserve and replenish aquatic bioresources; evaluating their efficiency and feasibility;
- developing proposals for the program of environmental motoring and control, including biodiversity monitoring, at all implementation stages of projected business

and other activities.

The design development of facilities is performed taking into account the following principles:

- use of the best possible technologies, methods and practices of work that facilitate rational use of natural resources, reduction of negative impacts on the environment and biodiversity conservation;
- minimization of the impact on biodiversity and habitat;
- ensuring the principle according to which preventive measures have priority over the measures for the reduction or elimination of impacts at the planning stage of environmental protection measures;
- ensuring monitoring and industrial environmental control, including biodiversity monitoring, at all life cycle stages of the respective facility.

The design documentation for offshore facilities is subject to intracorporate and state expert reviews.

Facility construction

Construction of field development facilities or other infrastructure facilities of fields, as well as hydrocarbon feedstock transportation facilities, is performed on the basis of a construction permit – the document that confirms that the design documentation complies with the applicable regulatory requirements. During construction works, it is mandatory to comply with approved design solutions, including biodiversity conservation solutions.

At the facility construction stage, the following components are the most important in ensuring that biodiversity conservation is duly taken into consideration:

- identifying occupational hazards; assessing risks and environmental aspects that have impact on biodiversity at the construction stage of facilities;
- developing and implementing measures to reduce and offset the impacts of occupational hazards, risks and environmental aspects;
- ensuring that the information about the goals and obligations of Gazprom with regard to biodiversity conservation is communicated to contractors;
- ensuring the monitoring of key flora and fauna species that, in the course of construction works, are subject to the risk of impact that is identified as significant (if any);
- ensuring the availability of the plan for elimination of possible emergencies that may occur in the course of construction works, with such plan envisaging minimization of impact on biodiversity;
- supervising on the part of SCs so that to ensure the compliance of the ongoing construction works with the relevant design solutions, as well as the adherence of contractors' personnel to Gazprom's compulsory requirements related to biodiversity conservation.

Facility operation

Operation of the facilities of SCs shall be performed on the condition that standards on environmental impacts are established and complied with, and the permitting

documents under the current legislation of the Russian Federation (comprehensive environmental permit, etc.) and subsurface use licenses, as well as licenses for specific activities, are available and timely updated. Operation of facilities shall be performed in full compliance with approved design documentation.

The following components are the most important for preserving biodiversity at the stage of facility operation:

- identifying occupational hazards; assessing risks and environmental aspects that have impact on biodiversity, at the stage of facility operation;
- monitoring the species that indicate the status of biodiversity; evaluating the monitoring results; if necessary, adjustment of the current measures and action plans for biodiversity conservation;
- ensuring the availability of the plan for elimination of possible emergencies that may occur in the course of facility operation, with such plan envisaging minimization of impact on biodiversity, and the plan for elimination of emergency oil spills, with such plan envisaging measures to safeguard protected species and vulnerable ecosystems;
- developing and implementing measures to reduce and offset the impacts of occupational hazards, risks and environmental aspects, including measures to prevent the introduction of alien species; if necessary, developing and implementing action plans for biodiversity conservation;
- providing educational activities and ensuring knowledge and awareness of facility personnel about the Environmental Policy of Gazprom, risks and environmental aspects related to biodiversity conservation, as well as legislative and other requirements regarding biodiversity conservation that are applicable to the performed activities.

Facility decommissioning

At the stage of completing production activities at the facilities of SCs, it is necessary to ensure that the works are completed in a manner that is safe for the environment and to perform the restoration of disturbed territories. It has to be taken into account that it is a mandatory condition at the decommissioning stage to provide conditions for biodiversity conservation in the area affected by the production facilities undergoing decommissioning, as well as to offset/compensate the damage in disturbed ecosystems.

Information support procedure

The information support system is created and put in place at Gazprom and SCs in order to provide information exchange between different levels of biodiversity conservation activities management.

The information support of biodiversity conservation is a component of the information & technology support of environmental protection management and is performed on the basis of the regulatory documents of Gazprom (Gazprom Group).

Final provisions

The Program is subject to revision and subsequent approval at least once every 12 years.