

ANALYSIS OF MEDICO-SOCIAL FACTORS DETERMINING THE OUTLOOK IMAGE OF THE SYSTEM OF RENDERING MEDICAL AID TO VICTIMS OF EMERGENCY SITUATIONS IN THE ARCTIC ZONE OF THE RUSSIAN FEDERATION

Peter K. Kotenko, Vladimir I. Shevtsov

Nikiforov Russian Center of Emergency and Radiation Medicine the EMERCOME of Russia,
St. Petersburg, Russia

The article is devoted to the analysis of medico-social factors that determine the outlook Image of the system of medical care for victims in emergency situations in the Arctic Zone of the Russian Federation. The social and economic development of the Russian Arctic zone is a strategic priority of the Russian Federation's state policy in the Arctic. The goals of Russia's state policy in the Arctic are to expand the resource base of the Arctic zone, to support the necessary combat potential of groups of troops of the Armed forces of the Russian Federation in the region, to preserve the natural environment, to ensure an adequate level of fundamental and applied scientific research, etc. Strategic priorities of the state policy of the Russian Federation in the Arctic are determined to increase the efforts of the Arctic States in creating a unified regional system of search and rescue, as well as prevention of man-made disasters and elimination of their consequences, including coordination of rescue forces; improving the quality of life of indigenous people and social conditions of economic activity in the Arctic. The main areas of development of the Russian Arctic include hydrocarbon production, fisheries, improvement of transport infrastructure and tourism. Three directions of socio-economic transformation of the Arctic zone of Russia, in the near future, can affect the formation of the appearance of the system of medical care for victims of emergencies: spatial expansion and increase of the economic potential of the Arctic zone of Russia; orientation to the concept of Trinity "innovative economy of energy efficiency sustainable development»; implementation of the concept of the formation in the Arctic eight reference zones of socio-economic development, of which the Kola, Nenets and Yamalo-Nenets reference zones are defined as pilot.

Key words: marine medicine, Arctic, Arctic zone of the Russia, emergency Situations, reference Zone socio-economic Development, System of rendering medical Aid to Victims in emergency Situations.

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Introduction. The Arctic "... becomes a place of the closest attention of countries and peoples both as a region, whose well-being largely depends on the planet's climate, and as a treasure trove of unique nature, and, of course, as a territory with enormous economic opportunities, with enormous economic potential ... Our goal is to provide sustainable development of the Arctic, and this is creation of modern infrastructure, development of resources and industrial base, improvement of quality of life of the indigenous peoples of the North, preservation of their original culture and traditions, and attitude of the state towards this," said President of the Russian Federation Vladimir Putin speaking at the site of the International Forum "The Arctic: Territory of Dialogue" (Arkhangelsk, March 29–30, 2017).

The land territory of the Arctic zone of the Russian Federation unites the territories of the Murmansk region, Nenets, Chukotka and Yamalo-Nenets autonomous districts; municipalities "Belomorsky Municipal District", "Loukhsky Municipal District" and "Kemsky Municipal District" of the Republic of Karelia; the municipality of the urban district "Vorkuta" (Komi Republic); the territory of Allaikhov ulus (district), Anabarsky national (Dolgan-Evenki) ulus (district), Bulunsky ulus (district), Nizhnekolymsky district, Ust-Yansky ulus (district) (Republic of Sakha (Yakutia); the city district of Norilsk, Taimyr Dolgano-Nenets Municipal District, Turukhansky District (Krasnoyarsk Territory); the territories of the municipal formations "City of Arkhangelsk", "Mezensky Municipal District", "Novaya Zemlya", "City Novodvinsk", "Onezhsky Municipal District", "Primorsky Municipal District", "Severodvinsk"(Arkhangelsk region); lands and islands located in the Arctic Ocean, specified in the Decree of the Presidium of the USSR Central Executive Committee of April 15, 1926 "On declaring lands and islands located in the Arctic Ocean" and other acts of the USSR¹.

The Arctic zone of Russia is bordered by the United States, Canada, Norway and Denmark, which owns Greenland.

¹On the land areas of the Arctic zone of the Russian Federation: Presidential Decree of 02.05.2014 No. 296 (as amended on 06.27.2017). URL: <http://www.kremlin.ru/acts/bank/38377> (Circulation date 02/19/2018).

Minerals mined in the Arctic, their proven reserves and probable resources make up the bulk of the country's mineral resources base. It produces more than 90% of nickel and cobalt, 60% of copper, extracts about 80% of gas and 60% of oil and most of Russia's diamonds. At the same time, the potential reserves of these types of raw materials constitute more than 70–90% of the total Russian.

President of the Russian Federation Vladimir Putin defined the goals of the state policy of Russia in the Arctic as expanding the resource base of the Arctic zone, supporting the necessary combat potential of the groups of troops of the Russian Armed Forces in the region, preserving the natural environment, ensuring an adequate level of fundamental and applied scientific research, etc.

The list of strategic priorities of the state policy of the Russian Federation in the Arctic includes:

– building up the efforts of the subarctic states in creating a unified regional search and rescue system, as well as preventing technological disasters and eliminating their consequences, including coordinating the activities of rescue forces;

- improving the quality of life of indigenous people and the social conditions of economic activity in the Arctic¹.

Four main directions of development of the Russian Arctic were confirmed: hydrocarbon production, fishing, improvement of transport infrastructure and tourism, of which the first three are associated with a high degree of risk of emergency situations of man-made and natural genesis.

President. Putin at a press conference in Moscow on December 14, 2017 emphasized: “Industrial development of the Arctic should go hand in hand with concern for nature, ensuring safety, including environmental and military ... with respect for the interests of indigenous peoples ...”

Materials and methods. The analysis was based on the legislative and regulatory legal acts regulating the development of the Arctic zone of Russia, materials of the VI and VII International Forums “The Arctic: Present and Future” (St. Petersburg, 5–7 December 2016 and 4–6 December 2017), the International Forum “The Arctic is the territory of dialogue” (Arkhangelsk, March 29–30.03.2017).

The main documents regulating the development of the Arctic zone of the Russian Federation for the near and medium term are:

- Decree of the President of the Russian Federation of 02.05.2014 No. 296 “On the land territories of the Arctic zone of the Russian Federation”²;

- “Fundamentals of the state policy of the Russian Federation in the Arctic for the period up to 2020 and beyond,” approved by the President of the Russian Federation on September 18, 2008 No. Pr-1969³;

- “Strategy of the development of the Arctic zone of the Russian Federation and national security for the period up to 2020”¹ and the Decree of the Government of the Russian Federation of April 21, 2014 No. 366 “On approval of the state program of the Russian Federation “Socio-economic development of the Arctic zone of the Russian Federation for the period until 2020”⁴.

In this paper, methods of the system analysis and forecasting, verbal and conceptual modeling are applied.

Results and their analysis. The total area of the Arctic zone of the Russian Federation is about 3 million km² (18% of the entire territory of the country), including 2.2 million km² of land.

About 2.5 million people currently live in the Arctic zone of Russia – 1.7% of the country's population (from 146.8 million) and more than 54% of the total population of the entire Arctic (4.6 million):

- indigenous peoples of the North - representatives of 21 ethnic groups: Aleuts, Veps, Dolgan, Itelmen, Kamchadal, Kerek, Kets, Koryaks, Mansi, Nganasans, Nenets, Saami, Selkup, Khanty, Chuchan, Chukchi, Evenk, Evenk (Lamut), Entsi, Eskimos, Yukagirs⁵;

¹Development strategy of the Arctic zone of the Russian Federation and national security for the period up to 2020 / Approved. President of the Russian Federation on February 20, 2013. URL <http://government.ru/info/18360/> (appeal date February 19, 2018).

²On the land areas of the Arctic zone of the Russian Federation: Presidential Decree of 02.05.2014 No. 296 (as amended on 06.27.2017). URL <http://www.kremlin.ru/acts/bank/38377> (Circulation date 02/19/2018).

³Fundamentals of the state policy of the Russian Federation in the Arctic for the period up to 2020 and beyond, Approved. President of the Russian Federation September 18, 2008 No. Pr-1969 // Ros. gas. "Central release" from 03/30/2009. No. 53p, in extracts.

⁴On approval of the state program of the Russian Federation "Social and economic development of the Arctic zone of the Russian Federation for the period up to 2020": Resolution of the Government of the Russian Federation of April 21, 2014 No. 366 // Coll. Zak-va RF from 05.05.2014 № 18. Part IV. Art. 2207.

⁵On the List of Indigenous Minorities of the North, Siberia and the Far East of the Russian Federation: Decree of the Government of the Russian Federation of April 17, 2006 No. 536-p // Coll. Laws of the RF from 04.24.2006. Number 17 (Part II). Art. 1905.

- resident population;
- temporarily living population: rotational officers, military personnel of the troops (forces) of the Russian Ministry of Defense, the Border Troops of the Federal Security Service of Russia and other structures of the power unit of Russia, members of Arctic expeditions and stations, crews of ships traveling along the Northern Sea Route, and so on.

Only seven indigenous peoples of the North in our time have sustained positive dynamics of population growth: the Nenets, Dolgan, Evenki with Evens, Yukagirs, Khanty and Mansi.

Of them, perhaps, only Nenets are growing in numbers due to the high birth rate from the Yamal and Taimyr reindeer herders (but not from the European Nenets tundra), but even there in 2017 there was a negative population dynamics. The urbanization of the indigenous northerners is also increases, although it remains much lower than the national average: according to the data of the All-Russian population census, in 2002, 30.3% of the indigenous peoples of the North lived in urban settlements, and in 2010 – 32.5%.

In the near future, the following areas of its socio-economic development can affect the appearance of the system of medical care to victims in emergency situations in the Arctic zone of Russia.

First of all, its spatial expansion and increase of economic potential:

- proposed to include in the Arctic zone of Russia Leshukonsky and Pinezhsky municipal districts of the Arkhangelsk region, fully comply with the peculiarities of the Arctic zone, and 13 regions of Yakutia (Abyisky, Bulunsky, Verkhnekolymskiy, Verkhoyansk, Zhigansky, Moma, Nizhnekolymsky, Oleneksky, Srednekolymsky, Ust-Jansky, Eveno-Bytantay) – all of the above areas have the same living conditions and are located above the Arctic Circle;

- accelerated development of the western coast of the Kola Bay and the development of small coastal settlements, such as Ura-Guba, Liinakhamari and Teriberka;

- implementation of investment projects of the Murmansk region aimed at import substitution: “Center for the construction of large-tonnage offshore structures (CCLTOS) in settlement Belokamenka of the Murmansk region” (PAO NOVATEK);

- creation of a support base for onshore support of offshore projects of PAO NK Rosneft with the creation of an industrial cluster of oilfield services and a service center for ships and vessels in the area of Roslyakovo, Murmansk.

Site 82 of JSC SRZ and adjacent territories (PAO NK Rosneft); an integrated chemical and metallurgical complex for the production of titanium dioxide, rare and rare earth metals on the basis of the Afrikandovskoye deposit (Murmansk region) (OOO SGK Arkmineral); the creation of the mining and metallurgical production of chromium alloys on the basis of the energy potential of the Kola NPP and local raw materials (AO Rosenergoatom Concern (Kola NPP)).

It is planned to develop the Yamal Peninsula as the largest logistics center in the country, which can become a multifunctional terminal, opening all regions of Russia with the shortest access to the trade channels of Europe, North America and the Asia-Pacific region, and the flexible logistics model is designed to provide year-round cargo transportation to the world markets in the North Sea of the way. In this connection, it is planned to develop the infrastructure of the Yamal transport corridor as a reference point for the expansion of relations of the Russian Federation with the rest of the world.

On December 5, 2017, the start of production of liquefied natural gas (LNG) at the first stage of the plant for the production of liquefied natural gas Yamal LNG¹, controlled by NOVATEK², in the village of Sabetta (Yamal-Nenets Autonomous District), and loading the first batch of LNG onto an LNG tanker on December 8, 2017

The Yamal LNG plant, one of the most ambitious projects in the oil and gas sector in recent years, consists of four gas liquefaction lines, with a total capacity of 17.5 million tons. The production complex also includes liquefied hydrocarbon gas fractionation plants, stable condensate and refrigerant storage parks, as well as other plant-wide engineering systems and flare units; four storage tanks for liquefied gas ($4 \times 160,000 \text{ m}^3$), each 54 m high; tanks for gas condensate – 3 tanks of $50,000 \text{ m}^3$ each; new gas turbine power station with a capacity of 376 MW. Appearance of the plant Yamal LNG is presented in Fig. 1.

¹The plant operates on the resource base of the South Tameyskoye field, located in the northeast of the Yamal Peninsula and belonging to the West Siberian oil and gas province. The field was discovered back in 1974. Proved and probable reserves are about 1.3 trillion m³ of gas and 60 million tons of condensate. The resource base should be enough for at least 25-30 years of confident work.

²The shareholders of Yamal LNG, in addition to NOVATEK (50.1%), are the French concern Total and the Chinese company CNPC (20% each), and the Chinese Foundation Silk Road (9.9%).

In the port of Sabetta (Fig. 2), six cargo berths, berths for the shipment of LNG and gas condensate were built. At the shipyard of the South Korean DSME, for Yamal LNG, 15 Arc7 class gas tankers capable of sailing along the Northern Sea Route were ordered. The tanker Christophe de Margerie¹ presented in Fig. 3 became the pilot vessel of the project.



Fig. 1. The plant “Yamal LNG” (December 2017)

Commissioning the Yamal LNG plant at full capacity will allow our country to take up to 9% of the global LNG market.



Fig. 2. Port of Sabetta (December 2017)

¹The gas tanker “Christophe de Margerie” is named after the head of Total Christophe de Margerie, who died in a plane crash on a Falcon plane at Vnukovo airport (Moscow) on 10/20/2014. Total is one of the shareholders of the Yamal LNG project.



Fig. 3. Gas tanker “Christophe de Margerie” in the port of Sabetta

In order to develop cooperation with industrial and transport companies of the Asia-Pacific region (APR) on the use of the Northern Sea Route, the development of the infrastructure of the Northern Sea Route (urban planning, ports, terminals, airports, roads) is planned: on the Kara Sea coast the construction of the new liquefied gas processing plant Arctic LNG-2; in the territory of the Republic of Sakha (Yakutia), the reconstruction of the Tiksi sea port and the Zelenomyssky river port is planned. According to forecasts, after the launch of Arctic gas liquefaction plants, Yamal will become the center of production of liquefied natural gas with a volume of 80 million tons per year.

In the second place – in the implementation of state policy on the Arctic development should be guided by the concept of the trinity of the “innovative economy – energy efficiency – sustainable development”. The main challenge to the implementation of the polar vector of development of the country is an innovative way to overcome the heterogeneity of the economic space of the northern coastal areas through geostability and mega-design.

Thirdly, the further development of the Arctic zone of Russia is associated with the implementation of the concept of forming in the Arctic eight support zones of socio-economic development: Kola – in the Murmansk region, the Arkhangelsk region – as the reference zone of the Arctic transport corridor, Vorkuta – at the Komi Republic, Taimyr-Turukhansk – at the Krasnoyarsk Territory, Nenets and Yamalo-Nenets support zones – respectively at the Nenets and Yamalo-Nenets autonomous districts, North-Yakutsk – at the Republic of Sakha (Yakutia), the Chukotka support zone.

Of these, the Kola, Nenets and Yamalo-Nenets support zones are identified as pilot.

Definitions. *The support zone of the socio-economic development of the Arctic zone of the Russian Federation* is the territory on which the integrated project is being implemented, which provides for the interconnection of all “sectoral” activities aimed at its socio-economic development during the planning, goal-setting, financing and implementation stages in order to achieve strategic interests and ensuring the national security of the Russian Federation in the Arctic.

The basis of the methodological approach to the implementation of the concept of “support zone of socio-economic development” is the hypothesis of reducing all types of costs in a single territory of the Arctic zone of Russia due to the positive effect of scale provided by the interconnection of measures to create the Arctic transport system, development of energy infrastructure, facilities industry, synchronous interconnected use of existing instruments of territorial development and support mechanisms and implementation of investment projects.

Each such project represents a contribution to the development of the support zone and the Northern Sea Route and provides for the creation of a favorable regime for doing business; the use of a set of economic measures that should create the conditions for successful socio-economic development in all territories of the Arctic subjects.

The system-creating factor in the Yamalo-Nenets support zone is the Bovanenkovskoye oil and gas condensate field¹, which in terms of volatile hydrocarbon reserves is considered to be the third (4.9 trillion m³) in importance in the Russian Federation and the fifth in the world.

The priority project, which has a systemic influence on the formation of the North-Yakutskaya support zone and ensures the successful implementation of other investment projects on its territory, is the investment project “Fleet Modernization and Shipbuilding to Ensure Freight Transportation by Inland Waterways in the Lensky River Basin. Construction of high-tech Zhataysky shipyard on the basis of the reconstruction and modernization of the Zhataysky ship repair shipyard”².

Fourth, the possibility of applying the regime of advanced socio-economic development for organizations implementing priority projects in the framework of the support zones, the state registration of which was carried out in the Arctic zone of the Russian Federation.

Fifth, major infrastructure projects aimed at improving the quality of life of the indigenous population, opening new opportunities, including attracting tourists, are planned as a priority area of international cooperation. In order to develop international cooperation in the field of Arctic tourism, it is proposed to develop projects for implementation under the EU-Russia border program Kolarctic.

The following projects for the development of the transport system of the Arctic zone of the Russian Federation are recognized as the priorities:

- “Creation of the railway Northern latitudinal railway“ Obskaya – Salekhard – Nadym – Chorey – Pangody – New Urengoy – Korotchaevo” and railway approaches to it” (Fig. 4);
- “Formation of the transport corridor “Obskaya – Bovanenkovo”, including “Construction of the railway line Bovanenkovo – Sabetta” and “Reconstruction of the railway line Obskaya – Bovanenkovo”;
- interregional projects “Belkomur” (construction of a railway line by connecting Arkhangelsk – Syktyvkar – Solikamsk), “Deep-water port Arkhangelsk”, “Pavlovskoye”.



Fig. 4. The project of the Northern latitudinal way

To ensure the development of highways in the Arctic zone, it is planned to include the construction of “Syktyvkar – Ukhta – Pechora – Usinsk – Naryan-Mar” highway with access to the MOGO Vorkuta into the state program of the Russian Federation “Social and economic development of the Arctic zone of the Russian Federation until 2020”.

¹Gas production officially started on October 23, 2012

²On Amendments to the Project Program “Development of Inland Water Transport of the Republic of Sakha (Yakutia) and Inland Waterways of the Lena Basin”, approved by order of the Government of the Republic of Sakha (Yakutia) of February 20, 2017 No. 202-p; Order of the Government of the Republic of Sakha (Yakutia) on June 29, 2017 No. 812-p. URL: <http://docs.cntd.ru/document/446549822> (Contact date February 4, 2018).

Ensuring transport accessibility in the Arctic zone of the Russian Federation provides for the development and implementation of mechanisms that stimulate accelerated renewal of the aircraft fleet; ensuring sustainable air transport communication of remote settlements with the backbone network of transport communications and the affordability of transport services of social importance.

For the purpose of developing aircraft manufacturing oriented to use in arctic conditions, it is planned to support production at the Ulan-Ude Aviation Plant of Mi-8AMT helicopters, which are designed to perform a wide range of tasks in the conditions of northern latitudes: transportation of goods, passenger traffic (including high-ranking passengers in conditions of increased comfort), monitoring of the assigned areas of responsibility, search and rescue operations, conduct of aeromedical evacuation. Helicopters are adapted for operation in the specific conditions of the Arctic: low ambient temperatures, “good night”, extensive water surfaces and large distances between the home points, in the event of satellite signals and unstable radio communications [1].

It is planned to ensure the restoration of airworthiness and the modernization of civil and state aviation airplanes, primarily 500–600 An-2 airplanes and 100 Yak-40 airplanes, which will close the issue of capacity deficit and alleviate the problem for the next 5–7 years.

In addition to the complex situation lighting system in the Arctic zone created by the Russian Ministry of Defense and including global ground and space information systems, it is proposed to create an aerial monitoring subsystem that will provide for quickly solving a set of interrelated tasks both at regional levels and at individual company levels.

In order to ensure safety during polar research and operational emergency response, it is proposed to initiate large-scale implementation of individual and group movement monitoring systems using radio beacons with alarm equipment, machines and personnel with navigation devices [2].

To ensure a common information space, organize the interaction of various types of aviation, attracted forces and assets, including unmanned aircraft, solving search and rescue tasks and special tasks, it would be necessary to consider the feasibility of introducing low-cost automatic dependent surveillance broadcasting technology in the Arctic zone of the Russian Federation (AZN- B) based on the VHF mode data link 4 (VDL-4).

In order to expand maritime activities on the Arctic shelf, domestic observing systems will have to be developed: a network of ground-based hydrometeorological stations, space observation facilities, manned and unmanned aircraft, and modern automatic observation facilities.

In order to ensure the protection of the natural environment and the formation of a single information space in the Arctic, it is planned to create and put into operation a complex of air monitoring of the extensive infrastructure of the Arctic and other regions based on unmanned aircraft with a take-off weight of more than 7 tons.

In order to timely respond to emergencies, it is proposed to implement the following response system in the Arctic zone of Russia:

- 8 rescue helicopters (Mi-8MT) based in the Arctic Complex Emergency Rescue Centers of the Emergencies Ministry of Russia at Murmansk, Arkhangelsk, Vorkuta, Nadym, Dudinka, Tiksi, Pevek, and Anadyr in the scale of their response zone without refueling. To increase their response zone, it is proposed to create fuel reserves on helicopter pads located on the mainland and on the islands;
- in the west and east of the Arctic zone, for example, at the Vytegra Arctic Rescue Training and Research Center EMERCOM of Russia (ACERC Vytegra) in the west and in the city of Anadyr or in Krasnoyarsk in the east, arrange IL-76 transport aircraft for permanent duty. It is also required to arrange warehouses with additional rescue equipment and fuel and lubricants in case of support of helicopter groups or elimination of a large-scale emergency.

To create a system to ensure comprehensive security of the population and territories of the Arctic zone of Russia for aviation support of the activities created by ACERC of EMERCOM of Russia, covering the Northern Sea Route and providing medical assistance to the population, it is advisable to create an aviation Arctic grouping EMERCOM of Russia by 2020, which should consist of no less than 10 helicopters and airplanes support and be based on airfields in the areas of deployment of ACERC of EMERCOM of Russia.

To ensure the safety of navigation and the coordination of the use of icebreaking fleets, a set of activities is needed to create a coastal surveillance system for the surface situation in the coastal Arctic zone of Russia with the deployment of a network of unattended remotely controlled observation points based on coastal radar stations such as MR-10M1 with independent power supply.

In order to quickly and effectively break through the effectiveness of search and rescue, as well as improve transport services in the Arctic, Siberia and the Far East, the existing ground transportation system and a system of search and rescue vehicles with high cross-country capabilities should be supplemented. In order

to ensure the transport accessibility of remote settlements in the regions of the Arctic zone of Russia, it is advisable to expand the fleet of all-terrain vehicles and amphibious vehicles at the ACERC of the Emergencies Ministry of Russia.

Improving the system of providing medical care to people affected by emergencies in the Arctic zone of the Russian Federation. Special approaches are required by the organization of the system of providing medical care to people affected by emergencies in the Arctic zone of the Russian Federation, due to extreme climatic conditions, low population density, hard-to-reach and remote areas of residence, providing financial support for the development of air ambulance stations, application of a differentiated approach to the establishment of standards for the volume of specialized medical care.

Construction and operation of new settlements, transport routes, product pipelines, plants for the processing of liquefied natural gas, sea and river ports and other promising projects in the Arctic zone of the Russian Federation, carried out by both the state and large private companies (Gazprom, Lukoil, NOVATEK, ALROSA etc., etc.), including with the participation of foreign capital, should provide for the creation of a modern medical infrastructure in the region, closely linking the use and possibilities of medicine forces and means of various forms of ownership.

In connection with the growing environmental threats to the health and life of the Arctic population [3], it is planned to develop programs to improve the health system in terms of timely diagnosis, prevention and treatment of endocrine ophthalmopathy, as well as the formation of a healthy lifestyle among the population of the Arctic zone of the Russian Federation (as a subprogram of the State Program for the Implementation of development strategy of the Arctic zone of the Russian Federation). Thus, in the Yamalo-Nenets Autonomous District, a network of year-round hospitals has been created and is being developed to monitor the state of the environment and public health. Fully autonomous item deployed on the White island – in the northernmost point of the region.

In order to provide high-quality, affordable and timely medical care to the population living in extreme climatic conditions, remote and hard-to-reach areas, it is recommended to fix in the sectoral legislation the priority of creating high-tech medical centers in the Arctic, developing sanitary and aviation evacuation and ensuring its financial support, and also consider the possibility of establishing higher standards of specialized medical care with appropriate finance collateral.

Due to the fact that climatic changes have a significant impact on the Arctic, it is recommended to ensure the prevention of climate and meteo-dependent somatic pathology [4] and combat the spread of infectious, viral and parasitic diseases migrating to more northern territories, especially tick-borne encephalitis, dangerous infections, insecticidal allergic diseases, etc.

In connection with the need for staffing of the Arctic medicine, a proposal was made to introduce a specialty in the Arctic medicine in medical educational organizations. However, this proposal needs further development.

It is also proposed to include the issues of the Arctic medicine in the activities of specialized medical organizations operating in the Arctic zone of the Russian Federation.

In order to ensure the creation of a single high quality standard of medical and social services for the population permanently residing and temporarily located in the Arctic zone of the Russian Federation, it is necessary to create an integrated telemedicine system in the Arctic zone of the Russian Federation. The system should consist of a network of fixed telemedicine consultation and diagnostic centers installed in medical institutions of port cities and large settlements in the Arctic coast and related mobile telemedical laboratory and diagnostic systems for various purposes installed on various delivery vehicles: off-road vehicles, helicopters or on floating craft. This project should become a pilot project of the National Telemedicine System of the Russian Federation, which fully complies with the tasks formulated by the President of the Russian Federation in a Message to the Federal Assembly on the widespread introduction of telemedicine and connecting all medical institutions to the broadband Internet.

Due to the fact that the training of specialists in higher educational institutions takes a long time, it is recommended to formulate for universities a list of specialists for working with telemedicine systems.

Considering that climate change has a significant impact on the Arctic, it is recommended to develop a system for monitoring biological risks in the Arctic, especially causative agents of infectious diseases sensitive to climate change, using modern IT technologies.

Taking into account the geographical and climatic specifics of the Arctic zone [2, 5], it should be recommended to include in the work program of the United Shipbuilding Corporation the construction of a family of sea and river hospital ice class vessels with telemedical functions for year-round medical care of the population and employees of enterprises of the Arctic zone.

Conclusions.

1. The socio-economic development of the Arctic zone of Russia is a strategic priority of the state policy of the Russian Federation in the Arctic.

The objectives of the state policy of Russia in the Arctic are the expansion of the resource base of the Arctic zone, supporting the necessary combat potential of groups of troops of the Armed Forces of the Russian Federation in the region, preserving the natural environment, ensuring an adequate level of fundamental and applied scientific research, etc.

The strategic priorities of the state policy of the Russian Federation in the Arctic are determined by increasing the efforts of the subarctic states in creating a unified regional search and rescue system, as well as preventing technological disasters and eliminating their consequences, including coordinating the activities of rescue forces; improving the quality of life of indigenous people and the social conditions of economic activity in the Arctic.

The main directions of development of the Russian Arctic include the extraction of hydrocarbons, fishing, improving the transport infrastructure and tourism.

Given that the total area of Russia's Arctic possessions is about 18% of the entire territory of the Russian Federation and about 1.7% of the country's population lives here, mineral resources mined in the Arctic, their proven reserves and forecast resources constitute the main part of the country's mineral resource base, potential Nickel, cobalt and copper reserves, gas and oil, diamonds constitute more than 70–90% of the total in Russia.

2. In the near future, the following areas of socio-economic transformation can influence the appearance of the system of rendering medical assistance to victims in emergency situations in the Arctic zone of Russia: its spatial expansion and increase in economic potential; focus on the concept of the trinity of the “innovative economy - energy efficiency - sustainable development”; implementation of the concept of the formation in the Arctic of eight reference zones of socio-economic development, of which Kola, Nenets and Yamalo-Nenets are defined as pilot.

3. Ensuring the availability and timeliness of providing medical care to victims in emergency situations in the Arctic zone of the Russian Federation provides for the creation of a modern medical infrastructure in the region and close coordination of the use and capabilities of medical forces and means of various forms of ownership: the state - the Ministry of Health of Russia, the Ministry of Defense of Russia, EMERCOM of Russia, RAO “Russian Railways”, etc. ; private – large oil, gas and diamond mining companies, etc. ; public-private partnership.

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Contact: Peter Kotenko, mil.med.kot@gmail.com

Authors credentials:

Peter K. Kotenko – Doctor of Medical Sciences, Professor, Head of the Department of Life Safety, Extreme and Radiation Medicine of the Institute of Advanced Professional Education “Extreme Medicine” of the Federal State Budgetary Institution “All-Russian Center for Emergency and Radiation Medicine” of EMERCOM of Russia; 4/2 Academician Lebedev str, St Petersburg, 194044, Russian Federation; e-mail: mil.med.kot@gmail.com;

Vladimir L. Shevtsov – Candidate of Technical Sciences, Associate Professor at the Department of Life Safety, Extreme and Radiation Medicine of the Institute of Advanced Professional Education “Extreme Medicine” of the Federal State Budgetary Institution “All-Russian Center for Emergency and Radiation Medicine” of EMERCOM of Russia; 4/2 Academician Lebedev str, St Petersburg, 194044, Russian Federation; e-mail: sdo-vcerm@yandex.ru.