

Education for Sustainable Development: Russian-Swedish Project

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Second International Arctic Forum

On 22-23 September 2011 the II International Arctic Forum "The Arctic - Territory of Dialogue" was held in Arkhangelsk. The idea of organizing the forum, coming from the Russian Geographical Society, was supported by the Chairman of the Board of Trustees of the Society, **V. Putin**. According to the President of the Russian Geographical Society, **S. Shoigu**, the forum was a success. More than 450 scientists, experts, politicians, heads of states and governments, as well as journalists from different countries (Russia, USA, Canada, Sweden, Norway, Finland, Iceland, and many others) participated in the forum. The wide interest, as well as the quality of the debate, says S. Shoigu, show the increasing attention to Arctic issues and the strengthening of international cooperation.

At the opening ceremony, the President of the Russian Geographical Society, S. Shoigu stressed that the decisions made at the forum are implemented in practice. Thus, as a result of the discussion at the Forum I, the work on a thorough clean-up in the Arctic was begun - meaning cleaning it from the industrial waste and garbage accumulated over many years. Also present the opening ceremony were Academician N. Laverov, Vice-President of the Russian Academy of Sciences, the Russian Minister of Natural Resources and Environment Yu. Trutnev, professor Braem Lawson of the University of Alaska in Fairbanks, Russian Transport Minister I. Levitin, the Governor of the Arkhangelsk region, I. Mikhalechuk and the rector of Moscow State University named after M.V. Lomonosov, V. Sadovnichy.



The plenary meeting of the Arctic Forum: The ruling prince of Monaco Albert II, President of Iceland Olavur Ragnar Grimsson, the Russian Prime Minister V. Putin, the President of the Russian Geographical Society, S. Shoigu and the Arctic Council Chairman G. Lind.

Photo from the web site of Russian Prime Minister V. Putin.

On the first day of the forum a plenary session was held, which was attended by Russian Prime Minister V. Putin, President of Iceland **Olavur Ragnar Grimsson**, Reigning Prince **Albert II** of Monaco and the Chairman of the Arctic Council **G Lind**, representing Sweden.

The forum continued with three thematic sessions on the development of the Arctic transport system, integrated security and disaster prevention and environmental protection in the Arctic. In total, 29 presentations were presented at the Forum.

The speech by **V Putin** was central to the work of the Forum. Below follow the most important parts of his speech.

«It is gratifying that the glorious traditions of the Russian Geographical Society in the Arctic have a worthy continuation and today's meeting, today's forum - this is, of course, the best proof thereof. The first Forum was held exactly one year ago in Moscow, and was of great interest to all who are concerned about the problems of the Arctic region, for whom are significant topics such as research and development of the Far North, its ecology, ethnography, historical heritage, the strengthening of trust and partnership in this region of the world. This is why we decided to make our meeting annual.

I note that the forum is moving ever closer to the Arctic itself. Today we have gathered in Arkhangelsk. The venue for this forum has defined its agenda and above all, its main theme - the region's transport infrastructure. This is an important foundation for a harmonious and sustainable regional development, and cooperation of the Arctic states. And the city of Arkhangelsk, the ancient capital of the Russian North, the home of the pioneers of the icy latitudes, in this sense, the place is very suitable and even symbolic. It was here, on the shores of the Northern Dvina River, that the Russian Arctic fleet was created - the fleet in general, and the Arctic one as well. The first large shipyards were built already in the XVII century. The lands of Arkhangelsk - this is also the homeland of the great son of the Russian people Lomonosov, scientist and educator, who predicted the North's great importance to Russia, and indeed to the whole civilization.

From here went the legendary expeditions to explore the northern regions of the world, including the Russian-Swedish expedition in 1878, which marked the beginning of navigation along the Northern Sea Route and became, in fact, the first joint international project in the Arctic. With Arkhangelsk is most closely related also the future development of the Arctic region, especially its water highways. Among them a special place, of course, takes the Northern Sea Route, which we intend to turn into one of the key trade routes, of global value and global scale. I want to emphasize this: we see the future of the Northern Sea Route as an international transport artery, able to compete with traditional sea routes considering the cost of services as well as the issues of safety and quality.



The Chairman of the Board of Trustees of the Russian Geographical Society V. Putin speaks at the II International Arctic Forum.

Photo from the site of Russian Prime Minister V. Putin.

I want to stress that all our plans will be implemented with the most stringent environmental standards taken into account. A gentle, civilized attitude to nature - this is a prerequisite of all development programs. The turbulent economic activity in the Arctic will be beneficial only if there will be a reasonable, competent balance between economic interests and nature conservation objectives, calculated not on 10, 15 or 20 years but truly long term. I was just talking about the Pirazlomnoye field, but production there is designed for 25 years at least and, of course, environmental support should be provided for all these years. In such fields as Shtokman, there is at least 50 years of production. Only long-term maintenance solutions to environmental problems can provide us with the balance of which I have just spoken. One evidence of this position and this approach is Russia's participation in the creation of the first collective fund of the Arctic Council, the so-called project support tool whose funds will be used for the implementation of environmental initiatives, including the elimination of environmental problem areas in the Arctic.

For our part we, as promised, have already begun the thorough cleaning of the Far North and Arctic Russia. Among the first projects is clearing Franz Josef Land from the accumulated barrels of oil. For these purposes 2.3 billion rubles will be allocated from the federal budget by 2015. Similar work awaits Wrangel Island and the Russian settlements on Svalbard. In addition, a complex assessment of ecological status will be carried out in seven major regions of the Arctic zone.

The implementation of such initiatives will not only improve the environment the Arctic, but will also develop unique technologies for recovery of the contaminated areas. I repeat once again: the environmental component should be the key leitmotif of human activity on the far north, because in spite of its harsh image, the Arctic has the most fragile ecosystem on the planet. The price of inattentive, careless attitude towards the Arctic is very high and the consequences extremely serious.

Our task is to involve all resources to thoroughly investigate the current situation in the Arctic and to develop effective tools that can reduce the damage already caused to this icy region and to prevent new risks. And the International Forum "The Arctic - Territory of Dialogue" could become (and I hope very much that will) a platform, where all the issues I have mentioned will not only be discussed, their solution will be sought for, and I therefore propose that the topic of the next forum will be environmental conservation».



Participants of the II International Arctic Forum in the hall where the meetings were held in the building of the Northern (Arctic) Federal University in Arkhangelsk.

Photo by Eugene Sorokoletov from the site of the Russian Geographical Society.

Sources: own information, the site of the Russian Geographical Society, the site of the Russian Prime Minister V. Putin.

Danish-Russian exhibition "The Arctic" opened

Dmitry Medvedev, Queen Margrethe II of Denmark and Prince Consort Henrik on September 7 this year attended the opening of the Danish-Russian exhibition "The Arctic" at the Moscow House of Photography.



President Dmitry Medvedev with Queen Margrethe II of Denmark and Prince Consort Henrik on the Danish-Russian photo exhibition "The Arctic".

Photo of the press service of the President of Russia.

Addressing the Queen of Denmark **D. Medvedev** said: *"Denmark and Russia are countries of the Arctic, and for us the Arctic is not an abstract geographical concept, distant and not very obvious, but it is what we do every day. It is a rough area, but it is very important for the development of our countries and other states and their peoples.*

Our countries are members of the Arctic Council and constantly interact within the council. This is very important, and I am sure that we also in the future will behave responsibly, keeping in mind that the Arctic is not only, so to speak, the current situation, but also our heritage that we must pass on to our descendants in good condition . And that, incidentally, as I understand it, is part of the story told by the exhibition.

It is no secret that the climate on our planet is changing. Some see this as a threat to the future of our civilization, someone sees certain opportunities in it, and some believe that the extent of this threat is exaggerated. But, in my opinion, one thing is clear: there is a change in the climatic trend, and we are talking about this in various places, ranging from expert platforms to the last summit of the "big twenty". Hence, that we pay attention to this issue, I believe, is certainly important."

In her reply address, **Queen Margrethe II** said: *"In 1725, the Danish navigator Vitus Bering was appointed head of the first Kamchatka expedition by Peter I. During the expedition Bering was to explore cartographically describe the most eastern lands of the Russian Empire. ... In July 1741 Bering reached Alaska, he sought the shore, but was wrecked while returning from Alaska, and died on Bering Island, far from his native Denmark. Today, his memory is honoured and valued in Denmark as in Russia. One could even say that the work of Vitus Bering was our first joint project in the Arctic.*

The Arctic has significance not only for science and for the world economy, the fact is that the northern regions of our planet are a strong source of inspiration also for art. ... The current exhibition is an excellent example of art that receives such a valuable inspiration from the Arctic world."

Source: the site of Russian President D. Medvedev.

News of Nord Stream

During a working visit to Vyborg, Russian Prime Minister Vladimir Putin gave the signal for process gas supply to the offshore section of the Nord Stream pipeline. The launch took place in the presence of the chairman of the shareholders' committee of the company Nord Stream AG, the former German

Chancellor Gerhard Schroeder at the Port gas compressor station, situated virtually on the border between Russia and Finland.

The compressor station Port is the endpoint of the main gas pipeline Gryazovets-Vyborg, by which it is connected with the Nord Stream. After welding the last joint of Nord Stream, which was done on August 19, the pipeline was filled with nitrogen, which acts as a cushion between the air and the gas. Today began the filling of the pipeline with process gas, which will replace the nitrogen and fill the tube to a certain level of pressure. After being filled with gas, the pipeline will be ready for commissioning. It is planned that this will happen in October, and the gas will begin to be transported to Europe.

Addressing the participants of the ceremony, **V. Putin** said: *"We have built this in less than 1.3 years - 1244 km. And already in that time we have constructed 640 km of the second line - more than half. The work has been carried out under various conditions, and not only climatic ones but also financial. Nevertheless, the world's banks have allocated loans somewhere in the region of 3 billion euros, while the rest was contributed by shareholders, and those were the world's largest banks. For Germany, it will probably be interesting - the amount of gas provided will be comparable with the energy produced by 11 nuclear power plants ..."*

The Nord Stream team is small - just 160 people, but these are representatives of 23 countries! A real, big international team. Large companies from Germany, Russia, France and the Netherlands. And the markets are Germany, France, the Netherlands, UK and Denmark. This is a great project. And, incidentally, with regard to ecology: 100 billion euros were spent on the study. Currently the amount spent only on the system of continuous monitoring reaches 13 million euros. On a daily basis performance is measured for 16 entries on a thousand points on the route. Quarterly reports are sent to the environmental services of Russia, Germany, Sweden, Finland and Denmark.



With the help of a computer mouse the head of the government pressed the button on the screen, thereby starting the device that began supplying gas to the pipe.

Photo from the site of Russian Prime Minister V. Putin.

I would like to thank our colleagues in these countries - Germany, Sweden and Finland and Denmark - for their support. Now we need to wait for the filling with process gas, and in November it will be possible to launch."

Источник: site of Russia's Prime Minister V. Putin.

The University of the Arctic opens research office

A research office has been opened at the Arctic center of collective use of scientific equipment of the Northern (Arctic) Federal University (SAFU). The idea of creating a separate office that will coordinate all

Arctic research, was born at a meeting of the Council of the Arctic University in 2007. The participants agreed that it is precisely in Russia there is a scientific centre, which can take on these functions, because in Russia there are strong academic traditions, particularly unique in the northern part. The President of the University of the Arctic Lars Kullerud expressed the hope that thanks to the office and the integrated model created in the north, the younger generation will raise true scientists that benefit their countries.

The research office is headed by its scientific supervisor, the Senior Vice-President of the Russian Geographical Society **Arthur Chilingarov**. The work of the office will also be supervised by SAFU; vice-rector for international cooperation Marina Kalinina, vice-rector for scientific research Konstantin Bogolitsyn and administrator Maria Lvova. "We will do our best to help prepare the young staff, and I am sure that Mr. Paulsen (Frederick Paulsen is a prominent businessman, scientist and philanthropist, Honorary Consul of the Russian Federation in Lausanne, Switzerland), who organizes many expeditions, now will take young staff from this centre," said Arthur Chilingarov.

The opening ceremony of the research office of the University of the Arctic was attended by President of Iceland Olavur Ragnar Grimsson, Vice-President of RAS Academician N. Laverov, head of Hydromet A. Frolov, the participants of the II International Arctic Forum and members of the public in Archangelsk.



At the opening ceremony of the research office at the University of the Arctic at the Northern (Arctic) Federal University. This photo shows the President of Iceland Olavur Ragnar Grimsson, the President of the University of the Arctic Lars Kullerud, SAFU Rector Yelena Kudryashova and first vice-president of the Russian Geographical Society, Artur Chilingarov..

Photo by Yaroslav Nikitin from the site of the Russian Geographical Society

Source: own information and the web site of the Russian Geographical Society.

An Arctic Centre of the Russian Academy of Sciences

An Arctic Centre of the Russian Academy of Sciences may be established in Arkhangelsk. The President of the Russian Geographical Society **Sergey Shoigu** has endorsed the establishment of an Arctic Centre of the Russian Academy of Sciences in Arkhangelsk, with direct subordination to the RAS. Together with the Northern (Arctic) Federal University such a centre, according to the governor of the Arkhangelsk Region **Ilya Mikhalchuk**, who announced the proposal, will give a new quality to the development of science in the Russian North.

"Indeed we need to take this strategic "Lomonosov-like" solution, and give the development of science in the North qualitatively new impetus", said Ilya Mikhalchuk. The President of RGS Sergey Shoigu praised the initiative and stressed that the proposal must find understanding among the leadership of the RAS, especially since the vice-president of the Academy, Academician Nikolai Laverov is a native of the Arkhangelsk Region.

Governor Ilya Mikhalchuk also stated that, for its part, the government of the Arkhangelsk region is ready to, together with the Ministry of Education and Science of the Russian Federation and the Russian

Academy of Sciences, develop a long-term program of support to the Arctic Centre and the establishment of strong scientific infrastructure.

Source: own information and the web site of the Russian Academy of Sciences.

Russia's strategy of innovative development

On September 7th The Russian government approved the Strategy for the innovative development of Russia up to 2020, but deleted the section on financial provision for the strategy through budget funds, said the head of the Ministry of Economic Development **E. Nabiullina** at a press briefing following the meeting of the Presidium of the Russian Government.

As reported, the Ministry of Economic Development offered to write into the strategy the budget allocations needed to implement it. According to calculations by the ministry approximately 15.6 trillion roubles would be needed for this purpose for the period from 2011 to 2020. "The strategy is an approved legal act of the Government, so it would look like a budget obligation," said the Minister. According to her, it was decided to record the financial parameters of the strategy in the annex, for them to be perceived as financial guidance.

In addition, according to E. Nabiullina, at the meeting the Presidium of the Russian Government it was decided not to make a special plan for the implementation of this strategy and but to use it in the preparation of state programs. "Thus, the state programs will be one of the elements of the implementation of the innovation strategy," said the Minister.

Source: INTERFAX Agency

New federal programme

Russia's Ministry of Natural Resources and Environment has developed a draft federal target program called "Development of the water sector of the Russian Federation 2012 - 2020". The program addresses issues related to the management and protection of water bodies and the development of water infrastructure.

By 2020, it is expected to reduce the environmental impact on water bodies by 2.5 times, reduce the water-intensity of the GDP, reduce non-productive water losses by 2 times, and increase in the proportion of people protected by engineering structures from adverse effects of water by 25%. As a result of activities carried out, over 6 million people living in regions with a lack of water will be guaranteed provision of water resources. Will be enhanced The operational reliability of hydraulic structures (including ownerless ones) will be enhanced and the state system of monitoring of water bodies will be modernized.

The federal target program will ensure provision water supply for a high rate of socio-economic development up to 2020, and increase the competitive advantages of the Russian Federation in such areas as energy, transport, agriculture and processing of natural resources. It is expected that due to the increase in environmental investment in housing and industry, the production volume of Russian enterprises in 2020 in the engineering industry will grow by 30-40 billion roubles, and in construction with 100-110 billion roubles. The draft federal target program has been published on the website of the Russian Ministry of Natural Resources and Environment.

Source: Press Service of the Russian Ministry of Natural Resources

Tourist season in the Russian Arctic national park

The first tourist season has been completed in the National Park "Russian Arctic" (the northern part of the archipelago of Novaya Zemlya with the adjacent water area), which also administers the federal natural reserve Franz Josef Land. According to the director of the National Park Roman Yershov, during the two summer months 11 cruises were held and 865 tourists visited the islands of the Russian Arctic. In general, in his opinion, the first tourist season was successful.

The tourists' compliance with environmental laws was monitored by the staff of the national park. Vessels entering the territory of the specially protected natural areas (PAs) were accompanied by inspectors. At the end of September, the staff of the National Park, led by its director **Roman Yershov** returned to Archangelsk, where the park headquarters is located.



Tourists at Zhelania Cape in the north of Novaya Zemlya.

Photo from the website of the Russian Ministry of Natural Resources and the Environment



Breeding ground of walrus on the Oranje Islands.

Photo from the website of the Russian Ministry of Natural Resources and the Environment

The National Park "Russian Arctic", which is included in the Ministry's system of protected areas, was established by the Government of Russia in June 2009 and began working as an environmental agency in April 2011. Its staff is at the present time 47 employees.

Источник: Own information and the Press Service of the Russian ministry of Natural Resources and the Environment.

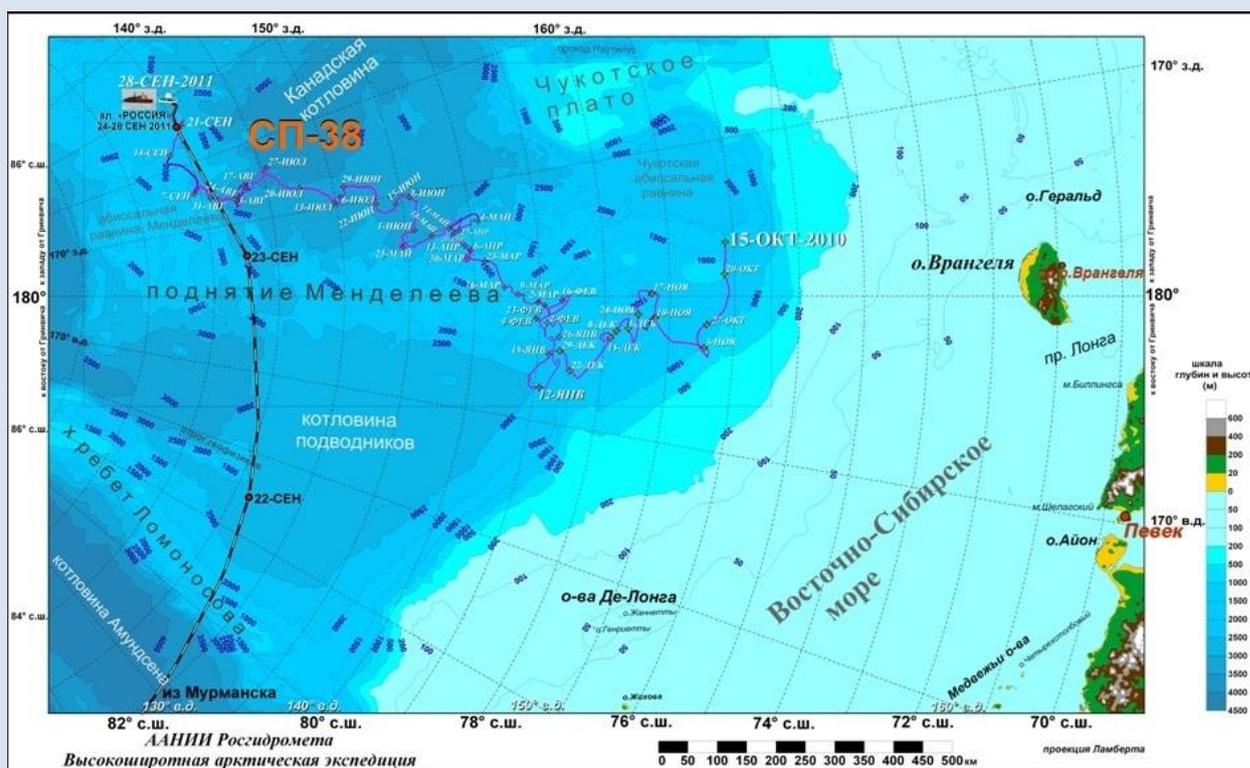
The work of drifting stations SP-38 and SP-39

Work continues on the drifting station North Pole-38 (SP-38). The total drift of the station since the start has been 2904.39 km, the general drift - 998.37 km in the direction of 18 degrees (see map).

On September 25, 2011 a/I "Russia" with the expedition "Arctic 2011" arrived at the drifting station NP-38 and continued to drift along with it. During the week, made several helicopter missions were carried out, searching for perennial fields in the vicinity of the station's drift. The search did not yield positive results.

On September 26 work continued with examining the southern ice, which had previously split from the main camp, and the setting up of SP-39 was commenced there: relocation of buildings, as well as adequate supply of fuel and lubricants and the property of SP-38. By September 28, 2011 up to 80 percent of the cargo of SP-39 had been unloaded. Work on the deployment of the station continues.

The head of the drifting station North Pole-39 is an employee of the AARI, Ph.D. **Alexander Y. Ipatov**, who has previously participated in a number of arctic expeditions. In accordance with the scientific observation programme, the scientific and engineering staff will ensure the continuation of the station's work in monitoring the Arctic environment based on a natural platform - a drifting ice floe. Professionals in the field of meteorology, aerology, oceanography, physics of ice and a number of other scientific disciplines will conduct observations in sufficiently complex natural conditions for one year. The station staff totals 16 people.



Map of the drift of the North Pole-38 station 15.10.2010 – 29.09.2011

Source: Press Service of the Arctic and Antarctic Research Institute.

Appointment at the Russian Ministry of Natural Resources and Environment

Svetlana Yurmanova has been appointed Director of the Department of State Policy and Regulation in the field of environmental protection and ecological safety of the Russian Ministry of Natural Resources and Environment. The corresponding order was signed by Minister of Natural Resources and Environment Yuri Trutnev.

Svetlana V. Yurmanova graduated from the Faculty of Biology at Urals State University named after AM Gorky. During the period 1991 to 2001 she has worked as laboratory assistant in the Ilmen Reserve (Chelyabinsk region), member of the scientific department of the Visim Reserve (Sverdlovsk region), director of Children's Environmental Center, and after that in the programme "Environmental protection and ecological safety of the Murmansk region in 2002" in JSC Arktikeko-A. From 2002, she has held various positions in the system of the Russian Ministry of Natural Resources and Environment. Prior to being appointed Director of the Department she worked as head of the section for regulating the state environmental control at the same Department.

Source: Press Service of the Russian Ministry of Natural Resources.

New source of biofuel

Siberian scientists have discovered a cheap and virtually inexhaustible source of biofuel. The material for fuel production is bottom sediments or, more simply, ordinary mud found on the bottom of reservoirs and treatment facilities. Moreover, it is possible to make fuel of Euro-4 standard from it. The results of the Russian experts' studies have already passed the international expertise.

"Silt has quite promising composition of lipids when it comes to making bio-diesel from it," says **Mikhail Gladyshev**, Dr of Biological Sciences, Professor of the Department of aquatic and terrestrial ecosystems of the Institute of Fundamental Biology and Biotechnology at SFU. The process only appears complicated. From raw materials an extract is allocated, then by using a slightly more perfect analogue of an ordinary brewing apparatus, is obtained almost the original product. A few chemical reactions, and the dirty slurry has become clean fuel.

The search for alternative sources of fuel involves scientists from around the world. Somewhere biodiesel is produced from plants, corn or canola, but this requires cultivation of vast areas. The biologists at the Siberian Federal University were looking for a cheaper source. Once they examined sludge from the bottom of an ordinary pond it was time to cry eureka. Sludge fields are in fact storages for human waste. But for biofuel, this raw material is suitable in all respects. The main indicator is fat. In the waste of the water utility service in Krasnoyarsk the fat component is 15%. According to scientists, just right for fuel. The source, we can say, is inexhaustible. So much filth is sifted out at the city's treatment plant, that if the daily amount was recycled, it would yield almost fifteen hundred liters of high quality diesel.

In solving one problem, the Krasnoyarsk scientists have found a solution of two. Cheap fuel and waste management. The research results have already passed a tough international expertise. The results of the biologists have begun to be published in scientific journals. It remains only to wait for the idea to be implemented.

Source: own information and the site of the Russian Academy of Sciences.
