

Russia Prepares To Develop the Arctic As Earth's Next Great Project

by William C. Jones

The Russian government under President Vladimir Putin has laid out an ambitious program for the development of its extensive Arctic region, in what should be an object of collaboration with the United States, another Arctic nation. In addition, the Russian plans for Siberian development entail the building of a tunnel across the Bering Strait between Chukotka and Alaska, which would be a natural extension of Arctic development for both these nations. The failure of the Obama Administration to grasp this opportunity, indeed, its push to foment, via its policy in the Middle East, a direct confrontation with Russia, can only be deemed as criminal in nature.

The direction taken by the Putin government in attempting to develop its Arctic domain, and, in cooperation with the other Arctic nations, to develop the region as a whole, represents a clear trajectory away from the type of confrontational policies launched by the Obama White House.

A number of developments of the last few years have helped precipitate that process. The increased temperatures in the Arctic region, more pronounced in the Russian Arctic than anywhere else, and the discovery of extensive oil and gas resources in the Arctic region, have made Arctic development a prime focus of Putin's long-term vision for Russia. Oil and gas ex-

ports are presently a mainstay of Russian economic development.

The Vision of Peter the Great

Russia, however, has been active in the Arctic for a long time. Indeed, the history of Russia as a modern nation, and particularly the history of Russian science, is intricately linked with Russia's exploration and development of its Arctic region ever since the meeting in 1711 between German philosopher Gottfried Leibniz and Tsar Peter the Great, in which Leibniz encouraged the Tsar to send an expedition to the far northeast of Siberia to determine if there were a land-bridge to the North America continent.

Even before that time, Russian explorers had been as



Russia is one of the only countries with a fleet of icebreakers, and they are working on the newest generation of nuclear-powered icebreakers for use in the Arctic. Shown: the Russian nuclear-powered icebreaker Yamal.

far as the Arctic region of Novaya Zemlya, and had expanded the territories of old Muscovy to the White and Barents Seas, providing Russia with its first access to a seacoast. Tsar Peter organized several expeditions to the East, the Great Kamchatka Command of 1716-20, the First Kamchatka Expedition, 1725-30, and then, the large Great Northern Expedition, 1733-43.

The Northern Expedition's leader was the Danish explorer Vitus Bering, who was tasked with investigating the feasibility of a Northern Sea Route (NSR), exploring the American coast, and reconnoitering a sea route from the Kamchatka Peninsula to Japan. It consisted of seven independent detachments, not counting the scientific and support teams, totaling some 977 men. While often working under extreme weather conditions, they compiled such a mass of scientific and geographical knowledge, that it lay the basis for the further advancement of the geographical and mineralogical sciences in the Russian Empire.

The entire Arctic coast had been surveyed and charted from Arkhangelsk to Mys Bol'shoy Baranav. The expedition produced 62 maps and charts of the Arctic coast and of Kamchatka, generally of a high standard, and compiled soundings and sailing directions which were to be put to good use by later navigators. Later, under Catherine the Great, Russian explorers navigated the last bit of the envisioned NSR along the coast of Chukotka. The great Russian scientist Mikhail Lomonosov, a strong proponent of an NSR, attempted repeatedly to sail across the North Pole, believing firmly in the existence of an open polar sea.

The famous Russian chemist Dmitri Mendeleev, who, with Adm. Stepan Makarov, developed the first Russian icebreaker, and who did more than anyone to promote the development of the Arctic region, was prevented from himself leading an expedition to the North



This history of Russia as a modern nation, and particularly the history of Russian science, is intricately linked with its exploration and development of the Arctic region. In 1711, the German philosopher Gottfried Leibniz (left) encouraged Tsar Peter the Great, to send an expedition to the far northwest of Siberia to determine if there were a land-bridge to the North America continent.

Pole by a lack of funding.¹

The Arctic expeditions were continued under the Soviet regime. During World War II, the Northern Sea Route was used extensively to deliver matériel under the Lend-Lease program to Soviet forces on the front. Between 1942 and 1945, a total of 120 ships carried some 450,000 tons of Lend-Lease goods from American West Coast ports to Soviet Arctic ports, via the NSR. The largest number of these ships (54) were bound for Tiksi at the mouth of the Lena River, but 13 of them rounded the Taymyr Peninsula to reach the ports on the Yenisei River, and one continued west to Arkhangelsk.

With the onset of the Cold War and the development of nuclear weapons, much of the Soviet Arctic, where many of the nuclear tests were conducted, became a closed military region.²

1. *EIR*, Jan. 6, 2012.

2. The Russians had, in 1967, to everyone's surprise, issued an open invitation to the international shipping community to make use of the NSR as an alternative to the southern ocean route. Yet, until the end of the Cold War, the Arctic was a closed military zone. Even transpolar flights were prohibited until the 1990s. In 1987, Soviet President Mikhail Gorbachov gave a speech in Murmansk calling for cooperation in the Arctic region, before the actual break-up of the Soviet Union.

Russia Gears Up for Life in the Arctic

But it wasn't until the U.S. Geological Survey's World Petroleum Report in 2000 indicated that 25% of the world's undiscovered energy resources were in the Arctic, that it became a priority for all of the countries of the Arctic region.

The first major Russian declaration on a new Arctic policy was issued in 2001. The increased ice melt also revived interest in the Northern Sea Route. In 2007, the Arctic Sea, monitored by satellite for three decades, reached a record minimum of ice pack. In 2009, two German ships made the first commercial voyage through the passage with a minimum of help from Russian icebreakers. In September 2008, the Russian government issued a second Arctic policy report, made public in 2009.

The 2008 report pointed to the Arctic region as a "strategic resource base of the country," which would require the development of new social and economic infrastructure, as well as an upgrading of the military presence in the region to safeguard the Arctic territory. The report, however, underlined that this was not a question of militarizing the Arctic, and expressed the need to forge agreements among the Arctic nations on the utilization of the resources of the region as a whole.

Although there was a very dramatic placement of the Russian flag on the floor of the continental shelf by the noted Arctic explorer Vladimir Chilingarov, which created a great deal of press hype about Russia "usurping" the Arctic, the Russian government has also taken the legal path, and filed a request with the UN Commission on the Limits of the Continental Shelf. According to the UN Law of the Sea, of which the Russian Federation is a signator, if a country can prove that an underwater shelf is connected to its continental land mass, it can claim the shelf as an exclusive economic zone.

The area encompassed by the NSR, however, is firmly Russian territory, and is generally recognized by most of the Arctic nations as such, although a few of the straits that must be traversed during the course of a voyage along the Route are designated by the United States as international waters. The U.S. is also in a dispute with similar Canadian claims on the Northwest Passage through northern Canada.

The Northern Sea Route is actually a series of different shipping lanes stretching between 2,200 and 2,900 nautical miles, depending on ice conditions. The route would cut off 4,000 miles in the distance between Rotterdam and Seoul. To the overall costs of the short-

ened route must also be included the cost of icebreaker assistance on certain sections of the route. But the higher average temperatures in the region have made that trip much more feasible. If the energy resources of the Arctic are also factored in to the equation (resources that would also have to utilize the same travel route on their way to the consumer), maintaining an open passage year-round becomes economically feasible.

A Strategic Necessity

In January 2012, at the request of the Russian government, the Council for the Study of the Productive Forces released another extensive report on the question of Arctic development, entitled "Strategy of Development for the Arctic Zone of the Russian Federation and the Maintenance of National Defense in the Period to 2020." This report is an ambitious program for Arctic development, but it has not yet received legislative approval and funding.

The "Strategy" document points out that the Arctic Zone of the Russian Federation (AZRF) comprises an area of around 9 million square kilometers with more than 2.5 million people, comprising less than 2% of the population of Russia, but about 40% of the population of the Arctic as a whole. Its production represents around 12-15% of the GDP, and provides around one-fourth of the exports of Russia. The Russian zone of the Arctic is the most developed of all the polar regions, comprising 60% of the value of Russia's extractive industries, as compared to the less than 15% provided to their respective nations by the Arctic regions of Greenland, Norway, Sweden, Finland, and Iceland, and around 30% for Alaska and Arctic Canada.

The key concept in the "Strategy" is the need for "modernization of the economy and social sphere of the AZRF on the basis of innovation." While oil and gas are major items in Arctic development, there will also now be a greater emphasis on the extraction of other important raw materials which the Arctic contains in abundance. While non-ferrous and precious metals—lead, nickel, cobalt, platinum, gold, diamonds, antimony, apatite, phlogopite, vermilion, barite—and the rare metals, tend to predominate, nearly the entirety of the Periodic Table of Dmitri Mendeleev is contained under the surface of the ice and permafrost. These are the materials that will be needed by the growing economies in the South, notably India and China, as they struggle to bring their expanding populations up to a modern standard.

But the extraction will be done far differently than it was during Soviet times, the environmental devastation of which remains a heavy legacy on the present generation of Russians, and requires a good deal of clean-up in order to pave the way for a modern industrial economy north of the Arctic Circle.

The goals of the new Arctic strategy are multifaceted. In addition to creating the resource base in the Arctic, the plan focuses on environmental protection as economic activity increases. "Clean-up battalions" have already started their work with a recent expedition to Franz Josef Land, an archipelago which served during Soviet times as a base of military operations and nuclear tests.

In bidding farewell to the squad before they left on the ship from Arkhangelsk, President Putin told them: "This is a symbolic event for Russia. First, it confirms our growing presence in the Arctic. We will increase our efforts and work in many areas here, developing new deposits and building new infrastructure, above all, ports, roads, bridges and so on. Of course, we will also bolster our military presence here too. In all of this work, we will strive for a balance between development and preservation of the natural environment."

Maintaining the NSR as a national transport corridor of the Russian Federation will require an entirely new system of oversight and corridor maintenance, the organization and control of shipping traffic, the creation of an administrative fleet, and hydrographic maintenance of the entire route. It will require modernization of the Arctic ports of Khatanga, Tiksi, Pevek, Dydinka, Dickson, and the establishment of new port complexes and transit terminals in Indiga, Kharacavei, Varandei, as well as container terminals at Murmansk, Egvekinot, and Provideniya.

There will also be rail and highway connections from these terminals for transiting goods to the South. It will also require a modernization of the Arctic fleet, including small and medium-sized ships for sea and riverine use, dry cargo and liquid cargo vessels, vessels for the transit of container traffic, tankers of an icebreaker class, specialized vessels for the fishing industry, and scientific research vessels.

The icebreaker fleet must also be upgraded. Russia is one of the only countries with a fleet of icebreakers, and they are working on the newest generation of nuclear-powered icebreakers and the development of specialized icebreakers, reinforced icebreakers, and dou-

ble-plated tankers. The Northern Sea Route is intended to operate year-round from Murmansk in the West to Petropavlovsk-Kamchatka in the East.

Building the Infrastructure

Bringing the Arctic region into the mainstream of world economic development will require a major commitment in terms of investment in transportation and other infrastructure to bring the far reaches of the North into contact with each other, and with the other nations of the Arctic. This will also require the development of a new communications infrastructure: guidance systems for ships and aircraft, equipment for long-distance maritime soundings, and systems of hydrometeorological and hydrographical support for the region, and for the planned scientific expeditions that are to become an integral part of this regional development. New ports are already being planned to service the expected surge in maritime traffic.

Nikolai Patrushev, the chairman of the Russian National Security Council, on Aug. 6, announced that Russia would build ten major sea and air stations along the coast of the Northern Sea Route. Three of the larger centers will be built in Nadjan Mar near the Pechora River, at Dudinka on the mouth of the Yenisei River near Vorkuta, and at Anadyr in Chukotka in the Far East. The other seven smaller emergency centers would be located along the Route at Tiksi, Nadym, Vorkuta, Murmansk, and Arkhangelsk.

The "Strategy" also calls for the development of north-south river and rail corridors to link the Arctic development region with the other regions of the Russian Federation, connecting to the east-west rail lines of the Trans-Siberian and the Baikal-Amur Mainline (BAM) railroads traversing the southern part of Siberia. These will utilize the north-south river systems, the Yenisei, the Ob system, and the Lena River in the East. One meridional corridor will be along the Lena River, connecting to a rail link that will travel from Berkakit to Yakutsk, where it will intersect with the BAM System. From Yakutsk, the goods can be transmitted to the Asian markets, and, when the envisioned Bering Strait Tunnel becomes a reality, to Alaska and to the North American market.

In addition, new highways and north-south rail lines will be built criss-crossing Siberia. By 2020, the reconstruction of a motorway is supposed to be completed to the Kola Peninsula from Saint Petersburg through Petrozavodsk, Murmansk, and Pechenga, to the border

with Norway, connecting the Murmansk port with the central regions of the Russian Federation. Also planned are motorways from the port of Anadyr on the Bering Sea to Pevek on the East Siberian Sea, and from Salekhard to Surgut, as well as the reconstruction of part of the motorway from Severo-Vostok to Polyarny Ural.

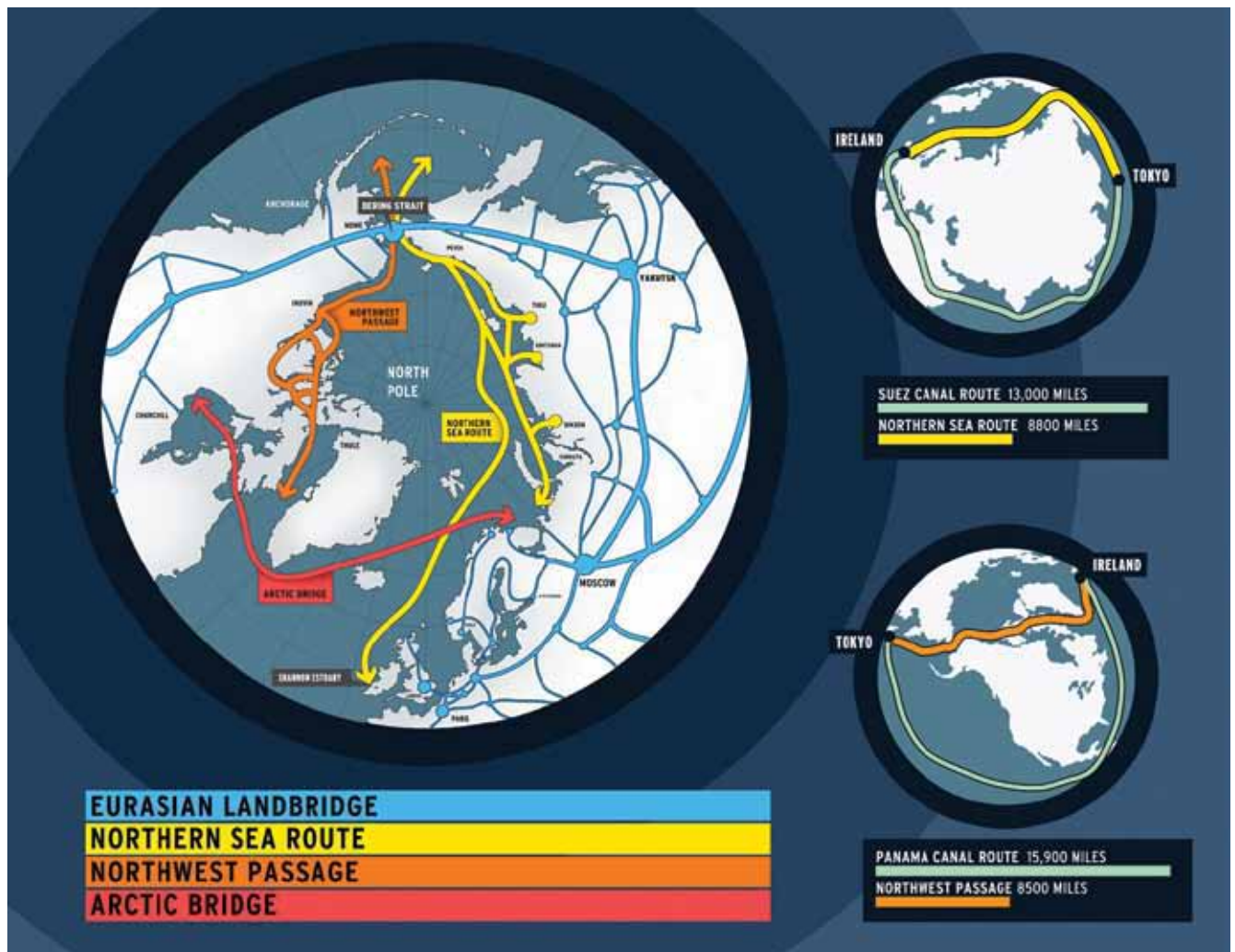
Proposals are also on the table for modernization of the airports in the region. International airports will be built in Murmansk, Archangelsk, and Anadyr. Air-



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President Putin has led his nation in its determination to develop the Arctic. Figure 1 shows the Arctic as a major world center, as the ice continues to melt, and trade and transport routes open up along the Northern Sea Route, as well as the Northwest Passage and others.

FIGURE 1
World Sea Routes



LPAC/Chris Jadataz

ports for national traffic will be established at Naryan-Mar, Salekhard, Norilsk, Khatanga, Tiksi, and Pevek. In addition, there will be a network of local airports supporting smaller aircraft, sea planes, and all-use helicopters. New types of amphibious transport are being developed, high-velocity amphibious vessels on dynamic and static air cushions, maritime vessels with wheels or tracks for land passage, platforms on air cushions. The fleet of cross-polar craft will be expanded for passenger traffic.

This infrastructural program will not only benefit the raw materials and energy sectors of the economy, as important as these might be; the fishing industry will receive a new lease on life, with new transportation corridors to bring products to the larger markets in the south of Russia and in Asia. The same goes for regional industries, such as that of the reindeer herders, comprised primarily of the indigenous peoples of the region. The loss of profitability in this industry was largely due to the sparse system of transportation and the distance of the nomadic herders from the social and transport infrastructure. The support that they will receive by the new transportation and communications systems will make possible a renewal of the reindeer herds.

New Centers of Scientific Research

Above all, the new Arctic thrust is science-vectored, emphasizing and enhancing that capability which is of the most value for Russia—its scientific cadre. The Arctic will become a new field for scientific exploration, an area of the world in which we still have so much to learn regarding the dynamics of our planet. The “Strategy” includes plans for the creation of an entire new generation of scientific vessels to study the deep-sea environment and the hydronautics of the region and will entail the use of instruments adapted for use in polar conditions.

This will involve not only land-based and sea-faring capabilities, but also space-based capabilities. The “Strategy” envisions the creation of a new “Arktika” system of satellite observation. The system will focus on three main areas: polar hydrography (geodesic fields in the Arctic Ocean, the character of the soil and the shores, the dynamics of the ocean bottoms, geophysical conditions, the state of the upper atmosphere, polar hydro-meteorology (ice conditions, weather and climate), as well as a study of the natural eco-system, plant and animal life in the sea). There will also be more

specific monitoring, examining, and predicting of the ice conditions, serving the interests of Arctic navigation.

“The creation of the Arktika system will not only allow us to monitor the ecology of the Arctic shelf, the water temperatures, the thickness of the ice floe and the pollution levels, all year round, but will also ensure the effectiveness and safety of the exploration of the shelf for our own and foreign companies,” Anatoly Perminov, former head of the Russian Federal Space Agency Roscosmos told reporters in April 2010. This entails a collaboration among space assets, hydrographic vessels, aircraft equipped for monitoring the ice floe, and observations from on-shore facilities. The goal is to ultimately develop an automated process for Arctic navigation with the aid of an electronic map. By 2020, it is planned to have a network of control and monitoring stations for the GLONASS GPS system all along the Northern Route.

The educational system of the Arctic region will be upgraded. There are two major universities in the Russian Arctic, the M.V. Lomonosov Northern Federal University in Arkhangelsk, established by then-Prime

Breaking the Ice on Arctic Development



LPAC's Michelle Fuchs reports on two sides of a potential global perspective for Arctic development: One, Russia's planned Arctic City, dubbed “Umka,” which will be modelled on the International Space Station; and two, the planned expansion of the River Shannon Estuary, which will make Ireland a lead player in deep-sea science. (27 minutes).

<http://larouchepac.com/node/20614>

FIGURE 2
The Arctic Region



Minister Putin in 2010, by combining the resident Pomor University and the Technical University into a top-rank federal institution, and the M.K. Ammosov Northeastern Federal University in Yakutsk. It has also been proposed that an Arctic Research Center in the Arkhangelsk Region be created, under the Russian Academy of Sciences, to focus on interdisciplinary studies of the Arctic, to give a fresh boost to science in the North.

There will be a significant upgrading of teaching staffs, and the universities are supposed to be provided with generous funding in order to conduct research in a variety of fields important for the region: hydrocarbon and coal chemistry, information technology and telecommunications, biotechnology and biochemical-biophysical diagnostics, and preventive and medical technologies. Other regional colleges will be affiliated with these two full-scale universities in order to meet the requirements for providing bachelors degrees and developing new university complexes that combine both research and teaching.

This year, students of the Northern Federal University participated in the first “floating university” for 40 days in the Arctic region, conducting experiments along the way, and collecting specimens from the places they visited. President Putin proposed that they conduct such expeditions on an annual basis.

Improving Living Standards with Nuclear Power

The government’s intention is that the infrastructure will encourage migration to the northern regions. This requires a leap forward in creating the conditions for long-term habitation in the Arctic climate, including research on new materials (particularly basalt fibers), and technologies for construction of modular units adapted to Arctic conditions, for example, better heat insulation. Much of this research will also be applicable in the planning of habitats for



To supply the region with energy, the Russian government has decided to place eight floating nuclear power plants along the northern coast. This photo shows the Akademik Lomonosov, a floating nuclear power station, being launched at Baltiyskiy shipyard in St. Petersburg.

man in other aversive environments, such as on the Moon or Mars.³

To supply the region with energy, the Russian government has decided to place eight floating nuclear power plants along the northern coast. Russia took the lead in the 1970s in developing the floating nuclear plant technology, but what with the Gorbachov/Yeltsin years of destruction of the Russian economy, and the simultaneous rise of the Green movement, much of this was put on hold. Now, with the determination of the Putin government to proceed with a major program of Arctic development, floating nuclear power plants are again on the agenda. These are also being developed for use as the gas and oil production proceeds closer to the region of the North Pole along the Lomonosov Ridge. The first such reactor, the Akademik Lomonosov, is already completed and waiting to be deployed.

The medical facilities in the Far North will also have to be significantly upgraded. The “Strategy” calls for creating new first aid stations, training a new generation of paramedics, raising the level of the medical professionals in the region, including the introduction of more

3. See “Man in the Arctic—But How?,” a speech by Ulf Sandmark, *EIR*’s Stockholm Bureau Chief, to the Schiller Institute Conference in Berlin Feb. 25-26, 2012.



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The importance of the Arctic project for the overall development of Russia's industrial infrastructure, including the space program, cannot be underestimated. Here, an Arctic explorer launches his boat into the icy waters during the International Polar Year 2007-2008.

medical specialists, integrating medical computerization and telecommunications technology to tap into medical assets and specialists available in other parts of the country. New medical clinics will be created throughout the region. Mobile medical brigades will be established for specialized treatment, including deployment of mobile stomatological and X-ray units. Ambulance services and airborne medical evacuation units will also be deployed.

The "Strategy" also broaches the problem, so prevalent in the dark northern Winters, of psychological depression. Additional outlays from the federal budget will be earmarked for creating centers of culture and community in the outlying regions. In the cities, it will be possible to develop an active artistic and cultural life. For the smaller towns and villages, multi-functional centers could be set up (cultural-sporting complexes), and mobile services in the cultural realm could be provided to the residents.

A Phased Approach

Three distinct phases are envisioned in the "Strategy." The first, scheduled to last until 2014, will be to create the preconditions for a stable socio-economic development of the Arctic region. This will include a coordinated response between federal and local author-

ities, the establishment of public-private partnerships for regional development, the creation of a financial platform for the needed infrastructural investment, regulating the federal laws governing utilization of the Arctic zone, and the establishment of the needed investment projects for regional development region.

The second phase, which is scheduled to last until 2017, calls for establishing an "innovative trajectory" for the region. This would involve, among other things, establishing the competitive predominance of Russia in the region's mining industry and in the transport of energy and mineral resources; a defense system for the Arctic zone, including a frontier and border guard infrastructure; comprehensive control of the adjacent waters of the region; developing the infrastructure of the sea route; and opening up some of the other mineral and maritime biological resources of the region.

The third phase, scheduled to be completed by 2020, involves the activation of sub-regional and international collaboration in order to form a general social-cultural and economic space, and division of labor together with the adjacent Arctic regions.

The plan for starting to build the ten emergency stations along the NSR has already been set into motion, with ground already broken on the first station. The Russian shipbuilding industry is constructing the next-generation atomic icebreaker, but is tied up in a financing dispute, an indication of the type of pitfalls the plan faces. It is a new design, and will be one of the biggest and most powerful icebreakers in the world. Four ships this year have already traversed the Northern Sea Route between the Pacific and the Atlantic Oceans, including the *Snow Dragon*, the first Chinese icebreaker to make the trip, and doing it in ten days.

The importance of the Arctic project for the overall development of Russia's industrial infrastructure, including the space program, cannot be underestimated. Building in the difficult conditions of the Arctic is not unlike building a station on the Moon or on Mars. Lessons learned from overcoming the difficult weather and geological conditions of the Russian Far North can be and will be applied as we move for construction in the

more far-flung reaches of our galaxy.

And as Lyndon LaRouche has always emphasized, by learning to build cities on the Moon, we will more effectively be able to build cities and renovate here on Earth. Conversely, by learning to build a habitat for Man in the frozen conditions of the Arctic or Antarctic, we will learn the capabilities needed for building a habitat for man on other relevant celestial bodies. For man, the explorer and scientist, the “New Frontier” is always just ahead of us.

But putting plans on the table is only the initial—and easiest—stage in such a grand undertaking. Mobi-

lizing the resources needed will require a determined political fight with those forces in Russia—and internationally—intent on satisfying the demands of the London-Wall Street financial oligarchy to impose austerity and population reduction, in a frantic attempt to save the bankrupt system. Unless decisive changes are made in the direction of a Glass-Steagall firewall for the world economy, many of these far-sighted plans will go unrealized. And the Arctic will become, not a project for world development, but rather a new arena for conflict among nations, fighting over the dwindling resources in a stagnant world economy.

Russian Government Gears Up for APEC Summit

Aug. 28—The Asia-Pacific Economic Cooperation (APEC 2012) summit will bring leaders from all around the Pacific Rim (but not U.S. President Barack Obama) to Russia’s Pacific coast port city of Vladivostok on Sept. 7-8. First Deputy Prime Minister Igor Shuvalov today gave a press conference on the Russian perspective for the meeting: Moscow wants a big surge in its Asia trade. “Our trade potential with these countries is underdeveloped; we’re barely using a quarter of it,” Shuvalov said.

Woven throughout Shuvalov’s remarks was the growing Russian concern, which President Vladimir Putin has also voiced, about its economy getting hit by the Eurozone crisis, because 50% of Russian foreign trade is with Europe and the majority of its budget revenue derives from foreign trade (oil and gas exports). “The future of faster growth for us is to have two strong legs, a European one and an Asian one,” he said. Russia will try to use the APEC summit to engage its neighbors more seriously in investing in Siberia and the Russian Far East.

Underinvestment there is a major issue right now. Victor Ishayev, the Presidential Representative to the Far East Federal District and now also Minister for Far East Development, warned July 2 that so far this year, “the federal government has slashed by 80%

the amount of investment going into the Far East. . . . The Far East can be developed only through federal investment and big projects,” but such projects have not been approved. Even the site-preparation work at a flagship project such as the building of Cosmodrome Vostochny, Ishayev said on July 24, is slogging along because only 2 billion rubles were disbursed for it this year, although nearly 8 billion rubles worth of work has already been done, and more like 15-16 billion rubles were needed.

With the Russian budget-formation process still operating under monetarist rules, the Finance Ministry last month announced it will seek to cut at least 12% from 2013 federal spending (equivalent to tens of billions of dollars). Since defense, debt service, and the social spending promised by Putin during the Presidential campaign are protected from cuts, the Finance Ministry seeks to slash funds for “the regions” and for Russian Railways, among other needs—exactly the spending areas that would include projects in Siberia and the Far East.

At a July session of a new State Council working group on “issues of improving the economic and demographic development of Siberia and the Far East,” Amur Region Gov. Oleg Kozhemyako, who heads the Council, cited a recent alarming poll that found 40% of the population of these regions wanting to leave because of economic stagnation and living conditions. Kozhemyako announced that the working group’s team of economists will prepare new proposals for deliberation this Autumn.

—Rachel Douglas