The Impact of Economic Development on Russia's Arctic Regions: Opportunities & Challenges

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http://www.cpsok.org

http://www.gazprom.com/press/news/2013/december/article181251/

DAY 1

Russia has a LONG northern coastline above the Arctic Circle.

Political Map of Asia

https://www.cia.gov/library/publications/the-world-factbook/docs/refmaps.html

Political Map of North America

Russia's and Alaska's borders are close to each other at the Arctic Circle.

https://www.cia.gov/library/publications/the-world-factbook/docs/refmaps.html

The Arctic is very important to Russia. Russians have been building settlements in its far northern regions since the 1500s in order to mine Arctic resources.

http://timeecocentric.files.wordpress.com/2011/05/ap071126057067.jpg?w=360

http://en.wikipedia.org/wiki/History_of_Siberia#mediaviewer/File:Taltsy_Museum_Irkutsk_Ostrog_Tower_200007280018.jpg

Today, global climate change is causing many unprecedented (never before seen) changes in the Arctic that are affecting animals in their natural habitat …..

http://someinterestingfacts.net/wp-content/uploads/2012/12/Arctic-Ice-Meltdown.jpg

…and the thawing of Arctic ice is creating both *economic* opportunities and serious challenges for Russia, its Arctic neighbors, and the global community as a whole.

http://barentsobserver.com/sites/barentsobserver.com/files/styles/grid_8/public/main/articles/komirepublic-river-winter-.jpg?itok=ft5Ol2gb

These NASA satellite images show the change in the thickest Arctic sea ice from 1979 to 2012.

http://e360.yale.edu/images/slideshows/nasa_seaice_1979_2012.jpg

Shipping goods from one part of the world to another covers many miles and can take a long time.

https://www.cia.gov/library/publications/the-world-factbook/docs/refmaps.html

With the thawing ice, new shipping lanes (that will save time moving cargo from one part of the world to another) will be open.

Northwest Passage and Northern Sea Routes

http://todaysmachiningworld.com/magazine/one-on-one-with-dr-rockford-weitz/

The thawing ice in the Arctic is helping to speed the process.

http://blogs.dw.de/ice/files/Gr%C3%B6nland-Eisberge-im-eisfjord-von-Ilulissat.jpg

Russia has a fleet of 28 nuclear powered icebreakers, and has developed expertise in operating in the harsh Arctic environment. By comparison, the United States has only 3 icebreakers.

Political Map of Arctic Region

https://www.cia.gov/library/publications/the-world-factbook/docs/refmaps.html

What do you see that could explain why Russia has so many icebreakers, as compared to the number belonging to the United States?

Political Map of Arctic Region

https://www.cia.gov/library/publications/the-world-factbook/docs/refmaps.html

http://www.dieselduck.info/historical/02%20articles/ns_Yamal.jpg

Some ways that Russian icebreakers earn money is by escorting ships through the North Passage, performing rescue missions, delivering supplies to remote Arctic settlements, accompanying ships exporting hydrocarbons, transporting tourists to the North Pole, and assisting undersea research stations.

http://barentsobserver.com/sites/barentsobserver.com/files/styles/grid_8/public/main/articles/icebreakeryamal.28rosatomflo.jpg?itok=KD1qJdrm

Russia has expanded drilling for oil and gas on its continental shelf, and is thought to have huge undeveloped reserves that are yet to be tapped.

Physical Map of Arctic Region

https://www.cia.gov/library/publications/the-world-factbook/docs/refmaps.html

http://1.bp.blogspot.com/-5HQdD9lnsJE/T6BKTpZGeoI/AAAAAAAAAcQ/JlhHZpKXrEc/s640/ArcticScramble1.png

DRILLING

RUSSIAN ARCTIC

http://i.telegraph.co.uk/multimedia/archive/02102/arctic_2102835b.jpg

The Russian oil company *Gazprom's* Prirazlomnoye oil platform is the first project for developing oil production on the Arctic Shelf.

All photos from: http://www.gazprom.com/press/news/201a3/december/article181251/

Gazprom's Prirazlomnoye oil platform

All Photos from: http://www.gazprom.com/press/news/2013/december/article181

Russia also has a growing tourist industry in the Arctic.

http://www.arctic-info.com/cached_image/5rf2p4ov2z0.jpeg

https://nicksmithphoto.files.wordpress.com/2010/01/north-pole-24.jpg

http://barentsobserver.com/sites/barentsobserver.com/files/styles/grid_8/public/main/articles/ArcticAdventure.jpg?itok=Rm7kxdHn

http://www.grida.no/photolib/thumbs/0c67cdc9-0590-459e-a428-1a1a34e811c3/medium/walrus-observed-by-tourists-apollonova-island-franz-josef-island-russian-arctic-national-park_140e.jpg

Russian economic development in the Arctic has many challenges as well……

http://media.economist.com/images/20090516/CFB958.gif

Conflicts or disagreements between countries, such as this boundary dispute between Russia and Norway, are common as rich resources are at stake.

http://barentsobserver.com/sites/barentsobserver.com/files/styles/grid_8/public/main/articles/militaryarcticmil.ru__0.jpg?itok=CneltqXO

http://img.rt.com/files/news/21/72/80/00/arctic-military-putin-security.si.jpg

Russia is building its military in the region to protect its borders and interests. In what ways can this be a source of conflict between nations?

http://cdn.rt.com/files/news/2d/51/40/00/27.n.jpg

http://globaldiscussion.net/uploads/monthly_11_2013/post-116-0-64228500-1384519141.jpg

http://foreignpolicyblogs.com/wp-content/uploads/bearbarrel.jpg

https://d233eq3e3p3cv0.cloudfront.net/max/700/0*qzGTPYpbdBtzjM77.jpeg

Pollution is also a problem in the Russian Arctic.

http://assets.knowledge.allianz.com/img/pollution_russia_norilsk_factories_emissions_rtr1o9it_q_49486.jpg

https://d233eq3e3p3cv0.cloudfront.net/max/700/0*qzGTPYpbdBtzjM77.jpeg

Rusting nuclear submarine.

http://static.themoscowtimes.com/upload/iblock/3ba/frost.jpg

http://bp3.blogger.com/_vHnNNTYeq2g/SGEjj-g1AaI/AAAAAAAAAFI/IILpQ4T_ccQ/s1600-h/building-crack2[1]++Photo+courtesy+of+Vladimir+E.+Romanovsky+

The melting permafrost, due to climate change, is creating problems for Russian economic development. What problems do you see in these pictures? Can any be solved? How, or why not?

Thawing Permafrost releases greenhouse gases.

http://barentsobserver.com/sites/barentsobserver.com/files/styles/grid_8/public/main/articles/tundra_kaninskaya.jpg?itok=DIrnarlH

Now read aloud together and discuss the handout *Russia's Arctic Development.* Use your Note-Taking Guide to record information you discover.

http://community.secondlife.com/t5/image/serverpage/image-id/142687iA6978BA241A4047B?v=mpbl-1

DAY 2

Play Video Clip 1:

*Russia's Arctic Ambitions

http://www.newscientist.com/data/images/ns/cms/dn24214/dn24214-1_300.jpg

Play Video Clip 2:

*Russia's Cold War on the Arctic

https://lienhardgeo2.wikispaces.com/file/view/russia-flag-arctic-seabed.jpg/292903874/russia-flag-arctic-seabed.jpg

http://static.planetminecraft.com/files/resource_media/screenshot/1234/IcebreakerYamal_3345818.jpg

North Pole Tourist Holiday Expedition on the Russian Nuclear Icebreaker Yamal

Play Video Clip 3

http://www.cartoonmovement.com/depot/cartoons/2011/01/uJo9dIXDSSqaKztNvhaoSw.jpg

http://www.thequotes.net/wp-content/uploads/2012/04/the-wealth-of-the.png