

Breaking the Ice: Who Controls the Northwest Passage? Lesson Plan

Adapted from material at http://archives.cbc.ca/politics/international_politics/topics/2349/

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Description: In this simulation, secondary students explore the potentials for cooperation and conflict that exist over sovereignty of the Arctic Sea. Through playing roles of decision makers of various nations, students learn about issues and positions involved in the waterway's sovereignty, security, and economic importance. There is another question that's often ignored – what about the "Eskimos" who live in the area?

Grade Level: 9-12 (High School)

Subject: Geography Course or AP Human Geography

Duration: 3 to 5 class periods – this lesson will take at least a day or two for reading and preparation, followed by one for negotiations and binding agreements writing. If time and interest permits, students may do further research before they negotiate.

Key Vocabulary: Northwest Passage; Arctic Sovereignty; Global Climate Change; Continental Shelf; Territorial Limits; Seabed.

Goal: Through playing roles of decision makers of various nations, students learn about issues and positions involved in control and sovereignty of the Northwest Passage. The situations the students will encounter reflect some of the major issues that are at stake in the control and use of the Arctic Sea.

Objectives: The students will

- Identify some of the most important issues that must be resolved in order to agree on a set of laws for control and sovereignty of the Northwest Passage.
- Identify the national and territorial interests of various countries and the Inuit, then make and defend proposals for the Laws of the Sea that reflect the national interest of a particular country.
- Discuss the importance of reaching agreement on the Law of the Seas and the difficulties of doing so.

Standards:

National Geography Standard 13 and Colorado State Standards 4.5: Students know how cooperation and conflict among people influence the division and control of Earth's surface.

NCSS Thematic Standards:

- Power, Authority, and Governance
- Global Connections

Background Information:

(Excerpts from the *K-12STUDY CANADA Resource Flier (Fall 2008)*, a joint publication by the Center for Canadian-American Studies, Western Washington University, and the Canadian Studies Center, Jackson School for International Studies, University of Washington)

Introduction

Teaching your students about the Northwest Passage is an excellent way to introduce them to one of the most interesting and relevant international issues today – the race for Arctic resources and territory. We have all heard about climate change, but few realize that as a result of climate change many countries are now staking claim to the Arctic. This has even raised concern over a potential polar war.

History of the Northwest Passage

Over 500 hundred years ago, the Western European nations began a competition to find a sea route to the Far East. This led to European settlements in the Americas and the extraction of tremendous resources. Spain got South America and all its gold, and the French got furs from North America. The British were a little less successful and therefore began looking for a way to make their mark. About 75 years after Columbus, a grand myth drew British explorer, Sir Martin Frobisher, to the Far North. A colleague had the notion that an Atlantis-type land lay in that direction and that it was rich in gold and provided the shortest route to the Orient. Frobisher convinced Queen

Elizabeth to fund his journey. Frobisher sailed into Frobisher Bay, Baffin Island in 1576, making landfall in today's Iqaluit, the capital of Nunavut. He believed that the land that formed the north of the bay was China and the lands to the south were North America. As proof of the success of his journey, Frobisher took back three Asian "specimens" (Inuit), as well as rock he assumed was gold. Queen Elizabeth gave him a hero's welcome and funded two more explorations. Though they later realized that they were not in Asia and that the rock was worthless quartz, Frobisher's voyages nonetheless kicked off the 400-year search for the Northwest Passage.

20th Century Tensions over the Northwest Passage

Dozens of explorers attempted to navigate the Northwest Passage in those 400 years many with harrowing tales of ice-locked ships, scurvy, and starvation. Finally, in the early 20th century, a Norwegian explorer, Ronald Amundsen, was successful. It took Amundsen three years to navigate the Passage – a bit too lengthy a period of time to constitute a viable shipping route. Britain eventually handed the Arctic islands over to Canada. At this time, there was little to worry about in terms of sovereignty over the region.

Then, in 1985 the U.S. sent a ship, the *Polar Sea*, through the Northwest Passage in part to assert that this was an international waterway. The Canadian government attempted to force the U.S. to request permission but failed in its efforts, causing the government some humiliation. The Canadian public was outraged. This was a direct challenge to Canadian sovereignty. The passage was still not viable for commercial travel but the incident certainly raised Canada's concerns about sovereignty over its Arctic lands and seas.

The Northwest Passage in the 21st Century

Today, all has changed. Now that the ice is melting and the Northwest Passage is opening, the issue over ownership is intensifying. For example, Canada and Denmark are fighting over a speck of stone (Hans Island) that lies between Greenland and Ellesmere Island. Russia planted a titanium flag on the ocean floor below the North Pole last summer staking its claim to the Far North. In 2008 the U.S. ran three research expeditions to measure the continental shelf off of Alaska in an effort to extend territorial jurisdiction. And, throughout all of this increased activity, the Canadian national Inuit association and the Inuit Circumpolar Council are intensely involved, adding yet another dimension to the discussion.

Materials:

- Handout #1: Who Owns the Arctic? Follows on Pages 5-6.
- Handout #2: Points of Conflict Follows on Page 7.
- Handout #3: Canada's Continental Shelf Follows on Pages 8-9.
- Handout #4: Northwest Passage Maps Follows on Page 10.
- Handout #5: Country/Aboriginal Roles Follows this lesson plan on Page 11-13.
- Handout #6: Time and Visitation Schedule Follows this lesson plan on Page 14.
- Handout #7: Negotiated Binding Agreement Follows this lesson plan on Page 15.
- Placards or flags for country names Download from <http://www.ip2location.com/flagsoftheworld.aspx> .

Procedures:

1. **Lesson Launch:** Write the word "sovereignty" on the board or chart paper. Discuss the meaning of the word and how it is derived from the term sovereign. Briefly explain to students that since the late 1960s, there have been a number of incidents in which Canada's authority, or sovereignty, over the waters of the Northwest Passage have been challenged, most often by the United States. Ask students to work with a partner to list reasons why Canada may feel that it rightly controls these waters. Make a list of reasons why other countries might challenge that authority. Share and discuss the lists (from CBC lesson: "Who Controls Northwest Passage?" at http://archives.cbc.ca/politics/international_politics/topics/2349).

2. **Introduction to Simulation Game:** Set up the following simulation scenario for students: The legal status of a section of the Northwest Passage is disputed: Canada considers it to be part of its internal waters according to the United Nations Convention on the Law of the Sea. The United States and most maritime nations consider them to be an international strait, which means that foreign vessels have right of "transit passage". In such a regime, Canada would have the right to enact fishing and environmental regulation, and fiscal and smuggling laws, as well as laws intended for the safety of shipping, but not the right to close the passage. In addition, the environmental regulations allowed under the UNCLOS are not as robust as those allowed if the Northwest Passage is part of Canada's internal waters."

3. Simulation Overview and Country Assignments:

A. The teacher should review the total agenda for the simulation. The students should look at and discuss the data and diagrams on Student Handout #1. Students should be familiar with basic terms such as continental shelf, seabed, territorial limits, etc. They should use world maps to help familiarize themselves with some of the issues described in this data.

B. Distribute Student Handout #2 (Points of Conflict), Student Handout #3 (Continental Shelf), and Student Handout #4 (Maps). Divide the students into six groups - Canada, United States, Russia, Inuit, European Union, Greenland/Denmark. Distribute Student Handout #5. Assign one country to each group.

C. Have the students read the roles of all the countries involved in the dispute and acquaint themselves with the maps and graphs. Tell them that their objective, as representatives of these nations, is to work out fair agreements on claims to the Northwest Passage.

4. **Individual Country Meetings:** Have the students meet in groups within their "nation" to consider their needs and goals as well as how they intend to pursue these goals in the coming international conference. Have students make a placard or flag for their country. Each country should discuss what it is willing to trade or negotiate. Teams should elect an ambassador and a prime minister and decide their needs.

5. **International Conference on the Arctic Sea:** Each group sends two ambassadors and a prime minister to negotiate with other countries to set up an international agreement. Students follow the "time and visitation schedule (Student Handout #6). Basic issues for consideration are:

- How far should a nation's jurisdiction extend?
- Should there be a national economic zones beyond territorial limits? If so, how far?
- Should the ocean be considered the common heritage of the people of the world? If so, should an international organization be formed to regulate mining of the seas?
- *Other issues that could be explored* include international law on navigation, international rights to oil and gas reserves, environmental degradation, and indigenous and human rights. Other issues may come up between particular countries and the broad issue, of importance to all, of what to do about resources and the deep seabed beyond national jurisdictions.

Begin a negotiating period during which countries may make bargains, agreements, or alliances with other countries. Formal agreements must be written and signed by the prime minister from the group being visited and visiting ambassador and teacher sponsor. Use the "Binding Negotiated Agreement" form (Student Handout #7). A spokesman for each group will ultimately share details about each agreement with others in one multinational meeting.

6. Closure: Debriefing the Game

Discuss what happened during the simulation so that students have a clearer sense of the dynamics and the relationship between the simulation and reality. Aspects you might explore:

A. What happened in the game? Were all nations able to reach their goals? If agreement was reached, was it fair to all nations?

B. Which issues were more difficult to resolve? What were the points of conflict? Do you think these same issues are the most troublesome in reality? Explain.

C. How were compromises reached during the simulation? Ask students what they learned about the skill of negotiating. What are countries willing to fight over?

D. In the class's judgment, what were the most crucial issues? Do students think the mileage limits should be uniform for all nations? Would that be fair?

E. What will be the consequences for the world if agreement is not reached?

Follow-up – Possible Discussion Questions:

1. Over what territorial issue are Canada and other countries clashing?
2. Why is the Northwest Passage issue so important to Canada and neighboring Arctic countries? Be specific.
3. Why has the Northwest Passage only recently become a contentious issue? Be specific.
4. What has been the standard sea route for Western merchant ships traveling to the Indies and the East for approximately the past 100 years?
5. Define sovereignty. Why does the U.S. say that Canada does not have sovereignty over the Northwest Passage and how does Canada dispute this assertion?
6. What actions has Canada taken to assert its sovereignty over the Northwest Passage?

Assessment:

- **Persuasive Essay:** You are a consulting diplomat for one of the countries involved in the “International Conference on the Arctic Sea” simulation. As you follow the proceedings, you take a position on one of the issues and contribute to future successful relationships between the countries by writing an article. Pay attention to the developments from all sides, choose what is important for your nation, and be able to articulate your perspective on how this issue should be resolved.
- **Self-Evaluation:** Have students complete the self-evaluation on the downloaded sheet from the CBC lesson: “Who Controls Northwest Passage?” on Page 16 of this document.

Possible Extension: It would also be useful for students to examine more closely the current Law of the Sea and discuss its major points. What problems have been solved? What problems still exist? How do the agreements reflected in this law compare to the agreements the students reached during the simulation?

You might have another country represented not located in the Arctic, but still hope to benefit from Arctic resources that belongs to everyone on the planet. You cannot vote or make decisions. You have to persuade others to adopt your position.

Teacher and Student Resources Worth a Click:

Northwest Passage Redux www.washingtontimes.com/news/2005/jun/12/20050612-123835-3711r/http://www.washingtontimes.com/news/2005/jun/12/20050612-123835-3711r/

Diary: Northwest Passage <http://news.bbc.co.uk/2/hi/science/nature/7033831.stm>

Opening the Northwest Passage www.udel.edu/Geography/DGAWeb2009/.../NorthwestPassage.pdf

Canadian Sovereignty on Northwest Passage <http://www1.american.edu/ted/ice/northwest-passage.htm>

As Ice Melts http://www.usatoday.com/news/world/2006-04-03-nwpassage-debate_x.htm

Canada and the Northwest Passage www.digitaljournal.com/article/265204

Canadian Arctic Sovereignty www.parl.gc.ca/information/library/prbpubs/prb0561-e.htm

As Arctic Ice Melts www.worldandi.com/subscribers/feature_detail.asp?num=24655

Northwest Passage: Wikipedia http://en.wikipedia.org/wiki/Northwest_Passage

Northwest Passage: Canadian Geographic www.canadiangeographic.ca/magazine/MA06/indepth/place.asp

Does Northwest Passage Still Matter? www.westernstandard.ca/website/article.php?id=2948

Northwest Passage: Myth or Reality? <http://redgreenandblue.org/2008/08/14/northwest-passage-myth-or-reality/>

Student News Daily: www.studentnewsdaily.com/daily-news-article/northwest_passage_open_for_business/

Is Canada’s Sovereignty Really Floating Away? www.scribd.com/doc/334471/The-Northwest-Passage-Shipping-Channel-Is-Canadas-Sovereignty-Really-Floating-Away

Opening the Northwest Passage Triggering International Disputes

www.globalclimatelaw.com/2008/09/articles/international-litigation/opening-of-the-northwest-passage-triggering-international-disputes/

David Jones: Canada’s Claims to the Northwest Passage (US Perspective)

www.globalclimatelaw.com/2008/09/articles/international-litigation/opening-of-the-northwest-passage-triggering-international-disputes/

Arctic Peoples www.arcticpeoples.org/2006/11/18/sovereignty-and-inuit-in-the-canadian-arctic/

Discussion Paper of Sovereignty and Security in the North http://docs.google.com/gview?a=v&q=cache:auwIWtrg-8oJ:www.gov.nt.ca/research/publications/pdfs/sovereignty_and_security_in_the_north.pdf+northwest+passage+sovereignty+lesson+plan&hl=en&gl=us

Who Owns the Arctic? <http://geology.com/articles/who-owns-the-arctic.shtml>

Canadian Defense Policy www.casr.ca/id-arctic-empires-2.htm

The Race is On www.santaiscanadian.com/TheRaceison.html

Suddenly, A Wider World Below the Waterline www.economist.com/displaystory.cfm?story_id=13649265

Preparing for a Sea Change www.washingtonpost.com/wp-dyn/content/article/2009/07/03/AR2009070301125.html

Student Handout #1 –Who Owns the Arctic?

Adapted from: <http://geology.com/articles/who-owns-the-arctic.shtml>

Who owns the Arctic Ocean and any resources that might be found beneath those waters? This question has enormous economic significance. The United States Geological Survey estimates that up to 25% of the world's remaining oil and natural gas resource might be held within the seafloor of the Arctic Region. Significant quantities of other mineral resources might also be present. Control of Arctic resources is an extremely valuable prize. These resources become more accessible as global warming melts the sea ice and opens the region to commercial navigation.



Collecting Seafloor Seismic Data in the Arctic.
© iStockphoto / westphalia

Freedom of the Seas

Since the seventeenth century a "freedom of the seas" doctrine was accepted by most nations. This doctrine limited a nation's rights and jurisdiction to the narrow area of sea along the nation's coastline. The remainder of the oceans were considered as common property that could be used by anyone. This was before anyone had the ability to exploit offshore resources.

Then in the mid-1900's concerns that long-distance fishing fleets were depleting coastal fish stocks triggered a desire in some nations to have greater control over their coastal waters. Then oil companies became capable of drilling in deep water and ideas for the seabed mining of manganese nodules, diamonds and tin-bearing sands started to seem possible. Any nation that claimed a greater distance from shore also made claim to valuable seafloor resources.



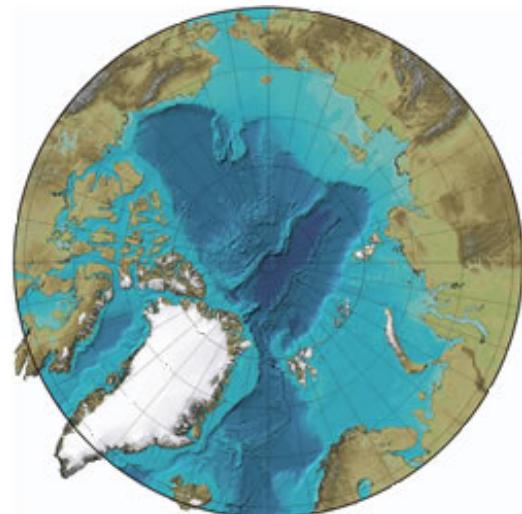
Arctic Ocean Political Map

Unilateral Claims

In 1945, the United States announced that it assumed jurisdiction of all natural resources out to the edge of its continental shelf. This was the first nation to depart from the freedom of the seas doctrine and other nations quickly followed. Nations began making unilateral claims to seafloor resources, fishing grounds and exclusive navigable zones.

A New "Law of the Sea"

The United Nations sought to bring order and equity to the diversity of claims being made by nations around the world. In 1982 a United Nations treaty known as "The Law of the Sea" was presented. It addressed navigational rights, territorial waters limits, exclusive economic zones, fishing, pollution, drilling, mining, conservation and many other aspects of maritime activity. With over 150 nations participating it was the first attempt by the international community to establish a formal agreement on how the seas can be used. It also proposes a logical allocation of ocean resources.



Arctic Ocean Bathymetric Map

Under the Law of the Sea, each country receives exclusive economic rights to any natural resource that is present on or beneath the sea floor out to a distance of 200 nautical miles (230 miles / 371 kilometers) beyond their natural shorelines. In the Arctic, this gives Canada, the United States, Russia, Norway and Denmark a legal claim to extensive sea floor areas that might contain valuable resources. (As of November, 2007, the United States had not yet ratified the Law of the Sea treaty. Those who have opposed ratification say that it would limit United States sovereignty)



Granite and kimberlite core from an Arctic diamond mine
© iStockphoto / M. Fuller

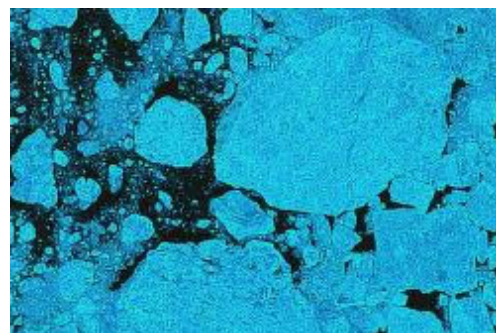
Continental Shelf Areas

In addition to the 200 nautical mile economic zone, each country can extend its claim up to 350 nautical miles from its shoreline for those areas that can be proven to be an extension of that country's continental shelf. To make this claim, a nation must acquire geological data that documents the geographic extent of its continental shelf and submit it to a United Nations committee for consideration. Most countries with a potential claim to the Arctic are currently mapping the seafloor to document their claim.



Aurora Borealis: an Arctic resource for everyone. ©
iStockphoto / Roman Krochuk

One feature of the Arctic Ocean that is of special note is the Lomonosov Ridge, an underwater ridge that crosses the Arctic Ocean between the New Siberian Islands and Ellesmere Island. Russia is trying to document that the Lomonosov Ridge is an extension of the Asian continental shelf, while Canada and Denmark (in regards to Greenland) are trying to document that it is an extension of the North American continental shelf. Any country that can successfully establish such a claim will gain control of a vast amount of seafloor resources in the central portion of the Arctic Ocean.



Landsat image of Arctic sea ice. Much of the Arctic is covered by ice but global warming is reducing its thickness and extent.

Looking Forward

In the future, as sea levels rise, current shorelines will migrate inland and the 200 nautical mile economic zone will move inland with them. In areas with gently sloping coastal land this landward advance of the sea could be a significant distance.

Perhaps those nations should exploit their most seaward resources first?

In summary, the Law of the Sea Treaty grants significant undersea portions of the Arctic to Canada, the United States, Russia, Norway and Denmark. These nations gain claim the natural resources on, above and beneath the ocean floor up to 200 miles from their shoreline. They can also extend their claim up to 350 miles from shore for any area that is proven to be a part of their continental shelf. All of these nations have gained significant oil and natural gas resources as a result of this treaty.

Student Handout #2 - Points of Conflict

Points of Conflict The basic laws of the sea were established in the 17th century and changed little until after World War II. Each nation had control of its coastal waters up to three miles from shore--the distance a cannon ball could be shot. Beyond that the seas were free for all. Recent developments changed this. Improvements in military and commercial technology reopened the basic question --*Who owns the seas?* Depletion of the land's natural resources and the desire for independence from OPEC-controlled oil (Organization of Petroleum Exporting Countries) made tapping seabed oil and minerals economically and politically attractive.

Why the sudden interest in the Arctic? Global warming is impacting the Arctic more than anywhere else on earth. Sea ice is melting at a rapid rate. This means that the natural resources that have been buried under the ice for millennia (gas, oil, and minerals) may soon be accessible. In addition, the passageway through Canada's Arctic archipelago is opening up. It could become feasible for shipping, cutting thousands of miles off the Panama Canal route. Canada argues that the Northwest Passage is hers. But Russia and the U.S. strongly disagree. They believe that the Northwest Passage is an international waterway and therefore open to commercial traffic.

How will we resolve this issue? It is extremely complex. Who owns the Arctic involves the United Nations Convention of the Law of the Sea (UNCLOS) the measuring of the continental shelf to prove extended territory, historic proof of continuous occupation of land, the Inuit "voice" in the debate, etc. From this one issue, you can involve your students in the study of science, history, law, and geography." (- excerpts taken from Jackson School of International Studies, West Washington University, K-12 Fall 2008 Newsletter.)

Directions: Familiarize yourself with the maps, diagram of the seabed and the ocean floor, (**Handout #3**) and with the data that follows. What are some of the potential conflicts?

The main battle is legal for now, fought through the United Nations Law of the Sea Convention, under which no country owns the North Pole or the Arctic Ocean, but neighboring countries can claim rights to exploit natural resources in an "exclusive economic zone" defined as 200 nautical miles from land. They can also claim further rights based on the location of the underwater continental shelf, if accepted by the Commission on the Limits of the Continental Shelf.

There is enormous room for dispute. In places, the shelf is as abrupt a ledge between shallow and deep ocean as the name implies, but in others it is gradual.

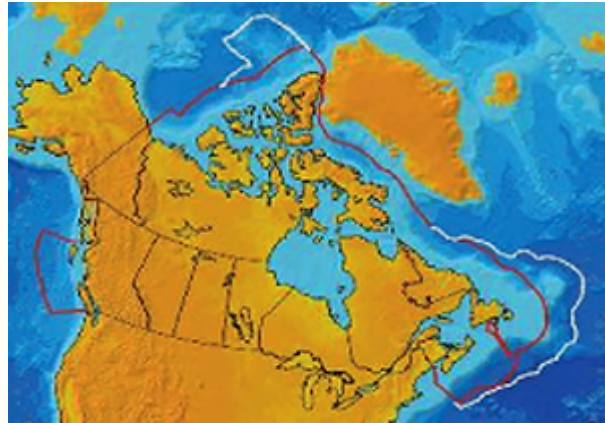
Data:

- The claimable areas of the continental shelf are 200 nautical miles (nm) but, in reality, the claimable areas are less. Some shelves stretch hundreds of miles before reaching the deep ocean floor which belongs to no state. While the rules aim to fix clear geological limits for shelves' outer limits, they have created a tangle of overlapping Arctic claims.
- The U.S. Geological Survey estimates the Arctic may contain as much as 25% of global untapped oil reserves.
- The Northwest Passage is a strategic trade route from the Atlantic Ocean to the Pacific Ocean through the northern Canadian islands. The transport of goods through the Canadian Arctic would save approximately 2,500 miles from Europe to Asia, making it a much more desirable trade route than traveling through the Panama Canal.
- The U.S. argues that the passage is an international strait with free passage for all, like other straits around the world. The Canadians, however, maintain their claim of full sovereignty of the islands/waterways and thereby asserts complete control over all activity to monitor its territories and protect its citizens, wildlife, and environment.
- In addition to the issue of commercial travel, Canada's northern archipelago is also believed to contain substantial oil/gas resources, and valuable mineral deposits. Many countries bordering the Arctic Ocean claim some part of it in the hopes of someday tapping the natural resources believed to be residing under the ocean floor.
- If countries have territorial jurisdiction beyond three miles, there is a serious problem for the great naval powers, since there would be a threat to free transit through straits. Under the long-standing principle of innocent passage, merchant ships can pass through straits even when they lie within the territorial jurisdiction of another nation. However, warships, submarines, and planes are not considered "innocent" and their passage could legally be blocked or restricted by the nation(s) with territorial jurisdiction over a strait. Thus, the great naval powers, such as the United States, are opposed to any extension of jurisdiction that could restrict the passage of their ships and planes through important straits.
- Current Arctic policy is a dense network of legal and political agreements between national and supranational stakeholders such as the International Maritime Organization (IMO), the Inter-national Seabed Authority and fisheries organizations such as the North East Atlantic Fisheries Commission (NEAFC).
- Only parts of the Arctic seabed are already well mapped. The race is on for each country to map the seabed to strengthen its claim. Arctic states are mapping and charting the ocean floor by sonar. Under the UNCLOS countries have 10 years in which to make a claim.
- Many of the nations of the world believe the oceans are the common heritage of mankind.

Student Handout #3 - Canada's Continental Shelf

Adapted from: http://cgc.rncan.gc.ca/org/atlantic/unclos_e.php [Webpage Last Modified 4/1/2009]

Canada is a coastal state, bordering three oceans, the Atlantic, Pacific and Arctic. About 40% of Canada's territory lies beyond the coast line beneath the sea and extends to 200 nautical miles (nm) offshore. Under the United Nations Convention on the Law of the Sea (UNCLOS) coastal states that have a wide continental margin, like Canada, can obtain sovereign rights over an area beyond the 200 nm - the extended continental shelf. This will give Canada the exclusive rights to the resources on and below the seabed in this area.



Map of Canada outlining the 200 mile exclusive economic zone (red line) and the possible limit of the extended continental shelf (white line).

Canada ratified the UNCLOS in 2003 and now has until 2013 to prepare a submission to the United Nations to define the limits of its extended continental shelf. The determination of this limit is based upon scientific data – the shape of the seafloor and the thickness of the sedimentary layer. Natural Resources Canada's expertise is focused on mapping the underwater geological formations in both the Atlantic and Arctic Oceans. Preliminary studies have estimated that the size of Canada's extended continental shelf could be as large as 1.75 million square kilometers – an area equivalent to the size of Canada's three Prairie Provinces.

Background

The continental shelf is the natural extension of the continent as it descends to the deep oceanic floor (see diagram). In order to determine the underwater limit of the continental shelf, NRCan researchers look at the seabed's topography (shape), and the thickness of deposits (sediment thickness). The mapping of these features uses sound waves, which travel through the water column and are then reflected by the seafloor (given its shape) or penetrate the upper layers and are then reflected (giving the sediment thickness).

Operations in the Arctic take place under challenging conditions. Weather and ice play an important factor in determining the success of those surveys. The field seasons are short, about six weeks in the spring for the on-ice surveys. These surveys use helicopters and the temperature needs to be cold enough so that no ice-fog forms, which prevents the helicopters from flying and could dangerously strand researchers on ice floes. Seismic operations in the Arctic use icebreakers and take place in the fall, when the ice is thinner.

Despite these challenges, the program is on track and NRCan is confident that the surveying and analysis will be completed by 2013.

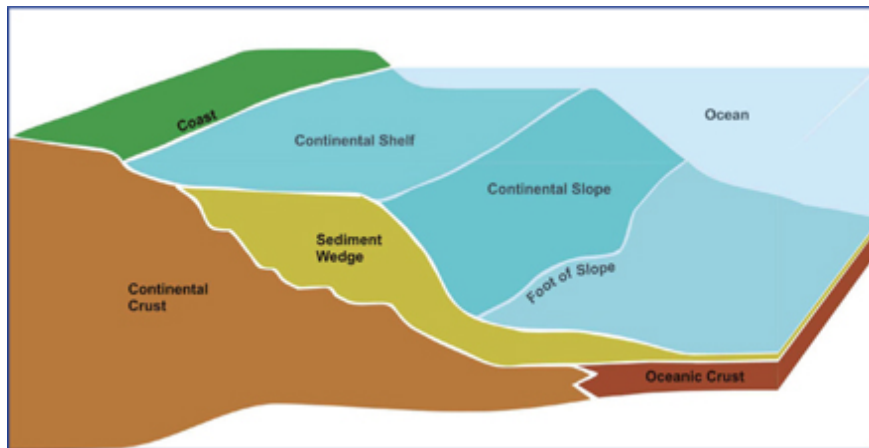


Diagram of an Atlantic-style continental margin including the continental shelf, slope, and rise.

Partners

The UNCLOS project is led by the Department of Foreign Affairs and International Trade, with the mapping component jointly managed by Natural Resources Canada and the Fisheries and Oceans Canada.

Wherever possible, Canada is collaborating internationally when conducting surveys in the North. In 2007, a joint Canada-Denmark seismic project was carried out from the Canadian Forces Station in Alert, located on Ellesmere Island in the Canadian Arctic. The goal was to determine if the Lomonosov Ridge, a submarine mountain chain, to the northeast, meets UNCLOS requirements for an extension of the North American continental shelf. Despite bad weather conditions, losing about 70% of the survey time, the joint operation was a success.

Canada is also exploring collaborations with the other arctic countries, Russia and the USA.

Making a Difference

Over the next three years, Canada will continue its research of two particular areas in the Arctic: the Beaufort Sea, in the Western Arctic; and the Lomonosov and Alpha ridges, submarine mountain ranges in the Eastern Arctic. A series of voyages in 2008, 2009 are scheduled for seismic surveying in the Beaufort Sea. All the data must be collected then analyzed before the limits of the continental shelf can be determined. The goal is to complete the surveying, data analysis and prepare a submission by the end of 2013.

Key Findings

The results of the 2006 Lomonosov Ridge study indicate that the area remains of interest for both Canada and Denmark. The results of the first year of seismic surveying in the Beaufort Sea in 2007 indicate that there are more sediments than anticipated.

The preliminary analysis of the 2007 seismic survey off Nova Scotia indicates that the sediments extend further offshore than anticipated.

For More Information

Defining "Canada's Extended Continental Shelf" [<http://www.international.gc.ca/continental/index.aspx?lang=eng>]



The research team from the 2007 joint Canada-Denmark seismic project in Alert.

Student Handout #4 - Country and Aboriginal Roles

Greenland/Denmark

“We are poised to be a major player in the Arctic, with an estimated 8.9 billion barrels of oil in the East Greenland Rift – and we have gained greater autonomy from Denmark now that we are legally a separate people from Danes, with Kalaallisut as our official language. People will become more interested in Greenland in the future due to the issues of “climate change, energy, and the geopolitical situation in the Arctic.” Greenland happens to lie at the center of the Arctic, between Europe and North America.”

Disputes and Claims:

September 2005, the Canadian Defense Minister, together with a brave outfit of Canadian soldiers, stormed an uninhabited rock formation off the eastern coast known as Hans Island and raised the Maple Leaf. This “provocation” and drew a fiery response from Denmark, which claims the island as part of Greenland. Denmark is to submit its own claim and is studying the Lomonosov Ridge, which runs through Greenland to Canada’s Ellesmere Island. We want to prove that the Lomonosov Ridge is an extension of Greenland, not Russia.

Denmark has urged all involved to abide by U.N. rules on territorial claims and hopes to sign a declaration that the United Nations would rule on the disputes. Both Denmark and Norway have said there is no need for a special treaty.

Besides territorial claims, the countries want to discuss cooperation on accidents, maritime security and oil spills with their Arctic neighbors.

Inuit and Qalunaat

Land Claim: Inuit and Qalunaat have traditionally had different attitudes toward the sea ice. Inuit have regarded it as a highway for travel and a platform for hunting sea mammals; while Qalunaat have traditionally regarded it as a danger to shipping and an impediment to their freedom. Inuit need to claim the distinctiveness of their perspective in order to assert their culture in the modern world.

Sovereignty: The creation of Nunavut was the outcome of the largest aboriginal land claims agreement between the Canadian government and the native Inuit people. The Inuit is one of the first indigenous peoples in the Americas to achieve self-government. We have the right to participate in decisions regarding the land and water resources, and rights to harvest wildlife on their lands. In the past, our perspective is that the Canadian Government took advantage of us to further its sovereignty agenda while ignoring our suggestions and demands. The importance of an equal partnership between the federal government and the Inuit regarding a future Northern Strategy should not be underestimated. Our people have a very practical interest in stewardship in the North. The Canada’s Arctic Waters Pollution Prevention Act is a good start, but without the ability to enforce this Act at present, the likelihood of protecting Northern resources is unlikely. The Inuit community has to be actively involved with both the management of the Northwest passage and Nunavut territory. How come when there is an immense area of land to settle in such as in Nunavut, no one, including Canada, the USA, and United Nations say anything at all. Complete silence!

Russia

Claims: We claim the Arctic as Russian Territory. In early August 2007, traveling in a mini-submarine, members of Russia’s parliament planted our country’s flag four kilometers (2.5 miles) below the North Pole at the climax of a mission to back up Russian claims to the region’s mineral riches. This was the first expedition of its kind to reach the ocean floor under the North Pole, the aim was to establish if a section of seabed passing through the pole, known as the Lomonosov Ridge, is in fact an extension of Russia’s landmass. We are claiming more than the 200 mile limit, extending to the North Pole. We believe that a continental shelf called the Lomonosov Ridge runs from Siberia on the Arctic seabed to the North Pole. As Russians we claim the region is based on international law that sets a 200-mile territorial limit stretching from the coast into open waters. This limit can be expanded if a country’s continental shelf extends further out to sea.

In addition, the our media has reported that the US had started its own similar expedition earlier and that this may have been a race between the two nations.

Canada

Sovereignty: "It's clear. It's our country, it's our property, it's our water. The Arctic is Canadian." Canadians...argue that it should be Canadian because it makes sense – stewardship, we're the responsible government — we have the Inuit to look after. Canada sees the Arctic as an internal waterway that should be regulated by Canadian national law. This legal position is sound today but, as the ice melts, there is the genuine fear in Canada that this sovereignty will float away, too. However, there are actions that can be taken and factors that could mitigate against a legal challenge.

Measurement of Seas: In 1951, the International Court of Justice's (ICJ) ruling on the Fisheries Case (United Kingdom v. Norway), accepted a new method of measurement of territorial seas that Canada preferred. This new method of calculation introduced the concept of straight baselines.

Rather than following the outline of a country's land mass, as was the more traditional method, the straight baseline method allows a country with offshore islands and/or very jagged coastlines to calculate its territorial seas from straight lines drawn from a point on the coast to the islands or from island to island. One then connects the dots literally and the water behind the lines is designated internal waters while waters away from the line and toward open waters are considered territorial seas. Hence, the term straight baseline. This method of calculation was reinforced seven years later at the first United Nations (UN) Conference on the Law of the Sea.

Mapping: Canada has committed \$51 million to map and identify the boundary of its continental shelf in the Arctic, pursuant to the United Nations Convention on the Law of the Sea (UNCLOS). Canada ratified the UNCLOS in 2003 and has 10 years from that date to determine the extent of its continental shelf. This mapping will help to determine Canada's exact sovereign rights in terms of economic control (beyond the UNCLOS - defined 200-nautical-mile exclusive economic zone) and resource exploration.

Security: Canada plans to spend \$7 billion to build and operate up to eight Arctic patrol ships in a bid to help protect its sovereignty. Canada's ability to detect and monitor such territorial incursions and to enforce sovereign claims over its Arctic territory in such cases has been questioned. Canada's identity needs to include monitoring of the Northwest Passage, and drawing new legislation for enforcement of Canadian sovereignty.

United States

Law of the Seas: The United States has signed, but never ratified, the Law of the Seas treaty, because of long-standing congressional opposition that dates to the Reagan administration. While former U.S. president George W. Bush supported the treaty, he was unsuccessful in swaying a small number of Republicans who successfully blocked ratification. Canada is hopeful the Obama administration will have more luck "applying pressure" with the U.S. Senate to take action, because of its increased Democratic majority. The US is the only large industrialized nation that has not signed the treaty. Since the U.S. hasn't ratified the Law of the Sea we cannot claim extra rights over the seabed, raising the question: Will the U.S. miss out on the world's last great Land Grab — the scramble for the Arctic?

Sovereignty: The US perspective is global. Hillary Clinton has "agreed to disagree" over sovereignty. The US maintains the Northwest Passage is "a strait used for international navigation" and disputes Canada's claim to sovereignty over the Northwest Passage: "The Arctic is an ocean; it is governed by the Law of the Sea. It doesn't require all these new laws and treaties. The United States has an enormous interest specifically in the Northwest Passage in addition to the global issues in keeping straits and navigations freely global."

Border Dispute: US-Canadian border dispute in the Beaufort Sea between Alaska and Canada's Yukon territory and an area that potentially has strong oil and gas resources. With US-Russia - the US State Department's response to Russian claim of an extended ice shelf is that "the best available scientific evidence suggests the ridges in question are oceanic by nature 'and thus not part of any country's continental shelf.'".

Measurement of the Seas: The older method of measurement (which is still used and favored by the US) simply calculated the territorial seas from a baseline not exceeding twelve nautical miles from shore that traced the outline of the coast. Therefore the baseline would exactly match the seacoast (but twelve miles out toward sea).

Security: The U.S. Congress is considering an \$8.7 billion budget reauthorization bill for the U.S. Coast Guard that includes \$100 million to operate and maintain the nation's three existing polar icebreakers. The bill also authorizes the Coast Guard to construct two new vessels. The Arctic has strategic significance for the United States in relation to missile defense and early warning systems that are either being planned or have already been built and notes the potential vulnerability of the United States to terrorist and criminal acts in the Arctic region.

European Union

The European Union is now aiming to play a greater role in this area. The Commission report identifies three major objectives: protecting and preserving the Arctic in unison with its population, promoting sustainable use of resources, and contributing to enhanced multilateral Arctic governance.

Protecting the region: The European Union sees the prevention and mitigation of the negative impacts of climate change and the adaptation to inevitable changes resulting from it as the most important goals of its Arctic policy. The European Union also emphasizes its support for the region's local and indigenous communities and claims indigenous rights to be one of its priorities. In addition, the Commission calls for an open dialogue between indigenous inhabitants using traditional hunting methods and the European animal rights movement.

Resources: The EU's Commission sees untapped hydrocarbon reserves in the Arctic as potentially playing a role in enhancing the European Union's energy security while also recognizing that exploitation will be slow due to the challenges posed by harsh conditions and environmental risks. It also argues that the fishing industry must be regulated both to ensure sustainability and to protect the rights of local communities. At present, Arctic communities are concerned that opening the Arctic Ocean to international fishing fleets will deprive them of their livelihood and leave them unable to compete with industrial fisheries on the open market. They are therefore calling for detailed management plans to avoid such consequences.

Navigation: The EU supports the principle of freedom of navigation and the internationally recognized right of innocent passage in newly opened routes and areas. It also argues that the existing obligations concerning maritime safety and environmental standards recognized by the IMO must be implemented. There is potential for conflict here with Canada. The European Union's emphasis on freedom of navigation and right of passage is seen as an attempt to question Canadian jurisdiction regarding navigation and safety in the Northwest Passage.

Governance: The Commission therefore calls for the further development of cooperative Arctic governance based on the UNCLOS, arguing that existing legal and policy instruments should be developed and adapted to the new conditions in the Arctic region.

Student Handout #5 – Maps of the Northwest Passage



Popular Northwest Passage Routes [from http://en.wikipedia.org/wiki/File:Northwest_passage.jpg]
Based on a NASA image at http://earthobservatory.nasa.gov/Newsroom/NewImages/images.php3?img_id=16340.



“Maritime Jurisdiction and Boundaries in the Arctic Region” Map

Researchers based the Arctic map design above on longstanding and more recent arguments over sovereignty and ownership. (Durham University). The color key for this map and additional details about existing agreements between nations can be seen at http://news.bbc.co.uk/2/shared/bsp/hi/pdfs/06_08_08_arcticboundaries.pdf

To best see where natural resources are in the Arctic, see the interactive **Arctic and Bordering Nations** map at <http://www.spiegel.de/flash/0,5532,18973,00.html> (*Staking Claim to the North Pole*). The map shows a variety of natural resource locations, including Arctic gas and oil reserves.

Student Handout #6 - Time & Visitation Schedule - Negotiations for International Agreements

<u>Country A</u>	<u>Country B</u>	<u>Country C</u>	<u>Country D</u>	<u>Country E</u>	<u>Country F</u>
Name:	Name:	Name:	Name:	Name:	Name:
First Visit to: F _____	First Visit to: A _____	First Visit to: B _____	First Visit to: C _____	First Visit to: D _____	First Visit to: E _____
First Visit to: E _____	First Visit to: F _____	First Visit to: A _____	First Visit to: B _____	First Visit to: C _____	First Visit to: D _____
First Visit to: D _____	First Visit to: E _____	First Visit to: F _____	First Visit to: A _____	First Visit to: B _____	First Visit to: C _____
First Visit to: C _____	First Visit to: D _____	First Visit to: E _____	First Visit to: F _____	First Visit to: A _____	First Visit to: B _____
First Visit to: B _____	First Visit to: C _____	First Visit to: D _____	First Visit to: E _____	First Visit to: F _____	First Visit to: A _____
Last Session:	Last Session:	Last Session:	Last Session:	Last Session:	Last Session:
Report Home w/agreements	Report Home w/agreements	Report Home w/agreements	Report Home w/agreements	Report Home w/agreements	Report Home w/agreements

Student Handout #7 - Binding Negotiated Agreement Form

At the International Conference on the Arctic Sea, the sovereign country of _____
hereby agrees to provide to the sovereign country of _____, the following provisions

in exchange for the following provisions

Signed in good faith on this _____ day of _____ in the year _____ by:

Signature of Head of State Signature of Head of State

[Title of Head of State - Name of Country] [Title of Head of State - Name of Country]

Signature of Ambassador Signature of Ambassador

Signature of Ambassador Signature of Ambassador

Signature of Teacher/ Sponsor as Witness

Who Controls the Northwest Passage? Educational Activities Download Sheet [Self-Evaluation Form]

Adapted from: www.cbc.ca/archives [CBC Radio and Television Archives Web Site © CBC]

On a scale of 1 to 10, circle to indicate how much you learned for each of the categories in the left column.

Understanding of the term “sovereignty”	Least 1 2 3 4 5 6 7 8 9 10 Most
Understanding of why Canada claims sovereignty of the Northwest Passage.	Least 1 2 3 4 5 6 7 8 9 10 Most
Understanding of why other nations claim they should be international waters.	Least 1 2 3 4 5 6 7 8 9 10 Most
Understanding of the Inuit and First Nations perspective on this issue.	Least 1 2 3 4 5 6 7 8 9 10 Most
Personal understanding and ability to articulate my position on this issue.	Least 1 2 3 4 5 6 7 8 9 10 Most
<i>The most interesting thing I learned in this activity was</i>	
<i>The best part of this activity was</i>	
<i>I want to learn more about</i>	