

# Regime Theory and Environmental Security in the Arctic

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ANNE KONRAD, MAY 31 2013

**Will the Arctic nations neglect environmental security over energy security? How may such behaviour lead to cooperation or conflict, and what are the global consequences for such objectives? Critically discuss using regime theory.**

'The Arctic Ocean is undergoing the largest environmental state-change on Earth. Removing the sea ice-cap fundamentally alters the Arctic Ocean, creating a new natural system with different dynamics from anything previously experienced by humans in the region, with geopolitical consequences that will influence sustainable development across the maritime region at the top of the Earth' (Berkman, 2009: 124).

While the Arctic has been of significant interest to environmental scientists for many decades, it was off the political agendas of state governments after the end of the Cold War. As there was hardly any prospect for commercial development in the Arctic in the 1990s, the region was neglected 'as the attention of the former belligerents focused elsewhere' (Huebert et al., 2012: 15). Due to the catastrophic effects of global warming, 'which are far more acute in the Arctic than elsewhere, partly because of the angle at which the sun's rays hit the ice' (Burkeman 2008), the polar region has become newly accessible. Over the past decade, summer-time ice in the Arctic has declined at an annual rate of 11%, and if it continues to melt at this rate, the Arctic Ocean may become seasonally ice-free in a few years time (Gupta, 2009: 174). While the melting of the polar caps at an ever-increasing speed is posing irreversible environmental risks, it is also generating vast economic opportunities. As a result, the Arctic has regained the attention of scholars of International Relations and Arctic security has re-emerged as an important issue on the political agendas of states who seek to gain influence in the region to secure their national interests (Huebert et al., 2012: 17).

In the context of the environmental changes that are currently taking place in the Arctic, this essay will focus on the governmental responses of Russia, Canada, Denmark, Finland, Iceland, Norway, Sweden and the United States, which will hereinafter be referred to as the 'Arctic states', as defined by the Ottawa Declaration (Arctic Council, 1996). We will examine some of the security strategy statements that have been released by the Arctic states concerning environmental protection and economic exploration on the North Pole, while also taking a short discourse on the involvement of other nations and international organisations such as China and the European Union. Regime theory's effectiveness in providing an analytical framework to understand why the Arctic nations may choose to cooperate in some matters and not in others will be assessed. The Arctic Council, the International Maritime Organisation and the United Nations Convention on the Law of the Sea will be used as examples to explain to what extent cooperation has succeeded in the Circumpolar North. Before concluding on the essay question, we will look at the political, environmental and economic consequences that the pursuit of the outlined state objectives will have on a global scale.

Berkman (2010: 2) defines environmental security as 'an integrated approach for assessing and responding to the risks, as well as the opportunities, generated by environmental state-change'. There is evidence that the Arctic states seek to ensure environmental security through cooperation, as they have realized that the region is 'on the verge of a dramatic and drastic transformation' (Huebert et al., 2012: 13). However, while there has been 'substantial effort to

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develop a cooperative governance regime based on goodwill and shared interests, the same Arctic states have begun to strengthen and expand their military and security capabilities in the Arctic' (Huebert et al., 2012: 13). Such behaviour may be explained through an analysis of regime theory.

Krasner (1982: 186, 191) defines regimes as 'principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given issue-area' and identifies their basic function to 'coordinate state behaviour to achieve desired outcomes in particular issue-areas'. Both Liberal Institutionalists and Realists accept regimes as an important feature of contemporary international relations, as both theoretical approaches recognize that a regime represents 'the response of rational actors operating within the anarchic structure of the international system' (Little, 2008: 302). Stein (1982: 304) identifies situations in which all actors have an incentive to neglect independent decision-making, namely when 'individualistic calculation leads them to prefer joint decision making because independent self-interested behavior can result in undesirable or suboptimal outcomes'. Stein refers to these situations as 'dilemmas of common interests and dilemmas of common aversions' (1982: 304). As Brosnan et al. (2011: 174) further explain, 'although actors may prefer unilateral action, they may find that they need to cooperate to attain certain outcomes protecting or advancing their interests as well as to avoid outcomes to which they are adverse'. With regards to the Arctic, mitigating the environmental risks posed by the melting of the polar ice caps constitutes a desirable outcome for the Arctic nations. Krasner (1982: 195), however, points out that 'the prevailing explanation for the existence of international regimes is egoistic self-interest', meaning that states rather use regimes to maximize their own interests and predict the behaviour of others. Young (1989: 352) further criticises that regime theory is 'flawed when it comes to accounting for the actual record of success and failure in efforts to form international regimes'. Therefore we will now examine how far regime theory can be applied to the Arctic and whether any success of regime formation is evident.

By signing the Ottawa Declaration in 1996, the eight Arctic states established the Arctic Council as a new intergovernmental forum, which they saw as 'an important milestone in their commitment to enhance cooperation in the circumpolar North' (Arctic Council, 1996). The council seeks to 'provide a mechanism for addressing the common concerns and challenges faced by [the] governments and the people of the Arctic'. Rosenthal (2012) points out that, while the forum initially dealt with tasks like monitoring Arctic animal populations, the increased accessibility of the Arctic waters has led the Arctic Council to deal with more substantive tasks, such as defining future port fees and negotiating agreements on oil spill remediation. As the council's current chairman Lind has declared, the Arctic Council 'has changed from a forum to a decision-making body' (Rosenthal, 2012).

The Arctic Search and Rescue Agreement, signed by the Arctic Council in 2011, was the first binding pact ratified by the eight Arctic nations. 'Conscious of the challenges posed by harsh Arctic conditions on search and rescue operations and the vital importance of providing rapid assistance to persons in distress in such conditions' (Arctic Council 2011: Article 2), the treaty seeks to 'strengthen aeronautical and maritime search and rescue cooperation and coordination in the Arctic'. Koring (2011) sees the treaty as the Arctic Council's 'first significant achievement' in terms of regime formation. However, he also criticises that the eight Arctic nations are leaving aside more crucial issues such as 'sovereignty, oil drilling, pollution and shipping'. Indeed, it is stated in the agreement that 'the delimitation of search and rescue regions is not related to and shall not prejudice the delimitation of any boundary between States or their sovereignty, sovereign rights or jurisdiction' (Arctic Council 2011: Article 3), meaning that it does not address any border disputes in the Arctic Ocean. The Arctic Search and Rescue Agreements thus serve as an ideal example for regime theory applied to the Arctic region: while states are hesitant to cooperate in areas that may put their national interests at stake and force them to make concessions to other parties, they have succeeded in forming a regime in area where their interests conjoin (Stein, 1982).

However, Huebert et al. (2012: 4) warn that joining these multilateral regimes is not sufficient, and members of the Arctic Council 'must renew a commitment to comply with existing obligations and implement their commitments as well'. The fact that the Ottawa Declaration (Arctic Council, 1996: Article 1a) explicitly states that it 'will not deal with matters related to military security' has emerged as a 'serious constraint to designing an integrated approach to Arctic Ocean stewardship' (Berkman, 2012: 126). While the Arctic Council aims to ensure sustainable development and environmental protection and has succeeded in being a high-level forum to address and solve some of these 'common Arctic issues', it still has no legal personality to create binding measures regarding environmental and

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political issues (Berkman 2010: 96). Thus, the formation of topical political regimes has in some cases taken place outside the Arctic Council. According to Berkman (2012: 129), the Barents Sea Treaty, which was signed by the governments of Russia and Norway in 2010, is a 'shining example of peaceful dispute resolution in the Arctic Ocean' as it settled a long conflict and delimited the boundary between the two countries in the Barents Sea (Norway and Russian Federation 2010: Article 1).

One legal framework that all Arctic states remain committed to is the United Nations Convention of the Law of the Sea (UNCLOS), which was adopted in 1982 and entered into force in 1994. It gives coastal states an exclusive economic zone of 200 nautical miles within which they have 'sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living (United Nations 1982: Article 56). Most importantly, UNCLOS allows coastal states to further claim sovereign rights to any continental shelf that extends from their territorial waters, up to a maximum of 350 miles from their coastline (United Nations 1982: Article 76). While UNCLOS intends to establish final and binding regulations on the limits of the continental shelf of a coastal state, it has also unleashed a 'scramble for the Arctic' as the involved nations have been 'eager to maximize their claims in order to capitalize on any future exploitation of the significant oil and gas reserves in the Arctic basin' (Huebert et al., 2012: 39). Russia, for example, submitted its claim in 2011, arguing that the Lomonosov Ridge, which extends all the way through the Arctic Ocean, is in fact connected to Russia's mainland and thus part of its continental shelf (Gupta, 2009: 175). However, the Commission on the Limits of the Continental Shelf rejected this submission, and advised Russia to re-submit its claim with more scientific clarity (Huebert et al., 2012: 39). The United States, on the other hand, 'has been hampered in the current jockeying because the Senate has refused to ratify [UNCLOS], even though both the Bush and Obama administrations have strongly supported doing so' (Rosenthal, 2012). Consequently, the USA has not been able to formally define their underwater boundaries under the accepted framework of international law.

As stated in the Ilulissat Declaration (Arctic Ocean Conference, 2008: 1), the five coastal states bordering on the Arctic Ocean – namely Canada, Denmark, Norway, Russia and the United States, accept UNCLOS as an adequate legal document that 'provides for important rights and obligations concerning the delineation of the outer limits of the continental shelf, the protection of the marine environment, including ice-covered areas, freedom of navigation [and] marine scientific research'. They agree to 'remain committed to this legal framework and to the orderly settlement of any possible overlapping claims' and currently 'see no need to develop a new comprehensive international regime to govern the Arctic Ocean' (Arctic Ocean Conference 2008: 2). Additionally, the International Maritime Organisation (IMO) serves as the 'United Nations' specialized agency with responsibility for the safety and security of shipping and the prevention of marine pollution by ships' (Berkman, 2012: 129). It has succeeded in developing a wide range of conventions, treaties and guidelines, committing to its initial purpose to 'facilitate the general adoption of the highest practicable standards in matters concerning the maritime safety' (IMO, 1948).

We can thus conclude that cooperation in the Arctic is indeed possible and that some political and environmental regimes have been established successfully to a certain extent. The Arctic states have realised that the transboundary processes and phenomena of climate change in the Arctic will influence their own security, and this international awareness has been reflected by the growth of environmental and ecosystem regimes (Berkman 2010: 49). Nonetheless, there is currently no legally binding regime in place to prevent or mitigate exploration and mining for mineral resources in the High North. Gupta (2009: 177) urges that serious consideration should be given to charting an international regime similar to the Antarctic Treaty, which established that Antarctica shall be used for peaceful purposes only and prohibits any territorial claims to sovereignty over the continent (Antarctic Conference, 1959, Article I). In a later conference, signatories of the original treaty also agreed to 'refrain from all exploration and exploitation of Antarctic mineral resources while making progress towards the timely adoption of an agreed regime concerning Antarctic mineral resource activities' (ATCM IX, 1977: 13). Bellinger (2008), however, rejects the proposal of an Arctic regime similar to the Antarctic Treaty and deems it 'unnecessary and inappropriate' as the conditions of the two regions are very different from each other:

'The Antarctic Treaty [...] governs a continent surrounded by oceans — a place where it was necessary to suspend claims to sovereignty in order to promote peace and scientific research. The Arctic, by contrast, is an ocean surrounded by continents. Its ocean is already subject to international rules [...] and its land has long been divided up,

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so there are few disputes over boundaries.'

Gupta (2009: 177) disagrees with Bellinger insofar that 'the exploitation of the region will make the existing rivalries acute'. In the light of increasing accessibility of the Arctic Ocean, 'interests are awakening to take advantage of new energy, shipping, fishing and tourism opportunities associated with the diminishing sea-ice (Berkman, 2012: 123) and despite their commitment to UNCLOS, the surrounding nations compete in their claims over access to Arctic resources. In 2007, Russian explorers planted their national flag on the seabed 4,200 m below the North Pole to further Moscow's claim to the Arctic (BBC, 2007). Although this bold territorial claim has been diminished as 'a stunt with no legal significance' (Bellinger, 2008), since then, all eight Arctic nations have been quick to release their Arctic policy strategies. As Berkman (2010: 98) projects, 'the overriding challenge in the Arctic Ocean is to balance national and common interests, recognising that states will always put their own interests first and foremost'. We will therefore now examine the individual interests of the Arctic nations in relation to the regional developments.

The global economic and environmental consequences of an ice-free Arctic are immense. Burkeman (2008) confirms that the accessibility of the Arctic Ocean would shift the global system of trade routes:

'The melting ice seems likely to open up the Northwest Passage, the fabled Arctic sea route linking the Atlantic and Pacific Oceans, to year-round commercial shipping. Nineteenth-century explorers dreamed of such a route; were it to become a reality now, it would transform how goods are shipped around the world – halving, for example, the distance by water between Japan and northern Europe.'

This development is of particular interest to the US and Canadian government, who currently dispute the status of the waters of the Northwest Passage. While Canada claims that the passage runs through its territorial waters, the United States challenges this view and has made freedom of navigation and the right of innocent passage a 'top priority' of its Arctic strategy (NSPD-66, 2009). The Government of Canada (2010: 4) seeks to 'exercise the full extent of its sovereignty' and is currently strengthening its physical presence in the Arctic. Like Russia, it claims that the Lomonosov Ridge is part of its continental shelf (Gupta, 2009: 175). The concluding statement of the Canadian strategy paper emphasizes that it will restore to self-help if national interests are at stake: 'Cooperation, diplomacy and respect for international law have always been Canada's preferred approach to the Arctic. At the same time, we will never waver in our commitment to protect our North' (Government of Canada, 2010: 27).

Berkman (2012: 127) projects that, 'while Arctic shipping routes may revolutionise international trade and increase fisheries in a seasonally ice-free Arctic Ocean, energy is likely to be the biggest economic driver'. The US Geological Survey (Gautier et al. 2009: 1175) has concluded that 'about 30% of the world's undiscovered gas and 13% of the world's undiscovered oil may be found [in the Arctic Circle], mostly offshore under less than 500 meters of water'. Following such scientific observations, the Arctic strategy released by Russia makes bold claims to Arctic resources. The Russian government states that it aims to 'transform the Arctic zone into a strategic resource base of the Russian Federation' which will provide a solution of problems of social and economic development and allow Russia to 'maintain the role of a leading Arctic power' (Russian Federation, 2008: 9). Most importantly, the strategy paper states that mutual agreements with other nations are only to be made 'taking national interests into account' (Russian Federation, 2009: 3). While Russia emphasizes its desire to maintain peace and cooperation and ensure environmental protection in the Arctic, its foreign policy statement underlines that national interests will be given priority (Berkman, 2010: 32), confirming our previous analysis of regime theory.

As a world leader in offshore oil technologies, and with oil and gas production in the North Sea declining, Norway is also turning its attention towards the Arctic (Gupta, 2009: 175). However, it is not only the Arctic nations that show interest in oil exploration in the North Pole. The European Union sees the Arctic as a potential source of oil and gas which would reduce its dependence upon imports from Russia (Gupta 2009: 176). Although the European Commission (2012: 3) commits itself to '[ensuring that] economic opportunities do not come at the expense of the highest environmental standards and the preservation of the unique Arctic environment', it has joined the scramble for the vast mineral riches of the Arctic being opened up by global warming, 'declaring that the region's resources could help stem anxiety about Europe's energy security' (Traynor 2008). Other global economic powers with scarce natural resources within their own territory are turning their interest on the Arctic as well. Mabey et al. (2011: 1)

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suggest that 'China, India and the rest of the developing world's growing middle classes will need oil and gas and other resources [and] high oil prices and advances in technology continue to support the drive towards offshore drilling in Arctic waters'. According to Rosenthal (2012), Arctic nations are particularly anxious about Chinese activity in Greenland, because 'the retreat of its ice cap has unveiled coveted mineral deposits, including rare earth metals that are crucial for new technologies like mobile phones and military guidance systems'.

Despite the immense economic opportunities posed by the increasing accessibility of the Arctic Ocean, the melting of the polar caps leads to far more negative than positive outcomes., which will ultimately impact the global economy. As Gupta (2009: 174) points out, the drilling for oil in the Arctic will in fact contribute to a rise in global CO2 emissions. Burkeman (2008) finds it 'bitterly ironic' that global warming, caused by burning fossil fuels, will 'unleash a new scramble for more fossil fuels'. Hence, all nations involved in Arctic exploration and exploitation will have to put their economic interests in natural resources, shipping and fishery aside, and address the vast environmental consequences that will arise from increasing activity in the region.

Complete melting of the Greenland ice sheet would today raise sea levels by 6-7 metres (Cuffey and Marshall 2000: 591). Freedman (2012) states that climate change and retreating Arctic ice may cause rare extreme weather events in several different ways: while the rising sea-levels increase the risk of flooding coastal areas [such as the Maldives], abnormally warm sea surface temperatures allow for hurricanes to soak up more energy from the ocean and thus grow in intensity. Scientists warn that 'hurricanes like Irene and Sandy could become more common as climate change continues to raise sea temperatures' (Collins 2012).

As already pointed out by Gorbachev in 1987, 'the community and interrelationship of the interests of our entire world is felt in the northern part of the globe, in the Arctic, perhaps more than anywhere else'. Not only is the Arctic Ocean a 'weather kitchen, the point where cyclones and anticyclones are born to influence the [global] climate', but it is also a region where political and military interests of the world's most powerful nations collide and may lead to potential conflict (Gorbachev 1987). Having analysed the core interests of the Arctic states, this essay concludes that their competition for energy resources, shipping routes and other economic advantages to be gained from access to the Arctic Ocean will put the unique environment of the region at risk. Huebert et al. (2012: 1) confirm this: 'Although the Arctic states invariably emphasize their desire to maintain a cooperative environment, several have stated that they will defend their national interests in the region if necessary.' Until now, the Arctic nations have been unable to establish an international legally binding regime to govern the Arctic (Arctic Council 1996). Nonetheless, the strategy statements of all Arctic states reveal that they do have common concerns and associated desired outcomes with regards to the Arctic, so opportunities for cooperation may emerge as dilemmas of common interests and aversions may be resolved through the establishment of multilateral regimes (Brosnan et al., 2011: 175). Howard (2009: 218) believes that some of the common interests may be of environmental concern, such as 'the need to protect endangered species, preserve ways of life that are under threat, or to prevent and alleviate the damage inflicted by oil spills or tanker collisions'. While the Arctic Council, IMO and UNCLOS may serve as sufficient forums for negotiation and the settling of disputes for now, Young (2009: 81) emphasizes the need to further establish stable limits and boundaries, enhance the role of the Arctic Council and integrate a number of specific issue regimes. 'Because the potential economic benefits of the opening of the Arctic are large, there is a substantial need for more concerted effort to resolve the risks so that they can be weighed against the benefits' (Huebert et al. 2012: 12).

Nonetheless, in the wake of a global need for oil and gas to cater for an ever-increasing population and struggle for economic growth, it is likely that the Arctic states will become subject to the 'tragedy of the commons' (Hardin 1968), where individual actors pursue their own interests to the detriment of the wider community. It would thus not be surprising if the Arctic nations fail to meet their commitments to cooperation and environmental protection, and seek to maximize their own interests and ensure energy security instead. The ultimate consequences of such behaviour will be irreversible and felt by global civil society, as stated by Hillary Clinton (2009, cited in Berkman, 2010: 119): 'The changes underway in the Arctic will have long-term impacts on our economic future, our energy future, and indeed, again, the future of our planet.'

## Bibliography

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Written by Anne Konrad

- Antarctic Conference (1959). *The Antarctic Treaty*. Washington, United States, 1 December 1959. Washington: U.S. Department of State.
- Arctic Council (1996). *Declaration on the Establishment of the Arctic Council*. Ottawa, Canada, 19 September 1996. Tromsø: Arctic Council.
- Arctic Council (2011). 'Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic'. *7<sup>th</sup> Ministerial Meeting of the Arctic Council*. Nuuk, Greenland, 12 May 2011. Tromsø: Arctic Council.
- Arctic Ocean Conference (2008). *The Ilulissat Declaration of Canada, Denmark, Norway, Russia and The United States of America from the Arctic Ocean Conference*. Ilulissat, Greenland 28 May 2008.
- BBC News (2007). 'Russia plants flag under N Pole'. *BBC News* [online] 2 August. Available at: <<http://news.bbc.co.uk/1/hi/world/europe/6927395.stm>> [Accessed 9 November 2012]
- Bellinger, J. B. (2008). 'Treaty on Ice'. *The New York Times* [online] 23 June. Available at: <[http://www.nytimes.com/2008/06/23/opinion/23bellinger.html?\\_r=0](http://www.nytimes.com/2008/06/23/opinion/23bellinger.html?_r=0)> [Accessed 9 November 2012]
- Berkman, P. A. (2010). *Environmental Security in the Arctic Ocean. Promoting Co-operation and Preventing Conflict*. Colchester: Routledge Journals.
- Berkman, P. A. (2012). 'Our Common Future in the Arctic Ocean'. *The Round Table: The Commonwealth Journal of International Affairs* [e-journal] 101 (2), pp. 123-135. Available through Taylor & Francis Online <<http://www.tandfonline.com/doi/abs/10.1080/00358533.2012.661527>> [Accessed 27 October 2012]
- Brosnan, I. G., T. M. Leschine and E. W. Miles (2011). 'Cooperation or Conflict in a Changing Arctic?' *Ocean Development & International Law* [e-journal] 42, pp. 173-210. Available through Taylor & Francis Online <<http://www.tandfonline.com/doi/abs/10.1080/00908320.2011.543032>> [Accessed 29 October 2012]
- Burkeman, O. (2008). 'A very cold war indeed'. *The Guardian* [online] 5 April. Available at: <<http://www.guardian.co.uk/environment/2008/apr/05/poles.endangeredhabitats>> [Accessed 10 November 2012]
- Bush, G. W. (2009). *United States National Security Presidential Directive (NSPD)-66: Arctic Region Policy*. Washington D.C.: The White House.
- Collins, N. (2012). 'Hurricane Sandy: what is causing the 'Frankenstorm'?' *The Telegraph* [online] 29 October. Available at: <<http://www.telegraph.co.uk/news/worldnews/northamerica/usa/9641294/Hurricane-Sandy-what-is-causing-the-Frankenstorm.html>> [Accessed 30 October 2012]
- Cuffey, K. M. and S. J. Marshall (2000). 'Substantial contribution to sea-level rise during the last interglacial from the Greenland ice sheet.' *Nature* [e-journal] 404. Available at: <<http://www.nature.com/nature/journal/v404/n6778/abs/404591a0.html>> [Accessed 1 November 2012]
- European Commission (2012). 'Developing a European Union Policy towards the Arctic Region: progress since 2008 and next steps.' *Joint Communication to the European Parliament and the Council*. Brussels: European Commission. Available at: [http://eeas.europa.eu/arctic\\_region/docs/join\\_2012\\_19.pdf](http://eeas.europa.eu/arctic_region/docs/join_2012_19.pdf)
- Freedman, A. (2012). 'How Global Warming Made Hurricane Sandy Worse'. *Climate Central* [online] 1 November. Available at: <<http://www.climatecentral.org/news/how-global-warming-made-hurricane-sandy-worse-15190>> [Accessed 3 November 2012]
- Gautier, D. L. (2009). 'Assessment of undiscovered oil and gas in the Arctic'. *Science* [e-journal] 324 (5931), pp. 1175-1179. Available through: Science Magazine <<http://www.sciencemag.org/content/324/5931/1175.full.html>>

# Regime Theory and Environmental Security in the Arctic

Written by Anne Konrad

[Accessed 5 November 2012]

Gorbachev, M. (1987). *The Speech in Murmansk at the ceremonial meeting on the occasion of the presentation of the Order of Lenin and the Gold Star Medal to the city of Murmansk*. Moscow: Novosti Press Agency.

Government of Canada (2010). *Statement on Canada's Arctic Foreign Policy*. Ottawa: Foreign Affairs and International Trade Canada.

Gupta, A. (2009). 'Geopolitical Implications of Arctic Meltdown.' *Strategic Analysis* [e-journal] 33(2) Available through: Taylor & Francis Online <[www.tandfonline.com/doi/abs/10.1080/09700160902775101](http://www.tandfonline.com/doi/abs/10.1080/09700160902775101)> [Accessed 28 October 2012]

Hardin, G. (1968). 'The Tragedy of the Commons.' *Science* [e-journal] 162 (3859), pp. 1243-1248. Available through: Science Online <<http://www.sciencemag.org/site/feature/misc/webfeat/sotp/pdfs/162-3859-1243.pdf>> [Accessed 12 November 2012]

Howard, R. (2009). *Arctic Gold Rush: The New Race for Tomorrow's Natural Resources*. London: Continuum International Publishing.

Huebert, R., H. Exner-Pirot, A. Lajeunesse and J. Gullede (2012). *Climate Change & International Security: The Arctic as a Bellwether*. Available through: Center for Climate And Energy Solutions <[www.c2es.org/publications/climate-change-international-arctic-security](http://www.c2es.org/publications/climate-change-international-arctic-security)> [Accessed 27/10/2012]

International Maritime Organization (1948). *Convention on the International Maritime Organization*. Geneva, Switzerland, 6 March 1948. London: IMO.

Koring, P. (2011). 'Arctic Treaty leaves much undecided'. *The Globe and Mail* [online] 11 May. Washington: The Globe and Mail. Available at: <<http://www.theglobeandmail.com/news/politics/arctic-treaty-leaves-much-undecided/article579628/>> [Accessed 9 November 2012]

Krasner, S. (1982). 'Structural causes and regime consequences: regimes as intervening variables.' *International Organization* [e-journal] 36 (2). Available through: Cambridge Journals <[http://journals.cambridge.org/abstract\\_S0020818300018920](http://journals.cambridge.org/abstract_S0020818300018920)> [Accessed 12 November 2012]

Little, R. (2008). 'International Regimes.' In: Baylis, J., Smith, S. and Owens, P. eds. *The Globalization of World Politics. An Introduction to International Relations*. 4<sup>th</sup> Edition. New York: Oxford University Press.

Mabey, N., J. Gullede, B. Finel, and K. Silverthorne (2011). *Degrees of risk: defining a risk management framework for climate security*. London: Third Generation Environmentalism Ltd (E3G). Available at: <[www.c2es.org](http://www.c2es.org)> [Accessed 27 October 2012]

Ninth Antarctic Treaty Consultative Meeting (1977). *Final Report*. London, United Kingdom, 19 September – 7 October 1977. London: Foreign and Commonwealth Office.

Norway and Russian Federation (2010). *Treaty Concerning Maritime Delimitation and Cooperation in the Barents Sea and the Arctic Ocean*. Murmansk, Russia, 15 September 2010. Oslo: Prime Ministers Office.

Rosenthal, E. (2012). 'Race Is On As Ice Melt Reveals Arctic Treasures.' *New York Times* [online] 18 September. Available at: <<http://www.nytimes.com/2012/09/19/science/earth/arctic-resources-exposed-by-warming-set-off-competition.html>> [Accessed 9 November 2012]

Russian Federation (2008). *Basics of the State Policy of the Russian federation in the Arctic for the Period until 2020 and for a Further Perspective*. 18 September 2008, Moscow, Russia. Moscow: Rossiyskaya Gazeta.

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Stein, A. A. (1982). 'Coordination and Collaboration: Regimes in an Anarchic World'. *International Organization* [e-journal] 36 (2), pp. 299-324. Available through: J-STOR <<http://www.jstor.org/stable/pdfplus/2706524.pdf?acceptTC=true>> [Accessed 11 November 2012]

United Nations (1982). *U.N. Convention on the Law of the Sea, Part VI: Continental Shelf*. New York: United Nations.

Traynor, I. (2008). 'Europe takes first step towards 'Arctic policy' to protect energy security'. *The Guardian* [online] 20 November. Available at: <<http://www.guardian.co.uk/environment/2008/nov/20/poles-arctic-europe>> [Accessed 31 October 2012]

Young, O.R. (1989). 'The Politics of International Regime Formation: Managing Natural Resources and the Environment.' *International Organization* [e-journal] 43 (3). Available through: JSTOR <<http://www.jstor.org/stable/2706651>> [Accessed 26 October 2012]

Young, O.R. (2009). 'Whither the Arctic? Conflict or Cooperation in the Circumpolar North'. *Polar Record* [e-journal] 45 (1), pp. 73-82. Available through: Cambridge Journals <[http://journals.cambridge.org/abstract\\_S0032247408007791](http://journals.cambridge.org/abstract_S0032247408007791)> [Accessed 8 November 2012]

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