

## Chapter Six

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### **Maritime Security and Arctic Issues: Challenges, Threats, and the Human Factor**

#### **Executive Summary**

- The strategic threats to maritime security have not disappeared, but their sources have changed. Globalization, growing economic interdependency, and dissipation of ideological controversy constrain the hostilities, whereas political or electoral considerations sometimes facilitate conflicts.
- The hostilities in connection with the nuclear programs of Iran and the DPRK are the most serious strategic security threats now. Unable to directly confront a technologically superior adversary, both nations can effectively use Special Forces and guerilla warfare in the maritime domain, as evidenced by the tragic incident with the Republic of Korea's *Cheonan*.
- The Arctic is becoming a focal point of interweaving interests for many actors, with the melting ice, oil and gas companies' interests, and prospects for navigation as the driving factors. The imperfection of the international law and contradictions between the Arctic and non-Arctic states hamper Arctic exploration.
- The degradation of human creative capacities facilitates the negative security and enhances safety challenges. The risk of human or man-made mistakes is increasing; the consequences can be catastrophic, especially for the fragile Arctic environment.

This chapter will review the existing and potential challenges to maritime security and its naval implications, as well as the security situation in the Arctic region. The geographic boundaries of the analysis will be limited to the Asia-Pacific region, which essentially means dealing with the maritime situations in three out of the four oceans.

## Maritime Security

The military/naval threats to maritime security in our region have not disappeared, but their sources have substantially changed. A Domsday nuclear-war scenario will hardly attract even a second-rate movie producer today. Global economic interdependency has become a paramount factor in reducing the possibility of war and limiting the scale of conflicts. The highly pragmatic and mutually beneficial relations between the two Chinas are a good example of this, especially compared to the situation in the Taiwan Straits 15 years ago.

This does not mean relations between the key actors will always be stable and manageable. *Per contra*, such relations will inevitably fluctuate sharply, resulting in periodic “crises” and “resets.” Nevertheless, each time it will happen for mere political, electoral, or PR-motivated reasons, not because of irreconcilable strategic or ideological differences.

Yet, we may not totally discard the threat of nuclear war today. It can start accidentally, as a result of a human, hardware, or software mistake. The idea is not the author’s paranoia, unfortunately; a further explanation of this assumption will be given.

Next are the more likely regional or local maritime conflicts. This threat is evident and potentially highly damaging to regional and global security. The Iran versus U.S.-led-coalition interface in the Strait of Hormuz is probably the most challenging hotspot today. The Korean Peninsula hostilities should be regarded as “threat number two” in the Asia-Pacific. However, confrontation is avoidable in both cases.

Syria, which is the only ally of Tehran, is possibly a key to settling the “Iran Crisis.” It is imprudent to make a political prediction in a rapidly changing situation. However, the author believes that the dramatic February 2012 UN Security Council vote on Syria would benefit the Middle East settlement eventually. This does not mean that the use of veto by Russia and China on a draft resolu-

tion proposing tough sanctions against the Bashar al-Assad regime was just a noble move. Both nations were motivated by purely pragmatic considerations. Moscow, in particular, could have easily used its influence on the besieged Syrian leadership well before the February vote to calm down the internal confrontation. The West, in its turn, should have finally realized the long-term consequences of the Arab Spring for its own security. The success of radical Islamists in Egypt was a wake-up call; the inevitable Syrian radicals' rise to power, if al-Assad's regime is forcefully eliminated, may easily become a passing-bell for Israel.

The possible fall of al-Assad would become a dramatic challenge to Shiite Iran, which regards the neighboring Arab Sunnite states as enemies no less than the Western Satan. Quite possibly, the Ayatollahs may choose to rapidly boost the country's nuclear program. In this case, the possibility of armed confrontation in the Gulf and the Arabian Sea will inevitably grow.

The outcome of a possible naval battle is clear – the Iranians have no chance to directly oppose the U.S. naval and air power for more than several days, maybe even hours. But it will mean very little. Unlike Iraq, split by Sunni, Shiite, and Kurdish rivalries and kept together only by the evil will of Saddam Hussein, Iran represents a completely different tradition and culture. The Iranian Revolutionary Guards successfully used speedboats for attacks against oil tankers in the 1980s; Tehran has much more sophisticated weaponry and trained personnel today. The experiences of Lebanon, Iraq, and Afghanistan clearly show that guerilla warfare can be successfully used to defeat a technologically superior enemy. The use of Special Forces, combat-trained marine mammals, and midget submarines in the shallow waters of the Gulf can have a surprising effect.

The tragic sinking of the ROK's *Cheonan*, supposedly by a torpedo fired from a North Korean midget submarine, on March 26, 2010, may well become a forewarning to major naval powers.

Trusting the conclusions of the Joint Investigation Report,<sup>1</sup> we have to admit the attack was a complete surprise to the crew of the *Cheonan*. But the crews of the ROK warships patrolling the maritime borders are highly professional and always on alert; they know the waters, islands, and coastline perfectly well. The *Cheonan* was a relatively modern warship specifically designed for patrol operations in shallow waters. Yet a midget submarine without advanced electronics and computer gear easily killed its adversary. If that is true, then what would the U.S. Navy face in the Strait of Hormuz?

Regarding the present security situation around the Korean Peninsula, two assessments can be used: “cautious optimism” and “uncertainties in the mid-term prediction.” The sudden death of Kim Jong-Il in December 2011 has not triggered the DPRK’s political collapse, against some expectations. The transition of power seemed smooth and trouble free. Maybe even too smooth, taking into consideration the obvious lack of experience of young Kim Jong-Un to play the role of the supreme national leader. There are signs that the top military ranks have become the most influential powers in the DPRK. This hampers the analysis of what is going on in Pyongyang now and what actions to expect in the near future. In any case, the maritime-security situation in Northeast Asia will remain complicated and volatile at least until 2020, mostly due to the possible developments within and around the DPRK.

At the same time, the naval build-up in key NEA nations – South Korea, China, and Japan (to a lesser degree)<sup>2</sup> – has become a new, challenging regional trend. The DPRK situation cannot be blamed for this build-up; neither can the “Threat from the North,” which ceased to exist more than a decade ago. The jealous desire to keep pace with neighboring rivals and develop a capacity to pro-

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<sup>1</sup> Joint Investigation Report on the Attack against ROK Ship *Cheonan*, Ministry of National Defense of the Republic of Korea, available at <http://www.nautilus.org/publications/essays/napsnet/reports/Cheonan.pdf>.

<sup>2</sup> Yuri Vedernikov, *Sea Dragons of East Asia: The Navies of Japan, Republic of Korea and China in the Beginning of the XXI Century*, *Tidskrift i Sjöväsendet, Royal Swedish Society of Naval Sciences* (2011, Issue 3), 274-285.

tect national interests in the maritime domain outside NEA is a possible motivating factor. The existence of unresolved territorial disputes between the three Northeast Asian nations adds to this drive; a lot more is hidden beneath.

Russia is luckily a “non-destabilizing” factor in NEA now, which opens an opportunity for Moscow to promote regional cooperation initiatives, including a dialogue with the DPRK. The APEC Summit-2012 in Vladivostok will be a perfect chance for Russia to demonstrate willingness to integrate into the Asia-Pacific regional architecture.

As for its navy, the keel-laying ceremony for the amphibious assault ship *Vladivostok*, the first *Mistral*-class ship ordered by Russia, took place in France in February 2012. Defense Minister Anatoly Serdyukov had earlier mentioned that the first *Mistral* would be based in the Pacific, but the Russian navy commander-in-chief Admiral Vladimir Vysotskiy declined to reveal to which fleet the *Vladivostok* would be assigned.<sup>3</sup> The Russian Pacific Fleet badly needs new ships of this class, which can provide full-scale support for anti-pirate operations in the Indian Ocean and other missions in the vast area of the Fleet’s responsibility. But there are problems with ship repair: the French-built vessels need to undergo medium repair and overhaul in France, which is 19,000 km from Vladivostok.

As for the situation with multinational, anti-pirate operations in the Arabian Sea and Gulf of Aden, it is necessary to point out their inconsistencies. The operational costs are extra high for all the participants. The legal aspects of dealing with sea pirates have not been settled at the UN, the IMO, and other international bodies. No breakthrough in this regard can be expected in the near future. At the same time, the officers and crews deployed to the Somalia coast are gaining invaluable experience and skills in at-sea interoperability and international collaboration, which is essential for maritime security.

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<sup>3</sup> Korabli tipa, “Mistral” poluchili nazvaniye. *Rossiiskaya Gazeta* (February 2, 2012), available at <http://www.rg.ru/2012/02/02/mistrali-site.html>.

Lastly, a brief remark on a common challenge to maritime security: how to provide safety in navigation. This problem has been in existence since our great ancestors first sailed the seas. It is still an urgent issue today, in the era of satellite navigation and electronic charts. The most modern ships collide all of a sudden, run aground, or sink in high seas. The tragicomic incident with the MS *Costa Concordia* hitting a rock in the Tyrrhenian Sea in January 2012, is a case in point of the human-factor importance, even for the most sophisticated engineering systems.

### **The Arctic**

The start of the full-scale exploration of Arctic resources has become extremely fashionable these days. The claims that global warming is leading to rapid melting of the Arctic ice, thus paving the way for oil and gas (O&G) extraction and commercial ship traffic in the Polar Ocean, are justified. However, this does not mean that Arctic exploration will start tomorrow. The reality, as usual, is much more complex and contains a number of caveats that can impede our movement toward the Arctic treasures.

The technologies of drilling and extracting O&G on the seabed in severe geographic conditions have improved to some degree, but not radically. The remoteness of potential Polar Ocean O&G extraction areas makes the construction, operation, logistics, and maintenance of oil rigs challenging and dramatically raises their costs.

The introduction of satellite-based, remote sensors helped to improve the situation with weather/ice monitoring in the Arctic, especially in terms of the quality of short-term forecasting. Mid-term and long-term forecasting is much more complicated, with no reliable model of ocean/atmospheric interaction in the North available so far.

The situation with search and rescue, disaster relief, and management capabilities in the Arctic is far from satisfactory. The joint Search-and-Rescue (SAR) system in the Arctic has only

started to form.<sup>4</sup> At various exhibitions, we see a lot of air cushions, air balloons, etc., and specially designed vehicles that could improve the capabilities for a mission in the Extreme North, but potential customers do not hurry to invest in it. The good, old ski and dog teams are often the best and only means of transportation there.

Communication and information technologies are probably the most advanced in terms of their Arctic application. However, the accessibility and quality of communications and satellite navigation in the polar zone generally fall back to areas lying to the south from the 70<sup>th</sup>-degree latitude. Russia's GLONASS should perform better than GPS in the Extreme North,<sup>5</sup> but it is still not very popular among end users.

The Arctic O&G deposits are not a myth. The estimated technically recoverable resources exceed 90 billion barrels of crude oil and 1,700 trillion cubic feet of natural gas, at the very least.<sup>6</sup> It is, however, important to keep in mind that 84 percent of Arctic O&G reserves lies off-shore.

There is enough oil on the global market today and its price (including transportation costs to major consumer economies) is acceptable. The ghost of the "second wave" of the global financial crisis helps stabilize the oil prices. The cost of the Arctic O&G will be 200 percent to 300 percent higher due to extremely difficult conditions for their extraction and transportation. What is worse, the delivery of O&G will be seasonally limited.

The beginning of commercial navigation via the Northern Sea Route (NSR) is probably the most attractive option for major East Asian economies. It explains their practical interest and determination to promote an active Arctic engagement policy. The economic

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<sup>4</sup> "Search and Rescue in the Arctic," (June 22, 20110, available at: <http://www.arctic-council.org/index.php/en/oceans/search-and-rescue>).

<sup>5</sup> Brian Harvey, , "Military Programs," *The Rebirth of the Russian Space Program* (Arctic, June 22, 2011), (Germany: Springer, 2007, 1<sup>st</sup> ed.), available at <http://www.arctic-council.org/index.php/en/oceans/search-and-rescue>

<sup>6</sup> United States Geological Survey, (USGS), (July 27 2008).

advantages are obvious: the “polar” route from Busan to Rotterdam is 40 percent shorter than the traditional “southern” route. Polar ice in waters adjacent to Russian coastline is melting faster than in the Canadian Arctic Archipelago, but it does not mean that all areas of the NSR will soon become safe for commercial navigation. Ship transit will be limited to two to three months a year for years ahead. Given the urgent and highly expensive requirements to equip the NSR with navigational means, create a reliable SAR system, and construct intermediate port facilities along the route, the prospects for commercial ship traffic in the Arctic do not appear very optimistic at the moment.

The security situation in the Arctic has not changed much in recent years. The announcement of the planned deployment of two Arctic brigades made by Russian Defense Minister Serdyukov in July 2011, will not affect the regional security situation. This initiative is fully in line with the recent moves by other Arctic nations eager to improve their defense capabilities in the North. It is a logical step, as the severe Arctic environment demands the presence of specially trained and equipped forces capable of performing a wide range of missions. Actual combat will definitely not be on top of their operational priorities’ lists, while SAR - HA/DR missions will be in high demand in the Arctic.

If the above arguments are correct, there seems to be only one reason for the “Arctic boom,” the global climate changes leading to the melting of the Arctic ice. Unfortunately, scientists cannot provide us with a reliable model of climate changes; their assessments are often contradictory. Accordingly, no exact business plans for the large-scale commercial exploration of Arctic resources can be developed today.

Yet the boom is obvious. The members of the Arctic Council, judging by their increasingly energetic moves, both domestically and internationally, are intent on maintaining the Arctic as their exclusive domain. At the same time, we see the intensification of multilevel activities of “Arctic-interested” countries, such as China,



Japan, and South Korea, which have already expressed their willingness and determination to engage in Arctic exploration.

Some Western experts insist that the 2007 Russian scientific expedition, during which the titanium national flag was planted on the Polar Ocean seabed at the Lomonosov range, pushed the situation and triggered the corresponding activities of other governments. Such allegations are questionable, at the very least. Anyway, it would be counter-productive to try to figure out which nation was the first to pull the trigger in the Arctic race. The idea had been in the air, helped to a large degree by clear imperfections of the international law.

First, it is a complicated compromise of the 1982 UN Law of the Sea Convention regime. Signed so far by 158 states, it provides the basic regulations for maritime law. However, this Convention was a result of a major tradeoff; it has a number of shortcomings and inaccuracies and needs reevaluation and further improvement. Moreover, it is not ratified by some key actors, including the United States. Second, the UNCLOS does not directly regulate the legal situation in the Arctic, where the principles of “sectoral division,” dating back to the nineteenth century, apply. The lack of universal legal regulations on the rights, privileges, and responsibilities of Arctic and non-Arctic states is creating a lot of uncertainty and may lead to serious conflicts when major actors decide to take the opening opportunities for Arctic exploration.

The economic exploration of the Arctic can hardly be pursued without solid government guarantees, or at least their support. Such support exists, and even the global financial crisis was unable to slow down the governments’ determination for Arctic exploration. We assume that the O&G corporations are lobbying their Arctic plans through respective government authorities for the following reasons:

- Potential fluctuations of O&G prices. In particular, if hostilities break out in the Gulf, the prices will rocket up and the Arctic oil may become lucrative.

- Blank spaces in international maritime law creating opportunities for possible rearrangement of access rights to potential areas of natural resources in the Arctic.
- The links and interdependency between the government officials and O&G corporations, which are highly ramified, complicated, sometimes cross-border and unaccountable.

Strictly speaking, there is nothing strange or malevolent in governments' willingness to protect their energy security interests, as well as in O&G corporations' desires to come ahead of rivals in a race for potential resources. Moreover, the transnational nature of O&G industry facilitates the scaling down of direct military-confrontation threats in the Arctic. However, there is another threat, maybe even more menacing, to the environmental security of the region.

The Arctic environment is extremely fragile, mostly due to a very short reproductive cycle. This means that the pace of natural recovery from sea pollution in the Arctic will be many times slower and sometimes simply impossible.

Oil and gas condensate is the most serious source of potential pollution in the Arctic. It is obvious that the construction of oil rigs and pipelines, as well as the loading and transportation of extracted petroleum resources in the Arctic, represents a highly challenging task both technically and administratively. The risk factors to be considered are many, while the price of any mistake can be disastrous. Even a relatively minor oil-pollution accident will demand a rapid deployment of salvage technique, personnel, and reagents from outside. A timely and adequate response cannot be guaranteed. In the event of major incidents, like the *Exxon Valdez* or BP Gulf of Mexico spills, large parts of the Arctic environment could be annihilated.

## Conclusion

The importance of the human factor as a serious security challenge should be stressed. The rapidly growing dependence on networking, software, and artificial-intelligence systems generates undesirable effects on human mentality. The generation of von Brauns and Korolevs, Sakharovs, and Oppenheimers, who could see problems in their entirety and suggest breakthrough solutions, has passed away. Their descendants, who were able to formulate the problems and control the work of software engineers, are giving way to a younger generation born and educated in virtual reality. Cruise liners run aground, satellites fall, nuclear-power-plant operators fail, NASA is left without piloted spaceships; these are clear symptoms of progressive degradation of human creative capacity. It is frightening, because tomorrow the mariners unable to steer their ships without e-Navigation support will sail into the Arctic, and software developers educated by *Star Wars* and *Half-Lives* will create new algorithms for advanced ABMDs.