The Comparative Study of Three NORTHEAST ASIAN Nations’ POLICIES and Countermeasures against Maritime Security Threats

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Abstract

The three northeast Asian nations, South Korea, China and Japan which are depending on the seaborne trade which is the majority of the trade, need active measures to respond to the international marine environmental changes and implement it.

This thesis is to look into the maritime security plans which is made by the United States and adopted by each nation and the three nations’ policy of new maritime security threats causes like cyber terrorism and to assess the appropriateness. This is also in order to suggest some assignments for the successful adaptation of the maritime security plans.

Maritime security has been a national agenda by terrorist attacks of pirates, maritime terrorism and shipping ports’ threats since the Cold War.

South Korea, China and Japan, the three nations in northeast Asia, are paying closer attention to maritime traffic security because of a high level of dependence on maritime trade as most exportations and importations are being made through marine transportation.

Especially nowadays there are new security threat factors using cyber terrorism and drones, so costal states need changes in security policy besides traditional maritime security.

The purpose of this thesis is to criticize the three northeast nations’ policy about new threats and the maritime security plan which is initiative to be drawn up and applied by the United States and also to present countermeasure.

Safety secure of sea lanes has become a national assignment which is directly connected to global survival to the three northeast Asian nations, South Korea, China and Japan which are dependent on trade through the sea.

This thesis shows that each nation has put in a great deal of effort in order to keep the maritime order from the threats like pirates interfering ships’ free passages and disconcerting marine trade orders and there have been considerable achievements. However, there are limits of united countermeasures because three northeast Asian nations have different stances in cultural, social and political situations.

It will be an important matter how to deal with security issues and unite continuous efforts against new threats liked cyber terrorism and drones with typical maritime security threats. I hope that stable environments of maritime security in eastern Asia come true through careful consideration about a few countermeasures shown on this thesis and reflection of the policy.

[Keywords] Policing, Pirate, Maritime Terrorism, Maritime Security, Cyberterrorism

1. Introduction

There are growing untypical threats such as ethnic group, religion, resource, terrorism etc. during the Post-Cold War era, although there were typical threats like the ideological confrontation between the United States and
the Soviet Union and horrors of war with nuclear weapons during the Cold War era. Maritime disputes are increasing as there are conflict factors including marine resources, sea lanes, delimitation of maritime boundaries etc[1].

The three northeast Asian nations, South Korea, China and Japan which are depending on the seaborne trade which is the majority of the trade, need active measures to respond to the international marine environmental changes and implement it.

This thesis is to look into the maritime security plans which is made by the United States and adopted by each nation and the three nations’ policy of new maritime security threats causes like cyber terrorism and to assess the appropriateness. This is also in order to suggest some assignments for the successful adaptation of the maritime security plans.


There is no concept of maritime security by UN maritime law or international law and it can be interpreted differently by institutions or contexts.

UN defines “Maritime security means protection of territorial integrity from direct threats such as general maritime crimes like pirates, sea robbery, terrorism and illegal speculation, ensuring safety from illegal and deliberate sabotage and unlawful fishery which depletes natural resources” on the report ‘Oceans and the Law of the Sea’[2].

US navy says “Maritime security is protection of sovereignty and marine resources, support of free open marine trade and operational mission for eradication of maritime terrorism, proliferation of weapons, international sexual crime, pirates, environmental damage and illegal maritime smuggling in non-doctrinal term”[3].

IMO explains “Maritime security is protection from illegal and willful misconduct”[4].

To sum up, maritime security can be defined “Comprehensive policy of actions and efforts for individual and nation’s safety against pirate, terrorism and transport weapons of mass destruction”.

2.1. Pirate threats and the international community’s policies

2.1.1. Pirate’s situations

The number of pirate’s attacks reported internationally have not been reduced although national and regional efforts to repress pirates. The international society paid about 3 billion dollars for the cost of damage from pirate attacks in 2013. It’s becoming severe threats in seaborne trade with economic damage[5].

The predominant feature is that the place of pirate attacks moved from Somalia and West Africa to Indonesia and Southeast Asia. There were 162 pirate attacks out of 245, about 66%, in this area[6].

The damage of human life is remarkably increasing. A total of 479 people were damaged in 2014; 4 killed, 13 injured and 442 hostages. A total of 304 people damaged in 2013; 1 killed, 21 injured and 304 hostages. This shows that pirate attacks have radicalized and brutalized.

2.1.2. International organizations and three northeast Asian nations’ policies

UN made punishment rules of pirates by maritime law(’82) and has assigned international legal justification of the international community participation and action through mandates of five times[7].

IMO has raised the problems of pirate attack’s damages since 2005 and advised to hire PCASP.

It has chosen a general assembly at the 27th special board of directors in 2013.

ReCAAP(Regional Cooperation Agreement on Combating Piracy & Armed Robbery against Ships in Asia) set up joint response system for eradication of pirate and ship armed robbery in Asia in 2004 and has strengthened international cooperation with
information exchange among united nations and training simulation of pirate attacks etc.

South Korea dispatched a LINX helicopter and a destroyer of 4500 tons to Africa sea sector in April in 2009 and killed 8 pirates, captured 5 pirates alive and transferred into the country and put them into trial from the hijacking of the third Jewelry in January in 2011. After that, Korea Coast Guard proposed the special law of dealing with pirates to smooth the progress of punishment in 2013 so it’s pending at the national assembly.

China has actively participated in anti-piracy operation, sending 2 destroyers and a supply ship to Somalia waters and the Gulf of Aden since March in 2009. They showed the USA and other countries that China was willing to carry out a bigger military role in the world through Chinese navy’s international anti-piracy operation[8].

Japan has sent 2 destroyers of 4000 tons and 2 of P-3C maritime patrol planes to Somalia waters and the Gulf of Aden since March in 2009[9]. They made “Piracy penalties and law of handling.

pirates” on 19 June 2009 and authorized their self-defense forces to act for protection of not only Japanese ships but also other countries’ ships[10]. There are also 8 coast guard international detectives on the board to arrest pirates in the act and running long-distance flight training once a year to Middle East and Europe for transporting pirates by affiliated aircrafts.

2.1.3. Evaluation

There is no problem by international law as three northeast Asian nations are fighting off pirates activities with warships as UN convention on the law of the sea. However, there are possibilities of legal wrangles in trial jurisdiction arresting and punishing pirates. There are also problems of legal grounds related to transportation by other countries’ convoys not by its own country’s convoy and the extent of damage.

Japan made the special law to accept this kind of situations by domestic law. However, South Korea and China are inadequate to deal with these problems as navy’s activities are based on the temporary law and punishment of pirates is applied by criminal law.

Japan has no legal issues as there is a maritime safety agency sheriff on the self-defense forces for arresting and detaining pirates apart from legislation policy, but South Korea and China need to supplement policies to prevent international legal dispute because they arrest and detain pirates by the military.

In addition, the pirate plunder is moving to Indonesia and Malaysia recently, so there is new need for action such as East Asian countries’ cooperation and the regional countries’ joint confrontation etc.

2.2. Marine terrorism threats and the international community’s policies

2.2.1. Marine terrorism threats’ situations

Marine terrorism has been increasing since the 20th century, this is because international society has prepared various countermeasures against air terrorism so terrorists have changed their targets to maritime vessels. For example, Portuguese Santa Maria’s hijacking in 1961, AchilleLauro’s hijacking in 1985, American destroyer U.S.S Cole’s explosion in the Gulf of Aden, Yemen in 2000, French oil tanker M/V Limburg’s crash near east coast of Yemen in 2002 etc.

The world economy cannot help being hit hard by blocking main sea lanes by terrorism as most world’s import and export goods are transported through shipping.

However, each country has a difficulty of coping with terrors because of various terrors’ targets like ships, ports, ocean facilities and limited resources. In addition, there is no clear definition of terrorism in international law, so there is concern of confusion about establishing policies and exercising of jurisdiction of the terrorists[7].

2.2.2. International organizations and three northeast Asian nations’ policies

IMO has adopted SUA(Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation) on 10 March
1988 because of Italian luxury cruise ship AchilleLauro’s hijacking on 7 October 1985 and has approved jurisdiction about “the destruction of ships and criminal damage of goods” so it has prevented from the states of affairs which criminals go unpunished by lack of proper jurisdiction.

However, SUA doesn’t apply to the ships which were used for terrorism and carried weapons of mass destruction so it’s added ‘transportation of terror related equipment’ in criminal acts and ‘boarding inspection and search provisions’ and proposed the regulation which is that the nations cannot refuse the request of criminal extradition in 2005.

South Korea joined in 1988’s SUA in May 2015 and made ‘Punishment of damaging ships and sea structures act’ as a domestic law, but hasn’t joined in 2005’s SUA. China and Japan also jointed in 1988’s SUA but not in 2005’s SUA.

In terms of countermeasures against maritime terrorism, South Korea is working on preclusive response activities of main ports and critical facilities and also for safety of liners’ passengers by Korea Coast Guard. Japan is performing for the same purpose as South Korea by Japan Coast Guard.

2.2.3. Evaluation

Three northeast Asian nations have formed a consensus with the international organizations and actively participated in joint confrontation with concerns about increasing marine terrorism since the 20th century. The three nations all joined in 1988’s SUA and have enforced the policy, but remained without joining in 2005’s SUA which was tightened regulations after the 9.11 terror.

This is regarded as the way they have taken because an official inspection for suspicion of terrorism in the international waters has advantages for the nation’s exertion of authority but they have to agree to other countries’ inspection requests on their own ships sailing in foreign waters so there are passive stances and apprehension of infringe on nation’s sovereignty.

The positive change of attitude is being requested like acceptance of international rules through domestic legislation as 2005’s SUA strongly impacts to other countries and will contribute to maritime terrorism prevention as an international legal justification and treaty.

2.3. Weapons of mass destruction transport threats and the international community’s policies

2.3.1. Weapons of mass destruction transport threats’ situations

The term ‘Weapons of Mass Destruction’ was used as “Threatening nuclear weapons which destroy everything” before Cold War. However, it’s defined as “The weapons which have tremendous destructive power that kills many people in a short time” in the UN Security Council resolutions 687.

After getting intelligence about North Korea’s cargo ship, Seo San Ho, carrying nuclear-related material to East Asia to Middle East area in December 2002, American and Spanish warships found 15 Scud missiles and warhead, but Yemen’s government admitted the import of the parts and promised to not to give to other groups so they couldn’t seize the weapons and discharged it. That caused the discussion specifically about threats of vessels carrying weapons of mass destruction in the international society.

Transport of weapons of mass destruction has emerged as a serious factor of threats of the world peace since North Korea carried out nuclear tests in Hamgyung-Do Whadae-ri 6 October 2006, Hamgyung-Do Gilju-Gun area underground 25 May 2009 and Hamgyung-Do Gilju-Gun area 12 February 2013 and also IS declared a nation of Islam and committed continuing terrorist acts in Middle East area.

2.3.2. International organizations and three northeast Asian nations’ policies

American president George Bush announced Proliferation Security Initiative (PSI) for the first time at the speech in Krakow, Poland in May 2003 and 11 nations submitted the bill jointly on the agreement about PSI principle of interdiction in Paris in September and got into the actions.
South Korea didn’t join in the PSI immediately due to concerns around the Korean peninsula military collisions but approved PSI’s principles and became a member of the PSI on 26 May, next day of the day when North Korea tested the nuclear weapons on 25 May 2009.

China has shown reservations because it could obliterate the freedom of the seas under international law but has agreed to the fundamental principles which prevent proliferation of weapons of mass destruction.

Japan has participated from the beginning as a joint initiative nation since 2003. Particularly they legislated ‘The special law enforcement about investigation of North Korean’s cargo ships’ and authorized Japanese Coast Guard and Self-Defense Forces to investigate North Korean’s ships if there are suspicious freight transports including missile-related materials. This is followed by UN mandate 1874 about nuclear weapons test on 15 May 2009 and a rocket launched on 5 April 2009[9].

2.3.3. Evaluation

Three Northeast Asian nations has agreed to PSI led by the USA as there are concerns about North Korean and Iranian marine transport weapons of mass destruction with terrorism. However, they have taken different actions because of relationships with North Korea.

South Korea has joined in lately because of worry about Korean Peninsula conflict and China shows a negative position as it could cause bad effects in alliance with North Korea. Japan has participated from the beginning of PSI with the burden of North Korea’s threat.

South Korea, China and Japan need to take active participation in PSI for the establishment of world peace which is common purpose of mankind and also for the prevention of war and large-scale massacre.

2.4. Ship and port cyber terrorism threats and the international community’s policies

2.4.1. Ship and port cyber terrorism threats’ situations

There are shipbuilding techniques combined with SAN(Ship Area Network) which connects one network with on-board equipment like engine system, automatic navigation system, automatic identification System, CCTV etc. and IT using communication service via satellite in recently built ships.

In addition, maritime communication infrastructure’s core, AIS(Automatic Identification System) is consisted of antenna, VHF transceivers, GPS receiver, radar, electronic chart display and information system, interface, monitor etc. with SOTDMA(Self Organized Time Division Multiple Access) techniques that mariners can judge the situation quickly with real-time monitoring of sailing. These functions are also used in Vessel monitoring system, speedy search and rescue and vessel track referrals etc.

Decoding software which can get the transferred information like ship’s name and unique identification number, type of ship and freight, real-time route, the port of destination and arrival date etc. from automatic identification system which is sent by VHF and portable radio receiver by personal computer’s USB interface are sold through the internet. There are also websites which can check sailing ships’ types and route information in real time around world.

It can be used in resending falsified information after collecting and analyzing information through these methods. It can make maritime systems useless and cause severe threats of ships’ safety because it can create confusion by sending forged information to other ships and land control center after getting the target ship’s information.

There was this kind of case that VTS(Vessel Traffic management System) was hacked in Julanam-do Jindo coast in South Korea on 22 March 2011, so the national radar of monitoring the southern coast was helpless and couldn’t do vessel tracking and monitoring and also wasn’t able to do control service for 20 days. In Mexico, there was offshore drilling facility was paralyzed by connecting with machine which infected by malware in the Gulf of Mexico.

2.4.2. International organizations and
three northeast Asian nations’ policies

The USA investigated about cyber safety management through US PATRIOT ACT and homeland security act and security breaches and also prepared a countermeasure after 9.11 terror.

Obama administration established presidential cyber coordinator which is called CZAR and authorized to control whole governmental cyber security policy[1].

South Korea doesn’t have a professional response department or organizations dealing with marine cyber terrors yet, although there are the national cyber security center belongs to the national intelligence service and cyber security agency belonging to national police agency against cyber terrors in land.

China and Japan also have a department of land’s cyber terror but don’t have a department of marine cyber terror, so it’s in vulnerable situation.

2.4.3. Evaluation

It is the fact that three northeast Asian nations haven’t been concerned much about the marine cyber terrors because there were almost none of marine cyber terrors in comparison with land’s cyber terrors to destroy important national facilities and to paralyze military facilities by North Korea and a few countries.

However, it’s predicted to have mass chaos if the marine cyber terrors occur and make the radar stop. Especially there are possibilities of large-scale deadly consequences and port state of paralysis if it paralyzes the fog signal equipment targeting large cruise ships and passenger liners or cause confusion on VTS’s operation in main ports.

It needs to prepare countermeasures against marine cyber terror which is a new type of terrorism, forming international cooperation network with international organizations like IMO and consultative groups against illegal cyber invasion like hacking and strengthening of international exchanges and reinforcing defense by virtual training etc.

2.5. Drone threats and the international community’s policies

2.5.1. Drone threats’ situations

Drones have rapidly come to the forefront by mega industrial IT corporation’s applicable planning announcement in early 2010 and they are fast changing from military purposes to commercial purposes with advancing technology.

The size of the done market in the world will be estimated at 891 hundred million dollars in 2022 from 65 hundred million in 2013 for 10 years.

Drones are used in agriculture, search and rescue, filming movies, photography shooting, observing nature, security, border surveillance etc. and also will be used in measurements of the sea floor, public waters management, fishing ground management so there are concerns that they could be threat factors of maritime security.

There was an international conference that 6 North Pacific Ocean Maritime security agency heads from South Korea, The USA, Canada, Japan, China and Russia joined at NPCGF(North Pacific Coast Guard Forum) in Seoul for 5 days from 14 to 18 September 2015. Japan which is in charge of Maritime Security Working Group introduced newly emerging maritime security threats, UAV(Unmanned Aerial Vehicle) for the first time at the international conference.

2.5.2. International organizations and three northeast Asian nations’ policies

The USA and each country have entered the legal review to regulate side effects that drones invade privacies and detect national security facilities but they couldn’t find equitable compromise between economic revitalization and regulation.

The USA is making regulations which specify certain standards of operator’s license retention within 1 to 2 years at FAA(Federal Aviation Administration).

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South Korea, China and Japan need to prepare a countermeasure because they don’t
have specific plans or policy about drones, although they have acknowledged the need for regulation against drone threats.

2.5.3. Evaluation

The three northeast Asian nations have recognized the drone as a new threat of ships and ports as there are high commercial demands of drones which were used only for military before. However, they couldn’t set up positive adjustment policies yet as drones’ purposes focused on economic effects against security.

North Korea keeps threatening with sending military drones to South Korea so it is becoming a serious threat factor. South Korea, China and Japan which are adjacent to North Korea need to establish a joint riposte to security risk of drones and to strengthen international exchange and information interaction.

3. Countermeasure against Maritime Security Threats

3.1. Active legislation enforcement

South Korea, China and Japan didn’t join at SUA about marine terrorism in 2005 and they are relying on existing criminal laws about eradication and punishment of pirates except Japan.

It is reckoned to be helpful to join in the international convention and accept into a domestic law for safety maintenance in east Asia against maritime security threat of increasing pirates in southeast Asia like Indonesia etc. and North Korea’s insistent nuclear missile threats.

It needs to prepare countermeasures establishing guidelines of certain standards with the international organizations as illegal actions is expected like destruction and paralysis of ship and port facilities by cyber terrorism and drones. For example, coast pilots and captains of ships have to carry portable AIS and also marine and port experts have to give positive consideration in imposing ports control system by at the same time[11].

3.2. Foundation of the international maritime police agency

All vessels are guaranteed freedom of sailing in other countries’ territorial waters as long as they don’t harm the ground rule of the innocent passage by international law. It is not easy to find out suspicious ships when they pass through other countries’ waters after maritime accident because of the rule.

In land, there is the international organization, ICOP(International Criminal Police Organization) established in 1956 with the purpose of quick solution of international crimes and prosperity of each country police agency. ICOP arrests and hand over wanted criminals who fled to other countries after commit crimes like terror, organized crime, crime against humanity, genocide, war crime, pirate, narcotic crimes, human trafficking, cyber crime, corruption and irregularity and intelligence-gathering activity etc.

If there is a unitary police agency for the maritime security, it can deal with the international crimes threatening maritime safety and support delivering related information to costal states quickly in marine accidents.

3.3. Reinforcement of international exchange and information interchange

NPCGF is an international exchange organization of maritime security in the North Pacific area which six nations including South Korea are joining in. It is composed of five working groups of drug smuggling, illegal fishing, crisis response, joint training and maritime security and is contributing to prevention and countermeasures against crime and terrorism. However, the members of nations are in the North Pacific area so it has a limitation of joint confrontation against maritime security threats as it doesn’t include Southeast Asian nations in reality.

Therefore, eastern Asian nations which are used for main transport routes need to join NPCGF for expansion of the international exchange.

3.4. Expansion targets of criminal jurisdiction
The criminal jurisdiction under the current international court of justice is specified in 7 sectors which are crimes of genocide, crimes against humanity, war crimes against people, war crimes against property and rights, war crimes about humanitarian operations and package identification. However, there is a limited response as the marine terrorism is not included in the crime against humanity.

The marine terrorism can cause catastrophe as an illegal act against humanity with piracy as mutual enemies in the international community, so it has to be punished in expanded targets of criminal jurisdiction beyond politics, religions, culture and ideology.

4. Conclusion

Safety secure of sea lanes has become a national assignment which is directly connected to global survival to the three northeast Asian nations, South Korea, China and Japan which are dependent on trade through the sea.

This thesis shows that each nation has put in a great deal of effort in order to keep the maritime order from the threats like pirates interfering ships’ free passages and disconcerting marine trade orders and there have been considerable achievements. However, there are limits of united countermeasures because three northeast Asian nations have different stances in cultural, social and political situations.

It will be an important matter how to deal with security issues and unite continuous efforts against new threats like cyber terrorism and drones with typical maritime security threats. I hope that stable environments of maritime security in eastern Asia come true through careful consideration about a few countermeasures shown on this thesis and reflection of the policy.

5. References

5.1. Journal articles


5.2. Books


5.3. Additional references

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