



**Hanging Together: Improving Deterrence
Through ROK-Japan Cooperation**



Issues & Insights
Vol. 13 – No. 7

Maui, Hawaii
February 2013

Pacific Forum CSIS

Based in Honolulu, the Pacific Forum CSIS (www.pacforum.org) operates as the autonomous Asia-Pacific arm of the Center for Strategic and International Studies in Washington, DC. The Forum's programs encompass current and emerging political, security, economic, business, and oceans policy issues through analysis and dialogue undertaken with the region's leaders in the academic, government, and corporate arenas. Founded in 1975, it collaborates with a broad network of research institutes from around the Pacific Rim, drawing on Asian perspectives and disseminating project findings and recommendations to opinion leaders, governments, and members of the public throughout the region.

The Young Leaders Program

The Young Leaders Program invites young professionals and scholars to join Pacific Forum policy dialogues and conferences. The program fosters education in the practical aspects of policy-making, generates an exchange of views between young and seasoned professionals, builds adaptive leadership capacity, promotes interaction among younger professionals from different cultures, and enriches dialogues with generational perspectives for all attendees. Fellows must have a strong background in the area covered by the conference they are attending and an endorsement from respected experts in their field. Supplemental programs in conference host cities and mentoring sessions with senior officials and specialists add to the Young Leader experience. The Young Leaders Program is possible with generous funding support by governments and philanthropic foundations, together with a growing number of universities, institutes, and organizations also helping to sponsor individual participants. For more information, see the Pacific Forum CSIS website, www.pacforum.org, or contact Nicole Forrester, Director – Young Leaders Program, at nicole@pacforum.org

Table of Contents

	Page
Acknowledgements	iv
Introduction by Cristin Orr Shiffer	1
Opportunities for Japan-ROK Bilateral Cooperation on Arctic Security By Nathan Pinkus	5
Standardizing Region-wide Safety and Security Practices for Transport Infrastructure By Ryo Hinata-Yamaguchi and Dong-Joon Park	13
Toward US-Japan-ROK HA/DR Cooperation in Asia By Linnea Duvall, Kei Koga, and Adam P. Liff	19
ROK-Japan Cooperation on Diplomatic Security By Jiun Bang, Stephanie Kang, and Seongho Hong.....	25
Materials of the Future: Rare Earth Elements and the Japan-South Korea Bilateral Relationship By Naoko Aoki and A. Greer Meisels	33
 <u>Appendices</u>	
Appendix A: About the Authors	A-1
Appendix B: YL Conference Agenda	B-1
Appendix C: YL Conference Participants	C-1

Acknowledgements

In February 2013, Pacific Forum CSIS brought 15 Young Leaders to Maui, Hawaii to participate in the 5th US-ROK and 6th US-Japan Strategic Dialogues.

Although not a focus of the formal, senior-level strategic dialogues (where discussions almost exclusively focused on bilateral military options for strengthening extended deterrence), the side-by-side events sponsored by the US Defense Threat Reduction Agency afforded the next generation attendees an opportunity to explore how the allies could take a more innovative and collaborative role in promoting peace and security in the region. This report is the essence of those discussions in Maui.

The Young Leaders' trilateral dialogue was explicitly focused on *Trilateral Alternatives to Extended Deterrence*. Their task was to think "outside the box" and brainstorm opportunities for expanded cooperation among the US, Japan, and ROK in fields and functional areas less directly related to traditional deterrence concepts. Young Leaders see the foundations of extended deterrence in a more comprehensive light, acknowledging that the major obstacle to deeper trilateral cooperation and enhanced extended deterrence in Northeast Asia is not operational, rather, it is the unfortunate state of bilateral political relations between Korea and Japan.

Our thanks go to the special guests, Dr. Kim Tae-hyo, Mr. Yoichi Kato, and General Noboru Yamaguchi who took time out of their schedules to speak to the Young Leaders.

Our thanks also go to Editor Cristin Orr Shiffer.

Introduction

By Cristin Orr Shiffer

Over a year has passed since US President Barak Obama announced the US pivot or rebalance to Asia, a central part of which was a call for strengthened alliances. Recent elections in both Japan and the Republic of Korea (ROK) indicate relationships with Washington are likely to remain strong; however, animosity between Washington's two central allies in the region continues to hamper cooperation and progress among the triad. Territorial disputes, mistrust, and historical legacies prevent the solidarity that is increasingly critical to all three states in overcoming present and future security challenges.

Specifically, the inability of the ROK and Japan to improve diplomatic and military coordination actively undermines the ability of the US to provide credible extended deterrence – on which both ROK and Japan rely. The poor relationship also threatens the US ability to secure its own national interests and the global common good of free maritime navigation in Asian waters.

On Feb. 4-10, 2013, in a period characterized by US difficulties to articulate exactly what the US rebalance to Asia means, rising concerns among Asian allies regarding the impact of US budget challenges on its defense commitments; recent domestic elections in the US, Japan, and the ROK; and worsening relations between Japan and the ROK, 15 Pacific Forum CSIS Young Leaders (YLS) joined senior experts in Maui for the US-Japan and US-ROK Strategic Dialogues sponsored by the US Defense Threat Reduction Agency.

The agendas for the two bilateral talks mirrored each other: perceptions of the US pivot or rebalance, recent domestic elections and their impact on the alliance, views of China's role in Northeast Asia, extended deterrence, modernizing the alliance, leveraging alliance networks, and the future of the alliance. Young Leaders attended the track-2 dialogues as observers; however, they were encouraged to engage senior participants during the conference and on the sidelines to share their perspectives and ask questions about current security and policy issues facing the alliances.

On Feb. 6, Japanese, US, and South Korean YLS participated in a day of trilateral dialogue and exercises. Discussion focused on extended deterrence – its effectiveness, what it was intended to deter, and alternative forms of trilateral cooperation that could be developed to decrease non-nuclear provocations and positively shape Northeast Asian regional security. YLS broke into small groups for a futures planning exercise aimed at generating “unknown unknowns” that could challenge US-ROK-Japan relations or cooperation.

A recurring theme during the trilateral dialogue was the need for the ROK and Japan to improve their relations and strengthen the third leg of the US-ROK-Japan security triad. Policy practitioners and analysts in all three states have long called for better cooperation among the ROK and Japan; however, alliance managers have watched

in frustration as ROK-Japan relations have further deteriorated rather than improved during this renewed US focus on Asia.

Aware of the substantial political and historical challenges facing attempts to improve the ROK-Japan relationship, it is crucial that leaders and publics in both countries are frequently reminded of the numerous ways enhanced relations could address many of the current challenges to alliance management and regional security.

For the ROK, improved cooperation with Japan offers the added benefit of advancing the “Global Korea” initiative. Through regional cooperation, the ROK public’s sense of South Korea’s regional and international position – and responsibilities – will be improved. Closer coordination with Japan could also offer the ROK new leverage against the DRPK.

Now that Japan has agreed to join the Trans-Pacific Partnership (TPP), the ROK is likely reconsidering accession. Both the ROK and Japan now have TPP as an additional mechanism to improve relations and establish greater economic ties.

Increasing intelligence sharing and signing a cross-servicing agreement, for example the shelved General Security of Military Information Agreement (GSOMIA) and the Acquisition and Cross-Servicing Agreement (ACSA) agreements, will improve both outcomes and ease of trilateral defense cooperation. Closer information sharing and security cooperation would also serve to reassure Japanese and South Korean publics about DPRK threats to their security and deter calls for offensive military buildups, including nuclear weapons. It would also help prevent an arms race in Northeast Asia. Joint security operations and funding between Japan and the ROK could help offset concerns about the impact of fiscal challenges to the US commitment to Japanese and South Korean security.

This volume argues that enhanced cooperation between Japan and the ROK can be used to improve relations and ultimately enhance extended deterrence and strategic reassurance critical to Northeast Asian regional security. It identifies five specific opportunities for mutual cooperation that currently exist despite the sub-optimal relationship between ROK and Japan. In each example, it candidly evaluates the feasibility of cooperation, describes how the opportunity enhances regional security, and develops specific recommendations for achieving further cooperation.

It is the hope of the Young Leaders who participated in this conference, now as authors of the following volume, that developing fresh ideas for cooperation – rather than merely joining the chorus calling for improved ROK-Japan relations – will provide current and upcoming foreign policy practitioners and alliance managers with practical steps that will bring about a closer ROK-Japan relationship. This improved relationship will enable enhanced strategic reassurance and extended deterrence that is critical to Northeast Asian regional security.

The chapters in this volume underscore two themes from the 2013 Young Leaders Trilateral Dialogue on Maui: 1) a desire to improve the utility of extended deterrence in preventing lower-level provocations; and 2) the increasing importance of the Japan-ROK relationship for maintaining and advancing regional security in Northeast Asia. Enhanced cooperation between the ROK and Japan is a strategy that not only strengthens the credibility of extended deterrence, but it also serves to enhance regional security by deterring lower-level actions that do not warrant a US nuclear response.

Frustrated with an extended deterrence policy that seems inadequate to deal with lower levels of provocation, Young Leaders sought to identify the conditions under which extended deterrence and strategic reassurance could be used as a more precise alliance tool. While each essay examined a different opportunity for increased ROK-Japan cooperation, all five evaluated feasibility of cooperation, described how the opportunity could contribute to extended deterrence, and developed recommendations for future cooperation.

The need for additional Track-1, 1.5 and 2 dialogues is a theme that runs through all five essays. This research suggests that establishing specialized, institutionalized, and frequent dialogues between ROK and Japan, and trilaterally with the US, should be a priority for alliance managers.

Whole-of-government cooperation and unified coordination among government, civil society, and private enterprise also characterize many of the policy recommendations. Authors defined security broadly, believing a diverse range of stakeholders are essential to developing successful coordination mechanisms.

The authors were well aware before undertaking this project of the significant challenges involved in building closer ROK-Japan ties. While not wanting to minimize these challenges, the authors as Young Leaders endeavored to develop this volume in light of the increasing importance of ROK-Japan rapprochement on Northeast Asian regional security. The Young Leaders deliberately attempted to think “outside the box” as a means to provide policy practitioners and alliance managers with specific, pragmatic, and actionable recommendations.

Increasing belligerence by China and North Korea may provide the impetus and political room to maneuver the ROK and Japan need to overcome domestic politics and historical mistrust. For the first time since 2009, defense ministers from the US, Japan, and the ROK held a trilateral meeting on June 1, 2013, during the Shangri-La Dialogue. In a joint statement, the ministers reaffirmed the importance of trilateral cooperation to regional and international security. Young Leaders hope this volume serves as a roadmap of practical ways to advance that trilateral cooperation.

Opportunities for Japan-ROK Bilateral Cooperation on Arctic Security

By Nathan Pinkus

Arctic security is a dynamic issue with implications that stretch far beyond geographic boundaries. Once a matter of environmental protection and sustainable development, Arctic security now encompasses significant economic and military components that affect all countries. Non-Arctic states, especially those in Northeast Asia, have increasingly focused on Arctic security and the massive opportunities that lie beneath the ever-shrinking polar ice. For the past decade, the Republic of Korea (ROK) and Japan have developed Arctic policies focused on economic aspects of Arctic security, as well as environmental and research aspects. Despite similar policies resulting from nearly identical Arctic political, geographic, and economic positions, Seoul and Tokyo have pursued their Arctic interests almost entirely independent of one another.

Mutual cooperation on Arctic security would not only yield substantial economic and geopolitical benefits for the two countries, but would also improve overall strategic trust between Tokyo and Seoul, leading to improved bilateral relations, a critical component of US extended deterrence and strategic reassurance in Northeast Asia. This chapter will introduce Arctic security from a Japanese and Korean perspective, review current Japan and ROK efforts related to Arctic security, assess the feasibility of mutual cooperation, recommend areas of cooperation between the two countries, and conclude by explaining how ROK-Japan cooperation on Arctic security can improve US extended deterrence policy in Northeast Asia.

Arctic Security for Japan and ROK

Arctic security entails political, economic, environmental, and military components. Issues range from researching the effects of climate change on polar ice to developing maritime security strategies to deter Arctic piracy. Each country with Arctic interests holds a different interpretation of Arctic security, placing greater emphasis on different components of security. Economic issues are the primary concern for Japan and the ROK, based on their similar positions as export-led, resource-strapped economies without territorial claims in the Arctic. Both countries have strong interests in securing sea lanes through the Arctic for the transport of goods to the major consumer markets of Europe and the United States, as well as in securing access to the natural resources of the Arctic. Their economic interests also include fishing, ship manufacturing, research, and tourism. Hard-security issues, such as protection of sea lanes of communication and the development of search-and-rescue capacity, relate to the economic interests of Japan and the ROK. As the frequency and scope of maritime transit through the Arctic increases, military aspects of Arctic security will be of greater importance. Environmental aspects of Arctic security are also a major focus for the ROK and Japan. Both countries are concerned about the global and regional effects of climate change resulting from the melting polar ice cap and have great interest in mitigating potential disastrous consequences of rising sea levels.

Current Arctic Efforts

Japanese and Korean Arctic efforts can be divided into three primary categories – research, economic, and geopolitical. For non-Arctic states, the ROK and Japan have considerable experience researching the Arctic. For nearly 50 years, Japan has conducted research on Arctic issues, focused primarily on environmental issues and oil exploration. Japan established a permanent research presence at Ny-Ålesund, an archipelago off the northern coast of Norway, in 1990. The ROK did the same in 2002. The ROK's first icebreaker, *the Araon*, became operational in 2009 and completed a successful research trip to the Arctic area in July 2010. Meanwhile, Japan has three icebreakers, one assigned to the Japanese Self-Defense Force and two assigned to other government organizations for research purposes. Both countries have technologically advanced Arctic research capabilities and are members of international scientific organizations dedicated to Arctic research. Through these international organizations, Japan and Korea have already cooperated to a degree on Arctic research. But beyond multilateral research efforts, focused largely on environmental issues and energy exploration, little other cooperation exists between Tokyo and Seoul on Arctic issues.

Regarding Arctic economic initiatives, Japanese and ROK economic efforts are largely two-fold – develop and secure access to Arctic shipping lanes and partner with Arctic states to gain access to untapped oil, natural gas, and mineral resources. Utilization of Arctic shipping lanes, known as the Northeast (over Russia) and Northwest (over Canada) Sea Passages, would shorten distances between Northeast Asia and the US and Europe by 30 to 50 percent by comparison with the traditional routes through the Indian Ocean and the Suez Canal, or across the Pacific and through the Panama Canal.¹ The benefits of such routes are not just reduced transit time, but also significantly lower fuels costs as well as a lower risk of piracy.

As resource-strapped nations dependent on energy imports, Japan and the ROK are highly interested in securing a share of the estimated 13 percent of the world's undiscovered oil and 30 percent of the world's undiscovered natural gas that lies beneath the Arctic.² With no territorial claims to Arctic resources, the ROK and Japan have sought to leverage their strong research capabilities to form economic partnerships with Arctic countries. Japan has partnered with Canada on hydrocarbon research and development in the Arctic and the ROK has conducted joint oil exploration with Russia.

In January 2011, two major Japanese trading firms announced plans to participate in Russia's largest-ever liquid natural gas (LNG) project to be developed on the Yamal Peninsula in the Arctic Ocean.³ Meanwhile, the ROK, with the world's largest shipbuilding industry, has produced a vast majority of the icebreakers and Arctic faring

¹ National Institute for Defense Studies Japan, "2011 East Asian Strategic Review". <http://www.nids.go.jp/english/publication/east-asian/e2011.html> (accessed 28 March 2013).

² Heather Conley, "A New Security Architecture for the Arctic." *Center for Strategic and International Studies*. http://csis.org/files/publication/120117_Conley_ArcticSecurity_Web.pdf Jan. 2012, (accessed 28 March 2013).

³ Chikako Mogi, "Japan LNG Reliance Grows with Latest Nuclear Setback," *Reuters*, May 2011 (accessed 28 March 2013).

ships. As a result of their separate Arctic economic efforts, the ROK and Japan have already seen their interests become intertwined. In December 2012, the South Korean built LNG tanker *OB River*, owned by Russian energy giant Gazprom, became the first LNG tanker to transit the Northeast Passage and deliver LNG to Japan.⁴

From a geopolitical perspective, Tokyo and Seoul have each tried to increase their standing and influence on Arctic issues, in part through their research and economic efforts. In 2008, the ROK applied for permanent observer status on the Arctic Council, an international consultative body on nonmilitary related Arctic issues comprised of the US, Canada, Denmark, Russia, Norway, Finland, Sweden, and Iceland. Japan applied for permanent observer status in 2009. Both have enjoyed ad-hoc observer status for the past five years. Each country has established governmental and non-governmental organizations to deal with Arctic issues. In the ROK, the Korea Polar Research Institute (KOPRI) serves as the primary government-funded organization overseeing the nation's polar research activities. The Korea Maritime Institute (KMI), along with KOPRI, handles the ROK government's Arctic economic issues, while environmental, safety, and legal issues are managed by the Korean Ministry of Foreign Affairs and Trade.⁵ In Japan, a bloated bureaucracy stretching across 10 different government agencies manages Japan's Arctic policy with the Ministry of Foreign Affairs taking the lead in official policy and the National Institute for Polar Research (NIPR) taking the lead for Arctic research.

Feasibility of Cooperation

Overall, Japan and the ROK are far ahead of most other non-Arctic states when it comes to enacting Arctic research, economic, and geopolitical initiatives. Both countries have the same goals in mind – develop and secure access to the Northern Sea Passages, gain access to Arctic natural resources, promote environmental protection and sustainability, and maintain peace and security in the Arctic. Yet they continue to pursue their policies independent of each other. Given the striking similarities between the countries when it comes to their geopolitical position vis-à-vis the Arctic and their desired outcomes for Arctic developments, how feasible is mutual ROK-Japan cooperation on Arctic security?

Although not anywhere near the most pressing issue for either country, Arctic security is strategically imperative to the security of both the ROK and Japan. Arctic security has serious environmental, economic, and geopolitical implications for Tokyo and Seoul. With expansive coastlines and economies highly reliant on their surrounding waters, Japanese and Koreans would face some of the most serious consequences from higher global sea levels caused by melting ice caps. And with record low levels of polar ice being set each year, no nation can afford the luxury of time when it comes to addressing Arctic security. From an economic perspective, both Japan and the ROK, as the two most advanced democratic nations in Asia, stand to benefit greatly from cooperating with each other. Financial benefits await both countries based on decreased

⁴ <http://rt.com/business/tanker-arctic-sea-route-complete-337/>, Dec 2012, (accessed 26 March 2013).

⁵ <http://www.ifpa.org/pdf/StrategicDynamicsArcticRegion.pdf>, Feb 2012, (accessed 27 March 2013).

costs due to economies of scale and by working together, Seoul and Tokyo can present more attractive research, investment, and energy-sharing opportunities to Arctic nations. Geopolitically, cooperation is also strategically important as both countries currently find themselves outside the sphere of influence on Arctic issues.

Few technical limitations exist for cooperation between Japan and the ROK on Arctic security. They have already conducted limited joint research initiatives through international Arctic research organizations, and each country maintains a cadre of scientific experts on Arctic issues. Both countries have research outposts within the Arctic Circle at Ny-Ålesund and have significant maritime Arctic exploration capabilities. The similarities in Arctic research and development capabilities between the ROK and Japan make cooperation feasible from a technological perspective. And from a bureaucratic standpoint, the ROK and Japan already have the institutions in place for bilateral Arctic cooperation on economic, environmental, and political issues.

Financially, Seoul and Tokyo have already committed significant funds to Arctic security. The ROK outspends the United States on its Arctic program, and Japan has invested resources in Arctic research for over 50 years.⁶ Both countries recognize the significant financial benefits of Arctic investments and have demonstrated intentions to continue investing in the Arctic. However, the global financial environment, combined with serious domestic economic challenges in Tokyo and Seoul, as well as high technological and financial barriers to entry for Arctic development, can make Arctic initiatives cost prohibitive. Jointly addressing Arctic security would reduce the financial burden of each country and expand research and development capabilities, thereby increasing their ability to secure access to Arctic natural resources.

Political challenges represent the largest hurdle to ROK-Japan cooperation on Arctic security, as is the case for all joint ventures between the two strategic partners and historic adversaries. Yet the political obstacles to cooperation on Arctic security are relatively low compared to the challenges of military or diplomatic cooperation. First, Arctic security maintains a low profile when it comes to public awareness, making it easier for the governments in Seoul and Tokyo to work together without risking domestic political repercussions. Second, cooperation on Arctic security is largely an economic issue. While relations on the security and diplomatic fronts have soured during periods of increased tension between Seoul and Tokyo, economic exchanges typically sustain through the ups and downs of ROK-Japan relations. Third, mutual cooperation would yield significant financial and geopolitical benefits for Tokyo and Seoul. By coordinating their policies and Arctic economic initiatives, the ROK and Japan could more effectively leverage the Arctic Council and secure greater benefits for non-Arctic nations.

Recommendations for Cooperation

The ROK and Japan can cooperate on Arctic security in four major areas – policy, research, economics, and military. Specific recommendations for cooperation in each

⁶ *The Economist*, “Snow Dragons.” <http://www.economist.com/node/21561891>, Sept. 2012, (accessed 25 March 2013).

area include:

Policy

- Establish an official exchange between the ROK Ministry of Foreign Affairs and Trade and Japanese Ministry of Foreign Affairs on Arctic security. Initial meetings should focus on understanding respective Arctic policies and the various institutions in each country responsible for enacting Arctic policies.
- Jointly promote interests to the Arctic Council. Japan and the ROK represent the two largest democratic economies in Asia and the two largest importers of LNG. Together, Japan and the ROK can have a greater influence over the policies of Arctic states and gain a greater share of Arctic resources. Opportunities also exist for multilateral cooperation with China and other non-Arctic states.
- Convene Track 1.5 and Track II dialogues among non-Arctic states to coordinate Arctic policies. Issues to discuss include the role of non-Arctic states, ways to maintain peace and stability in the Arctic, environmental protection, dispute resolution, and a possible Arctic treaty, similar to the Antarctic Treaty of 1959.
- Utilize international forums such as the World Winter Cities Association for Mayors, an organization founded by Japan, and other regional forums to promote Arctic interests at a local level.
- Formulate and refine policies for the protection of indigenous Arctic people, using Japan's experience with its Ainu population as a foundation. Indigenous Arctic populations tend to be overlooked when discussing Arctic security, yet their interests represent a major consideration for the Arctic Council. Focusing on the rights of Arctic people will demonstrate the seriousness of cause for Japan and the ROK and lead to greater influence on Arctic issues.

Research

- Conduct joint research missions in the Arctic with Japanese scientists aboard ROK research vessels and vice-versa.
- Increase the number of scientific conferences on Arctic security. The ROK hosted the 2011 Arctic Science Summit Week (ASSW) in Seoul, further expanding its scientific ties to a host of other international organizations engaged in the management of Arctic issues. Such efforts lead to greater influence on Arctic issues and make the ROK and Japan indispensable nations for their technical and scientific expertise on the Arctic.
- Integrate research facilities at Ny-Ålesund to improve technological capabilities, decrease costs, and promote cooperation among other nations with Arctic interests.
- Institutionalize and expand multilateral research efforts. Current efforts are conducted on an ad-hoc basis and lack overarching direction. Expanding cooperative research can function as a confidence building measure, promoting mutual trust and ultimately leading to greater economic and military cooperation.

- Continue to focus research on softer areas such as Arctic fisheries and marine species. These areas represent low-hanging fruit for cooperation and can increase trust at the personal level.

Economic

- Jointly develop infrastructure, along with Arctic nations, for the opening and expansion of the Northwest and Northeast Sea Passages. To make for safe transit along the Northern Passage, the ROK and Japan can help conduct surveys, construct ports, set up search and rescue systems, and expand communications systems in the Arctic.
- Work toward an Arctic resource-sharing initiative. Neither country will benefit from competition against one another for Arctic energy resources, especially with Chinese efforts to obtain the same finite resources. Together, Seoul and Tokyo could present a more appealing offer for resource development and extraction than China.
- Coordinate shipbuilding activities. The ROK currently maintains the largest and most advanced shipbuilding capability, with Japan not far behind. Each country would benefit from strategic partnerships in shipbuilding as demand for Arctic vessels will sharply increase in the next decade.

Military

- Participate in and expand the Arctic Security Forces Roundtable (ASFR), a semi-annual gathering of senior military officers from the Arctic Council nations and selected allies, which looks at how to improve cooperation, particularly in terms of search-and-rescue and domain awareness.
- Utilize the North Pacific Coast Guard Forum (NPCGF), comprised of Russia, ROK, Japan, US, China, and Canada, to discuss Arctic military issues. Arctic security issues are not currently discussed in this forum
- Hold joint planning sessions and conduct exercises regarding future issues such as countering Arctic piracy and disaster relief missions in the Arctic.

Conclusion

The alignment in Arctic interests between Japan and the ROK makes Arctic security an area rich in opportunities for bilateral cooperation. Moreover, cooperation, as opposed to direct competition and competition with China, is in the interests of the ROK and Japan. Through mutual cooperation, Tokyo and Seoul stand to reap major economic benefits and attain a stronger geopolitical standing on Arctic issues. Strategic trust will also improve as a result of such cooperation, improving overall relations between the ROK and Japan.

For US extended deterrence policy and strategic reassurance in Northeast Asia, the tenuous relationship between Seoul and Tokyo is an Achilles Heel. US extended

deterrence is much stronger if it can be enacted for Japan with ROK support, and for the ROK with Japanese support. US assets based in Japan can more easily be deployed on the Korean Peninsula if political will and trust exists between the ROK and Japan. Arctic security represents one area where Japan and the ROK can cooperate, build trust, and increase mutual confidence, which can ultimately serve as the foundation for cooperation in areas critical for US extended deterrence such as information and intelligence sharing and military planning. As such, bilateral ROK-Japan cooperation on Arctic security represents not only a benefit for the ROK and Japan, but also for US extended deterrence and strategic reassurance.

Beyond the bilateral context, opportunities for multilateral engagement and cooperation on Arctic security abound. China is in much the same position as the ROK and Japan regarding its non-Arctic status and desire to access natural resources and Arctic sea passages. Many of the areas for bilateral cooperation between the ROK and Japan could be expanded to trilateral cooperation among ROK-Japan-China or multilateral cooperation with Arctic states. Such efforts will contribute to peace and stability in the Arctic region. Ultimately, the multilateral promotion of peace in the Arctic will improve the stability of Northeast Asia, thereby lessening the burden of US extended deterrence, while at the same time, strengthening the potential of US extended deterrence by improving relations between America's two Northeast Asian allies.

Standardizing Region-wide Safety and Security Practices for Transport Infrastructure

By Ryo Hinata-Yamaguchi and Dong-Joon Park

With the exponential increase of domestic and international civilian transportation traffic in the Asia-Pacific over the past decade, governments must find a regional approach to ensuring safety and security. Governments should implement region-wide safety and security standards and practices for transport infrastructure. Increases in international and interstate air traffic means higher risks in safety and security and the safety of airports, ports, and border facilities are mutually shared interests in the region.

The following is a short brief on how Japan and the Republic of Korea (ROK) can improve and implement region-wide safety and security standards and practices for transport infrastructure in Asia. In particular, this section will focus on the promotion of biometric technology. The objective is to evaluate and assess both the necessity for and feasibility of a region-wide initiative by examining the following issues: strategic necessity, political feasibility, fiscal affordability, technological feasibility, and obstacles and solutions. The intended output of this research is two-fold; first to offer concrete policy recommendations for concerned actors, and second to provide insight on the positive impact of increasing trilateral deterrence between Japan, the ROK, and the US.

Background

Over the past two decades, transport routes within, to, and from the Asia-Pacific region have increased rapidly. In particular, airports in Beijing, Seoul/Incheon, Tokyo, Hong Kong, Bangkok, Singapore, Shanghai, Guangzhou, and Kuala Lumpur are amongst the world's busiest airports. Estimates forecast that the number of flight passengers will double to 6.3 billion per year by 2030. Hence, the Asia-Pacific is likely to become the biggest and most sophisticated hub for the global civil aviation industry.

However, an increase in civil transportation also leads to increased risks. These risks include but are not limited to terrorism, transnational crime, illegal migration, human trafficking, and incidents caused by miscommunication, misconduct or substandard safety, and security practices. Given the increasing economic interdependence within the region, establishing region-wide regulatory oversight protocols is essential. Formulating and implementing measures to deal with the above problems aren't easy and governments of the Asia-Pacific face three glaring problems.

First, a regional institution or chapter that specifically looks at civil aviation security is absent. While the International Civil Aviation Organization (ICAO) has the Asia and Pacific (APAC) Office in Bangkok, it merely oversees the protocols of the Convention on International Civil Aviation (Chicago Convention) in the region. Occasionally, airport security is discussed at the ASEAN Regional Forum, but it is specifically for the purposes of counter-terrorism. Simply put, organizations and regimes in the region lack the legal and political leverage to enforce regulations and standards.

Currently, the European Union has a legal framework that either bans or restricts carriers with sub-standard safety/security practices. Given the broad range of airlines flying to and from Asia-Pacific states, signatories to the ICAO or other regional forums should apply measures that are consistent throughout the region. Complexities arise from establishing regional legal frameworks or even coordinating the Civil Aviation Laws of each state, given concerns over sovereignty and differences in existing laws.

Second, there are serious domestic issues that must be addressed as civil aviation security involves law enforcement, transportation, foreign affairs, customs, and military authorities. Establishing new laws and standards will require cooperation and coordination among these ministries/departments which is apt to be slowed by domestic bureaucratic tensions. In some states, implementing new standards and laws relating to civil aviation security and safety may involve major legal overhauls that states may be reluctant to undertake.

Third, differences in technological capacity also slow any regional approaches to civil aviation security. Technological gaps exist in airport security equipment and facilities, jet bridges and other dis/embarkation equipment, ground support and logistics equipment/vehicles, and infrastructure. For states that face major economic or technological constraints, Japan and the ROK could provide technological and training assistance in the form of aid.

To streamline the security standards in regional civil transportation, Japan and the ROK should cooperate to promote and guide other states. Amongst the states in the Asia-Pacific, both Japan and the ROK have consistently demonstrated high-quality standards in civil aviation safety and security, as well as border security. More importantly, security in civil transportation is not limited to the defense or law enforcement institutions. Other government organs such as the Japan's Ministry of Justice Immigration Bureau, Ministry of Land, Infrastructure, Transport and Tourism, and Korea's Ministry of Justice Immigration Service and Ministry of Land, Transport and Maritime Affairs should promote bilateral cooperation effort to play greater roles in regional security.

Strategic Necessity

Securing the safety and security of airports, ports, and border facilities is an essential preliminary step to prevent terrorism, transnational crime, and illegal migration. Such threats have increased immensely in the 21st century, highlighted by the terrorist attacks that the world has witnessed over the past decade. Parallel to the newly emerging dangers, countries have vigorously pursued measures to increase border control and security. One such consequent phenomenon has been the expansion of the use of biometric technology in immigration control. As of January 2013, more than 60 countries have adopted biometric passports.

However, limits remain regarding the extent to which biometric technology substantially increases border control and security of independent nations. This is mainly because such advancements can only reach their full potential when the required

capabilities are shared universally. Even with the tools, inspection and tracking of foreign nationals will only be viable if foreign travelers are documented and recorded.

Biometric documentation is not without controversy. First, there are concerns regarding the intrusion of privacy and unlawful use of information. Second, there will be disagreements between states on who to profile on the basis of governmental interests, such as the case with state-sponsored agents or otherwise valued individuals. Hence the worldwide application of such technology will probably not be achieved for quite some time, until solutions at the domestic and international level are agreed.

However, others regard biometric passports as a more safe and viable form of traveler documentation. Biometric systems could be utilized to replace short-term visit visas as they automatically register the details of individuals. A prime example is in the US, where citizens of selected countries with biometric passports are given visa waivers for short-term travel. Therefore, the increased use of such technology will help bolster border control and security, which is vital in preventing terrorist activities/movements and human trafficking.

Political Feasibility

Strategic necessities from the national and regional security viewpoints will give momentum to bilateral and multilateral initiatives to strengthen security of transport infrastructure. Both Japan and the ROK possess not only the technological experience and knowledge required, but also the relationship with target countries in Southeast Asia. Specifically, the two countries have actively participated in ODA projects in Southeast Asia both bilaterally and multilaterally, constructing the diplomatic and social trust required for successful cooperative projects. This serves as a momentum to export and promote regionally consistent security practices for transport infrastructure.

However, some states may view changes in existing policies as intervention or interference with their sovereignty. Moreover, the introduction of biometric systems via imported technologies may provoke suspicion of espionage and individual privacy issues. To overcome domestic political problems, each state will need to configure its legal framework to minimize ramifications from implementation or improvements to its civil transport laws. Governments will also need to promote the notion that safety and security of intra-regional civilian traffic is a win-win concept for their own country and the region.

Approaching Southeast Asia countries on this issue on already existing platforms may be a viable option. The Asian Biometrics Consortium (ABC), which convenes annually, promotes “the adoption of biometrics in Asia by fostering collaboration in research and development, by coordinating efforts to adopt international standards, and by facilitating the contact among companies and end users.”¹ Not only are Japan and the ROK both members, but Thailand and Indonesia also participate in this annual event, making it easier for other Southeast Asian countries to join.

¹ The Asian Biometric Consortium (ABC), “About ABC,” <http://abc2011.csp.escience.cn/dct/page/65583> (Accessed on March 12, 2013).

The Track 1.5 ABC annual conference invites academics, government officials, and corporate representatives to share and discuss regional trends and developments in both technology and policy-related improvements. As a result, any potential preliminary negotiations between the receiving (Southeast Asia countries) and the supplying (Japan and the ROK) countries can be held with the key domestic actors in attendance.

Inter-government agreements that pave the way for a more regional approach to transport infrastructure security are also vital. Like visa agreements, governments will need to comprehensively discuss not only the types of systems, but also steps to implement them. For example, governments should discuss the minimum standards for profiling passengers as well as measures for dealing with flagged individuals. Various consultations at venues such as the ABC, or at summit meetings such as the ASEAN+3; can lead to concrete negotiations for the transfer of relevant technology, as well as the bilateral and multilateral agreements needed for the comprehensive application of biometric technology to foster enhanced border control and security.

Fiscal Affordability

Financially, there are some problems in affordability for Japan and the ROK to cooperate in promoting regional transport infrastructure safety and security. First, countries that already have comparatively advanced systems may not feel the need to invest in a regional system for transport infrastructure. Second, countries with low economic capacity will be heavily reliant on fiscal and technological imports in the form of aid. The former is more of a political issue to be solved via diplomatic dialogues to advance and utilize existing technologies for multilateral security. The latter is perhaps more problematic as it leads to increased reliance and higher costs for Seoul and Tokyo.

Difficulties regarding costs involved with the transfer of biometric systems to bolster border control and security to other nations can be overcome if Tokyo and Seoul apply appropriate leverage on private companies. Hence, financial problems can be understood as a policy issue. The question is not only about costs and benefits, but R&D, production, and export processes. While companies and research institutions in both Japan and the ROK are making strong efforts to advance biometric technology in recent years, biometrics is not yet high enough priority.² The two governments will be able to convince the private sector to shoulder the financial burden of transferring tools and equipment for the use of biometric passports for border control. Additionally, private companies may be persuaded to participate in private-government consortiums with added benefits of further investment opportunities in Southeast Asia. Given connections among Southeast Asian countries, the market presents private companies with a prospective market for future investment.

² Kwon Young-Bin, "Biometrics in Asia (Presentation at the Biometric Consortium Conference and Technology Expo, 2009)," <http://biometrics.org/bc2009/presentations/tuesday/Kwon%20MR%2014%20Tue%20345%20PM%20-%20400%20PM.pdf> (Accessed on March 12, 2013.)

Technological Feasibility

Technologically, both Japan and the ROK have more than enough capacity to take the lead in proliferating advanced systems. Both Japan and the ROK have already adopted biometric passports (Japan in 2006 and the ROK in 2008). Existing technology that utilizes finger/fingerprint recognition, the dominant form of recognition in the biometric market, has proved to be effective and efficient in both states. Technologically, while finger recognition is considered sufficient today, the future will require more sophisticated technologies, most of which have been envisioned or are under development in Japan and the ROK. Bilateral cooperation between the two parties will contribute to faster commercialization. One such example is vascular recognition technology which was developed in the ROK but has since been taken up in Japan.

The establishment of such technologies in both countries indicates promising export opportunities and rationale for a regional initiative on border security. Moreover, while many cooperative programs between countries are usually conducted bilaterally, there are added benefits in Japan and the ROK. Companies such as NEC, Hitachi, and Fujitsu in Japan and LG in the ROK have established themselves as industry leaders in the field, presenting opportunities for greater publicity and further development. At the same time, the transfer of proprietary technology will be complex, due to strong corporate interests to export complete systems to recipient countries. Hence, packaging the transfer of experience and know-how involved in managing these systems will be a crucial agenda that requires coordination and cooperation between the government and private sector.

Cooperative investment in biometric systems to transfer to Southeast Asia also has the benefit of reducing fears in recipient countries about dependency on a particular country. Such reassurance would be beneficial for export prospects for both Japan and the ROK which will be competing with other nations such as the US and the EU.

Conclusion: Policy Recommendations and Impact on Extended Deterrence

Cooperation between Japan and the ROK to promote greater safety and security of transport infrastructure is both critical and beneficial in the regional context. As a first step, Seoul and Tokyo need to negotiate and draft a bilateral agreement for cooperation that is both feasible and plausible. The second step would be for Japan and the ROK to take the initiative on discussing the issue at regional forums such as the ARF or EAS. Here, both Japan and the ROK could push for the establishment of a regional legal framework for civil transport infrastructure safety/security by establishing greater linkages between the ICAO and regional forums. The Asian Biometric Forum (ABC) can be used as a foundation for more concrete organizations. The third and final step would then be to implement a regionally consistent system. Seoul and Tokyo will then need to provide technological assistance to developing countries that face economic and technological challenges in implementing these above standards.

States may be concerned about ramifications on sovereignty, existing laws, economic/technological feasibility, and be hesitant about sharing information about their

citizens. However, safety and security of civil transport infrastructure is an essential issue throughout the region. Furthermore, difficulties in biometric security aren't limited to technical issues; perhaps more important is management of the system once it is implemented. The use of biometric technology to improve border control is challenging, and Southeast Asian countries will need significant assistance to support the smooth adoption of the technology.

The impact of safety and security of transport infrastructure on trilateral extended deterrence is indirect. First, while it may not have direct impact in strengthening capabilities to deter state-to-state threats to Japan, the ROK, or the US in the traditional context, prevention of transnational crime, espionage, and terrorism is essential.

Second, the regional approach led by Japan and the ROK will enhance the diplomatic architecture and could be utilized for other initiatives that relate to regional security. As geographical neighbors and alliance partners with the US, promoting regional approaches to border security would serve as an opportunity for bilateral cooperation.

Third, in the trilateral context, it is vital to consider how coordination between Japan and the ROK that enhances border security and control might affect US perceptions regarding its extended deterrence efforts toward its two allies. While US alliances with both Japan and the ROK have been steady and unwavering, it is hard to deny that fiscal and economic difficulties in the US have become a real concern – and revamped the need for discussions on burden-sharing. By taking the initiative to enhance Southeast Asian border security, Japan and the ROK will make a substantive and sincere gesture indicating both countries are interested in the security of the region rather than merely their own security. Such notions will be noticed in the US, and will undoubtedly emphasize the importance of maintaining strong alliances and deterrence postures both bilaterally and trilaterally.

Toward US-Japan-ROK Humanitarian Assistance and Disaster Relief Cooperation in Asia

By Linnea Duvall, Kei Koga, and Adam P. Liff

Improving military operational capabilities to respond to increasingly frequent and devastating natural disasters and humanitarian crises in the Asia-Pacific is an urgent task for all countries in the region. These nontraditional security threats are particularly acute in less developed and maritime nations in the Indian and Pacific Oceans that have limited operational capabilities to effectively respond to crises on their own. They present an affordable and politically feasible opportunity for Japan and the Republic of Korea (ROK) to strengthen their bilateral relationship and their alliances with the United States.

Over the past decade Asia-Pacific nations have suffered a number of catastrophic natural disasters, including the Sumatra earthquake and tsunami in 2004; the Sichuan earthquake and Cyclone Nargis in Burma/Myanmar in 2008; and the Christchurch earthquake and Tohoku earthquake and tsunami in 2011. Although sometimes dismissed by military traditionalists as less urgent than traditional security issues, natural disasters pose major threats to regional security, and their consequences can be catastrophic. For example, the Dec. 26, 2004 tsunami in Southeast Asia caused over 200,000 deaths and incalculable human trauma and economic devastation. Without the quick response of the huge multinational coalition of US-led military forces, *Operation Unified Assistance*, suffering undoubtedly would have been much higher.

Although natural disasters are unavoidable, their catastrophic humanitarian, economic, and security effects can be mitigated significantly through more effective crisis response. Japan, the ROK, and the US are uniquely suited to provide leadership in future regional crisis responses. But this role pays larger dividends. Deeper cooperation among these three countries in humanitarian assistance/disaster relief (HA/DR) operations also has the significant added benefit of contributing to improving trilateral political and military ties writ large; an outcome with salubrious consequences for US extended deterrence and strategic reassurance in East Asia.

Beyond the obvious strategic and humanitarian imperatives, there are at least four reasons why HA/DR is a great means by which to improve Japan, ROK, and US political and military relations and thus strengthen extended deterrence.

- **First**, HA/DR operations have no obvious domestic spoilers within either Japan or the ROK. For example, the Japan Self-Defense Forces' participation in HA/DR operations is hugely popular within Japan; does not require the use/threat of use of force, thereby circumventing Constitutional obstacles and making it likely to receive widespread domestic political support (including even from the Communist Party of Japan); and will also contribute to improving Japan's image in Asia. Meanwhile, an anti-Japan activist, in the ROK would probably find it difficult to ardently and publicly oppose greater ROK participation in these operations, which not only saves lives of innocent civilians abroad and significantly enhances the ROK's image in Asia – thus contributing to the “Global

Korea” brand, but also does not take place anywhere near the Korean Peninsula and thus avoids historically informed sensitivities surrounding Japan’s armed forces operating in or near Korean territory. In short, HA/DR cooperation between the Japan and the ROK is significantly more likely to garner popular support in both countries than many alternative forms of military cooperation.

- **Second**, simply put: Japan, the ROK, and the US are all wealthy, developed market economies that can afford the occasional deployment for HA/DR. Even at its peak, when *Operation Unified Assistance* – the largest HA/DR operation in history – involved 15,000 US military personnel, it cost US taxpayers roughly \$6 million per day. This is by no means cheap, but it’s certainly affordable for these countries, especially if costs are shared.
- **Third**, all three countries already possess most of the necessary operational capabilities and platforms with which to carry out these low-intensity missions and could expand training and/or procure more platforms with relative ease.
- **Fourth**, these low-intensity operations are an effective means by which to begin to enhance interoperability among the three countries’ militaries.

In short, expanded trilateral HA/DR cooperation has an obvious strategic and humanitarian imperative, is economically and technologically feasible, and – most importantly – is significantly more likely to garner popular support in all three countries – especially Japan and the ROK – than many alternative forms of military cooperation. By enhancing political ties and military interoperability, trilateral HA/DR cooperation provides significant extended deterrence bang for a limited (domestic political and economic) buck. The following sections discuss progress heretofore and also offer several proposals for concrete measures to enhance US-Japan-ROK cooperation in this domain.

Overview of Existing HA/DR Cooperation

Many regional HA/DR cooperation bilateral and multilateral schemes in the region and beyond already exist, including the Asian Conference on Disaster Reduction (ACDR), the Asian Disaster Reduction Center (ADRC), the ASEAN Regional Disaster Emergency Response Simulation Exercise (ARDEX), the ASEAN Regional Forum Disaster Relief Exercise (ARF DiREx), and the ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre). These frameworks are important mechanisms through which to share information and engage in policy and operational coordination. Indeed, using these frameworks, especially the ASEAN Regional Forum, the United States proposed to create a Rapid Disaster Response Agreement (RDR) among Asian states, a legal framework that enables foreign governments to rapidly respond to natural disasters. Regional HA/DR cooperation is generally acceptable to most of the East Asian states, including Japan and South Korea, which have co-hosted DiREx, in 2011 and 2013, respectively. Even China is likely to

participate in joint HA/DR exercises during the *Rim of the Pacific (RIMPAC)* multinational exercises in 2014.

In terms of the US-Japan-ROK framework, HA/DR cooperation is strategically, financially, and politically feasible:

1) Strategic and Financial Feasibility:

Considering that these three states have already achieved a high level of economic development and military infrastructures, they are more capable in terms of their technological and financial capabilities than any other states in East Asia. The United States and South Korea possess amphibious forces, which are extremely useful for conducting disaster relief operations. Also, the United States has the Seventh Fleet while South Korea has useful military assets, such as the *Dokdo*-class amphibious assault ship, *CH-47Ds*, and *HH-47Ds*. Though Japan lacks marines, Japan possesses military equipment useful for air and sea lift, including *C-130H*, *UH-60 Blackhawk*, *CH-47 Chinook*, and *UH-60J* Helicopters with *Hyuga*-class helicopter destroyers.

2) Political Feasibility:

US-Japan-ROK cooperation can also contribute to improving political relations between Japan and the ROK. For domestic political reasons in Japan and the ROK, it has been difficult to formally enhance Japan-ROK bilateral military cooperation heretofore. For example, longstanding reluctance on the part of Japan to participate in “collective security” has been one issue, while the postponement of General Security of Military Information Agreement in 2012 is clear case in point of domestic political obstacles within the ROK to develop closer ROK-Japan ties.

Focusing specifically on HA/DR cooperation and a trilateral scheme that includes the US, an ally of both states, however, will help mollify domestic political opposition in both countries. Furthermore, HA/DR cooperation could create a positive feedback loop whereby a successful trilateral response to a regional natural disaster would improve the image of Japan and South Korea in both states, which would further open the door to still greater cooperation.

However, at least two questions regarding the *raison d’etre* of US-Japan-ROK trilateral HA/DR cooperation must be answered. One question concerns the geographical scope of cooperation. If cooperation extends to Southeast Asia, the framework should also include other capable states, especially Australia, due to its geographical proximity and significant assets. However, if the HA/DR cooperation solely aims at enhancing the effect of extended deterrence against potential threats, particularly North Korea, the US-Japan-ROK trilateral cooperation should be somewhat exclusive. The other question is political and concerns Japan-ROK relations. Because of the ROK’s political sensitivity toward and skepticism about Japan’s intentions, inclusion of the United States and the HA/DR focus may – initially at least – be insufficient to make trilateral cooperation politically feasible. Rather, successful cooperation may require a legal and political

agreement among the three governments that explicitly states that trilateral military cooperation will be limited strictly to the field of the HA/DR.

Still, in spite of the fact that political hurdles exist between Japan and South Korea, the feasibility of trilateral cooperation in terms of capability is relatively high, as the success of past multinational exercises – such as *Cobra Gold*, *Cope North*, and *RIMPAC* – suggests. Furthermore, formal US-Japan-ROK trilateral cooperation enhances the rapid response capabilities to natural disasters in Northeast Asia and beyond. Moreover, as described above, the trilateral training improves military interoperability as well as promoting confidence-building among the three states. Despite the historical issues existing between Japan and South Korea, this nontraditional security cooperation may help create more robust Japan-ROK bilateral military relations in the future, which could be useful to enhance the stability of US extended deterrence and respond in times of regional crisis, such as a contingency on the Korean Peninsula.

In addition, in the aftermath of the very successful operational cooperation with regional partners, namely Australia, India, and Japan, in response to the 2004 Indian Ocean tsunami, the United States began in 2007 to conduct the annual “Pacific Partnership” operation wherein US hospital ships are deployed to Asian nations to carry out HA/DR activities. Japanese and South Korean medical professionals, NGOs, and military ships have participated, and a certain division of labor has been informally structured. For example, through Pacific Partnership, Japanese SDF medical teams conducted capacity-building activities in locations after US hospital ships left the area – e.g., in Cambodia, East Timor, and Vietnam. Accordingly, trilateral coordination by utilizing existing activities and schemes can improve efficiency of current HA/DR activities, and thus trilateral cooperation.

Recommendations for Future Cooperation

- **Sign a Japan-ROK Cross-Servicing Memorandum of Understanding.** Japan and the Republic of Korea came close to signing a General Security of Military Information Agreement (GSOMIA) and Acquisition and Cross-Servicing Agreement (ACSA) in 2012, but the agreements were shelved at the last minute by the South Koreans. An ACSA provides the basic framework for cooperation in military logistics and covers the exchange of logistic support, supplies, and services – a crucial agreement if one of the militaries is to operate in the other during a crisis or exercise. Although acquisitions might deal with sensitive information (and therefore require a GSOMIA), cross-servicing can occur without significant information sharing. To restart this valuable process, Japan and the ROK should establish a limited HA/DR-focused cross-servicing agreement, whether permanent or, as a more realistic first step, for a specific HA/DR exercise. This has the added benefit of serving as a small step back toward signing a GSOMIA.
- **Establish a civil-military disaster relief consultative mechanism in Northeast Asia.** This mechanism, such as an institutionalized Track I series of meetings and

events, could expand nascent trilateral cooperation on HA/DR between Japan, the ROK, and China, by promoting information sharing, civil-military relations, and executing deliverables like specific initiatives to demonstrate cooperation, following trilateral senior leader dialogues. This official Track I dialogue could also identify ways to manage information flow during a crisis in the absence of a Japan-ROK GSOMIA and ACSA. The participants should identify and implement minilateral cooperative measures with other Asian states, including Australia and Singapore. This Track I group would coordinate with the Asian Disaster Reduction Center (ADRC) and the ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre) in Indonesia, but focus specifically on Northeast Asia. The main objective of this official Track I dialogue would be to demonstrate political cooperation among the three Northeast Asian powers, much like the purpose of the China-Japan-ROK senior leader dialogues.

- **Conduct Track 1.5 Humanitarian Assistance Planning.** The US, Japan, and Republic of Korea should establish institutionalized Track 1.5 humanitarian assistance planning in order to ensure smooth cooperation between the government and private sector, including NGOs and business corporations. Civil-military cooperation was identified as a critical weakness in the US-Japan response to Operation Tomodachi, so this initiative would take concrete steps to remedy that shortcoming. To this end, this Track 1.5 meeting would consist of politicians, bureaucrats, academics, business, and military institutions. In the HA/DR field, information-sharing and information-dissemination as disaster prevention, rapid response capacities for relief and transfer in case of disaster, and a long-term support system for affected people are vital. To this end, enhancing the lines of communication between these organizations and clarifying a division of labor among them would help smooth the conduct of operations in case of crisis. The three countries could specifically address capability development of AHA Centre in Indonesia and building this new center into a gold standard for public-private partnerships.
- **Develop amphibious capabilities that support HA/DR missions, with an emphasis on joint and combined training.** Japan and the Republic of Korea are currently improving their amphibious capabilities, and integrating these new capabilities across the services will be critical for ensuring effective response to all types of crises. As Japan discovered during the March 11 triple disaster, amphibious capabilities are essential for delivering supplies and supporting populations in areas where roads and other critical infrastructure have been damaged. An amphibious task group would include surface ships capable of transporting ships and supplies, with ship-to-shore transfer and on-shore resupply via helicopter or amphibious craft; such a task force therefore requires excellent coordination between branches of the military. This training could precede or follow the annual ASEAN Regional Forum Disaster Relief Exercise (ARF DiREx) and showcase the region's most advanced HA/DR capabilities, with an eye to incorporating Japan and ROK amphibious capabilities into future DiREx

events. While the US could lead this effort in the first year or two, the objective would be for Japan and the ROK to take turns leading the exercise.

- **Expand the Multi-year Joint Capacity Development Program on Disaster Management (MJCD).** The MJCD Program was started in 2012 by the Japan International Cooperation Agency (JICA) and the Korea International Cooperation Agency (KOICA), which have already cooperated closely on several development activities, including partnering on field-level consultations in Nepal and an environmental event in Bangladesh. One possibility would be for the two organizations to establish a joint water management assessment team for the Mekong River region, which they could combine with US initiatives conducted through the Lower Mekong Initiative. JICA and KOICA could also partner with the Japanese Self-Defense Forces and the Republic of Korea Armed Forces to conduct a study on best practices for civil-military development cooperation in the Mekong River region. This environmentally vulnerable sub-region is of great strategic value to Japan and the ROK but is a potential flashpoint for conflict over land and food security.
- **Establish a multinational post-disaster reconstruction team.** Major disasters require not only an immediate response of supplies and support, but also long-term reconstruction. This initiative, run by the US, Japan, and Korean foreign ministries and defense departments as a focal point for coordination, would establish a trilateral civil-military post-disaster reconstruction corps composed primarily of reservists and civilian responders from several agencies that could be called up in a disaster. These specifically designated units would focus on building cohesive, integrated groups around specific skill sets for post-disaster reconstruction, such as medical teams, engineers, urban planners, or other civilian and military specialists. These teams would train together during annual HA/DR exercises. For military and civilians, the benefit of having specifically designated trilateral teams is that the same units would train together repeatedly, thus building communication and trust between the teams.

ROK-Japan Cooperation on Diplomatic Security

By Jiun Bang, Stephanie Kang, and Seongho Hong

The Vienna Convention on Diplomatic Relations, ratified by 187 countries, outlines the rights of a diplomatic mission and enables diplomats to function without fear of compulsion or harassment by a host country. There are, however, numerous incidents of violations of the Vienna Convention that threaten proper diplomatic missions.

Former US Secretary of State, Hillary Clinton, underscored the urgency of diplomatic security by citing the September 2012 deadly attack on the US diplomatic mission in Libya's eastern city of Benghazi, which prompted the US to take urgent steps to improve security at its diplomatic posts worldwide.¹ In the Benghazi attack, suspected al-Qaeda militants raided several US compounds and killed four Americans, including the US ambassador. On Feb. 1, 2013, the bombing at the gate of the US embassy in Ankara, Turkey, reinforced the imperative of protecting US diplomats serving abroad.² Recent attacks on diplomatic facilities and their corresponding implications demonstrate that it is vital to prepare for future security threats to embassies, consulates, and overseas diplomatic missions. There is no telling whether the attacks in Benghazi and Ankara were aberrations or harbingers of coming events aimed against the US, but threats to diplomatic facilities and personnel are evident and growing.

Due to increasing tensions and conflicts over maritime territories and history, maintaining diplomatic security has become a significant issue in East Asia. In the case of South Korea, in 2010, ROK Foreign Minister Yu Myung-hwan had to extend his condolences to the Japanese Ambassador Toshinori Shigeie, after he was attacked by a South Korean protester during a public lecture in Seoul.³ Similarly, the South Korean embassy in Beijing increased its security when it was hit by a small projectile in a dispute over the murder of a South Korean Coast Guard officer; and a Japanese man was arrested and charged for throwing a smoke canister at the South Korean consulate in Kobe in January 2013.⁴ The South Korean embassy in the Libyan capital Tripoli has also been attacked by looters amid the chaos arising from battles to topple leader Muammar al-Gaddafi.⁵ Japan has also been impacted. In January 2012, a Chinese national threw

¹ Michael Lipin, "US Boosts Diplomatic Security After Benghazi Attack," *Voice of America*, Jan. 25, 2013. <http://www.voanews.com/content/us-embassy-security/1590611.html>

² Tim Arango and Sebnem Arsu, "Suicide Blast Kills US Embassy Guard in Turkey," *The New York Times*, Feb. 1, 2013. <<http://www.nytimes.com/2013/02/02/world/europe/2-dead-in-suicide-bombing-at-us-embassy-in-turkey.html>>

³ The Japanese ambassador avoided the stone and was not hurt, but his Japanese translator was slightly injured. According to police, the protester was carrying leaflets for a political group that criticized Japan's claim over Dokdo/Takeshima. "Foreign Minister Consoles Japan Envoy Over Stone Attack," *Yonhap News Agency*, July 8, 2010. <http://english.yonhapnews.co.kr/national/2010/07/08/21/0301000000AEN20100708001700315F.HTML>

⁴ Michael Martina and Jeremy Laurence, "South Korea's China Embassy Window Shot Amid Tensions," *Reuters*, Dec. 14, 2011. <http://www.reuters.com/article/2011/12/14/us-china-korea-embassy-idUSTRE7BD0IA20111214>; "Korean Consulate Smoke-Bombed," *The Japan Times*, Jan. 6, 2013. <http://www.japantimes.co.jp/news/2013/01/06/national/korean-consulate-smoke-bombed/#.UU1hThzvsou>

⁵ "Looters Attack S. Korea Embassy in Libya," *AFP*, Aug. 29, 2012.

gasoline bombs at the Japanese embassy in Seoul after claiming his grandmother was forced into wartime sex slavery, while in September 2012 security was tightened at the Japanese embassy in Beijing in response to explosive Chinese protests over the Senkaku/Diaoyu island dispute.⁶

Responses to Threats to Diplomatic Security

The US has shown the most immediate and perceptible response to threats to diplomatic security. In response to the Benghazi attack, Washington evacuated all government personnel from Benghazi and subsequently reduced the staff size at the Embassy in Tripoli. According to Libyan officials briefed on the new US proposals, Libyan authorities planned to create a specialized diplomatic security unit as part of a larger overhaul of security services, in part, to help deflect growing international criticism about Libya's response to the anti-US attacks in Benghazi.⁷ In addition, Secretary Clinton asked for hundreds of additional Marine security guards to be dispatched to vulnerable diplomatic posts. She also appointed an official to the new position of deputy assistant secretary of state for high-threat posts, with the responsibility of giving missions in dangerous places "the attention they need," further stating that the US is taking aggressive steps to protect diplomats worldwide. Furthermore, the US House of Representatives revealed a spending bill that would increase funding for embassy security by \$2 billion in response to the attack on the US consulate in Benghazi.⁸

In the case of South Korea, five security guards from the police department were dispatched to protect diplomats in Iraq in 2007. It was the first time that police security personnel were ever sent to an overseas mission. The dispatch took place on request from the Ministry of Foreign Affairs and Trade (MOFAT) to ensure the safety and smooth diplomatic activity of the ROK ambassador stationed in Iraq.⁹

Japan, after the Persian Gulf Crisis in August 1990, learned important lessons on the need to strengthen Japan's readiness to manage crises abroad and the necessity of improving its capacity of foreign diplomatic offices. The Gulf War trauma and criticisms of Japanese "checkbook diplomacy" made Japan aware of its need to contribute

http://www.channelnewsasia.com/stories/afp_asiapacific/view/1149755/1/.html

⁶ "Chinese Held for Firebomb Attack at Japan Embassy in Seoul," *Reuters*, Jan. 8, 2012.

http://ajw.asahi.com/article/asia/korean_peninsula/AJ201201080010; "Security Tightened at Japanese Embassy in Beijing as Protests over Islands Go On," *Associated Press*, Sep. 16, 2012.

<http://www.guardian.co.uk/world/2012/sep/16/chinese-protests-japanese-islands-dispute>

⁷ Margaret Coker, "Libya to Retool Security for Diplomats," *The Wall Street Journal*, Dec. 26, 2012.

<http://online.wsj.com/article/SB10001424127887323300404578203051880427718.html>

⁸ Julian Pacquet, "House Spending Bill Adds \$2B for Embassy," *The Hill*, March 4, 2013.

<http://thehill.com/blogs/global-affairs/terrorism/286069-spending-bill-adds-2-billion-for-embassy-protection-in-the-wake-of-benghazi-attack>

⁹ Sangjoon Park, "Dispatch of Security Guards to Iraq with Aim to Protect Diplomats," [in Korean] *The Hankook Ilbo*, Sep. 10, 2007.

<http://news.hankooki.com/lpage/society/200709/h2007091018054222000.htm>

personnel to international efforts.¹⁰ As a result, in 1991, the Advisory Group to the Foreign Minister on the Enhancement of Diplomatic Function recommended “the functions and systems of Japanese diplomatic missions abroad, such as their facilities, crisis management system and protection of Japanese nationals should be strengthened expeditiously.”¹¹

With the US “rebalance” toward Asia, Washington anticipates that military cooperation between its two allies will be required in Northeast Asia. However, strong public sentiment in the two countries has often been an obstacle to improving bilateral relations, especially in areas that involve the military and security. Thus, it is important to try to find areas of cooperation that draw upon less sensitive issues. Bilateral cooperation between South Korea and Japan on diplomatic security would be a good starting point for strengthening relations between two vibrant democracies that face shared security challenges.

Strategic Imperative & Feasibility regarding Japan-ROK Cooperation on Diplomatic Security

In light of the increasing tensions and conflicts surrounding diplomatic missions, there is a strategic imperative for Japan and South Korea to cooperate on diplomatic security to protect nationals abroad. In particular, strained political relations over territorial disputes in Northeast Asia have made embassies and consulates into sites for potentially dangerous conflict. Japanese and South Korean embassies and consulates are increasingly seen as targets for riots and protests, which have occasionally escalated into violent confrontations.

Threats to embassies and diplomatic personnel have lasting political impacts that could further splinter the fragile ROK-Japan bilateral relationship. In response to the December 2011 arson attack on the Yasukuni Shrine and subsequent attack on the Japanese embassy in Seoul in 2012, the South Korean government sided with China in the competing request for extradition between Beijing and Tokyo over the custody of Liu Qiang, the man responsible for the attacks.¹² The ROK court decision to repatriate Liu to China by rejecting Tokyo’s extradition request sparked outcry in Japan, with Japanese Prime Minister Abe Shinzo also voicing his displeasure.¹³ Even relatively minor diplomatic security disputes, in terms of frequency and magnitude, can produce intense

¹⁰ “When Cash Alone Won’t Carry: Japan’s Kaifu proposes significant departure from checkbook diplomacy,” *The Los Angeles Times*, April 28, 1991. <http://articles.latimes.com/1991-04-28/opinion/op-1305_1_checkbook-diplomacy>; Suvendrini Kakuchi, “Japan’s new, tougher foreign policy,” *Asia Times Online*, June 18, 2004. <<http://www.atimes.com/atimes/Japan/FF18Dh04.html>>

¹¹ Michio Watanabe, “Diplomatic Blue Book,” *MOFA of Japan*, April 12, 1993. <http://www.mofa.go.jp/policy/other/bluebook/1992/1992-4-2.htm>

¹² Sang-hun Choe, “South Korea Rejects Extradition in Attack on Japanese Shrine,” *The New York Times*, Jan. 3, 2013. <<http://www.nytimes.com/2013/01/04/world/asia/korean-court-sides-with-china-in-arson-attack-on-japanese-war-shrine.html>>

¹³ Nam-ku Jeong, Min-hee Park, and Tae-woo Park, “Seoul deems Chinese national a ‘political prisoner’ with views consistent with South Korea’s constitution,” *The Hankyoreh*, Jan. 5, 2013. <http://www.hani.co.kr/arti/english_edition/e_international/568397.html>

and lasting political tensions that further strain ROK-Japan bilateral relations and the ability of the two states to cooperate on other issues.

Increased attacks on diplomatic facilities and personnel also bring attention to the gravity of maintaining a high level of physical security around embassies and consulates, especially in unstable crisis zones.¹⁴ Physical attacks on embassies in high conflict areas are not only limited to the US; given their respective alliances with the US, Japanese and South Korean diplomatic buildings are susceptible as well. The looting of the ROK embassy in Tripoli in 2011, the Algerian hostage crisis in January 2013 resulting in the deaths of 10 Japanese nationals, and the 2012 attack on the US embassy in Benghazi highlight the need for increased cooperation on diplomatic security among the US, ROK, and Japan.

Political Feasibility

Although diplomatic security is a common strategic interest, South Korean, and Japanese political contentions over historical legacies and territorial disputes occasionally hinder bilateral security cooperation. In May/June 2012, Tokyo and Seoul failed to sign two key military agreements – the General Security of Military Information Agreement (GSOMIA) and the Acquisition and Cross-Servicing Agreement (ACSA) – due to public backlash in South Korea over historical controversies.¹⁵ The failure of the two countries to sign the important information and technology sharing GSOMIA shows how Japan-ROK bilateral security cooperation can be subject to political turmoil at home and abroad.

Despite rising political tensions within the two countries, Japan and South Korea can overcome domestic pressure on historical and territorial issues to cooperate on maintaining and improving diplomatic security. In a speech on Japan's foreign policy, Japanese Foreign Minister Fumio Kishida stated that safety measures and diplomatic initiatives “will be strengthened for protecting the safety of Japanese nationals and companies active overseas.”¹⁶ The domestic pressure and strategic necessity to protect citizens and diplomatic personnel abroad can be leveraged and offered as a reason to enhance bilateral cooperation on this issue. Seoul and Tokyo have previously cooperated on issues that raise significant security concerns;¹⁷ thus, the protection of citizens and

¹⁴ Eric Schmitt, David D. Kirkpatrick, and Suliman Ali Zway, “US May Have Put Mistaken Faith in Libya Site's Security,” *The New York Times* Sept. 30, 2012.

<http://www.nytimes.com/2012/10/01/world/africa/mistaken-sense-of-security-cited-before-envoy-to-libya-died.html?pagewanted=1&ref=africa>

¹⁵ Seongho Sheen and Jina Kim, “What Went Wrong with the ROK-Japan Military Pact?” *The East-West Center: Asia Pacific Bulletin*, No. 176, July 31, 2012; Young Jun Moon, “History Intrudes on Korea-Japan Security Cooperation,” *Stimson Center Spotlight*, July 13, 2012. <http://www.stimson.org/spotlight/history-intrudes-on-korea-japan-security-cooperation/>

¹⁶ Fumio Kishida, “Foreign Policy Speech By Minister for Foreign Affairs Fumio Kishida to the 183rd Session of the Diet,” *Ministry of Foreign Affairs, Japan*, Feb. 28, 2013.

http://www.mofa.go.jp/announce/fm/kishida/speech_130228.html

¹⁷ Bruce Klingner, “Washington Should Urge Greater South Korea-Japanese Military and Diplomatic Cooperation,” *Heritage Backgrounder* No. 2734, Sep. 24, 2012.

<http://www.heritage.org/research/reports/2012/09/washington-should-urge-greater-south-korean-japanese-military-and-diplomatic-cooperation>

overseas diplomatic missions can create the common ground and political cover necessary to overcome objections that may arise.

Technological Possibility

Cooperation on diplomatic security can be improved by information sharing on information and technology related to each country's overseas diplomatic missions and the safeguards put in place to secure them. The US Bureau of Diplomatic Security "maintains a database of each [US] post's compliance with physical security standards and the status of requests for exceptions and waivers."¹⁸ In a similar fashion, Washington, Tokyo, and Seoul could cooperate on maintaining a common database or increased information sharing to ensure security standards are in place to predict hotspots where diplomatic security may need to be increased. Current US counterterrorism efforts with its allies should expand to incorporate diplomatic security efforts as well.

In light of North Korea's increased bellicosity and threatening rhetoric, several countries have also expressed their concerns with protecting diplomats and embassies in hostile environments. On April 5, 2013 Pyongyang issued a warning to embassies in North Korea that it could not guarantee the safety of diplomatic missions and international organizations if war were to break out on the Korean Peninsula.¹⁹ Although most countries have largely overlooked Pyongyang's verbal threats, the warnings from the North underscore the extent to which diplomatic missions may be seen as possible targets. Countries that have embassies in North Korea, such as Great Britain, Russia, and Sweden (the proxy representative for the US), might find it increasingly valuable to create coordinated security protocols and procedures with South Korea and Japan to establish coordinated emergency evacuation protocols in case of a crisis situation. Such an evacuation would likely require high levels of coordination with Seoul and Tokyo as the closest US allies available to receive exiting diplomats and their families. A Japan-ROK bilateral committee for developing safety procedures and security protocols for third nation diplomats' egress from North Korea could serve as a first step.

Economic Affordability

Due to budget and spending cuts in the US, it is estimated that \$168 million will be cut from the US State Department's Worldwide Security Protection and Embassy Security, Construction and Maintenance funds.²⁰ Diplomatic security cuts in the US may

¹⁸ Harold W. Geisel, Deputy Inspector General, "Review of Overseas Security Policy Board Exceptions and Secure Embassy Construction and Counterterrorism Act of 1999 Waivers," *United States Department of State and the Broadcasting Board of Governors, Office of Inspector General*, Jan. 7, 2013.

<http://www.washingtonguardian.com/sites/default/files/stateireportjan2013.pdf>

¹⁹ Jethro Mullen, Barbara Starr, and Laura Smith-Spark, "Embassies face decisions as tensions rise in North Korea," *CNN*, April 5, 2013. <<http://edition.cnn.com/2013/04/05/world/asia/koreas-tensions/index.html>>; Associated Press, "Russia: North Korea warns diplomatic missions it can't guarantee their safety in event of war," *The Washington Post*, April 5, 2013. <http://articles.washingtonpost.com/2013-04-05/world/38308481_1_pyongyang-north-korea-chang-yong-seok/2>

²⁰ Susan Cornwell, "Automatic Spending Cuts Would Hit US Embassy Security: Democrats," *Reuters*, Feb. 11, 2013. <http://www.reuters.com/article/2013/02/12/us-usa-fiscal-embassy-idUSBRE91B01020130212>

put pressure on US East Asian allies to increase efforts to secure diplomatic missions and personnel. Although increasing diplomatic security requires increased costs for upgrading and improving physical security around embassies and consulates, the financial cost of increasing cooperation, consultation, and planning bilaterally are much lower than the brick and mortar security costs and would be shared between the two states.

Additionally, unconventional means of maintaining diplomatic security would be low cost and could easily be initiated in cooperative efforts for diplomatic security.²¹ Social media and social networking services like Facebook and Twitter could be utilized to predict potential threats to diplomatic buildings by “determin[ing] when crowds might form or when an attack is being planned.”²² Information on gathering movements or public sentiment provided on social networking sites could be pieced together and analyzed to produce early warning on possible threats to embassies.²³ Seoul and Tokyo-based social media professionals thus should be engaged via a public-private initiative that examines the possibility of using current and emerging social technologies to predict threats to embassies and consulates.

Benefits to Extended Deterrence and Strategic Assurance in East Asia

Japan-ROK cooperation on diplomatic security is not only highly feasible, but also has significant implications for US extended deterrence (ED) in East Asia. The most intuitive and immediate advantage to ED of increasing collaboration on diplomatic security is that safeguarding embassies and the well-being of diplomatic personnel addresses basic physical security. As a direct corollary to ED, increased diplomatic security that is achieved through individual or joint efforts will serve to increase confidence in each state’s ability to provide for their own defense. Further, ROK-Japan cooperation on any type of defense enhances extended deterrence.

Similarly, cooperation on diplomatic security should make it easier for the US to reinforce its commitment to *negative* security assurances, or to not use or threaten to use a nuclear weapon against a non-nuclear weapon state. If alliances are fortified through collaboration on diplomatic security, both South Korea and Japan as US allies should feel less vulnerable to fears such as abandonment, which would open up space for the US to use a variety of approaches in dealing with North Korea. In other words, by increasing fungibility – wherein forces that are dedicated to increasing diplomatic security are also channeled into other security efforts such as anti-terrorism activities – alliances will be deepened, and Washington will be less susceptible to charges by Seoul and Tokyo that extending such negative security assurances to Pyongyang undermines overall stability.

²¹ John Vandiver, “Experts suggest unconventional means of embassy security,” *Stars and Stripes*, Sep. 28, 2012. <http://www.stripes.com/news/experts-suggest-unconventional-means-of-embassy-security-1.191105>; William Young, “Embassy Security: From the Outside In,” *RAND Corporation*, Feb. 2013. <http://www.rand.org/pubs/perspectives/PE103>

²² Young, “Embassy Security,” Feb. 2013.

²³ *Ibid.*

There is also a major spillover effect from strengthening efforts in diplomatic security. According to the October 2012 report published by the South Korean National Assembly Budget Office, MOFAT increased its allotted resources toward consolidating safety against anti-terror activity by 18.2 percent, to over 10 billion won (or \$9 million) for 2013.²⁴ Re-locating the South Korean embassy in Iraq to the fortified Green Zone took up a bulk of that increase, which underscores the importance of safeguarding diplomatic buildings and personnel. The salience of anti-terror security is also not lost on Japan, given the recent loss of 10 Japanese lives in the Algerian hostage crisis involving Islamist militants in January 2013 – the largest group of foreigners confirmed dead in the tragedy.²⁵ The following month, the US and Japan held a summit meeting, a the joint statement issued thereafter specifically called for promoting cooperative measures aimed at consolidating counterterrorism mechanisms, through processes such as the US-led Global Counterterrorism Forum (GCTF) and the US-Japan counterterrorism consultations.²⁶ As one of the 30 founding members of the GCTF, Japan has a vested interest in securing and extending counterterrorism capacity-building assistance to other countries. It has already hosted dialogues on this topic with the Association of Southeast Asian Nations (ASEAN).

Subsequently, diplomatic security is an excellent opportunity for complementing Japan's ongoing domestic counterterrorism measures such as immigration control and intelligence gathering. Further developing anti/counterterrorism capabilities through collaboration on diplomatic security is an example of an organic spillover effect that could bolster ED by emphasizing joint capacity-building in the area of comprehensive security. The interconnectedness of security in the domestic and international spheres is reiterated by the fact that anti-terrorism security is also applicable to and essential for the domestic realm. It is especially relevant to both Seoul and Tokyo as the preeminent global cities in Northeast Asia.

Policy Recommendations to Increase Japan-ROK Cooperation on Diplomatic Security

- *Include diplomatic security as an agenda for consultations with the US to ensure a heightened priority for diplomatic security efforts:* this stems from the realization that if an issue is irrelevant in the eyes of the US, progress will most likely be stunted; initial agenda-setting and increasing awareness of the issue will be crucial for future success.
- *Enlist the help of the US Bureau of Diplomatic Security to gather information regarding the creation of a common database that would clearly outline security*

²⁴ “2013 Departmental Budget Breakdown: MOFAT/Defense,” [in Korean] National Assembly Budget Office (NABO) Report, Oct. 2012.

²⁵ “Victims, Survivors of Algerian Hostage Crisis Return Home,” *The Asahi Shimbun*, Jan. 25, 2013. http://ajw.asahi.com/article/behind_news/social_affairs/AJ201301250076.

²⁶ Joint Statement by the US and Japan, Feb. 22, 2013 summit meeting between Japanese Prime Minister Shinzo Abe and US President Barack Obama, *Official Website of the Kantei*, http://www.kantei.go.jp/foreign/96_abe/diplomatic/201302/22_e.html

protocols in case of a breach of diplomatic security: leveraging existing capabilities instead of building from the ground-up will ensure cost effectiveness.

- *Utilize more cost-effective and innovative early warning systems to minimize fallout from potential breaches to diplomatic security*: just as the various foreign ministries issue warnings and alerts for traveling to hot zones, such diplomatic security warnings may take the form of mobile applications or social media (i.e., Twitter) sites.
- *Increase the sharing of hotlines, protocols, and safety measures regarding the protection of diplomatic buildings and personnel*: this includes establishing best practices in curbing and preventing the flare-up of crimes involving US military officers in South Korea and Japan, such as a code of conduct regarding curfews, as well as the more traditional task of protecting embassies and legations abroad.
- *Heighten the interoperability between the domestic police force in South Korea and Japan with US military forces based in the respective countries, in order to build greater joint capacities for diplomatic security*: this underscores the importance of realizing that the domestic and international spheres are organically linked. Moreover, preventing anti-American sentiments will strengthen ED.
- *Leverage the spillover effects from collaborating on diplomatic security*: anti-terrorism efforts – both domestic (during major international conferences) and international (particularly in crisis zones) – will bolster alliance capacity-building in comprehensive security.
- *Channel the increased sense of confidence and trust from collaboration on diplomatic security into extending negative security assurances to North Korea*: albeit an indirect method of bolstering ED, this represents a more sustainable way of realizing stability on the Korean Peninsula.

Materials of the Future: Rare Earth Elements and the Japan-South Korea Bilateral Relationship

By Naoko Aoki and A. Greer Meisels

Rare earth elements (REEs), a group of 17 metallic elements sub-classified as light, medium, and heavy, have been described as “vitamins of modern industry” because of their wide applications in high-tech and defense industries. As of 2010, the world’s demand for REEs was estimated to be about 136,000 tons per year and global production was around 133,600 tons. (The difference is covered by previously mined stockpiles.) Today, China dominates the rare earth production market and according to a Chinese white paper released in 2012, currently has 23 percent of the world’s total reserves – although a United States Geological Survey conducted last year raised its estimates of China’s reserves to half the world’s supply. Regardless, the real point of contention as it relates to China and the REE industry is its near monopoly on REE production which accounts for well over 90 percent of total production per year.

China has not always dominated the industry though. The United States used to be one of the world’s leaders in both rare earth production and innovation. The Mountain Pass mine located near the California-Nevada border accounted for 100 percent of the US domestic demand and one-third of global exports of rare earths.¹ However, following “reform and opening,” China began to realize the untapped potential of this resource and rapidly increased its own REE production capacity. This led Deng Xiaoping to allegedly state in 1992, “There is oil in the Middle East; there are rare earths in China.” But rising production capabilities were only made possible with significant and sustained government support – in essence the government subsidization of the industry. This allowed companies that were not profitable to continue their operations and to export REEs at artificially low prices causing the global price to fall considerably. Therefore as time went on, most non-Chinese producers of REEs, the United States included, were forced out of the business entirely. Mountain Pass mine, for example, was shut down in 2002.

And yet as stated earlier, REEs are critical for the development of high-tech and defense industries as well as for the manufacturing of clean energy products. These are of vital importance to countries such as Japan and South Korea who are attempting to steer their economies away from a “carbon-intensive industrial model.”² Therefore, with the understanding that either disruptions or threats of disruptions may affect these two countries’ economies and defense industries, this paper will try to identify ways in which Japan and South Korea, could work together to ensure a safe and stable supply of these critical materials, in turn reducing future dependence on a country such as China. The argument is that by developing a deeper cooperative relationship around REEs, this might serve as a model for future activities between the two countries.

¹ Lee Levokitz and Nathan Beauchamp-Mustafaga, “China’s Rare Earths Industry and its Role in the International Market,” US-China Economic and Security Review Commission Staff Backgrounder, Nov. 3, 2010.

² Please see <http://www.ft.com/cms/s/0/b17e8714-54b0-11e2-89e0-00144feab49a.html#ixzz2PEok727d>

The structure of the paper is as follows: First, there is a description of the current state of the REE industry in both Japan and South Korea to provide background as well as to bring up any major issues or challenges that the two countries face *vis-à-vis* REE procurement.³ Next, the paper outlines ways Japan and South Korea can work together in the REE industry given their different needs and concerns. Finally, it will begin to explain why enhanced cooperation between Japan and the ROK on REEs might help to ameliorate some tensions between the United States' two most important Asia-Pacific allies.

Japan: Background and Recent Developments

Japan relies almost entirely on REE imports as it produces virtually none of the materials domestically. Tokyo's imports have grown over the years, although it has fluctuated in tandem with economic growth. In the period between 1999 and 2008, Japan's rare earth imports jumped 68 percent from 20,970 tons to 35,327 tons. Of the total of imports in 2008, 89 percent was from China which, as stated in the introduction, controls over 90 percent of the materials.⁴

The dangers of relying on China for REEs entered the Japanese public consciousness in September 2010, when China appeared to suspend its supply of the materials to Japan over a diplomatic spat. While Beijing insisted that it was not using REEs as a diplomatic leverage, the halt was widely interpreted in Japan as retaliation linked to a collision of Chinese and Japanese ships near the disputed Senkaku/Diaoyu islands in the East China Sea.

Japan was not the only country worried about market uncertainties due to China's monopoly of REEs. In 2011, Japan, the United States, and the European Union joined together to challenge China's restrictive export policy at the World Trade Organization.

In addition to the coordinated diplomatic offensive, Japan has combated unstable supplies and soaring prices by decreasing its dependence of rare earth materials on its giant neighbor. Japan's official goal is to raise rare earth "self-sufficiency" – which consists of materials obtained through overseas production involving Japanese companies and those recovered through recycling efforts – to 50 percent by 2030.

With this goal in mind, Tokyo has taken action mainly on three fronts: using less REEs in Japanese products, diversifying its import base, and recycling what has already been used. While differing somewhat in degrees, the three measures have been largely successful. In 2012, Japan's imports dropped by 61 percent from a year earlier, to 13,800

³ Please keep in mind that the data and information from Korea is considerably more limited than what we were able to find on Japan. We are unsure of why.

⁴ Japan Oil, Metals and Gas National Corporation. (2011 July). "*Rea asu no juyou, kyokyu oyobi kakaku no dokou* (The trends in demand, supply and price for rare earth materials." Kinzoku Shigen Repoto. Retrieved from <http://mric.jogmec.go.jp/public/kogyojoho/2011-08/MRv41n2-06.pdf>

tons,⁵ although this is also likely to be a reflection of a drop in demand due to slower economic growth.

Japanese manufacturers using REEs were also able take a breather as prices of the materials dropped sharply in 2012.⁶ For example, dysprosium, which is essential for electric car batteries and energy-saving domestic electric appliances, traded in March 2013 at around \$600 per kg, or less than one-sixth its peak price in July 2011.⁷

Japanese Actions

Decreasing dependence on rare earth materials

The most successful of Japan's three actions has perhaps been a corporate-led effort to decrease its dependence on REEs. This has been achieved both by reducing the amount needed in products and replacing them with other substances. Nissan Motor Company, for example, announced in November 2012 that it is starting to fit its LEAF electric vehicle with engines that use 40 percent less dysprosium, and that it plans to begin doing the same with its hybrid cars.⁸ Toyota Motor Corporation, the largest maker of hybrid vehicles, is reported to have successfully developed a way to make engines without using any REEs at all.⁹ Some consumer electronics companies, meanwhile, have begun replacing motors for washing machines and air conditioners to those that do not use REEs.¹⁰

This trend in the Japanese corporate sector is a strong one that is likely to continue. Demand for rare earth materials has not recovered even after the sharp drop in their prices, underscoring the extent to which the manufacturing sector is trying to wean itself from its reliance on imported REEs.

Recycling

Recycling efforts are also under way. A notable announcement came from Honda Motor Company in March 2013 when it said it had established the world's first process to reuse rare earth metals extracted from used nickel-metal hydride batteries for new

⁵ *Nihon Keizai Shimbun*. (2013, March 27). "Rea asu banare senmei (A clear move away from rare earth elements)." Retrieved from <http://www.nikkei.com/article/DGKDZO53253660W3A320C1QM8000/>

⁶ The REE sector experienced record highs in 2011 but plunged in 2012. Some attribute this drop to the reintroduction of new sources of production outside China.

⁷ *Nihon Keizai Shimbun*. (2013, March 27). "Rea asu banare senmei (A clear move away from rare earth elements)." Retrieved from <http://www.nikkei.com/article/DGKDZO53253660W3A320C1QM8000/>

⁸ Nissan Motor Corp. (2012, Nov. 20). "New Nissan EV Motor Cuts Rare Earth Use by 40 Percent." Retrieved from <http://www.nissan-global.com/EN/NEWS/2012/STORY/121120-02-e.html>

⁹ *Reuters*. (2012, Jan. 23). "Toyota finds way to avoid using rare earth: report." Retrieved from <http://www.reuters.com/article/2012/01/23/us-toyota-rare-earth-idUSTRE80M0JK20120123>

¹⁰ *Nihon Keizai Shimbun*. "Rea asu banare senmei (A clear move away from rare earth elements)."

batteries.¹¹ Companies such as Mitsubishi Materials Corporation are also involved in the recycling of rare earth materials recovered from scrapped vehicles.¹²

Meanwhile, the Japanese government is considering ways to recycle REEs used in household electronic devices. Government officials say they are interested in cooperating with the manufacturing sector to try to establish a recycling system that prevents, for example, used devices from being shipped to other countries for sale as scrap material first and thus raising the cost of recovering the used devices.¹³

Private sector efforts to reduce the use of REEs or to recycle them are being supported by the government, which appropriated 15 billion yen for such efforts in a comprehensive rare earths strategy adopted in December 2010.

Diversifying Japan's import base

Japan has managed to reduce its overwhelming reliance on China for REEs by increasing its imports from other countries such as Vietnam, France, and Estonia. As a result, Japan's dependence on China for total rare earths imports in 2012 dropped to 50 percent from the near 90 percent level in 2008.

There is, however, a catch. While Japan has been able to wean itself from large-scale imports of light rare earth materials from China, it still relies on the country for the less common and more valuable heavy REEs such as dysprosium, an overwhelming majority of which is still imported from China.¹⁴

A recent announcement by Japanese researchers about a large-scale rare earth deposit in the seabed in the Pacific Ocean is welcome news in this regard. A team from the Japan Agency for Marine-Earth Science and Technology and the University of Tokyo said the vast cache in the seabed surrounding the Minami tori shima Island may be home to rare earth substances that are 30 times more concentrated than those being mined in China.

Of particular note is the expected concentration of dysprosium, the highly sought-after material that is generally difficult to recycle or replace with an alternative material.¹⁵

¹¹ Honda Motor Company. (2013, March 3.) "Honda established world's first process to reuse rare earth metals extracted from nickel-metal hydride batteries for hybrid vehicles." Retrieved from <http://world.honda.com/news/2013/c130303Reuse-Rare-Earth-Metals/>

¹² Mitsubishi Material Corporation. (Sept. 10, 2012). "Development of technology for recovery of rare metals from scrapped vehicles -Grant to be received from the New Energy and Industrial Technology Development Organization (NEDO)." Retrieved from <http://www.mmc.co.jp/corporate/en/news/news20120910.html>

¹³ Comments by official of the Ministry of Economy, Trade and Industry at a rare earths conference held in Tokyo on Feb. 21, 2013. Summary retrieved from http://iruniv.net/marketnews/2013_02/ma2013_0225_1.html

¹⁴ *Nihon Keizai Shimbun*. (2012, Oct. 10). "Rea asu 'datsu chugoku'." Retrieved from http://www.nikkei.com/article/DGXNASFS0902Q_Z01C12A0MM8000/

¹⁵ Many of the examples throughout this paper have centered on dysprosium; this is because it is very important from both a commercial and military perspective and is already in short supply. Should market

Prof. Kato Yasuhiro was quoted by the *Nihon Keizai Shimbun* newspaper as saying that the area may contain enough dysprosium to satisfy several centuries' worth of Japanese demand for the material. Whether the finding could be transformed into a commercially viable operation is yet to be known, but the discovery has raised hopes of Japan securing a stable domestic supply of the materials over the long run.

Stockpiling

The urgency for stockpiling rare earth materials has subsided, given the fall in their price and demand. It does, however, remain a long-term question for the Japanese government, and if other measures do not prove effective, the issue may be revisited with renewed urgency. Substances such as dysprosium could continue to be a problem as it easily oxidizes under natural conditions and poses difficult problems for stockpiling.

Technological Innovation and Cooperation with Others

Japan has made much progress in technological innovation to reduce the use of rare earth materials and recycle them in a relatively short period of time. This progress puts Tokyo in a strong position to lead any effort at cooperation with countries such as South Korea to deal with the long-term risks of instability in rare earth supply.

That strength, however, is also a weakness in any such endeavor. While some technical advances have been made in cooperation with the government and academia, the corporate sector has taken the lead in technological innovation to reduce Japan's reliance on rare earth materials. Competition between the manufacturing sectors between Japan and South Korea could limit incentives for such cooperation.

South Korea: Background and Recent Developments

South Korea, in many respects, has an easier time with its REE imports. First, unlike Japan, its supply of rare earth materials has never been "turned off" due to tensions or a dispute with China. However, like Japan, South Korea does not have any indigenous REE mines and is therefore forced to import all of the materials it needs primarily in raw form from China and in half-finished product form from Japan. For this reason, it has pushed to explore other countries that might serve as alternative sources for REEs.

Some South Koreans see the country as falling into a positioning trap between China and Japan. China is the world's largest resource base and largest producer of REEs and Japan is a technology base, and number one in the world in terms of materialization. But South Korea is a large import base and lacks resources – in other words it has a huge

demand continue to grow, which appears to be the trend, there will soon be a growing deficit. It is also important to realize that not all rare earths are made equal. Certain REEs have more critically important commercial and military uses than others. For example, if there was a major disruption in Yttrium supply, things like microwave communication for defense and satellite industries, color televisions, and computer monitors would be affected. On the other hand, Holmium shortage means our glass might not get adequately tinted.

commercial industry and a weak supporting industry. To provide some context, South Korea's trade deficit with Japan in the materials and component sector has been growing over the past several years, although a trade deficit with Japan is nothing new and in fact expanded throughout the 2000s.

South Korea also seems to be trying to become a “thought leader” in the industry. For example, in conjunction with the US Department of Energy's Ames Laboratory, the Korea Institute for Rare Metals (KIRAM) has organized two international workshops on rare metals. They are intended to provide a forum for researchers and practitioners from around the world – including the US, Japan, China, Germany, Canada, the UK, and Indonesia – to discuss high-level strategic issues and strategies to ensure secure supplies of these essential materials.

South Korean Actions

Decreasing dependence on rare earth materials

South Korea has also reduced the amount of REEs it imports though the reasons behind this trend remain opaque. Some attribute this trend to the fact that South Korea companies such as Samsung and LG shifted production from cathode ray tubes (CRTs) to liquid crystal display (LCD) and plasma display panels. Also of interest is the fact that South Korea's REE imports from Japan have been on the rise while imports from China have declined.¹⁶ Keep in mind, however, that the REEs are imported in secondary (non raw material) form from Japan.

Recycling

The trend in the REE industry does seem to be moving toward improving recycling efforts and South Korea is no exception. For example, Kim Jun-dong, head of the Ministry of Knowledge Economy's climate change energy development bureau, said that Seoul was committed to improving R&D surrounding reusing and recycling REEs.¹⁷ South Korea's Institute of Industrial Technology is also working with the Ames Laboratory to try to make new magnet alloys from recycled rare earths.¹⁸ Scrap piles of used products, termed “urban mines” might be a good source to recover REEs. South Korea has determined that “recycling from end-use products and designing for recyclability at the production stage are particularly important.”¹⁹

Diversifying South Korea's import base

Similar to Japan, South Korea has managed to reduce its reliance on China for REEs. The *Global Times* reported last month that South Korea's customs data shows that “rare imports from China plunged to 54.5 percent of the total for the period from January

¹⁶ See Appendix 1 for statistics from Korea International Trade Association.

¹⁷ Please see <http://nwww.koreaherald.com/view.php?ud=20120423000689>

¹⁸ Please see <http://phys.org/news/2012-12-magnetic-idea-rare-earth-recycling.html#jCp>

¹⁹ Steven Chu, ed., “Critical Materials Strategy,” US Department of Energy, December 2010, p. 66.

to November 2012, as compared to almost 80 percent during the same period in 2011.²⁰ Its search for new sources of these valuable materials is wide ranging and includes Kyrgyzstan – where it began a prospecting program in 2011 Vietnam, Australia, South Africa, and Brazil. Overseas resource development in South Africa could be particularly lucrative since the state-run Korea Resources Corp reached a deal to develop 6,000 tons of the industrial material within the country.²¹ Frontier Rare Earths Ltd. of South Africa signed an MOU with five Korean companies including Hyundai Motor Co., Samsung C&T Corp., and Daewoo Shipbuilding & Marine Engineering Co. Ltd. to develop this project.

Stockpiling

Though South Korea has reduced its dependence on rare earth elements at a macro-level, it has also decided to secure and stockpile the vital resources to offset any potential supply chain disruptions. The Ministry of Knowledge Economy has changed the country's industrial policy to ensure that its rare earth reserves meet 100 days of demand by 2014. To this end, state-run commodities firm Korea Resources Corp. (KORES) secured 1,000 tons of the elements through two joint venture projects in China. South Korea's stockpile program appears to be modeled after Japan's and includes not only REEs but also the stockpiling of cobalt and titanium.

Technological Innovation and Cooperation with Others

Similar to the Japanese case, though the potential for technological innovation and cooperation is ripe, in reality, it is still rather limited. In 2011, a consortium of Japanese and South Korean firms that includes Japan's Nippon Steel and South Korea's Posco and National Pension Service (NPS) took shares in a Brazilian rare metal mining company, Companhia Brasileira de Metalurgia e Mineracao (CBMM).²² That same year, Posco and NPS set up an 800 billion won (\$752 million) fund for overseas acquisitions.²³ If Japan and South Korea could work in tandem to develop additional mines and overseas projects, the initial exploration costs could be mitigated.

Additionally, reusing elements and finding better ways to refine the materials from nature without causing environmental damage are areas in which South Korea wants to become a leader. China has noted that excessive rare earth mining has resulted in landslides, clogged rivers, environmental pollution emergencies, and even major accidents and disasters. If South Korea could work with other countries such as Japan, one of the world's leaders in environmental protection and green technology, to develop new innovative ways to help countries and companies extract these vital resources

²⁰ Marc Howe, "South Korea turns to Japan to reduce rare earth reliance on China," Mining.com, Jan. 5, 2013. Retrieved from <http://www.mining.com/south-korea-turns-to-japan-to-reduce-rare-earth-reliance-on-china-10580/>

²¹ Please see <http://english.yonhapnews.co.kr/business/2012/04/23/30/0501000000AEN20120423001000320F.HTML>

²² Please see <http://www.bbc.co.uk/news/world-south-asia-12631102>

²³ Please see <http://www.ft.com/cms/s/0/b17e8714-54b0-11e2-89e0-00144feab49a.html#axzz2PEobQR00>>

without causing the environmental damage that goes hand in hand with the process; that would be a win-win solution. Japan and South Korea could also work together, perhaps with the United States, “to develop new, efficient technologies that substitute for or improve the usage and recycling of REEs.”²⁴

Feasibility of Japan-ROK Cooperation on Rare Earths

The sense of urgency to secure an adequate REE supply has subsided since prices dropped sharply in 2012. Some of the factors behind the plunge were slower economic growth in REE consuming nations, an increase in China’s annual REE export quota, China’s overproduction, and more availability of the supply from non-Chinese sources, including US-based Molycorp, which reopened its REE plant in California.²⁵

However, nurturing a secure supply chain for REEs continues to be a longer-term challenge for both Japan and South Korea. This is particularly true for the heavy rare earth materials that China continues to monopolize. While technological innovation has reduced the demand for REEs in Japan, the world is far from eliminating the need for them entirely.

As both Japan and South Korea are resource-scarce nations and are rivals in the manufacturing sector, challenges remain for cooperation between the two countries in this field. But there are four areas where the nations’ interests may overlap.

One is in the diplomatic arena. Japan has joined forces with the United States and the European Union at the World Trade Organization to protest China’s restrictive policies. Bringing in South Korea in such efforts will be worthwhile. This would also address the so-called “free rider” problem in which countries such as South Korea benefit from the actions of other nations. Negotiating directly with China together may also be a possibility.

A second area is the joint exploration of REEs in third countries. Securing new sources together would reduce exploration costs and make use of the countries’ differing strengths. The two governments could promote the joint exploration not only through direct investment by state institutions but also through government-backed funding opportunities for private companies.

Japanese companies have struggled to secure enough technicians to work on overseas REE extraction projects, as those with skills in the field retired and were not

²⁴ Yufan Hao and Weihua Liu, “Rare Earth Minerals and Commodity Resource Nationalism,” NBR Special Report #31, September 2011, P. 40.

²⁵ Currie, A. (2012, Dec. 31). 3 Rare Earth Stocks to Watch in 2013. *Rare Earth Investing News*. Retrieved from <http://rareearthinvestingnews.com/8782-rare-earth-stocks-2013-ucore-matamec-stans-outlook.html>

replaced during the years that REE production shifted to China.²⁶ Working with a partner may be attractive for Japan in this regard, and South Korea could be a likely partner.

The third potential cooperation is joint development and production of items that use less REEs. Given the potential instability of REE supply, magnets and other products that use less REE as a percentage of the whole are attractive items. The upside of this plan is that the two countries could merge their technical expertise to create better products and to find potentially bigger markets to sell them to. However, Japanese companies may face a dilemma as they try to work with South Korean companies without sacrificing competitiveness in technical expertise.

There is a precedent in this arena. Over the past several years there has been an uptick in the flow of Japanese investment into South Korean parts and raw materials industries and R&D. One such example is the establishment of a carbon-fiber manufacturing facility by Toray. Japanese companies account for around 70 percent of the world market for carbon fiber. Toray has previously only produced carbon fiber in Japan “but decided to build a factory in South Korea not only because of lower production costs, but also because of the growth of the motor vehicle and shipbuilding industries, which use carbon fiber.”²⁷ If Japan feels comfortable that it would not lose its competitive advantage in this area (just one example of many) who’s to say that they would not achieve similar success in the REE market?

Fourth, the process of extracting REEs is highly damaging to the environment and that is why China has voiced legitimate environmental concerns that stem from its production practices. Since Japan and South Korea both value environmental protection the two countries could work together to develop new, less harmful ways to extract and produce REEs not only for China, but also for the other countries that have REE supplies, such as Russia, the United States, Australia, India, Malaysia, Vietnam, Canada, South Africa, and Brazil.

Finally, Japan and South Korea could work together to mimic in East Asia what the US Department of Energy did earlier this year when it created the Critical Materials Institute (CMI). In essence, the CMI’s mandate is to “develop solutions to the domestic shortages of rare earth metals and materials for US energy security.”²⁸ There seems to be little reason why a similar sort of institute couldn’t be spearheaded by countries such as South Korea and Japan that rely so heavily on REEs. In fact, it might make sense for the US, South Korea, and Japan to work together by pooling resources – both financial and human capital – to try to address these concerns more efficiently and effectively.

²⁶ Hiranuma, H. (2009, Oct. 15) “Onshitu kouka gasu sakugen 25 percent de masumasu juyou to naru nihon no reamataru kakuhosaku. (With 25 percent reduction in greenhouse gases, Japan’s rare metal securing plan becomes more important)” The Tokyo Foundation.

²⁷ Hidehiko Mukoyama, “Japan-South Korea Economic Relations Grow Stronger in a Globalized Environment,” *Pacific Business and Industries*, Vol. XII, 2012 No. 43, p. 17.

²⁸ Please see <http://energy.gov/articles/ames-laboratory-lead-new-research-effort-address-shortages-rare-earth-and-other-critical>

Conclusion and Recommendations for Further Cooperation

The future of the REE market remains murky. Hikaru Hiranuma, a research fellow at The Tokyo Foundation, offers four possible scenarios for the future.²⁹ In the first scenario, Japanese companies continue to reduce their reliance on REEs through technical innovation. As a result, REE demand declines further. In the second, REE supply from China stabilizes through successful international negotiations and monitoring. China's REE remains the cheapest in the world, so if uncertainties and risks are reduced, companies are likely to return to buying from the country.

If the Japanese economy picks up and demand for REE grows, there is a possibility that a third scenario will unfold. Under this scenario, Japanese companies begin buying from China again despite the risks involved, rather than make an effort to cut their use of REEs. This is possible as prices have dropped and light REEs in particular are readily available on the market. The fourth scenario envisions a successful diversification of REE sources. In this scenario, REE sites in countries other than China would provide the materials at competitive prices. The possibility of this happening, however, will depend on the speed of development of new REE mines. If development of new sources is outpaced by corporate efforts to reduce REE reliance, the decrease in demand will make investing in new sites less attractive.

Japanese companies are currently leaning toward the first scenario, according to the Tokyo Foundation's Hiranuma. But cooperating with South Korea could help make the second scenario possible. Stability in supply from China is in both countries' interests. Joining forces would strengthen the countries' negotiating positions. Hiranuma also sees value in cooperation between the two countries over negotiations with China.

Diplomatic cooperation is the logical first step for Japan and South Korea also because it faces the fewest obstacles among the possible areas of cooperation identified above. Japan and South Korea could explore bilateral as well as multilateral cooperation over stabilization of Chinese supply.

A stable supply of REEs also has security implications for the two countries. REEs are used heavily for the miniaturization of weapons as well as state-of-the-art space technology. While progress has been made in the reduction of REE demand in the automobile and electronics industry, whether such cuts can be made in the defense industry remains unknown.

Japan and South Korea should also consider joint exploration of new REE sources, as this is another path to secure the materials. This option, however, is highly susceptible to external factors and any decisions must be weighed against, for example, demand for REE. Moreover, if the two countries were to cooperate on the recycling process, they could become leaders in the standardization of recycling systems on a regional and global

²⁹ Information is based on an e-mail exchange with Hikaru Hiranuma.

level. In so doing, recycled REEs could be “placed at the beginning of the supply chain as additional resource inputs.”³⁰

The two governments could also encourage joint technology development to reduce REE demand. While the final decision on such cooperation will be up to the corporate sector, government backing should be considered to promote such cooperation.

Finally, Japan and South Korea are two of the United States’ closest strategic allies and yet if one thinks of the relationship between the three countries in geometric terms the Japan-ROK leg of the triangle is by far the weakest. The reasons for this current state of affairs go beyond the scope of this paper though the legacy of Japan’s colonial period still looms large and many South Koreans harbor a deep mistrust of Japan and its military intentions. That is why these two countries need to have as many positive conversations and cooperative programs as possible, and in so doing this might provide a context for their disagreements. Japan and South Korea should seek to manage their differences while building on common interests, such as ensuring a stable and secure supply of Rare Earth Elements. Efforts in these areas that are less politically sensitive though vital from an economic and military standpoint may become a model for cooperation between the two countries. Similarly, the United States would undoubtedly welcome any improvements in the relationship between these two critical allies. That is why REEs – these “materials of the future” – could become part of a more solid foundation for Japanese and South Korean future interactions.

³⁰ Steven Chu, ed., “Critical Materials Strategy,” US Department of Energy, December 2010, p. 66.

Table 1

South Korea's Total REE Import (Source: Korea International Trade Association)						
	Compounds, inorganic or organic, of rare-earth metals, of yttrium or of scandium or of mixtures of these metals.		Rare-earth metals, scandium and yttrium, whether or not intermixed or interalloyed		Total REE Imports	
	Weight (ton)	Income amount (USD 1,000)	Weight (ton)	Income amount (USD 1,000)	Weight (ton)	Income amount (USD 1,000)
2005	7377	28,552	54	788	7,431	29,340
2006	6626	23,730	34	848	6,660	24,578
2007	5968	23,248	43	559	6,011	23,807
2008	3809	25,170	295	604	4,104	25,774
2009	2633	24,900	23	624	2,656	25,524
2010	3206	57,864	81	1,088	3,287	58,952
2011	2926	193,952	666	9,464	3,592	203,416
2012	1994	81,048	267	5,664	2,261	86,712
South Korea's REE Import from China (Source: Korea International Trade Association)						
	Compounds, inorganic or organic, of rare-earth		Rare-earth metals, scandium and yttrium, whether		Total REE Imports	
	Weight (ton)	Income amount (USD 1,000)	Weight (ton)	Income amount (USD 1,000)	Weight (ton)	Income amount (USD 1,000)
2005	6633	21,883	52	340	6,685	22,223
2006	5915	16,019	32	346	5,947	16,365
2007	4931	14,238	35	407	4,966	14,645
2008	2873	13,297	288	428	3,161	13,725
2009	1707	10,073	21	249	1,728	10,322
2010	2082	34,791	75	581	2,157	35,372
2011	2172	137,568	644	8,015	2,816	145,583
2012	959	44,146	260	4,285	1,219	48,431
South Korea's REE Import from Japan (Source: Korea International Trade Association)						
	Compounds, inorganic or organic, of rare-earth		Rare-earth metals, scandium and yttrium, whether		Total REE Imports	
	Weight (ton)	Income amount (USD 1,000)	Weight (ton)	Income amount (USD 1,000)	Weight (ton)	Income amount (USD 1,000)
2005	203	2,708	2	367	205	3,075
2006	550	5,233	2	252	552	5,485
2007	658	5,745	5	90	663	5,835
2008	780	8,506	1	55	781	8,561
2009	754	10,803	1	266	755	11,069
2010	723	15,182	1	184	724	15,366
2011	280	23,141	0	505	280	23,646
2012	610	17,607	0	932	610	18,539

APPENDIX A

About the Authors

USA

Ms. Linnea DUVALL is a civilian employee at US Pacific Command J52 Southeast Asia Planning division ASEAN desk. She was a Presidential Management Fellow, taking part in a two-year leadership development program directed at recent graduates entering the public sector. She received an MA in Law and Diplomacy at the Fletcher School, Tufts University, with a certificate in Diplomacy Studies. She lived for three years in Tokyo, where she studied Japanese foreign policy and worked at a public relations firm helping Western clients enter the Japanese market. She has a BA in History and East Asian Studies from Yale University and speaks intermediate Japanese.

Ms. Stephanie Nayoung KANG is an MA candidate in the Graduate School of International Studies at Seoul National University with a major in International Cooperation. She received her BA with honors in Political Science from the University of California, Irvine (UCI) in 2009. Stephanie has published articles on international security in the UCI Undergraduate Research Journal and most recently in e-International Relations. After working in South Korea for a year, she developed interests in inter-Korean relations and the dynamics of the US alliance system. Her current research interests are in US-ROK-Japan trilateral cooperation toward North Korean issues, with a particular focus on examining the Trilateral Coordination and Oversight Group. In addition to her research, Stephanie has worked at several NGOs based in Washington, D.C. and Seoul that work to improve relations between North Korea and the international community through humanitarian aid, support for refugees, and science diplomacy.

Mr. Adam LIFF is a doctoral candidate in Princeton University's Department of Politics. He is currently a Visiting Scholar at Peking University's School of International Studies. Adam's research interests include political and security affairs in Northeast Asia, international relations theory, the military policies of rising powers, and the politics of defense policy formulation. Recent publications include peer-reviewed articles in the Journal of Strategic Studies and The China Quarterly (forthcoming). Before entering Princeton, Adam lived and worked in mainland China and Japan for three years. He holds a BA (with Honors) from Stanford University, where he graduated Phi Beta Kappa, and an MA in Politics from Princeton. He speaks, reads, and writes Mandarin Chinese and Japanese.

Ms. Greer MEISELS is the Associate Director and Research Fellow for China and the Pacific at the Center for the National Interest and was previously an Assistant Project Director at the National Committee on American Foreign Policy (NCAFP). Before her work with the NCAFP, she served as a visiting lecturer at the China Foreign Affairs University in Beijing. She has also worked for the International Crisis Group and the International Peace Academy (now International Peace Institute). She has been a member of the Young Leaders program since 2007 and is currently a non-resident Sasakawa

Peace Foundation Fellow and a former non-resident James A. Kelly Fellow. She received her MA from Harvard University's Regional Studies East Asia program where she focused on Chinese politics and foreign policy, and her BA from Hunter College, City University New York, majoring in political science and classical and oriental studies. She speaks Mandarin Chinese and is starting to learn Japanese.

Mr. Nathan PINKUS is a Staff Officer for the US Department of Defense (DoD) conducting policy research on political-military issues as they relate to US support operations in the Asia-Pacific region. He previously worked as a research analyst for the DoD and interned on Capitol Hill. Nathan received a Bachelor's of Science Foreign Service degree in International Politics with a certificate in Asian studies from Georgetown University, Walsh School of Foreign Service in 2009. His research interests include US-China relations, non-traditional security threats, nuclear security, and regional security partnerships in the Asia-Pacific.

Ms. Cristin Orr SHIFFER previously worked as a Program Coordinator at Blue Star Families, a national non-profit that researches and advances policy options in support of military families. Her research centers on the role of women in and around national defense and critical security studies. She will receive an MA in International Studies from Old Dominion University in 2013. Cristin received her BA in Political Science from Santa Clara University.

Japan

Ms. Naoko AOKI is a freelance journalist based in Washington D.C. She was formerly with Kyodo News, Japan's largest news agency, covering Japanese domestic politics and economic policy in Tokyo before serving as Kyodo's Beijing correspondent from 2004 to 2009. She has written extensively about Japan, China, and North Korea, and has traveled to North Korea 18 times as a journalist. She has an MA from SAIS Johns Hopkins University, with concentrations in international economics and Korea studies.

Dr. Kei KOGA is a Research Fellow in the International Security Program at the Belfer Center, Harvard Kennedy School and a Non-Resident SPF Fellow at Pacific Forum CSIS. He was an RSIS-MacArthur visiting associate fellow at S.Rajaratnam School of International Studies (RSIS) in 2010, and the 2009-10 Vasey Fellow at Pacific Forum CSIS. Previously, he served as a research fellow at the Japan Forum on International Relations and as assistant executive secretary at the Council on East Asian Community. He also taught international relations and East Asian security at the Open University of Japan. He received a PhD in International Relations at the Fletcher School of Law and Diplomacy, Tufts University, an MA in international affairs at the Elliott School of International Affairs, George Washington University, and a BA in international affairs at Lewis & Clark College.

Dr. Ryo HINATA-YAMAGUCHI is a Resident Vasey Fellow at Pacific Forum CSIS. Ryo is also a Sergeant First Class in the Japan Ground Self-Defense Force Reserve

Component and a Security Analyst affiliated to the FM Bird Entertainment Agency Scholar Project in Tokyo. Ryo received his PhD from University of New South Wales - Canberra (Australian Defence Force Academy), where he wrote his dissertation on North Korea's military capability management. Ryo received an MA in Strategic and Defense Studies and BA in Security Analysis from the Australian National University. Ryo has presented and published a variety of papers on defense planning, military balance in the Asia-Pacific and Korean affairs. He has extensive international experience, having lived over 20 years in Australia, Korea, Malaysia, Singapore and the US. Ryo is a native speaker of Japanese and English, is fluent in Korean, and also has some knowledge of Chinese and Malay.

ROK

Ms. Jiun BANG earned her BA in International Studies from Ewha Womans University in 2005. She obtained her MA in Security Studies from Georgetown University in 2006. Realizing that she missed the academic life after spending over two years at the Korea Institute for Defense Analyses (KIDA), she returned to academia in the Political Science and International Relations doctoral program at USC in California. Her current research interests include geopolitics in Northeast Asia, alliances and rivalries (especially among the powers of China, Japan, the two Koreas, and the US), and Northeast Asia security community.

Mr. Seongho HONG is the 2013 Resident Kelly Fellow at the Pacific Forum CSIS. He previously worked as a Research Assistant at the Korea Institute of International Economic Policy in Seoul. He has previously worked at the EU Delegation of the Republic of Korea, Accenture, and the ING Office in Seoul. He is a graduate of the Johns Hopkins University with a BA in Economics. Mr. Hong was the 2012 Pacific Forum CSIS Emerging Leader representing South Korea.

Mr. Dong Joon PARK was a resident Kelly Fellow at Pacific Forum CSIS. He completed his MA at the Department of Politics and International Relations at Korea University in Seoul where he also received his BA in Political Science and International Relations in 2008. From 2004 to 2006, he served in the Korean Army as a translating soldier. His research interests include inter-Korean relations, nuclear proliferation, and Northeast Asia regionalism. He has recently been focusing on deterrence on the Korean Peninsula.

APPENDIX B

HOSTED BY THE
PACIFIC FORUM CSIS
AND SPONSORED BY THE
US DEFENSE THREAT REDUCTION AGENCY

FIFTH US-ROK-JAPAN TRILATERAL DIALOGUE
Royal Lahaina Resort ♦ Maui
Feb. 3-8, 2013

YOUNG LEADERS AGENDA

Sunday, February 3, 2013

6:30 Opening reception for the US-ROK Strategic Dialogue

Monday, February 4, 2013

8:00 **Young Leaders Introductory Session over Continental Breakfast**

Brad Glosserman, Pacific Forum Executive Director, and Nicole Forrester, Director – Young Leaders Program, will provide introductory remarks and outline YL meeting objectives.

9:00 Welcome remarks

9:15 **Session 1: Security Policy after the Elections**

This session looks at the impacts of the US and ROK elections on regional perspectives. Is the region more or less stable than the last time we met? What factors are driving regional security policy? What impact did regional developments have on the elections? What has been the impact of the US and ROK elections in the region? Have they (or will they) alter security policy and priorities? How does each government see the US “rebalance” and its impact? What are the key concerns for each government? What are their priorities and do they align? (Discussion of China and Japan apart from their role in above-mentioned issues should be withheld until sessions 2 and 6, respectively); Korean Peninsula issues will be taken up in Sessions 3 and 4.)

10:45 Coffee break

Monday, February 4, 2013 (cont.)

11:00 **Session 2: China's Role in Northeast Asia**

This session will examine views of China's role in Northeast Asia. How do participants characterize Chinese foreign policy and its role in the region during this leadership transition period? How does China impact regional stability? Does either government anticipate a shift in policy toward China? If so why? What are the implications for nuclear policies and postures? What is the role of the United States in this equation? What are the constraints? How does your country see the other's relations with China and what impact does that have on your relationship with your ally? How are other countries responding to the rise of China and its new role in the region?

12:30 Lunch

13:45 **Session 3: Views of North Korea**

Here we will explore perceptions of North Korea and their impact on the ROK and the alliance with the United States. How does your government characterize the new North Korean government? After a year, is the Pyongyang leadership different from its predecessor? How? What are Seoul's and Washington's expectations for one another when it comes to North Korea? Will the new ROK government change its approach to the North? How? What is the status of the Six-Party Talks? What are the implications of the low-level talks in Beijing between North Korea and Japan? Do Seoul and Washington agree on how to assess the North's nuclear program and how to proceed? What is China's proper role when dealing with North Korea?

15:15 Coffee break

15:30 **Session 4: Extended Deterrence**

This session explores thinking in each country about how extended deterrence (ED) works. How has thinking about ED evolved, in particular when compared to extended nuclear deterrence (END)? Does ED/END need to be strengthened vis-à-vis North Korea? If so how? Is ED/END applicable in the South China Sea? The East China Sea? How should it be applied/used in each case? What lessons can we draw from these different cases? What should the United States do to make its ED/END more credible in these different contexts? What can allies do to increase ED/END credibility in these contexts?

17:00 Session adjourns

Tuesday, February 5, 2013

9:00 **Session 5: The Alliance after the Elections**

This session looks at the impact of the US and ROK elections on the alliance. Will either government change its policy toward the alliance? Why? What does each government expect its partner to do and to prioritize during the next term? What does the US “rebalance” mean specifically for the US-ROK alliance and relationship?

10:45 Coffee break

11:00 **Session 6: Potential and Limits of Trilateralism**

This session examines the opportunities and challenges for trilateral coordination and cooperation among the United States, the ROK, and Japan on strategic issues following elections in all three countries. What are the participants' views of such a dialogue? What do they see as the main opportunities, for each country, and to improve the regional security environment? How have ROK-Japan relations influenced the prospect for trilateral cooperation? Have leadership changes in both countries improved or complicated the prospects of closer cooperation? What are the obstacles? How can these obstacles be overcome? What would be the role of nuclear policies, including diplomacy, extended deterrence, and energy, in such a trilateral arrangement?

12:30 Lunch

13:45 **Session 7: The future of the US-ROK alliance**

This session invites specific recommendations on what the two countries' new leaderships can do to promote regional security and stability, specifically within the context of ED/END, and how these policies can strengthen the alliance. How can the United States and ROK strengthen their alliance and better cope with future strategic challenges? What role do nuclear weapons play in that equation? What issues deserve more attention?

15:15 Meeting adjourns

Wednesday, February 6, 2013

9:00 **Introduction to the Young Leaders US-ROK-Japan Trilateral Meeting**

Speaker: Brad Glosserman

Coordinating rapporteurs: Adam LIFF and Cristin SHIFFER

9:15 **Session 1: Extended Deterrence in Northeast Asia today**

What is extended deterrence (ED) policy trying to deter in North-east Asia? And by whom? How does ED work in practice? Is ED effective and when can we claim success? Are we bad at deterrence? What does a failure of ED look like? What alignments in ED policy between the US, the ROK and Japan are required to improve outcomes?

Discussants: Jiun BANG, Kei KOGA and Nathan PINKUS

Session rapporteur: Takashi KAWAMOTO

10:30 Coffee break

11:00 **Session 2: Building Trilateral Alternatives to Extended Deterrence**

The DPRK leadership is aware that the extended deterrence promised by the US will be activated only by actual use of nuclear weapons, not by threatening rhetoric. If extended deterrence deters only the DPRK's use of nuclear weapons, should we be looking to develop an alternative approach to ED? What other forms of trilateral cooperation are needed to deter DPRK provocations? How might they work? What role is there for other US allies and regional partners in developing these alternatives?

Discussants: Linnea DUVALL, Dong Joon PARK and Ryo HINATA-YAMAGUCHI

Session rapporteur: Seongho HONG

12:30 Lunch

13:30 **Session 3: The unknown unknowns**

There are known knowns; the things we know we know. There are known unknowns; we know there are some things we do not know. But there are also unknown unknowns -- the things we don't know we don't know. Next generation thinking can provide an insight for senior policy makers by looking over the horizon. Time to get creative! Using an "unknown unknowns" lens, small groups (each facilitated by a resident fellow) will brainstorm future US-ROK-Japan trilateral challenges and cooperation and discussants will report back to the larger group.

Discussants: Naoko AOKI, Seukhoon Paul CHOI and Greer MIESELS

Session rapporteur: Stephanie KANG

Wednesday, February 6, 2013 (cont.)

15:30 **Session 4: Wrap up**

Young Leaders will discuss next steps for the conference project and determine the topic, structure and mechanism for the resulting conference publication/product.

Session rapporteur: Jenny LIN

16:30 Meeting concludes

18:30 Opening reception and dinner for the US-Japan Strategic Dialogue

Thursday, February 7, 2013

7:30 **Young Leaders Breakfast Meeting**

9:00 **Welcome remarks**

9:15 **Session 1: Perceptions of the ‘Rebalance’**

This session looks at security developments since we last met, focusing on perceptions of the US rebalance to Asia. How do both countries characterize the rebalancing? What impact has it had on shaping both countries’ perspectives on security developments? What does it mean for the US-Japan alliance and relationship? What are the implications of rebalancing for nuclear policies and postures? Save discussion of what the alliance must do to adjust to the rebalance until session 5.

10:45 **Coffee break**

11:00 **Session 2: Japanese Politics and the Alliance**

This session looks at the impact of the US and Japanese elections on the alliance. Will the recent elections in each country influence perceptions of the alliance? Will either government change its policy toward the alliance? Why? What are the priorities for each government for the alliance relationship? What impact will budget politics in the US have on the alliance? What are the prospects for progress on the Okinawa issue?

12:30 **Lunch**

Thursday, February 7, 2013 (cont.)

13:45 **Session 3: China after the New Leadership**

Here we explore views of China's role in Northeast Asia. What changes, if any, do you anticipate in Chinese foreign policy over the next year? Does either government anticipate a shift in policy toward China? What are the implications for nuclear policies and postures? How does your country see the other's relations with China and what impact does that have on the alliance relationship? How are other countries responding to the rise of China and its new role in the region? Discussion of the specifics of the dispute over the Senkakus/Daiyutai islands should be put off till the next session.

15:15 **Coffee break**

15:30 **Session 4: Extended Deterrence**

This session explores thinking about what is required to make extended deterrence (ED) work. How has thinking about ED evolved in both countries? How does ED relate to extended nuclear deterrence (END)? How is ED/END applicable to the East China Sea? The South China Sea? On the Korean Peninsula? How should it be applied/used in each case? What are the differences between each case? What lessons can we draw from these different cases? What should the United States do to make its ED/END more credible in these different contexts? What can allies do to increase ED/END credibility in these contexts?

17:00 **Session adjourns**

Friday, February 8, 2013

9:00 **Session 5: Modernizing the Alliance: Goals, Rhetoric, Visions, Implementation**

This session explores thinking in each country about what is required to modernize the alliance through the review of the guidelines for Japan-US Defense Cooperation. Has the current strategic context changed the central purpose of Japan-US defense cooperation? What should the shared vision be? What are the main similarities and differences between national perspectives on the shared vision? How does the "rebalance" affect the alliance? How should the roles, missions, and capabilities of the alliance evolve? What is the place of nuclear weapons in that equation?

10:45 **Coffee break**

Friday, February 8, 2013 (cont.)

11:00 Session 6: Alliance Networks: New Partnerships, Linkages (Australia, ROK)

This session explores the potential and limits for the US-Japan alliance to develop new partnerships and linkages with other regional actors on strategic issues. What is the participants' assessment of the US-Japan-Australia dialogue? How can this process be strengthened to better address strategic concerns? Can the US-Japan alliance build upon this model to develop a similar dialogue with the ROK? What do the participants see as the main opportunities, for each country, and to improve the regional security environment? How have Japan-ROK relations influenced the prospect for trilateral cooperation? Have leadership changes in both countries improved or complicated the prospects of closer cooperation? What are the obstacles? How can these obstacles be overcome? What would be the role of nuclear policies, including diplomacy, extended deterrence, and energy, in such a trilateral arrangement? Are there opportunities for using the US-Japan alliance to develop a stronger partnership with Southeast Asian countries? With India?

12:30 Lunch

13:45 Session 7: The Future of the US-Japan Alliance

This session invites specific recommendations on what the two countries can do to promote regional security and stability, specifically within the context of ED/END, and how these policies can strengthen the alliance. How can the United States and Japan tighten their alliance and better cope with future strategic challenges? What role do nuclear weapons play in that equation? As the nuclear dimension of ED is downplayed, what opportunities are opened for a greater Japanese contribution to ED? What more can/should Japan do? What other issues deserve more attention? The Pacific Forum CSIS will hold a mini-trilateral meeting in Northeast Asia later in the year: what should that focus on?

15:15 Meeting adjourns

APPENDIX C

HOSTED BY THE
PACIFIC FORUM CSIS
AND SPONSORED BY THE
US DEFENSE THREAT REDUCTION AGENCY

FIFTH US-ROK-JAPAN TRILATERAL DIALOGUE
Royal Lahaina Resort ♦ Maui
Feb. 3-8, 2013

PARTICIPANTS

USA:

1. **Ms. Linnea DUVALL²**
International Relations Specialist
US Pacific Command
2. **Ms. Stephanie Nayoung KANG¹**
M.A. Candidate
Graduate School of International Studies,
Seoul National University
3. **Mr. Adam LIFF***
Ph.D. Candidate, Princeton University
4. **Ms. Jenny LIN²**
Resident Sasakawa Peace Foundation
Fellow
Pacific Forum CSIS
5. **Ms. Greer MEISELS***
Associate Director and Research Fellow
China and the Pacific Center for the
National Interest
6. **Mr. Nathan PINKUS***
Staff Officer, Department of Defense
7. **Ms. Cristin SHIFFER²**
Resident WSD-Handa Fellow
Pacific Forum CSIS

ROK:

8. **Ms. Jiun BANG¹**
Ph.D.Candidate
University of Southern California
9. **Mr. Seukhoon Paul CHOI¹**
Research Associate
Council on Foreign Relations
10. **Mr. Seongho HONG¹**
Resident Kelly Fellow
Pacific Forum CSIS
11. **Mr. Dong Joon PARK¹**
Researcher
Ilmin International Relations Institute,
Korea University

JPN:

12. **Ms. Naoko AOKI²**
Ph.D. Student, University of Maryland
13. **Dr. Ryo HINATA-YAMAGUCHI***
Resident Vasey Fellow
Pacific Forum CSIS
14. **Mr. Takashi KAWAMOTO²**
Researcher/Adviser
Consulate-General of Japan at Honolulu

15. Dr. Kei KOGA²

Research Fellow

The Belfer Center, John F. Kennedy School of
Government, Harvard University

Staff:

Ms. Nicole FORRESTER*

Director Young Leaders Program

Pacific Forum CSIS

*Attending both bilateral dialogues

¹ Attending US-ROK and YL Trilateral
Dialogues

² Attending US-JPN and YL Trilateral Dialogues