

2019
CSPS-KOREA
SYMPOSIUM



SCHAR SCHOOL OF POLICY AND GOVERNMENT

Center for Security Policy Studies
at George Mason University

INTERNATIONAL SECURITY:

Environmental Challenges & Solutions

CONFERENCE REPORT

INTERNATIONAL SECURITY:

Environmental Challenges & Solutions



MAY 22, 2019 (WEDNESDAY) 10:00-16:00

INCHEON GLOBAL CAMPUS, ROOM 5074 (SONGDO, INCHEON)



[PROGRAM]

TIME	PROGRAM	SPEAKER
09:30-10:00	Registration	
10:00-11:00	Welcoming Address	Dr. Robert Matz Campus Dean of George Mason University-Korea
	Introductory Speech	Dr. Mark Rozell Dean of Schar School of Policy and Government
	Concept Note Speech "Linking Climate Change to Security and Environmental Policymaking"	Dr. Soyoung Kwon CSPS-Korea Director
		Prof. Ellen Laipson CSPS Director
11:00-11:15	Commemorative Photograph	
11:15-12:30	Session 1 "Atmospheric Politics between China and Korea for Short- and Long-Term Responsible Solutions" "How the Tsunami and Fukushima Crises Affected Japan's National Policy on Climate" "South Korea's Policy on Climate Change and Fine Dust"	Dr. Taedong Lee Professor of Yonsei University
		Dr. Ming Wan Professor of Schar School, GMU
		Dr. Eunjung Lim Professor of Ritsumeikan University
12:30-14:00	Luncheon (George Mason University Korea, Global Lounge)	
14:00-16:00	Session 2 "The New Landscape of International Climate Leadership: China, the US, and Global Development Trends" "The Green Climate Fund and the Paris Agreement: Global Solutions to Climate Change" "Participatory Environmental Governance: Raising Awareness on Environmental Security through Education" "Climate Change and Complex Interdependencies"	Dr. Andrew Light Professor of Schar School, GMU
		Dr. Simon Wilson Head of Communications at the Green Climate Fund
		Dr. Changwoo Ahn Professor of George Mason University
		Dr. Todd M. La Porte Professor of Schar School, GMU

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Climate Change belongs on the Agenda for International Security

Ellen Laipson

Director, International Security Program

Schar School of Policy and Government

George Mason University

Today the conceptual and practical linkages between climate change and security are increasingly well understood. Those who still dispute the realities of climate change may not agree, but the majority of professionals in the security field acknowledge the powerful linkages between the consequences of climate change and a daunting set of security challenges.

Security is a policy imperative at many levels: at the nation state level, but also along a continuum from local communities to international cooperation. Most security functions – from law enforcement to military operations - operate under the authorities of nation states, but climate change does not respect political borders. Consequently, greater effort is required at the global level, and often the security institutions of states are not well suited for cooperation in a globalized world. That is why we need to deepen our understanding of how climate and security are inter-related, for wiser policymaking and for greater security, at all levels of political organization.

Historically the expert communities of climate science and national security lived on separate planets. They were interested in fundamentally different issues, and did not see the connections. Humanitarians, economic development experts and climate scientists did not want to see their issues “securitized” or captured by military and national security institutions. There was some cultural resistance and concern that any active interest by the military in their work in environmentally stressed places and climate affected communities would cause political friction, or make the work of environmental non-government organizations (NGOs) appear more linked to national security interests, rather driven by local needs.

In the large security community in the United States, both civilian and military, if we look back 25 years, there was resistance to giving climate change a prominent role in security planning at the national level, or as a topic for dialogue with allies and other security partners.

- In the 1990s, those responsible for security budgets did not want to allocate resources to this issue because it was not a national security priority and there were other centers of expertise in the government to work on climate issues.
- In some important alliance relationships, such as Germany and Japan, their elites did not want environmental issues to become the concern of military establishments. Both were still politically committed to a very constrained role for their militaries, and Green (pro-environment parties) political activists did not want to see any expansion of the role of the American military in their countries.
- At the UN, earlier in this decade, some countries resisted having the Security Council address climate as a cause and consequence of conflicts. They did not wish to see this important social and economic issue captured by the fifteen countries of the Security Council, and have pushed to create an office to deal with climate change that would report directly to the UN Secretary General, not be captured by the Security Council.

But today, few would resist the notion that the effects of climate change have profound consequence for all domains of social and political life, and can affect the stability and security of countries and regions. Many would now place the impacts of climate change for world peace and security alongside the existential threat of nuclear weapons use.

In the United States, former President Barack Obama made an important speech in 2015, declaring climate change a national security priority.

“Climate change will impact every country on the planet. No nation is immune. So I’m here today to say that climate change constitutes a serious threat to global security, an immediate risk to our national security. And make no mistake, it will impact how our military defends our country. And so we need to act - and we need to act now.”¹

Even in the Trump administration, where political appointees and the president remain climate skeptics and have tried to scale back many domestic environmental regulations, parts of the national bureaucracy continue to monitor and report on the evolving dangers and risks from climate. In the national security community, the Defense Department has recently issued a report assessing the vulnerabilities of dozens of



¹ <https://obamawhitehouse.archives.gov/the-press-office/2015/05/20/remarks-president-united-states-coast-guard-academy-commencement>

defense installations to climate change caused floods, droughts, and wildfires, to name a few. And the leaders of the US intelligence community now routinely include climate change in their annual public threat assessments to Congress. It is not up there with geopolitical competitors China and Russia, but is on the short list of things that affect the international environment and US interests, and for which intelligence effort is required.

Within security communities, responsibilities range from very immediate operational concerns to broader, strategic objectives. One can think of the climate-security linkages along a hierarchy of policy action and ideas:

Practical Military Concerns

On the military side, climate change was first addressed in the 1990s as it related to pollution, sea level rise, and warming ocean temperatures, which could affect everything from port access to technical systems, to the requirements for sailors' or soldiers' uniforms and facilities.

Military-Military Cooperation

At least a decade ago, the US Department of Defense found that its security dialogues with partner countries in warm climates and with significant coastal zones were increasingly focused on the effects of climate. Even if it was not the US' highest priority, there was a growing realization that many small countries consider climate to be their highest security concern, more than conflict with a neighbor or some other external threat.

Climate in Conflict Analysis and Response

Considerable work has been done in the peace operations and economic development communities to conceptualize climate change as a driver or outcome of conflict, within and between states. It may be a true cause of conflict, or, most often, exacerbates other underlying vulnerabilities that make conflict more likely, more acute, and harder to bring to an end.

Climate as global driver of change

Climate change will affect power imbalances, will change the fortunes of states, with some becoming winners and others losers. It will exaggerate the disparities between rich and poor countries.

Stanford scholars Noah Diffenbaugh and Marshall Burke recently published results of empirical quantitative research showing how global warming increases global economic inequality. They looked at the parabolic relationship between temperature and economic growth, which is up in cold countries and down in warm countries, increasing the gap. The connection to security is not always direct, but it's there, as countries facing serious slowdowns in growth can become unstable and be preyed upon by adversaries.

Climate as determinant of global assistance

Climate considerations will rise as a determinant of foreign assistance priorities, and will also shape spending requirements at home. Some EU analysts project that the EU should plan to spend over a third of its budget on climate adaptation, in all its dimensions, from infrastructure to energy to other fundamental public policy requirements.

Climate as part of the new geopolitical struggles

From the Arctic to the rise of China, climate change will be part of the way we understand new geopolitical competition, and will shape the global agenda. Its impact on security will be profound, even if indirect. The migration crisis in recent years from Africa and the Middle East to Europe and to Southeast Asia, for example, has significant climate change dimensions, which are not always explicit in defining the immediate policy challenge.

Climate scientists want to do their work in an apolitical environment, and may find it disturbing to put a security filter over their work, in terms of how research funds are allocated, or how much attention climate issues get from policymakers. But these two enormous communities of experts, officials, and concerned citizens have no choice but to engage in dialogue, hopefully mutually respectful and productive. The climate change experts have much to contribute to security debates, and security institutions and experts will play their roles as states and the international community look for solutions to the daunting challenges ahead.

Note: this essay is based on remarks made at the May 22, 2019, symposium hosted by the Center for Security Policy Studies-Korea, at the George Mason University campus in Incheon, Korea.

Multilateral Nationally Determined Contribution Agreement for Transboundary Air Pollution

Dr. Taedong Lee
Professor of Political Science and International Studies
Yonsei University

I suggest a 'Nationally Determined Contribution Agreement for East Asian Air Pollution Reduction,' which is similar to the Paris Agreement, to tackle transboundary air pollutions. Northeast Asian air pollution agreement should contain mutual goal for Nationally Determined Contribution (NDC): financing, experience-sharing, implementation of Measurement Reporting Verification (MRV) in a form of an international agreement.

First of all, the point is making a multinational agreement which is binding to individual countries. It's different from MOU which only strengthens cooperation or establishment of a center as the current outcomes of environmental cooperation have been. However, stipulating responsibility and damage compensation from participating countries might obstruct the agreement process. Individual states should determine and report their own level of pollution reduction and timeline setting as voluntary NDC. This meets the desperate eagerness of the people of each country. In order to do that, having joint reduction target in East Asia is also required to make the goal more specific.

To tackle Sino-Korean problem the framework of multinational cooperation, rather than bilateral cooperation, secures legitimacy and promotes better circumstance for negotiation. Transboundary air pollution issue such as fine dust is not only problematic for few countries but the entire region. Although South Korea argues that the dust comes from China, Chinese government criticizes Mongolia as the main source of fine dust and yellow dust. And Japan has been influenced by air pollution from South Korea, China, Mongolia, and North Korea. Northeast Asian Clean Air Partnership created in August 2018 can facilitate the NDC agreement in air pollution.

To control the risk of greenhouse gas, the Paris Agreement on Climate Change aims to ensure that the average temperature of the Earth does not surpass 2°C comparing the pre-industrial revolution era (MoE 2016). NDC agreement on fine dust issue should meet the standard of individual countries and WHO. Simultaneously, as climate change agreement re-sets reduction target every five years, gradual development should be included on the institutional system.

Cooperation should be established based on sharing experiences, mutual financial preparation, and MRV. Technology and policy sharing regarding how and in what area whether the fine dust reduction is possible is the key point of NDC agreement. Not only the success of reduction but failure could be important. For instance, MoE Korea attempted the introduction of the Chinese outdoor air purifiers. In this case, the knowledge gained through China's outdoor air purifier technology can be studied. After figuring the economic weaknesses and advantages, application procedure can be more accurately designed.

It is also necessary to provide financing for technology, policy, and human resources for fine dust reduction. In case of climate change, resource provision such as Green Climate Fund and support mechanism was systematized. Fine dust response plan should also orchestrate financial system such as Clean Air Fund. Through these financially-systematic-settings, technology transfer and implementation of joint projects could develop.



Transparency and Measurement, Reporting, Verification: MRV can be utilized to regularly check the compliance status of dust reduction with the member countries. Setting goals regarding climate change agreement, the process how reduction plans are determined should be transparent. Simultaneously, it is important to establish a system of mutual and regular checks about the participating countries' performance. The actual implementation of the dust reduction should be confirmed.

Future generation and sustainable air environment

Although wind flow is uncontrollable, the fine dust emission and air pollutants in a national jurisdiction can be reduced. In particular, if not a single country but all countries in a region concerned and work together to solve the problems it is not an impossible task. Under the binding international agreement, cooperation between governments, industrial sector, experts, and citizens becomes stronger and they will be able to inherit clean and sustainable air environment for future generation.

My presentation suggests the model of international cooperation about fine dust issue, especially through Sino-Korean cooperation development. 'East Asian Dust Reduction NDC' has been somewhat accredited model to tackle the current climate change problem. The model is considered to operate since there's no great regional regime such as EU and ASEAN, and economic and political asymmetry still exists in East Asia. Most of all, every country is striving to reduce the dust. Thus, it may not be effective to require accountability and compensation for the transboundary air pollutant. Rather, it would be more feasible for countries to reduce the fine dust their own. Sharing information mutual checking of the implementation mechanism would be a better method to solve the problem.

How the Tsunami and Fukushima Crises Affected Japan's National Policy on Climate Change

Dr. Ming Wan

Associate Dean, Schar School of Policy and Government

George Mason University

The Tsunami and Fukushima crises in 2011 have had a profound impact on Japan's politics and economy. This short essay focuses on how the crises affected Japan's national policy on climate change.

The Fukushima disaster destroyed not only several nuclear reactors but also the public faith in the myth of "safe nuclear energy," which the Japanese government, industry and media had cultivated for decades. This shift has crucial implications for Japan's climate change policy. The Japanese government and industry have long been interested in nuclear energy. The imperial Japanese government launched a small nuclear research program during WWII. First commercial nuclear power reactor (British design) began operating in Japan in 1966. Nuclear energy became a key national strategic priority since the first oil crisis in the early 1970s. Tokyo hoped to reduce dependence on foreign oil and nurture an emerging industry at the same time. Japan made much progress in its drive for nuclear energy, receiving 30 percent of electricity from nuclear power reactors before Fukushima. The Japanese government had an ambitious plan to increase the ratio to over 40 percent by FY2017 and 53 percent and to reduce coal-fired energy supplies to 11 percent by FY2030.

Fukushima did much damage to Japan's nuclear industry. Because of the disaster, 165,000 people were evacuated from the contaminated areas and 3,700 deaths were eventually tied to the evacuation. Despite much effort at discovery and reconstruction, there are still 50,000 evacuees at present. The government and the Tokyo Electric Power Company (TEPCO) estimate that it would take 30-40 years to decommission the nuclear reactors at an estimate cost of \$200 billion. But even conservative think tanks believe that the cost would be several times higher. Groundwater continues to be contaminated because of leaking.

The government and TEPCO's handling of the disaster further eroded public confidence. TEPCO denied a meltdown for the first two months. A parliamentary panel concluded in 2012 that Fukushima was a "profoundly man-made disaster." TEPCO admitted in 2012 that it had not followed safety warnings before the accident, including about a tsunami, because it feared losing public confidence in the nuclear power industry.

After Fukushima, due to various reasons not all directly related to the disaster such as periodic inspections, all 54 of Japan's nuclear reactors were shut down. It was impressive how Japan managed to avoid blackout during the two years when all reactors were shut down. But that involved mobilization of the citizens and corporations to engage in energy saving efforts such as keeping room temperature high during summer and low during winter. Two reactors restarted in August-October 2015, followed by seven others. Another seventeen are in the process of restart approval, of which six have been approved.



Fukushima has had a direct impact on Japanese climate change policy because nuclear energy is recognized as carbon-free. To make up for shortage of electricity, Japan turned to fossil fuel. In FY2016, 42.3 percent of electricity production came from natural gas, 32.3 percent from coal and only 1.7 percent from nuclear power. Japan had 90 coal-burning power plants and was planning to build 30 more as of March 2016. The plan now is to increase nuclear energy to 20-22 percent and decrease coal-based energy supplies to 26 percent by FY2030.

Fukushima also eroded further Japanese voters' confidence in the then-ruling Democratic Party of Japan (DPJ). The long-dominant Liberal Democratic Party (LDP) returned to power at the end of 2012 under Abe Shinzo's leadership. Prime Minister Abe has shifted back to Japan's postwar development strategy of promoting exports, particularly plants and infrastructure. Thus, Climate Action Network awarded Japan "the Fossil of the Day Award" in December 2014 for "getting busted funding coal and gas power stations in developing countries, in particular Indonesia, with money for scaling up climate action." The conservative LDP government under Abe is moving away from a leadership role in the global environmental movement. While Abe wants to increase the market values of Japanese firms because of assessment of their physical risk and potential for clean technologies, he has tried hard to avoid embarrassing the Trump administration that questions the science of climate change and withdrew from the Paris Accord in Climate Change, as revealed in the G-20 summit held in Osaka in June 2019.

South Korea's Policies on Climate Change and Air Pollution: Focusing on Dilemmas of Politicization

Dr. Eunjung Lim

Professor, College of International Relations

Ritsumeikan University

Climate Change and Air Pollution by Fine Dust in South Korea

Climate change and air pollution situations have become tremendously serious over the last couple of years in South Korea. Now, the country's environmental change is regarded as one of the most challenging things to its own people; South Koreans seem to worry about their health problems caused by bad air quality (especially during winter and spring time) more than any other problems, even more than North Korea's nuclear threat. In 2018, the Organization for Economic Cooperation and Development (OECD) reported that South Korea has the worst air quality among a group of 35 mostly rich nations. Early in 2019 (based on the 2017 data), OECD repeatedly ranked South Korea as one of the five countries with the worst air pollution in the world. Number one was India, followed by China, Vietnam, South Africa and South Korea. In South Korea, air pollution caused by fine dust tends to overwhelm climate change-related issues. In brief, it would be fair to say that overuse of coal for power generation and extensive use of diesel vehicles are major culprits that emit polluting materials and CO₂.

Currently, South Korea accounts for approximately 1.4% of global greenhouse gas emissions (including Land Use, Land-Use Change and Forestry (LULUCF)). At the Paris Climate Conference (COP21), South Korea pledged to reduce its greenhouse gas emissions by 37% from the business-as-usual (BAU, 850.6 MtCO₂eq) level by 2030 across all economic sectors. Following this Intended Nationally Determined Contributions (INDC), the South Korean government completed the country's "First Basic Plan for Climate Change Response (2017-2036)," after approval by the National Green Growth Committee and at a cabinet meeting led by then-Prime Minister Hwang Kyo-Ahn on December 6, 2016. This Basic Plan is supposed to be renewed every five years.

The Moon Jae-in Administration's Energy Transition Policies

Since President Moon Jae-in came into power, the South Korean government tries to tackle air pollution and pursues the country's energy transition. Among several important aspects of the Moon administration's energy transition policies, the following two things can be highlighted as the most significant changes in the field of power generation: first, South Korea will reduce its dependence on coal and nuclear energy for power generation, and second, it will increase use of natural gas and renewable energy sources. However, there are many critical voices about the government's energy transition policies.



Also, despite its international pledge and the government's efforts to accomplish the goal, South Korea's mitigation potential remains limited due to its industrial structure. South Korea's economy is largely dependent on manufacturing and its major industries are highly energy-consuming. Moreover, given the deterioration of public acceptance of nuclear energy after the Fukushima nuclear accident and the Moon Jae-in government's negative perception about nuclear energy, it can be difficult to expand use of nuclear energy, one of the major mitigation measures. Instead, the government is likely to try to use carbon credits from international market mechanisms to

achieve its 2030 mitigation target, in accordance with relevant rules and standards. This makes part of South Korea's pledge conditional on external market forces and makes the prospect of the country's climate change response policies fluid.

Meanwhile, the South Korean government established "Comprehensive Countermeasures for Fine Dust Reduction" that includes five sectors and 58 action plans on September 26, 2017. Also, it announced "Complementary Measures for Fine Dust Reduction in Springtime" on March 29, 2018, and strengthened environmental standards of fine dust on March 27, 2018. Moreover, "Special Act on Reduction and Management of Fine Dust" was legislated on August 14, 2018, which entered into force on February 15, 2019.

Evaluation on the South Korea's Policies

First, the South Korea's policies lack 'Comprehensiveness.' The country's climate change responses and fine dust reduction policies are not closely linked; however, these two issues cannot be separated. There are sporadic measures by individual municipalities without specific guideline set by the central government. Second, the country's policies lack 'Coherence.' There are too many countermeasure plans, and some policies have been even reversed. For example, diesel vehicles used to be promoted by an earlier government and now it became a target of criticism. In the field of renewable energy, Feed-in Tariff (FIT) system was transferred to Renewable Portfolio Standard (RPS). Nuclear energy also used to be a national policy for a long

time and the government has promoted the use of it, but now it is criticized harshly by some political groups. This caused the third problem, lack of 'Balance.' By demonizing specific energy sources, South Korea is likely to remain dependent on fossil fuels for upcoming years, which will not be helpful neither for climate change responses nor for fine dust reduction. Last but not least, the country lacks 'Consensus.' The South Korean society needs to build a consensus on how to see its future economic development and on how to see energy and electricity.

Having had these as the problems we see, it is necessary to think about what made these problems. First, I see path-dependent goal setting as one of the reasons. The country's analysis on energy/ electricity supply and demand is often imprecise because its analysis does not fully reflect its socioeconomic changes. Growth-oriented mindset and industry-friendly policies might need to be reconsidered. Second, the country's political system, which is a presidential system with five-year single term, makes it difficult to keep continuity in its policies. Discontinuity between the administrations remains, and (extreme) polarization of political groups amplifies the problems. Third, lack of trust in the authority makes the situation worse. Fourth, severely contentious relations between the central government and civil society and between the central government and municipalities make it difficult to have comprehensiveness. Fifth, the patchwork-like pricing system of electricity distorts the reality and makes the cost-benefit calculation incorrect.

Conclusion: Policy Suggestions

In conclusion, I suggest the followings: first, South Korea needs to reset ways of thinking about its economic development, energy security, and electricity. Second, it needs to analyze power demand/supply more objectively. Third, it needs to synthesize sporadic targets and guidelines. Fourth, it should highlight the importance of power conservation and electricity efficiency. Fifth, it needs to direct specific targets and assignments to responsible players. Sixth, it needs to think about restructuring energy market and related infrastructure system.

The New Landscape of International Climate Leadership: China, the US and Global Development Trends

Dr. Andrew Light
Schar School of Policy and Government
George Mason University

For decades the United States and China were the most prominent adversaries in the global negotiations on climate change, often representing the clashes between developed and developing countries on some of the most difficult topics at play, including the fundamental question in the UN Framework Convention on Climate Change (UNFCCC) on how to interpret the idea that all Parties had “common but differentiated responsibilities” to respond to climate change. This all changed in the run up to the creation of the Paris Agreement on climate change in 2015. The U.S. and China linked up to move the world toward a more cooperative stance on a host of issues that were essential to the creation of the agreement, with Presidents Xi and Obama challenging each other and the world to do more. The result was the creation of the most comprehensive agreement on climate change in history, with near universal participation from all countries. These days seem far behind us now, especially with the announcement of President Trump in June 2017 of the intention of the United States to withdraw from the Paris Agreement in 2020. What is abundantly clear is that as the U.S. has stepped back, China is now the leading Party in the global struggle against this increasingly urgent problem. What is less clear is how the global development ambitions of China and the U.S. may be unexpectedly moving in the same direction. In lieu of a summary, several slides from Dr. Light’s presentation have been included in this conference report.

2015: The Paris Agreement on Climate Change



One Key to Paris Success: Surprise early Announcement from U.S. and China on Paris Targets in November 2014

Deal on Carbon Emissions

www.nytimes.com/2014/11/13/world/asia/deal-on-carbon-emissions-by-obama-and-xi-jinping-raises-hopes-for-upcoming-paris-climate-talks


ASIA PACIFIC

Deal on Carbon Emissions by Obama and Xi Jinping Raises Hopes for Upcoming Paris Climate Talks

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Deal on Carbon Emissions by Obama and Xi Jinping Raises Hopes for Upcoming Paris Climate Talks

By CORAL DAVENPORT NOV. 12, 2014



PLAY VIDEO | 2:02
What the Climate Accord Could Change

The possible effects for the coal and automobile industries of the landmark agreement between the United States and China. Video by Corrie Halperin on November 12, 2014. Photo by Feng Li/Getty Images.

WASHINGTON — The historic announcement by President Obama and President Xi Jinping of China that they will commit to targets for cuts in their nations' carbon emissions has fundamentally shifted the global politics of climate change. The agreement has given a fresh jolt of optimism to negotiations aimed at reaching a new international climate treaty next year in Paris, where the American and Chinese targets are expected to be the heart of the deal.

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United States:

- 26-28% below 2005 levels by 2025
- (2x pace of decarbonization from 2020-2025)
- Trajectory for 80% reduction by 2050

China:

- Peak emissions around 2030
- ~20% non-fossil energy by 2030
- (800-1,000 gigawatts new nuclear, wind, and solar = all current U.S. power generation)

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THE U.S. HAS NOT YET WITHDRAWN FROM PARIS

Good news: Withdrawal takes 4 years -- 3 + 1. Earliest withdrawal date will be 1 year after Entry into Force date = 1 day after next U.S. election in 2020.

Bad news: Regardless of whether Trump withdraws, he is intent on reversing as much U.S. federal climate action as possible undermining ability of U.S. to meet it's pledge under Paris.



CAN THE DIRECTION OF BRI CHANGE?

- Current state of affairs:
 - International awareness is critical but leverage from other parties is difficult.
 - “Green BRI” is currently at a high, conceptual level.
- Possibility of two, mutually-reinforcing tracks:
 - Demand side: What will get BRI countries to ask for more green power?
 - Supply side: Should Chinese institutions require consideration of Paris pledges by recipient countries?

WHAT TO DO ABOUT THE U.S.?

- The new Congress is pushing for climate action.
 - Passed House Resolution 9 in support of Paris.
 - Almost \$500 million in climate-related development assistance for renewable energy, adaptation, and sustainable landscapes (e.g., forest carbon) in new appropriations.
- Climate-related disasters and increasing discussion of cost of future impacts has climate change at or near top of polling on voter concerns for Democratic primaries.
- How will the world welcome possible re-engagement by the U.S. in 2020?

The Green Climate Fund & the Paris Agreement: Global Solutions to Climate Change

Dr. Simon Wilson
Head of Communications
Green Climate Fund

The Green Climate Fund (GCF) is a new global fund created to support the efforts of developing countries to respond to the challenge of climate change. GCF helps developing countries limit or reduce their greenhouse gas (GHG) emissions and adapt to climate change. It seeks to promote a paradigm shift to low-emission and climate-resilient development, taking into account the needs of nations that are particularly vulnerable to climate change impacts. It was set up by the 194 countries who are parties to the United Nations Framework Convention on Climate Change (UNFCCC) in 2010, as part of the Convention's financial mechanism. It aims to deliver equal amounts of funding to mitigation and adaptation, while being guided by the Convention's principles and provisions. When the Paris Agreement was reached in 2015, the Green Climate Fund was given an important role in serving the agreement and supporting the goal of keeping climate change well below 2 degrees Celsius. In lieu of a summary, several slides from Dr. Wilson's presentation have been included in this conference report.

GCF's MISSION

An operating entity of the UNFCCC financial mechanism;
serving the Paris Agreement



We help **developing countries** take ambitious action on climate change



To promote a **paradigm shift** to low-emission and climate-resilient
development

IMPACT AREAS

Reduced Emissions From:



Energy
generation
and access



Transport



Buildings, cities,
industries and
appliances



Forests and
land use

Increased Resilience of:



Livelihoods of
people and
communities



Health, food
and water
security



Infrastructure
and the built
environment

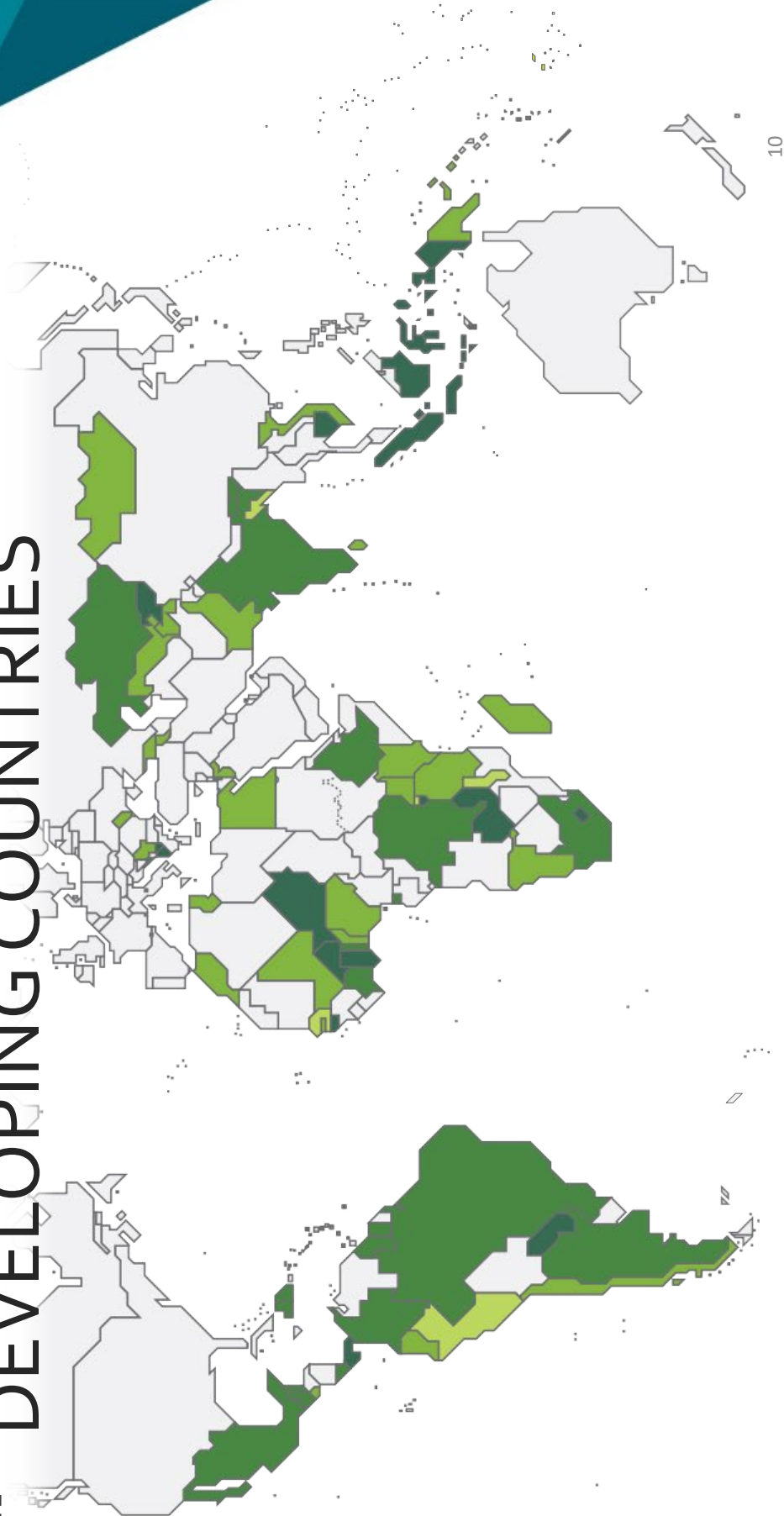


Ecosystems and
ecosystem
services



GREEN
CLIMATE
FUND

PROJECTS APPROVED IN 97 DEVELOPING COUNTRIES



2015 2019



NEW MODELS OF COOPERATION

PARIS AGREEMENT

GREEN CLIMATE FUND



Global solutions through consensus



Balanced governance



Bottom-up not top-down solutions

Country ownership, direct access



Nationally Determined Contributions

Country & strategic programming



Climate finance flows

Contribution model, catalyzing finance



2020 global stocktake

2019 GCF replenishment

Raising Awareness of Environmental Security Through Interdisciplinary Collaboration and Curriculum Design for Higher Education

Dr. Changwoo Ahn

Professor of Environmental Science and Policy

George Mason University

We live in the era of climate crisis. These days, we hear the news on a daily basis about increased flooding, drought, wildfires, and heatwave and all kinds of phenomena associated with climate anomalies around the globe. In addition, the increasing urbanization over the recent decades has facilitated the significant loss of natural habitats including wetlands and their ecosystem services, making our living conditions more vulnerable to the consequences of climate crisis.

We often hear terms like national security or homeland security. They are all about “human security”. Environmental security is human security because it is for our survival and ability to thrive. It is about us, our families, and our communities. Sustainability and resilience, two key concepts for environmental governance and management, are also for human security. We see more and more climate refugees or migrants who are forced to flee their homes or home countries due to sudden and gradual changes in the natural environment related to at least one of three impacts of climate change: sea-level rise, extreme weather events, and drought and water scarcity.

I have worked as an ecologist/environmental scientist for two decades professionally. My specific fields of expertise are wetland ecosystem ecology and ecological engineering that involve in the restoration of ecosystem services. I worked with a variety of stakeholders, including The Nature Conservancy, National Science Foundation, Corps of Engineers, USGS, farmers, landowners, and other stakeholders over many projects. My research interests focus on finding ecological design principles and system approaches applicable to sustainable land and water management. In addition, I have been deeply interested in strong interdisciplinary efforts to build creative linkages among different disciplines. The daunting environmental challenges facing humankind, from climate change to plastic pollution, will not be dealt with by

any one discipline. It often feels quite difficult to share the urgency of climate crisis in every part of the society. Climate crisis is such a complex, multi-faceted issue since it is closely associated with almost everything we do, which makes it all the more challenging for us to communicate effectively about it. To get our communities engaged in coming to a common understanding of the crisis, not to mention finding solutions, we need a great deal of effective science communication on the issue and conversation among all the parties involved. To facilitate much-needed communication and collaboration in higher education for environmental sustainability I, as a scientist, started working with artists several years back.

I have directed an initiative called “EcoScience + Art” at George Mason University (GMU) over the past several years. The initiative supported interdisciplinary interactions across the campus and beyond, while bringing the environmental sciences, arts, engineering, and humanities together with the intention of finding an innovative approach for college general education and university research on environmental sustainability. The EcoScience + Art initiative had two parts. One was a speaker series which introduce innovative, original, and pioneering figures of the boundary of arts and ecological sciences to students and faculty to motivate and inspire their creative collaboration and successful efforts that directly speak to current theory and practices of environmental stewardship. I served as a creative director for the lecture series by studying and meeting in person all of the speakers ahead of time to design their talks for the series to thematically address their approaches and practices in art on environmental sustainability, security, and humanities.

The other part of the EcoScience + Art initiative was a student collaborative, interdisciplinary project of ecosystem restoration and environmental literacy for stormwater issues as affected by climate change. I designed a project called “The Rain Project” in the fall of 2014 as an experiment as well as a case study of what EcoScience + Art holds for now and the future for college education, scholarship, and service for community. It was a student participatory project with a project-based learning approach aiming at developing innovative interdisciplinary education and scholarship. I put together a team of students (24-26 students) and volunteers from 5-6 different disciplines/departments on the GMU campus to design and implement a “living sculpture” of floating wetland on Mason pond for water quality improvement and ecological literacy and communication. The project was extremely successful in many layers, setting up a new model for interdisciplinary higher education and pedagogy on environmental sustainability through art-science collaboration. The project has been covered by TEDx talk, NBC4 Washington TV, international and national meeting presentations, a short documentary, peer-reviewed science journal articles and numerous local media exposures. The Rain Project has also been featured as an exemplary case for cross-disciplinary collaboration for community impact in National



Academies' s recent report (2018), titled "The Integration of the Humanities and Arts with Sciences, Engineering, and Medicine in Higher Education- Branches from the Same Tree.

My efforts to break the academic silos to promote interdisciplinary training for undergraduates also include speaking at the DASER (D.C. Art and Science Evening Rendezvous). DASER is co-sponsored by Cultural Programs of the National Academy of Sciences (CPNAS) and Leonardo, the International Society for the Arts, Sciences, and Technology with support coming from the National Academies Keck Futures Initiative. Since 2015, I also have been inducted as an invited member for International Eco Art Network. I recently organized and curated a symposium titled "Interdisciplinary Collaboration Among Ecological Engineering, EcoScience, and Eco-Art to Enhance Ecological Restoration Research" at INTECOL (International Congress of Ecology) with > 2,900 people attended. The symposium was novel in that it brought artists and scientists together to address environmental issues, sponsored by National Science Foundation (NSF). The symposium provided a unique opportunity to share experiences and build collaborations among ecological engineers, scientists, and artists while communicating across the cultural boundary between East and West. I also presented and served as a panel member at The Alliance for the Arts in Research Universities (a2RU) conference titled "Arts in the Public Sphere: Civility, Advocacy, and Engagement" in 2017 at Northeastern University with co-hosts MIT and Boston University, especially in a session titled "Learn to Connect" that focuses on the idea generated in a2ru's Co/curricular/Curricular committee that the organization would benefit from a more in-depth engagement with students and an exploration of how to train the next generation for a better communication desperately needed to understand environmental issues.

There can be a number of benefits in interdisciplinary collaboration between art and science, in the field of environmental security. Communicating complex environmental issues and raising awareness as well as restoring impaired ecosystems and their services for society requires effective communication skills to help build the stewardship capacity of the communities involved. I believe that college education needs a major transformation to transdisciplinary, solutions-focused, engaged with the community, education for life, not just for the first job. Across the country STEAM (i.e., STEM + Art) initiatives have gained much attention on many college and university campuses nationwide with probably few doubting the positive impacts of such collaborations on student learning. STEAM aims to foster well-rounded thinking, boost creativity in all fields, and encourages cross-disciplinary exchange to spark innovation by giving equal voice to the arts and sciences. This type of educational model and curriculum design to be followed not only breaks down disciplinary barriers, but allows students of all dispositions to engage in STEAM subjects from various points of view, where one can find science through art, or art through technology, or mathematics through design. We should strategically incorporate environmental sustainability, cross-disciplinary collaboration, and community engagement into the college education to train the next generation in this century for the challenges we all face. Universities have a critical role to play in the community to improve literacy for environmental security through education, research, and curriculum innovation, all of which I have extensively involved in through my academic career. More recently I have been working on developing a

curriculum that focuses on helping students better grasp the intricacy of global environmental issues that are tied with other issues such as gender, poverty, politics and global economy.

Next summer (SU 2020), a new global discovery course that I designed will take students to wetlands of international importance where nature and culture have evolved together for a long time yet are currently facing the environmental threats of climate crisis. The first field site chosen is Messolonghi Lagoon in Greece, one of the largest Ramsar wetlands in Europe where historic fishing industry and salt farming from the wetland have been tightly associated with their gastronomic heritage and food culture. The course will prepare students to become globally engaged citizens with a good deal of ecological and cultural literacy of the nexus of water, energy and food for environmental security.

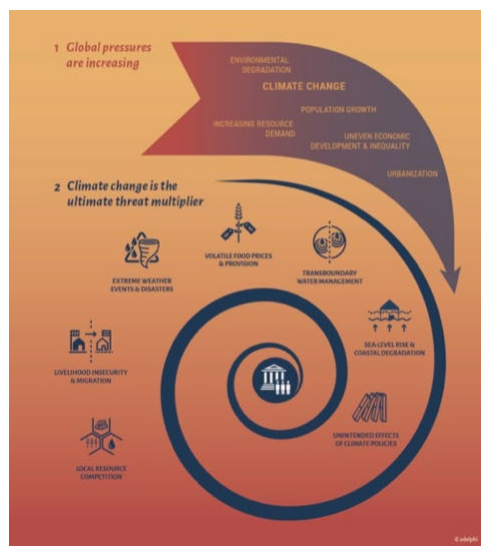
After working 16 years on the main campus of George Mason University as a professor in the Environmental Science and Policy department I got a chance to teach for a semester in Spring 2019 at George Mason University Korea (GMUK), a branch campus situated as a member of Incheon Global Campus (IGC) in South Korea. It was a sort of “homecoming” for me. During my time at GMUK I was privileged to be an invited speaker for the symposium on environmental challenges & solutions hosted by Center for Security Policy Studies (CSPS)-Korea at GMUK. With this precious opportunity to speak at the CSPS symposium on environmental security I propose to start designing a specific program and/or curriculum activity for a new major or minor to be with, titled “Global Environmental Security”. The majority of students who took my environment classes during my time at GMUK majored in the fields of global affairs or conflict resolution & analysis. I found their lack of exposure to and understanding of global environmental issues alarming. Currently very few universities run or offer programs on environmental security. Situated in a geopolitically sensitive location as well in South Korea, GMUK may serve as a right place to develop such programs/curricula to train the next generation in this important field. This will involve a great deal of coordination and collaborative efforts among environmental science, public policy, art, and university administration on both ends, GMUK and the main campus of GMU.

I am only a week away from going back to the States where my current home is. I am returning home, back to what is important to me now. I am sad, however, at leaving my native home, Korea, which I was fortunate to visit and teach for the past six months. The place and the people have grown on me, instilling me a new sense of home about Korea. No human being in this world would feel secure without a sense of home. I feel privileged to have two homes. On top of these two homes I think that I actually have the third home of mine, the natural world for which we all may have an innate sense of home. A sense of home is critical to protect what matters us against the threats of climate crisis. We need to think about how we value what we value and talk together about our sense of “home” for all the natural places we cherish. It is deeply connected to our culture as human beings. If we can share our sense of home for the natural world we may be able to engage further in the work necessary to secure the natural environment for humanity as it is about securing our collective home as species.

Climate Change & Complex Interdependencies

Dr. Todd M La Porte
Schar School of Policy and Government
George Mason University

Climate change is conventionally understood as a national security issue that affects military readiness, operating environments, and strategic considerations. But it also presents international security policy challenges as a threat multiplier, exacerbating local resource competition, food and livelihood insecurity, large-scale population movements, water scarcity and other unintended effects across many regions.



Dramatic system scale increases and complex interdependency among natural and human systems is a feature of these challenges, raising the probability of insecurity and conflict in ways that are largely unfamiliar to national and

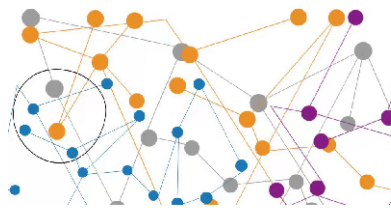
international security policy professionals. In this view, climate change is an unparalleled policy problem, requiring responses at all levels and in all sectors of society.

What institutional arrangements and knowledge are necessary to respond effectively? How do we manage complex interdependency when the past – characterized by simpler systems, understandable metrics, familiar policy tools -- is no longer a guide to the present and future?

I argue that strengthening domestic and international institutions and enlarging their analytic scope and depth is key to managing today's complex interdependent security challenges. Adopting multi- and poly-centric and "clumsy" models of governance, engaging in more adaptive learning and management, and committing to greater openness and public engagement in decision-making are necessary to successfully respond to the national and international security problems.

How to manage when past is no longer guide to present or future?

POLYCENTRICITY

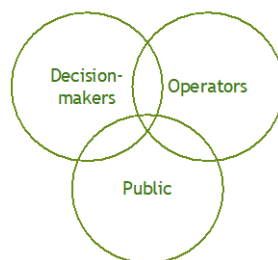


- ▶ Strengthen institutions: domestic and international ... if possible. If not/and:
- ▶ Multi-level and poly-centric governance
- ▶ Adaptive management and learning
- ▶ Civic environmentalism and public engagement
- ▶ Clumsy policymaking

While nations will continue to respond to such climate-exacerbated conditions, they will also be called to reduce the need to respond by promoting more effective adaptation at local and regional scales., something outside traditional national security reflexes. Better governance involving intensified and effective collaboration among decisionmakers, system operators and managers, and the public will help improve the quality of information, strengthen institutions, promote governmental and societal resilience and greater adaptive capacity.

... Decisionmakers, operators, public

- ▶ And focuses on administrative and operations managers and networks they are part of, rather than just decision-makers or public:



Governance is improved: better information, stronger institutions, more resilient, more adaptive

One way to promote such responses is to bring together data about climate change and its complex effects on natural and human systems with regional historical and institutional analyses, and with ongoing public participation.

I propose that an atlas bringing together 1) place-and livelihood-sensitive environmental and climate histories, 2) high quality maps and 3) participatory mapping methods would improve governance and reduce the likelihood of conflict. Far better to avoid conflict through use of information and dialog than come to blows due to a lack of understanding of the interconnected challenges of climate change.

CSPS-Korea Hosts International Security Symposium on Environmental Challenges & Solutions

CSPS-Korea Student Fellows

George Mason University

The CSPS-Korea is a branch of the CSPS Arlington. The CSPS is an institute which provides the broad and intellectual space for Mason students and faculty to address today's pressing security issues with government, military, and private sector experts by having a research and symposium. The branch of this center is located in Korea, which is CSPS-Korea. Therefore, including this symposium, CSPS Arlington and Korea have been cooperative to hold the important symposium by expanding the importance of research for international security throughout the world. The 2019 Symposium was especially dealt with environmental challenges that threaten the world ecosystem and expected solutions brought by various experts and scholars.

The symposium began with the welcoming speeches by Dr. Robert Matz who is the campus dean of George Mason University Korea and Dr. Mark Rozell who is the dean of Schar School of Policy and Government. They delivered their delights of opening CSPS Symposium in Mason Korea and their expectation about great discussion and lecture. To introduce this symposium and panels, Dr. Soyoung Kwon who is the CSPS-Korea Director, gave an introductory speech and prof. Ellen Laipson who is the CSPS Director briefly address the key concept of this discussion. Through both women, the 2019 Symposium was held.

The symposium was divided into two sections; 'Regional and National Perspectives' and 'Global Cooperation and Solutions'. Dr. Taedong Lee, a professor of Yonsei University, began the first section with his presentation. He delivered the speech related to 'Atmospheric Politics between China and Korea for Short- and Long-term Responsible Solutions'. He said that, "Proposing multilateral NDC treaty at national council on climate and air quality and focusing on the sub-national and intra-national level of analysis by looking at important domestic actors is a vital point toward the cooperative world in environmental security." In succession, Dr. Ming Wan, a professor of Schar School, address the speech based on the question, 'How the tsunami and Fukushima crises affected Japan's national policy on climate change?' He analyzed the cost of

Fukushima crises and expected diplomatic policy of Japan on the climate change. He said, “Japan may want to increase the market values of Japanese firms because of assessment of their physical risk.” Then, the national policy of Korea was also analyzed by Dr. Eunjeong Lim, a professor of Ritsumeikan University. Although there are some agreements on environmental challenges of Korea, there exist limitations caused by path-dependent goal-setting, political system, lack of trust in the authority, contentious relations and pricing system of electricity according to her analysis. Therefore, she addressed some potential policy recommendations such as to reset ways of thinking about economic development, energy security, and electricity and to direct specific targets and assignments to responsible players. Their lectures address the association between environmental challenges and political power.



In the second section, Dr. Andrew Light, a professor of Schar School started at first. His speech is focused on the new landscape of international climate leadership: China, the US, and global development trend. Along the political power, the extent of engaging in protecting environment can be decided as Trump declared withdrawing from Paris Agreement. He emphasized that regarding the environmental issues as emergent and vital duty of global citizens and cooperating actively is an important role of global leader. Therefore, he remained some question to China such as “How should Chinese policy makers support existing NDCs in designing a green BRI?” Simon Wilson, a Head of Communication in GCF, Changwoo Ahn, a Professor of George Mason University and Todd M. La Porte, a professor of Schar School addressed own lectures focusing on their potential recommendations for keeping environment secure. They discussed global Solutions to Climate Change, the importance of participatory environmental governance by raising awareness on environmental security through education and climate change and complex interdependencies. After their lectures, the discussion between panels was lead and then the second section was also finished.

This year's symposium addressed various perspectives for growing challenges for environment from great experts in-depth. Environmental security is one of the most important subject which surpasses national borders. Especially, the adverse effects of climate change and fine dust requires collaborative policymaking over the world. The symposium successfully addressed the expected implementation process of national policies, importance of global cooperation, and role of international organizations. As this multilateral form of symposium expresses, "With great power comes great responsibility".

Biographies of Participants

발표자 약력

Robert Matz | Campus Dean of George Mason University Korea

로버트 매츠 | 한국조지메이슨대학 캠퍼스 학장

Dr. Robert Matz is the Mason Korea Campus Dean. He is responsible for leading and managing all aspects of Mason Korea's programs and operations in close coordination with Mason's Fairfax Campus. A faculty member at George Mason University for over twenty-five years, he has previously served as Chair of the George Mason English Department, as Senior Associate Dean of George Mason's College of Social Sciences, and as Interim Dean of the college. He brings to Mason Korea this experience in academic leadership, his commitment to excellence in teaching and research, and his dedication to the opportunities for international exchange that Mason Korea offers.

로버트 매츠 한국조지메이슨대학교 캠퍼스 학장은 전반적인 프로그램 운영을 본교와 긴밀하게 조율하며 한국조지메이슨대학교를 이끌고 있다. 조지메이슨대학교에서 25년 이상 재직하며 조지메이슨대학교 영어영문학과 학과장, 인문사회과학대학 수석부학장 및 임시 학장 등을 역임하였다. 매츠 학장은 연구와 교육, 교직원 업무 관리에 대한 오랜 경험을 바탕으로 한국조지메이슨대학교의 국제적인 역량을 더욱 강화하고자 노력하고 있다.

Mark Rozell | Dean of Schar School of Policy and Government

마크 로젤 | 샤르정치정책대학 학장

Dr. Mark J. Rozell is Dean of the Schar School of Policy and Government at George Mason University where he also holds the Ruth D. and John T. Hazel Chair in Public Policy. He is a widely published scholar who has authored nine books and edited twenty books on various topics in U.S. government and politics including the presidency, religion and politics, executive privilege, media and politics, and interest groups. Dean Rozell frequently contributes to op-ed columns and commentary to numerous broadcast and print media such as The Washington Post, New York Daily News, Politico, and Time Magazine. He previously received his Ph.D. and M.A. from the University of Virginia and his B.A. from Eisenhower College of Rochester Institute of Technology.

마크 로젤 교수는 현재 미국 조지메이슨대학교 샤르정치정책대학 학장과 Ruth D. and John T. Hazel 의장직을 맡고 있다. 로젤 학장은 대통령제, 종교와 정치, 미디어와 정치, 이익집단 등을 포함한 미국 정부와 정치 분야의 전문가로 관련 서적 9권을 집필하고 다수의 서적을 편집했다. 또한 워싱턴 포스트, 뉴욕 데일리 뉴스, 폴리τικο, 타임지 등 다수의 미국 언론에 칼럼을 기고하고 있다. 로젤 학장은 로체스터 공과대학(Eisenhower College of Rochester Institute of Technology)에서 학사 학위를, 버지니아대학교(University of Virginia)에서 석사 및 박사 학위를 받았다.

Soyoung Kwon | Director of Center for Security Policy Studies - Korea

권소영 | 안보정책연구소-한국 소장

Dr. Soyoung Kwon is an Assistant Professor of Global Affairs at George Mason University Korea and is a research fellow at Yonsei Institute for Unification Studies of Yonsei University. She worked at the spokesperson's office of the Ministry of Unification, Republic of Korea, and at the Asia-Pacific Research Center of Stanford University. She was an advisor on the EU-Korea relations at the European Parliament in

special advisor to the President of the World Taekwondo Federation. She also taught at Kyung Hee University and Chungbuk National University. She specializes in comparative politics, North Korean studies, inter-Korea relations, peace and security in Northeast Asia, and sports diplomacy. She holds a B.A in Political Science and Diplomacy from Ewha Woman's University and an M.Phil and Ph.D. in Political Science from the University of Cambridge.

권소영 교수는 한국조지메이슨대학교 국제학과 교수로, 연세대학교 통일연구원의 방문연구원으로도 재임하고 있다. 권소영 교수는 통일부 대변인실과 스탠포드대학교 아시아-태평양 연구소(Asia-Pacific Research Center of Stanford University)에서 근무한 경험이 있으며, 유럽의회에서 의원 보좌관 및 세계태권도연맹 국제담당 보좌관을 역임했다. 그녀는 비교정치학, 북한학, 동아시아 평화 및 안보 연구, 스포츠 외교 분야의 전문가로, 경희대학교 및 전북대학교에서 강의하였다. 권소영 교수는 이화여자대학교 정치외교학에서 학사, 영국 케임브리지대학교(University of Cambridge)에서 석사 및 박사 학위를 받았다.

Ellen Laipson | Director of Center for Security Policy Studies

엘렌 레입슨 | 안보정책연구소 소장

Director Ellen Laipson is the Director of the International Security program at the Schar School of Government and Policy at George Mason University. She was former President and CEO of The Stimson Center and a board member of International Security and Diplomacy including the International Advisory Council of the International Institute for Strategic Studies and American Diplomacy Center Board of Trustees. She served as the Vice Chair of the National Intelligence Council (1997-2002), a board member of the Asia Foundation (2003-2015), President Obama's Intelligence Advisory Board (2009-2013) and board of the Secretary of State's Foreign Affairs Policy (2011-2014). She holds a M.A. from the School of Advanced International Studies, Johns Hopkins University and a B.A. from Cornell University.

엘렌 레입슨 소장은 조지메이슨대학교 샤르정치정책대학의 국제 안보 프로그램을 총괄하고 있다. 레입슨 교수는 미국의 안보 싱크탱크인 스티imson센터의 회장 및 최고경영자직을 수행하였으며, 미국 외교센터이사회(American Diplomacy Center Board of Trustees) 및 국제전략문제연구소(International Advisory Council of the International Institute for Strategic Studies)의 자문위원을 역임했다. 레입슨 교수는 미 국가안보위원회(National Intelligence Council)의 부의장, 아시아 재단(Asia Foundation)의 이사직을 거쳤으며, 오바마 대통령의 정보보좌관 및 외교부 정책보좌관을 지냈다. 레입슨 교수는 코넬대학(Cornell University)에서 학사 학위를, 존스홉킨스대학(Johns Hopkins University)에서 석사 학위를 받았다.

Taedong Lee | Professor of Yonsei University

이태동 | 연세대학교 교수

Dr. Taedong Lee is Associate Professor at the Department of Political Science and International Relations and the director of Environment, Energy and Human Resource Development Center in Yonsei University, Seoul. His areas of research include global and sub-national environmental politics and policy, NGO and civic politics. Professor Lee recently published his monograph, *Global Cities and Climate Change: Translocal Relations of Environmental Governance* (Routledge, 2015), *Village Community Politics* (2017, in Korean) and *Debates in Environment and Energy Politics* (2017, in Korean), and *Politics that We Make: Actions for Neighborhood Democracy* (2018, in Korean). His articles have appeared in journals including *Policy Sciences*, *Nonprofit and Voluntary Sector Quarterly*, *Review of Policy Research*, *Policy Studies Journal*, *Energy Policy*, *International Environmental Agreements*, *Environmental and Planning C*, *Global Environmental Politics* and other Korean and international peer-reviewed journals.

이태동 교수는 연세대학교 정치외교학과 교수와 연세대 환경·에너지-인적자원 개발센터의 소장으로 재임하고 있다. 주요 연구 분야는 국제와 지방의 환경 정치와 정책, 비영리단체(NGO)와 시민 정치로, “우리가 만드는 정치: 동네 민주주의 실천”과 “토론으로 배우는 환경-에너지 정치”, “마을학개론: 대학과 지역을 잇는 시민정치교육”, “Global Cities and Climate Change: The Translocal Relations of Environmental Governance”를 출간하였다. *Policy Sciences, Nonprofit and Voluntary Sector Quarterly, Review of Policy Research, Policy Studies Journal, Energy Policy, International Environmental Agreements, Environmental and Planning C, Global Environmental Politics* 등의 국제적 학술지에 다수의 연구논문을 게재하였다.

Ming Wan | Professor of Schar School of Policy and Government

밍 완 | 샤르정치정책대학 교수

Dr. Ming Wan is Associate Dean and Professor at Schar School of Policy and Government. His Ph.D was from the Government Department, Harvard University. He has held postdoctoral fellowships at Harvard from the Program on US-Japan Relations, the John M. Olin Institute for Strategic Studies and the Pacific Basin Research Center and has been a visiting research scholar Tsukuba University and a George Washington University-Woodrow Wilson International Center for Scholars Luce Fellow in Asian Policy Studies. He was a visiting professor at Keio University of Japan in 2010-2012. He can present on how the tsunami and Fukushima crises affected national policy on climate.

밍 완 교수는 조지메이슨대학교 샤르정치정책대학의 부학장으로 재직하고 있다. 하버드대학교(Harvard University) 정부정책학과에서 박사 학위를 받았으며, 동 대학의 미국-일본 관계 프로그램, 존 M. 올린(John M. Olin) 전략연구센터와 태평양 분지연구센터에서 박사후연구원을 지냈다. 밍 완 교수는 현재 일본 쓰쿠바 대학(Tsukuba University)의 방문연구원 및 조지워싱턴대학의 우드로윌슨센터에서 아시아 정책연구원을 역임했다. 또한 밍 완 교수는 일본 게이오대학교(Keio University)의 객원 교수를 역임했다. 이번 심포지움에서 쓰나미와 후쿠시마 원전사고가 일본 기후정책에 미친 영향에 대해 발표한다.

Eunjung Lim | Professor of Ritsumeikan University

임은정 | 리츠메이칸대학교 교수

Dr. Eunjung Lim is an Assistant Professor at the College of International Relations, Ritsumeikan University. Her areas of specialization include international cooperation, comparative and global governance, and energy and climate change policies of East Asian countries. Before her current position, she taught at Johns Hopkins University SAIS. She also taught at several universities in Korea, including Yonsei University and Korea University. She has been a researcher and visiting fellow at several institutes including the Center for Contemporary Korean Studies at Interfaculty Initiative in Information Studies at the University of Tokyo, the Institute of Japanese Studies at Seoul National University, the Institute of Japan Studies at Kookmin University, and Institute of Energy Economics, Japan. She earned her M.I.A. from Columbia University and a Ph.D from SAIS, Johns Hopkins University.

임은정 교수는 일본 리츠메이칸대학(Ritsumeikan University) 국제관계학부 조교수로 재직 중으로 동아시아 국가들의 에너지와 기후변화 정책과 국제협력, 비교 국제 거버넌스 분야의 전문 학자이다. 존스홉킨스대학 국제관계대학원(SAIS)과 연세대, 고려대에서 강의했으며 일본 도쿄대학교대학원 학제정보학과 현대한국연구소, 서울대학교 일본연구소, 국민대학교 일본학연구소, 일본 에너지경제연구소에서 연구원을 지냈다. 임은정 교수는 컬럼비아대학(Columbia University)에서 국제관계학 석사, 존스홉킨스대학(Johns Hopkins University)에서 박사 학위를 취득하였다.

Andrew Light | Professor of Schar School of Policy and Government

앤드류 라이트 | 샤르정치정책대학 교수

Dr. Andrew Light is University Professor of Philosophy, Public Policy, and Atmospheric Sciences, and Director of the Institute for Philosophy and Public Policy at George Mason University. He is also a Distinguished Senior Fellow in the Climate Program at the World Resources Institute. From 2013-2016, he served as Senior Adviser and India Counselor to the U.S. Special Envoy on Climate Change, and as a Staff Climate Adviser in the Secretary of State's Office of Policy Planning in the U.S. Department of State. He was Co-Chair of the U.S.-India Joint Working Group on Combating Climate Change, Chair of the Interagency Climate Working Group on the Sustainable Development Goals and served on the senior strategy team for the UN climate negotiations.

앤드류 라이트 교수는 샤르정치정책대학에서 철학, 공공 정책 및 대기과학 분야를 가르치는 교수이자 조지 메이슨대학 철학 및 공공정책 연구소 (Institute for Philosophy and Public Policy)의 소장을 맡고 있다. 또한 세계자원연구소(World Resources Institute)의 기후프로그램 특별 상임연구원으로 재임 중 이다. 2013년부터 2016년까지 미 외교부 기후변화 담당 특사의 수석 고문 및 자문위원, 미 국무부 정책 기획실 기후관련 고문을 역임했다. 기후변화 대응을 위한 미국-인도 합동 워킹그룹(U.S.-India Joint Working Group on Combating Climate Change)의 공동 의장과 지속 가능한 개발을 위한 기후 워킹그룹(Interagency Climate Working Group on the Sustainable Development Goals) 의장으로 활동했으며 UN 기후변화협상 수석전략팀에서 근무했다.

Simon Wilson | Head of Communication, Green Climate Fund

사이먼 윌슨 | 녹색기후기금 커뮤니케이션 팀장

Dr. Simon Wilson is acting Head of Communications at the Green Climate Fund (GCF), based in Songdo, Republic of Korea. GCF is the world's largest dedicated climate fund, with the mission to support the efforts of developing countries to respond to the challenge of climate change. GCF helps developing countries limit or reduce their greenhouse gas emissions and adapt to climate change. Simon is a communications professional with over twenty years' experience in public relations and political advocacy. He has worked as a Director in a PR agency, Executive Director of a European NGO network, EU representative of a green think-tank, and a law lecturer. Prior to joining the Green Climate Fund Secretariat, he was senior advisor to the GCF communications team for a number of years.

사이먼 윌슨 박사는 대한민국 송도에 위치한 국제기구 중 하나인 녹색기후기금(Green Climate Fund)의 대외 협력부장이다. 녹색기후기금은 전 세계에서 가장 큰 기후관련 기금이며, 개발도상국이 기후변화에 대한 적응력을 높이고 온실가스 배출을 줄일 수 있도록 돕는 역할을 담당한다. 윌슨 박사는 공공정책 및 홍보 분야에서 20년이 넘는 경력을 가진 대외협력 전문가로 유럽 비영리단체 네트워크의 상임이사, 환경 싱크탱크의 유럽연합 대표를 지냈고 다수의 대학에서 법학을 가르쳤다.

Changwoo Ahn | Professor of George Mason University

안창우 | 조지메이슨대학교 교수

Dr. Changwoo Ahn is an Associate Professor in Environmental Science and Policy at GMU, where he runs Ahn Wetland Ecosystem Laboratory. He earned his Ph.D at the Ohio State University, followed by postdoctoral work at University of Illinois at Urbana-Champaign (Illinois Water Resources Center). His research interests and experiences include ecological functions of created/restored wetlands, wetland system ecology, water quality, wetland creation and restoration, nutrient dynamics (N, P), ecosystem services, and ecological modeling. He has been an associate editor for the journal "Ecological Engineering -the journal of ecosystem restoration (Elsevier)" and is currently a Book Review Editor. He is also a reviewer for EPA, NSF, USGS, and USDA

안창우 교수는 조지메이슨대학 환경과학 및 정책학 부교수로 재직 중이며, 동 대학에서 안 습지생태연구실 (Ahn Wetland Ecosystem Laboratory)을 운영하고 있다. 안창우 교수는 오하이오주립대(Ohio State University)에서 박사 학위를 취득하였으며, 일리노이대학 어바나 캠퍼스(University of Illinois at Urbana-Champaign) 수자원 연구소(Illinois Water Resources Center)에서 박사 후 연구과정을 마쳤다. 안창우 교수는 습지 생태연구, 수질, 습지 생성 및 복원, 영양 역학 분야의 저명한 학자로, *Ecological Engineering-the journal of ecosystem restoration*(Elsevier) 등 주요 생태학 저널에서 편집자를 맡았으며, 현재는 미 환경보호청(EPA), 미 국립과학재단(NSF), 미국지질조사국(USGS) 등에서 리뷰어로 활동하고 있다.

Todd M. La Porte | Professor of Schar School

토드 라 포트 | 샤르정치정책대학 교수

Dr. Todd M. La Porte is an Associate Professor at Schar School of Policy and Government, George Mason University. He teaches and researches critical infrastructure protection, homeland security, and organizational strategies for public response to extreme events. He has substantial research interests in networked society, large technical systems, information and communications policy, public organizations and institutional change, particularly relating to the internet. He maintains research interest in critical infrastructures, institutional capacity and organizational response capability with emphasis on the international dimensions of organizational and technological change. He is also able to present on the US debate on climate change, and the ways subnational actors are complying with the Paris Accord (even if the administration has walked away from it).

토드 라 포트 교수는 조지메이슨대학교 샤르정치정책대학 부교수로 재직하고 있다. 라 포트 교수는 극적인 사건들에 대한 공적 대응을 위한 조직 전략과 국토 안보, 주요 인프라 보호를 가르치고 연구하고 있다. 또한 네트워크 사회, 대규모 기술 시스템, 정보통신 정책, 공공 조직, 그 중에서도 특히 인터넷 관련 연구에 상당한 관심을 가지고 있다. 조직과 기술이 변화하면서 국제 차원에서 강조되는 인프라, 제도적 역량 및 조직 대응 역량에 대해서도 연구적 관심을 이어가고 있다. 라 포트 교수는 본 심포지움에서 미국의 파리기후협정 이탈 시도와 해당 협약의 지속가능성에 대한 비전에 관하여 발표한다.

About Center for Security Policy Studies

Launched in 2014, the Center for Security Policy Studies (CSPS) of Schar School of Policy and Government advances the study of international security. Through its research and extensive array of student programs, CSPS seeks to both generate creative solutions to today's pressing security challenges and educate tomorrow's security policymakers. CSPS's multidisciplinary faculty include experts in economics, history, political science and sociology, as well as a number of distinguished practitioners-in-residence. Located on Mason's Arlington campus, CSPS also provides unique access to a large number of defense and security experts, including current and former government officials, active and recently retired senior military officers, prominent think tank analysts, and world-renowned scholars.

The Center for Security Policy Studies (CSPS) addresses today's pressing security issues. Such challenges range from so-called 'traditional' threats, including great power conflict, civil war, nuclear proliferation, and terrorism, to so-called 'nontraditional' threats, including climate change, pandemic disease, demographic shifts, extreme poverty, state failure and refugee crises. All of these threats transcend traditional academic boundaries. Therefore, CSPS seeks to produce multidisciplinary, policy-relevant research by leveraging experts from across George Mason University.

CSPS has three overarching goals; to facilitate collaboration between scholars and practitioners from across George Mason University and Washington D.C., to generate multidisciplinary research relevant to today's most pressing defense and security challenges and to attract, recruit, and educate George Mason University's best and brightest students to prepare them for service as tomorrow's scholars and leaders.

The objectives of the CSPS branch at Mason Korea Campus include: setting a model for research collaboration and academic exchange with the main campus; creating a research hub connecting the US and Asia and a policy exchange platform between Washington and Seoul; supporting CSPS, the Schar School Faculty, and researchers by connecting to research infrastructure, policy field, and government in Korea; holding joint events between the two campuses; and building a reputable university specialized program and vibrant research environment.

안보정책연구소 목적 및 배경

2014년에 설립된 샤르정치정책대학 산하 안보정책연구소 (Center for Security Policy Studies)는 국제안보에 대한 전문적인 연구와 이와 관련된 정책적 방향을 제시하는 연구 기관이다. CSPS는 광범위하고 다양한 프로그램을 통해 오늘날의 시급한 안보 과제에 대한 창의적인 해결책을 도출하고, 미래의 정책 전문가 양성에 힘쓰고 있다. CSPS는 경제학, 역사, 정치학 및 사회학 분야의 저명한 전문가들로 구성된 연구 기관으로, 워싱턴 DC와 가까운 버지니아 주 알링턴에 위치하여 각 분야 전문가, 정부 관계자, 군 고위 간부들과 활발한 교류가 이루어지고 있다.

안보정책연구소 (CSPS)는 국제안보와 관련된 현안들을 다루고 있으며, 현대 사회의 안보문제는 그 범위가 소위 ‘전통안보’ 분야로 분류되는 무력 분쟁, 내전, 핵확산 및 테러에서부터 ‘비전통안보’ 분야인 기후변화, 전염병, 인구변화, 빈곤, 난민, 국가 실패까지로, 매우 광범위하며 기존의 학문적 경계를 넘나든다. 이에 따라 CSPS에서는 학교 내·외부의 전문가들과 협력하여 안보 정책 연구를 수행하고 있다.

CSPS의 설립 배경은 크게 세 가지로 요약될 수 있는데, 이는 (1) 미국 정계와 학계 간의 가교 역할 수행, (2) 현대 사회의 시급한 안보 문제에 대한 정책 연구 수행, (3) 조지 메이슨대학교의 뛰어나고 잠재력 있는 학생들의 교육이다.

이번에 한국에 분소를 개설함으로써 CSPS는 미국 캠퍼스와의 연구 및 학문적 교류의 활성화, 미국 및 한국 간의 정책연구 교류 기반 마련 등의 효과를 기대하고 있으며, 대학 내부적으로는 전문 프로그램 개설, 역동적인 연구 환경 조성 등의 효과를 기대하고 있다.