



2019 PACIFIC  
ENVIRONMENTAL  
SECURITY  
FORUM

# PRESENTATION SUMMARIES





Co-sponsored by: | New Zealand Ministry of Foreign Affairs &  
Trade, New Zealand Ministry of Defence, New Zealand Defence  
Force and U.S. Indo-Pacific Command






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Presentation Title: ***Opening Ceremony Statement***

Date: 21 May 2019

Time: 0845 - 0910

Theme: Opening Ceremony

Speaker:



**Honorable Ron Mark, Minister of Defence, New Zealand**

Biography:

Ron Mark was born in Masterton and was raised as a ward of the state. He grew up in a number of foster homes in Napier and the Wairarapa before attending Tararua College.

At 16, he went into the New Zealand Army's Regular Force Cadet School, Waiouru, graduating in 1971 as a soldier mechanic.

In 1978 he was accepted for Officer Cadet Training and graduated as a 2nd Lieutenant.

In 1982, as a mechanical engineering officer, he successfully completed the NZSAS selection course. That same year he was one of five New Zealand Army officers deployed to help set up the Multinational Force and Observers peacekeeping operation in the Sinai desert.

From 1985 to 1990, he served in the Sultan of Oman's Defence Forces finishing as a Major.

Ron was elected to Parliament in 1996 as a New Zealand First List MP and has held a range of portfolios including spokesman for New Zealand First on Defence, Law and Order, Corrections, Police, Mental Health, Veteran's Affairs, Disarmament and Arms Control, Sport and Recreation, Youth Affairs, Local Government and Building and Construction.

In 2010 Ron was elected Mayor of Carterton and was re-elected unopposed in 2013.

Ron is of Maori and Irish descent. His iwi affiliations are Ngati Raukawa, Te Arawa, Tuwharetoa, Ati Awa, Ngati Porou, Whakatohea, Rangitane and Ngati Kahungunu ki Wairarapa. Ron is a father of five and a grandfather of 12.

Statement:

It is my pleasure to welcome you all to the 2019 Pacific Environmental Security Forum. New Zealand is proud to host this year's Forum alongside the United States Indo-Pacific Command, and to have so many of our Pacific neighbours in attendance. I would like to acknowledge the United States Ambassador to New Zealand, Scott Brown and the French Ambassador to New Zealand, Her Excellency Sylvaine Carta-Le Vert, Timor Leste Ambassador Cristiano De Costa.

Over the course of this Forum, you will discuss topics of paramount importance to Asia-Pacific security. These include the intensifying impacts of climate change, climate migration, biosecurity, resource protection, tangible environmental security solutions and environmental security





transformation. The primary theme for this year's Forum is *Building Resilience in the Pacific*. This is particularly important. Our Pacific Island partners are disproportionately affected by the impacts climate change—the western Pacific Ocean is rising at about three times the global average rate of around three millimetres annually.

In my first attendance at the Shangri-La Dialogue in June 2018, I and the French Minister of Defence led discussions on what we saw as a critical threat to security. At the September 2018 Pacific Islands Forum, the leaders of our neighbourhood, including New Zealand, affirmed that “climate change presents the single greatest threat to the livelihood, security and wellbeing of Pacific people”. Discussions on climate change, defence and security were front and centre during my recent visit to Fiji for the South Pacific Defence Ministers' Meeting. We recognised climate change as a challenge that regional defence organisations must be ready for. Recommendations on advancing collective work by regional militaries and defence establishments on climate change, defence and security following a coordinated study, led by France, commissioned by the meeting in 2017, received unanimous support.

Key components of this future work are in lock step with the goals of the Pacific Environmental Security Forum, including the sharing of best practice in a range of areas from policy development, education and awareness-raising and civilian-military collaboration. The importance of the networks you will form this week cannot be overstated. Strong and enduring civilian-military partnerships across the Asia-Pacific will enhance stability and security.

New Zealand's vast maritime profile, encompassing waters from Antarctica through the South Pacific and to the Equator is fundamental to the wellbeing of New Zealand and our Pacific neighbours. Challenges in this domain are visible and intensifying. New Zealand's collaborative work with our partners, such as the Navy working with Fiji to patrol its EEZ for illegal fishing, aims to protect natural resources for future generations. New Zealand also collaborates with partners in Antarctica where scientists are conducting ground-breaking climate change research. The new Zealand Defence Force plays a critical role in enabling this important work, and it is through doing that work it is seeing first-hand the effects of Climate Change and its consequences.

The impacts of climate change are challenging community resilience and working to exacerbate a range of challenges from transnational crime, resource competition and climate-induced migration. In December, in conjunction with New Zealand's Minister for Climate Change the Hon James Shaw, we released *The Climate Crisis: Defence readiness and responsibilities assessment*. This assessment reinforces New Zealand's view that climate change is one of the greatest security challenges of our time. You will receive a presentation on this piece of work today.

The Pacific region is facing increased frequency and intensity of extreme weather events leading to a range of environmental impacts such as coral bleaching, decreasing fish stocks and increased soil salinization—all have flow-on economic, cultural and social consequences. When coupled with increased rainfall and deforestation the results are catastrophic – land subsidence, slips, erosion, and loss of biodiversity to name a few. It is important to take lessons from the past to better inform our future. Whilst it is some time ago, in May 1840 a devastating landslide destroyed the Ngati Tuwharetoa village of Te Rapa on the South West shore of Lake Taupo, killing sixty people. This environmental disaster remains New Zealand's highest death toll from a landslide. Such events will become more frequent. More recently two of the most destructive tropical storms in the South Pacific have occurred in the past few years. Cyclones Winston and Gita caused widespread destruction in 2016 and 2018 respectively. The New Zealand Defence Force supported and will



continue to support the New Zealand Government to provide humanitarian assistance to those affected.

Over time there will be an increased requirement for our Defence and other security forces to respond with humanitarian assistance and disaster relief, more search and rescue missions, and potentially stability operations. All of this means we need to think about capability. We also need to think about incorporating traditional and indigenous knowledge with contemporary methods will allow us to establish projects that merge strategies that have been successful for centuries, with technology and methods of response that can enhance resiliency for future generations.

Sustainable practices are not only important for the protection of human life, they are also important for the protection of natural life. The Pacific is home to a broad indigenous biodiversity that is important to our national identities and economic wellbeing. However, our unique flora and fauna are at risk from biosecurity hazards and threats that are already present. Those that are present and dormant, and those that arrive but which normally would not survive. We must not be blind to the potential for such threats to be deliberately introduced. Make no mistake, climate change will have grave implications for biodiversity and biosecurity. This is an area that requires new and innovative thinking if we are to preserve our natural ecosystems and ways of life. Not to mention our economic prosperity.

The New Zealand Defence Force, can, does and will play a critical role in supporting our biosecurity system here in New Zealand and the wider Pacific region. A whole of Government effort in this space is essential to protect and promote the wellbeing of our communities and natural resources. This year, the United States Indo-Pacific Command has proposed evolving the PESF from an event-based initiative into a non-binding network of practitioners named the Pacific Environmental Security Partnership. New Zealand is proud to support the proposal and views this evolution as a unique opportunity for the Asia-Pacific region by accelerating wide-reaching civilian-military partnership in the environmental security sector.

Make no mistake. Climate change is a crisis. But, it is also an opportunity for our security sector to step up. The intersection between defence, climate change, and security can help put us on a shared path to becoming even more prepared for the current and future challenges we face. We look forward to continuing to learn from our Pacific friends and work with our partners across the Asia-Pacific to further strengthen our shared resilience against climate change. I am keen to hear about the outcomes of this Forum and invite all of you to participate to your fullest and to make the most of this conference.

Finally, I would like to conclude with reflecting on my recent visit to Fiji for the recent South Pacific Defence Ministers' Meeting. It is heartening that collectively as Pacific Island neighbours, we have committed to a path that will lead towards tangible actions for alleviating climate change and environmental security challenges. I encourage you all to take learnings from this forum home to help support the wider Asia-Pacific follow an enhanced path of sustainability and stronger environmental security.

I'll finish by just sharing something from the South Pacific Defence Minister's meeting. Quite often when I talk about this matter, I'm immediately challenged by people who want to confront me on climate change. I tell them, I'm not here to argue what's causing climate change or how we're going to resolve it, what I say to them, and I'll say to you, is that things are changing now. Our women and men in uniform who crew our vessels, fly our aircraft or operate on the land, are closer to the elements than most civilians who talk about climate change ever will be. They





absolutely depend on a thorough and professional understanding of meteorology, the climate, weather patterns and how it's changing. We have had to adapt our operating procedures so that we can operate in that sphere. We understand the importance of understanding where we sit at any given point in time with regards to the environment. It is because of this, that we recognise and see the changes that are happening. We have to adjust for us to remain effective and we need to recognise that deployments to relieve citizens caught by natural disaster are going to become more frequent and they're going to be more demanding so on that fact alone we need to adjust to what's happening, understand it and plan accordingly. This means we all need to work together.

At the South Pacific Defence Minister's Meeting we were talking about conflict and the potential for it to occur. And I know what some people say, how does climate change cause conflict? Well it's all to do with competition for food and resources, and I'd like to highlight a couple of things which highlight the potential for conflict in the future.

Firstly I'd like to talk about jellyfish. There is a jellyfish in Tonga which is a delicacy. At the meeting the Tongan Minister of Defence Lord Ma'afu talked to us about this jelly fish. It has disappeared from its natural habitat and the fishermen have gone looking for it. This raises the interesting question, what if they find that in someone else's water? What if they start harvesting from an area that is not theirs? Who then does the jellyfish belong to? Rice paddies were another example; there is an area in Fiji which always was able to grow rice. Today, it does not. The sea has inundated that area and now it is full of salt water. So the food source has gone. So what are the consequences of that? Erosion is yet another example; people think that when land falls away you just pick up the population and find them a new home. Into another tribes area? We saw it in PNG when I happened to be there during the earthquake. A whole tract of land fell into a valley meaning a village had to move. There are people in this world who think it's easy to move one tribe onto another tribes land. Pacific Island people understand you cannot just do that. First there needs to be some conversation and it needs to be worked through in a respectful manner.

The Fijian Minister of Defence, Minister Seruiratu, shared the story of his own village which has had to redo its sea wall three times due to rising sea levels. This is a small village with limited economic resources, and for the third time it has to rebuild its sea wall to stop it from disappearing into the ocean. All these things are worth thinking about, because eventually one might conclude that villages like this will need to be relocated. With food sources being scarce, fish stocks disappearing, and land becoming more precious, this has potential to create conflict.

For us in the military and security sector, these are real challenges, and they have the potential implications which I'm hopeful the great minds in this room will talk about, and come up with some solutions for us politicians to move forward and implement. Good luck, I'm looking forward to reading the results of this meeting. Thank you.

Presentation Title: ***Opening Ceremony Statement***

Date: 21 May 2019

Time: 0845 - 0910

Theme: Opening Ceremony

Speaker:



**Honorable Scott P. Brown, U.S. Ambassador to New Zealand and the Independent State of Samoa**

Biography:

Scott P. Brown is a prominent political leader, attorney, and National Guardsman with a long history of public service. In 2010, Ambassador Brown won a special election and served in the U.S. Senate for three years. During his time in the U.S. Senate, Ambassador Brown was known as the most bipartisan Senator and was the ranking member on the Armed Services Committee, as well as the Committee on Homeland Security and Governmental Affairs, and was a member of the Veteran's Committee and the Committee on Small Business. As an elected official, he worked extensively on sex offender, child trafficking and other law enforcement issues to keep children and families safe. He began his public service career as an Assessor and Selectman for the Town of Wrentham, Massachusetts. He served as Massachusetts State Representative for the 9th Norfolk District for seven years and as State Senator for the Norfolk, Bristol, and Middlesex District for five.

Ambassador Brown served in the enlisted and officer ranks of the Massachusetts and Maryland National Guard. He retired as a Colonel after 35 years of service, the last four of which he served as the Deputy to the Chief Counsel to the Chief of the National Guard Bureau at the Pentagon. While maintaining his law practice he was also a contracted contributor and analyst for Fox National News. Ambassador Brown worked as an attorney for Nixon Peabody, LLP, Boston, MA. He served on the Board of Directors and as an Advisor to Kadant, Inc., Westford, MA and as an advisor to 1st Alliance Lending, LLP, East Hartford, CT, an organization aimed at helping low income citizens keep their homes. He was an Advisor to SkyBridge Capital, New York, NY and to Ron Terwilliger Housing Foundation, Vienna, VA, and served as a board member for the USA Triathlon Foundation introducing youth to the sport of triathlon. He traveled extensively speaking before colleges, businesses, trade associations, and financial and government advocacy groups globally. Ambassador Brown is married to Gail Brown. They have two daughters: Ayla, a singer/songwriter in Nashville, Tennessee and Arianna, a veterinary who studied at Cornell University in New York. Ambassador Brown earned a B.A. from Tufts University and a J.D. from Boston College Law School. He has Honorary Doctorates from Lasell College (Humanitarian Letters) and Nichols College (Public Administration).

Statement:

It is a truly an honor to be here opening the 2019 Pacific Environmental Security Forum, particularly alongside my good friend. Minister, I would like to start out by thanking your government, and especially the New Zealand Ministry of Foreign Affairs and Trade and Ministry of Defence, for your collaboration on this important forum.



It is wonderful to see partners and familiar faces from across the Indo-Pacific here in Wellington to engage on this important topic in an annual event that is now nearly a decade old. I hope you will all get the chance while you're here to enjoy this beautiful city and country that I have been so lucky to call home the past couple of years. The United States and New Zealand are close friends and partners who share a long history, and I can say with confidence that we are at a new summit in our friendship and global partnership. A few examples of why:

- In February, the U.S. Coast Guard Cutter POLAR STAR made a port call in Wellington, after supporting U.S. and New Zealand Antarctic resupply operations. She was the first scheduled U.S. Coast Guard ship visit to Wellington in over 30 years, and the fourth time a U.S. ship has visited New Zealand in that time. She'll be back!
- About 20 months ago, when a U.S. Navy ship went offline, the Royal New Zealand Navy dispatched the TE KAHA to support our Nimitz Carrier Strike Group, filling a gap in our lines during operations in the Pacific.
- A few months ago, Deputy Prime Minister Winston Peters traveled to Washington and was received by Vice President Mike Pence and Secretary of State Mike Pompeo for extended, in-depth consultations. Our Vice President cannot often meet foreign leaders, but he made time for Minister Peters – significant time. I know, I was there.
- This comes at a time when our military engagement is off the charts as well. Over the last year we have had nearly every 4-star officer from INDOPACOM visit New Zealand, including the Combatant Commander ADM Davidson, and the commanders of the Air Force, Army, Marines, and Navy components. ADM Aquilino, who commands the Pacific Fleet, was just here a few weeks ago to keep our navy-navy ties strong.
- We facilitate countless exchanges between leaders in the science, academic, and business communities, and I'm very excited that we've partnered with the Ministry of Business Innovation and Employment to send four Kiwis to participate in the NASA internship program.
- And just a few weeks ago, the Chairman of the powerful Senate Appropriations Committee, my former colleague Richard Shelby, brought a delegation of 4 other US Senators to Wellington and Dunedin for an excellent set of meetings with various ministers.

In fact, when the last U.S. Marines left New Zealand's shores at the end of World War II, they left a plaque that reads, "If you ever need a friend, you have one." So we are very happy to be here today working together as close friends to host representatives from throughout the Indo-Pacific region engaging on challenges faced by the region and the world.

So, what is the Pacific Environmental Security Forum? It's a chance for experts to get together to find ways to address resource sustainability, threats from natural disasters, and share best practices to be good stewards of the environment. The overlap between environment and security is an important emerging theme throughout the world. But in this region, which includes many island nations sitting atop the Pacific Ring of Fire—archipelagos like New Zealand and coastal states, environmental security and the mitigation of environmental threats is particularly important.

The U.S. Free and Open Indo-Pacific strategy envisions a region in which nations are sovereign, strong, and prosperous. Resilience to stand up to environmental security risks is a big part of that.

In short, this forum lets us look at these issues together and to find ways to partner to tackle them going forward.



I have prioritized the environment throughout my political career, and like other countries, the United States is looking for ways to address environmental challenges. We have done a lot and can do more. The U.S. economy is driving targets for emissions reductions globally and will continue to do so. Over the past 15 years, the United States has shown that it can reduce emissions while growing the economy and promoting energy security. Since 2005, U.S. greenhouse gas emissions have fallen by 12%, even as our economy has grown by 17.5%. The United States continues to be a leader in clean energy and innovation. America's energy revolution has produced affordable energy for consumers along with high-paying jobs for small business – all while dropping carbon emissions to their lowest levels in 25 years. Renewable generation in the United States provided a new record of 742 million megawatt hours of electricity in 2018, nearly double the production levels of 2008. The United States is the second largest producer of renewable energy in the world. Renewables provided 17.6% of electricity generation in the United States in 2018. Our goal is to see this number continue to rise, with further investments in electric vehicles, rooftop household solar systems and increasingly energy efficient smart homes.

I was very encouraged that the President signed the Save Our Seas Act, which provides resources and expertise to address the plastic problem in our oceans. The United States is committed to reducing the risks and impacts of climate-related natural disasters. We have long been engaged in supporting disaster risk reduction programs aimed at saving lives and reducing the impact of disasters worldwide. The United States will continue to work with vulnerable countries to build resilience to natural disasters and extreme weather events. The priority the United States places on environmental security is why we are continuing to host this important forum, and it is why INDOPACOM has proposed to evolve this annual gathering into the Pacific Environmental Security Partnership.

I am especially pleased to see so many representatives here from Pacific Island nations. I'm privileged to also represent the United States as Ambassador to Samoa, where my wife Gail and I recently returned from our fifth visit there. Thanks to my broader duties, I've also been able to get to the Cook Islands, Niue, and – with the help of the Royal New Zealand Air Force – flown to Antarctica from Christchurch.

As I have engaged with Pacific leaders, I've been listening. I know that environmental security is important to you and that you are concerned about climate impacts. The United States recognizes the vulnerabilities and risks that the Pacific islands face due to their unique circumstances, including from rising seas and extreme weather. USAID assistance to the Pacific totaled \$49 million last fiscal year, including almost \$29 million in disaster response. We would like to continue working together with you on these issues going forward and follow the lead of important regional institutions like the Pacific Islands Forum. As Ambassador to New Zealand, I think the U.S. "Free and Open Indo-Pacific" approach meshes perfectly with New Zealand's commitment to the Pacific region in the "Pacific Reset." We are both working, independently, with Pacific partners to strengthen Pacific Island countries' economies and resilience.

Speaking of working together, one thing that is unique and important about this particular forum is that it promotes civilian-military collaboration. Civ-mil partnership is key when it comes to environmental security. It is important to constantly strengthen those partnerships so that we can capably respond when we need to.

I hope that this forum will help to further environmental security partnerships and multi-national collaboration in the Indo-Pacific region so that we can together address threats from natural



disasters and resource sustainability, and be good stewards of the environment. Please enjoy your time here this week and like me take advantage of the famous “Kiwi hospitality.”

Presentation Title: ***Climate Science Overview: Introduction to Climate Security Challenges in the Pacific Theme***

Date: 21 May 2019

Time: 1000 - 1010

Theme: Climate Security Challenges in the Pacific

Speaker:

**Professor James Renwick, School of Geography, Environment and Earth Sciences, Victoria University, New Zealand**



Biography:

James has nearly four decades' experience in weather and climate research. His main field is large-scale climate variability and climate change, including such things as El Niño, the Southern Hemisphere westerly winds, and the impacts of climate variability and change on New Zealand and the Antarctic. James was a lead author for the last two Assessment Reports of the Intergovernmental Panel on Climate Change (IPCC), and is a Convening Lead Author for the new 6th IPCC Assessment. He is a co-chair of the of the World Climate Research Programme (WCRP) CliC (Climate and Cryosphere) project, and has served as the Chair of the Royal Society of New Zealand Climate Expert Panel, President of the New Zealand Association of Scientists, and President of the Meteorological Society of New Zealand.

Presentation Summary:

In this introduction to the state of the science of climate change in the Pacific region, Professor Renwick made clear that the changing climate poses a continued threat to stability throughout the region. Rainfall variability has increased, resulting in wetter storms and drier droughts. He stated that temperature extremes in some regions will become so bad that the climate implications cannot be modeled. There has been a clear trend in sea rise, with the Pacific region rising more than average. Furthermore, it has been shown that a reduction in greenhouse gas emissions is not yet apparent. He suggested that a major challenge is swaying public opinion to recognize climate change as a threat. Many in the public have not been convinced that climate change poses a major challenge for food and water security.



Presentation Title: ***New Zealand Defence Assessment on Climate Change***

Date: 21 May 2019

Time: 1010 - 1030

Theme: Climate Security Challenges in the Pacific

Speaker:

**Ms. Jane Nielson, Senior Policy Analyst (Climate Change), Ministry of Defence, New Zealand**



Biography:

Jane Neilson is a Senior Analyst in the Policy Branch of the New Zealand Ministry of Defence. Her primary policy focus is on the security and defence impacts of climate change, with particular applicability on the South Pacific. Jane officially joined the Ministry in December 2018 after completing 14 months in the role on secondment from the New Zealand Defence Force. Before focusing on climate change, Jane was an Asia-Pacific strategic analyst with the New Zealand Defence Force, a role she started in February 2014. Prior to her appointments with Defence, she was an intern at the European Parliament in Brussels, Belgium in 2012.

Jane holds a Master of Arts with First Class Honours in Political Studies and a Bachelor of Arts with First Class Honours in Political Studies and French from the University of Auckland, New Zealand. In her free time, Jane enjoys swimming and is an international Brevet judge for New Zealand in rhythmic gymnastics – she volunteers at a local gymnastics club in Wellington.

Presentation Summary:

In December 2018, New Zealand's Minister of Defence Hon Ron Mark and Minister for Climate Change Hon James Shaw released the New Zealand Defence Assessment on the security impacts of climate change. *The Climate Crisis: Defence Readiness and Responsibilities* explored the implications of climate change for New Zealand Defence Force operations. The document highlighted that the impacts of climate change are being acutely felt in the Pacific as well as in New Zealand itself and climate change will be one of the greatest security challenges for New Zealand and the world in the coming decades. Ms. Nielson's presentation covered the key findings of the Defence Assessment and highlighted the importance of Defence forces working with a range of partners to better understand and respond to the intensifying impacts of climate change.

Presentation Title: ***Tropical Cyclone Gita: A HMAF Experience***

Date: 21 May 2019

Time: 1030 - 1050

Theme: Climate Security Challenges in the Pacific

Speaker:

**Maj Soane 'Aholelei, Component Commander - Training, His Majesty's Armed Forces, Tonga**



Biography:

Major Soane 'Aholelei joined His Majesty's Armed Forces (HMAF) on 16 February 1994. He was commissioned into the Tonga Royal Guards (TRG) after completing his commissioning course at the Royal Military College, Duntroon in Australia.

Major 'Aholelei has held various staff and command appointments at the sub-unit to unit level and secondments. He was posted to the Ministry of Foreign Affairs Trade as Military Liaison Officer in the year 2000 and as an Instructor at the New Zealand Army Command School, Waiouru 2015-2016. Major 'Aholelei is currently the Component Commander Training Unit.

Major 'Aholelei deployed on operations to the Solomon Islands 2003 -04 and Iraq as a troop commander 2007-08. He is a graduate of the Australia Command and Staff College and holds a Masters in Military and Defence Studies from the Australia National University 2013.

Major 'Aholelei is married to Dr 'Alamea who is a General Surgeon by trade and have a 14 year old daughter Faka'anaua. He is Methodist by faith.

Major 'Aholelei follows sports in particular boxing and all rugby codes. He is an avid reader of history and enjoys working on his root crop plantation and garden.

Presentation Summary:

This presentation looked at the HMAF experience and lessons learned during Tropical Cyclone Gita, a category 5 cyclone that hit the main island of Tonga in February 2018. Major 'Aholelei first described one of HMAF roles as provided in HMAF Act, which is the Support of the Civil Authorities in time of a civil emergency such as natural disasters. He then provided an overview of equipment, manpower, and logistical support available to HMAF. This included HMAF organization and what platforms HMAF have, which are enablers in HMAF response to natural disasters. It was noted that land platforms are very limited while maritime platform effectiveness could be improved with better training and specialized equipment.

The presentation continued on with HMAF responses before, during, and after a natural disaster. Disaster response to Cyclone Gita was offered as a case study. Lessons learned were discussed, including the improvement of communications and the promotion of "traditional resilience," the use of indigenous practices to aid in recovery from natural disaster.

Presentation Title: ***Climate Change-Related Human Mobility in the Pacific***

Date: 21 May 2019

Time: 1100 - 1120

Theme: Climate Security Challenges in the Pacific

Speakers:



**Dr. Nathan Ross, Development Manager, Climate Change and Environment, Ministry of Foreign Affairs & Trade, New Zealand**

Biography:

Nathan Ross is Development Manager (Climate Change and Environment) in the Pacific and Development Group at the New Zealand Ministry of Foreign Affairs and Trade (MFAT). He leads the policy and development work regarding the New Zealand Action Plan on Pacific Climate Change-Related Human Mobility. Nathan is in the final stages of a PhD regarding climate change-related relocations from low-lying Small Island Development States. His PhD examines implications in international law of self-determination.

Before taking on the migration portfolio, Nathan worked as Specialist Adviser in the Climate Change Unit at MFAT, which leads New Zealand's UNFCCC-related work. He has also worked as a Research Fellow at the Faculty of Law, Victoria University of Wellington where, as well as undertaking his doctorate, he published on a range of legal and policy subjects. In collaboration with former Prime Minister Rt Hon Sir Geoffrey Palmer QC, Nathan taught domestic and international climate change law. Nathan has also previously worked as Manager of New Zealand's large-scale renewable electricity programme, and its solar programme. He began his career in local government, working on community greenhouse gas mitigation projects, and training local governments how to devise climate change strategies. Nathan holds degrees in Law and Environmental Science.

Presentation Summary:

The effects of climate change have undermined the conditions necessary for Pacific communities to remain in situ. As a result, climate change-related human mobility (internal displacement, planned relocation and cross-border migration) has already begun to happen and will increase as climate change impacts outpace adaptation activities. While the reasons why people relocate are often a complex mixture of push and pull factors, responding to climate change-related environmental changes is ultimately a form of forced relocation. Forced relocation in other contexts, such as to make way for large-scale development projects, has been known to cause various forms of impoverishment such as joblessness, landlessness, community dislocation, marginalization, food insecurity, and increased morbidity. Dr. Ross stated that these are the types of risks that can be expected to face people affected by climate change-related mobility. Also at risk are the continuity of their national identities, cultures, languages and ways of life. In light of all these risks and challenges, the Pacific Islands Forum has recognised "the desire of Pacific peoples to continue to live in their own countries, where possible". However, as an emerging and unprecedented issue, there has been no systematic response, either to enable in situ adaptation or support relocation. This presentation introduced the complex drivers and classes of climate change-related human mobility while outlining the New Zealand work programme to investigate the issue in the Pacific.



Presentation Title: ***Pacific Environmental Security Partnership (PESP)***

***Introduction***

Date: 21 May 2019

Time: 1315 - 1335

Theme: Pacific Environmental Security Partnership Introduction

Speaker:

**Mr. Christopher Sholes, Environmental Program Manager, U.S. Indo-Pacific Command**



Biography:

Chris Sholes is the Environmental Security Program Manager within the USINDOPACOM Engineering Division. His duties include overseeing environmental compliance for bilateral exercises (e.g. Talisman Saber), and planning the Pacific Environmental Security Forum and international environmental workshops. He also monitors environmental impact assessments developed by the service components and coordinates projects with State of Hawaii offices and others on environmental matters. His previous experience includes project management of various environmental remediation projects throughout Hawaii and the Pacific including soil and water remediation and UXO clearance in Saipan, Guam, Japan and Korea, Palmyra and other remote islands. He has five degrees including two from the London School of Economics in International Relations and Economics and an MS in Systems Engineering from the Naval Postgraduate School. He is a certified contracts manager (CPCM) and certified project manager (PMP) from the respective US national certifying organizations.

Presentation Summary:

The Pacific Environmental Security Forum has convened since 2011 and delivered capacity-building projects in partnership with countries attending and contributing to the PESF. The increasing operations have made it apparent that more frequent interaction and a firmer organizational structure is needed to keep pace with the challenges and opportunities that Environmental Security presents. Mr. Sholes explained the purpose of the newly-proposed Pacific Environmental Security Partnership and elaborated upon its future applications.



Presentation Title: ***Pacific Environmental Security Partnership Work Group Overview***

Date: 21 May 2019

Time: 1335-1345

Theme: Pacific Environmental Security Partnership Introduction

Speaker:



**Col Mike Matheis, Joint Engineer (Reserves), U.S. Indo-Pacific Command**

Biography:

Colonel Michael T. Matheis is the United States Indo-Pacific Command Environmental Security Engineer at Camp Smith, Hawaii. Colonel Matheis entered active duty in 1990 as a distinguished graduate of the Air Force ROTC program. He first served as a contract programmer and Chief of Readiness, which included preparing Edwards AFB for earthquakes and Space Shuttle landings. He was then assigned to the 554th RED HORSE Squadron, executing contingency projects and planning throughout the Pacific theater. Next he led the bed down of the E-8C Joint STARS aircraft at Robins AFB and the development of Eagle Flag at the USAF Expeditionary Center.

As a Reservist, he was the 514th Civil Engineer Squadron Commander and then on staff at the pentagon, Air Mobility Command, Air Force Space Command and the Air Force Installation and Mission Support Center prior to his current assignment. He has two deployments in support of Operation ENDURING FREEDOM to Seeb AB, Oman and Kabul, Afghanistan.

As a civilian, Colonel Matheis was a construction manager based in Philadelphia. His projects included the Philadelphia airport international terminal, a 45-story high-rise condominium, and several interior renovations. In 2009 he became a federal civilian at Joint Base McGuire-Dix-Lakehurst working as a Project Manager, then Chief of Programming and later as Chief of Operations Engineering. He is currently the Deputy Director of the 787th Civil Engineer Squadron.

Presentation Summary:

Colonel Mike Matheis introduced the Pacific Environmental Security Partnership (PESP) work group concept. Col Matheis explained the purpose of the four proposed PESP work groups: 1) Education, 2) Mitigation, 3) Networking and 4) Policy. Next, Col Matheis explained that participants will have the opportunity to listen to speakers delivering presentations on the four PESP work group topics. The presentations delivered during the sessions will showcase the type of work and topics the PESP may cover in the future. Finally, Col Matheis requested all participants to select their first topic, and report to the appropriate room to start the session.

Presentation Title: ***Environmental Sensitivity Index (ESI)***

Date: 21 May 2019

Time: 1345-1405

Theme: PESP Education Work Group Series

Speaker:

**Surgeon Captain Duminda Indunil Samarawickrama, Senior Command Officer, Western Naval Command, Sri Lanka Navy, Sri Lanka**



Biography:

Surgeon Captain Duminda Indunil Samarawickrama is presently a Senior Command Medical Officer of Sri Lanka Navy's Western Naval Command. He joined the Sri Lanka Navy as a Direct Entry Acting Sub Lieutenant in 2000. He graduated from the University of Sri Jayawardanepura with a Bachelor of Medical Science. He received his Master's Degree in Defense and Management from Sir John Kothalawala Defense University. He has been a member of the Naval Environmental and Marine Conservation Committee since 2014, with special interest in mangrove replanting projects, coral conservation, bio gas, solar power, environmental health, occupational health, disaster medical management, and sustainable developments goals.

He has attended several international medical conferences, including Asia Pacific Military Exchange 2016-2018. He has presented more than 30 scientific abstracts about environmental health.

Presentation Summary:

The Sri Lanka Navy facilitated the first ever Environmental Sensitivity Index (ESI) project for Sri Lanka. The project, from Colombo to Negombo, was successfully completed with the collaboration of the Sri Lanka Navy, the United States Army Corps of Engineers (USACE), and Sri Lankan stakeholders on 23rd August 2017.

ESI maps provide a concise summary of coastal resources that are at risk if an oil spill occurs. When an oil spill occurs, ESI maps can help responders to meet their main response objectives: the reduction of environmental consequences of the spill and the commencement of cleanup efforts. The Sri Lanka Navy (SLN) acted as the focal point and facilitator of the project. A series of discussions were held with the representatives of the US Embassy, USACE, SLN, SLCG and other local stakeholders prior to the commencement of the project.

A number of local government organizations assisted the project by providing data for the database. SLN Hydrographers and GIS specialists, Marine Environment Protection Authority (MEPA), National Aquatic Resources Agency (NARA), Central Environment Authority (CEA), Coast Conservation Department (CCD) and students of Ruhuna and Wayamba Universities assisted the field work in the second phase



Presentation Title: ***Role of Maritime Domain Awareness (MDA) in Governance***

Date: 21 May 2019

Time: 1410 - 1430

Theme: PESP Education Work Group Series

Speaker:

**Dr. Christopher Merritt, Maritime Technical Advisor, U.S. Mission to Association of Southeast Asian Nations**



Biography:

Dr. Christopher Merritt is a native of Wilmington, North Carolina, and he is currently assigned to the United States Mission to the Association of Southeast Asian Nations (USASEAN), where he serves as a Maritime Domain Awareness (MDA) Advisor. In this capacity, Dr. Merritt advises the US Ambassador to ASEAN and ASEAN Member States on how to implement, promote, and establish a regional maritime threat information sharing architecture. He has over twenty years of experience living and working in the Indo-Pacific, which includes an extensive background working at the local, operational, and national levels on MDA initiatives. Since 2004, he has worked as a Department of the Navy Civilian Analyst and Liaison in assignments that included service as a Southeast Asia Terrorism Analyst for U.S. Pacific Command, Chief of the Joint USCG Intelligence Coordination Center/Office of Naval Intelligence Maritime Homeland Threat Analysis Division, a Commercial Maritime Liaison Officer for the U.S. Pacific Fleet, and a Senior Analyst for the service as an Officer in the U.S. Navy Reserve. His academic experience includes teaching undergraduate and graduate courses in strategy, policy, critical thinking, and analysis with Hawaii Pacific University and the American Military University. He has a B.S.B.A. in International Business and a M.B.A. from Hawaii Pacific University, and a Doctoral Degree in Educational Leadership from the University of Southern California. He is married with three children, all of whom attend college in the United States.

Presentation Summary:

Maritime Domain Awareness (MDA) has been a core component to regional safety and security. It enables a nation to effectively govern its own waters and to contribute to strengthening the international rules-based order that protects the global maritime commons from traditional and non-traditional threats. By employing effective MDA, governments have been able to establish effective and informed policies that relate to the management of maritime environmental resources, the promotion and safety of maritime trade and transportation, and security from traditional and non-traditional threats that emanate from the maritime domain. Additionally, MDA enables nations to work collaboratively to protect the global commons from these same threats.

Presentation Title: ***Environmental Intelligence: Products and Decision Support Services from NOAA***

Date: 21 May 2019

Time: 1500 - 1520

Theme: PESP Education Work Group Series

Speaker:



**CAPT Barry Choy, Liaison Officer to U.S. Indo-Pacific Command, National Oceanic & Atmospheric Administration (NOAA), USA**

Biography:

CAPTAIN BARRY CHOY is a commissioned officer in the smallest of the U.S. uniformed services, the National Oceanic and Atmospheric Administration Commissioned Corps. He serves as the NOAA Liaison to U.S. Indo Pacific Command. Prior to this assignment CAPT Choy led the Office of Hydrologic Development and served as Chief Science Officer for the National Centers for Environmental Prediction for the NOAA National Weather Service (NWS). In previous assignments over the last 30 yrs, he has served in a variety of geographically dispersed operational and management positions including ship's deck officer and diver on several NOAA ships conducting fisheries, oceanographic, and atmospheric research in the Pacific, Atlantic and Arctic to Aircraft Commander, Chief of Maintenance, and Chief of Flight Operations at the NOAA Aircraft Operation's Center in Tampa, FL. He has served as Hurricane Qualified Aircraft Commander and Flight Instructor for NOAA and accumulated over 4500 hrs flight time in the NOAA Hurricane Hunter WP-3D and snow survey aircraft. He has flown into many notable hurricanes, including hurricane Katrina, collecting valuable data used to improve forecast skill. He has also served on scene in scientific support roles during the Exxon Valdez' and Deep Water Horizon oil spills. CAPT Choy holds a Bachelor of Science degree in Meteorology from the University of Hawaii and completed graduate studies in Aeronautical Science from Embry-Riddle Aeronautical University in Aeronautical Science.

Presentation Summary:

The National Oceanic and Atmospheric Administration (NOAA) has used the very best science to develop and distribute decision support tools for environmental understanding and prediction. These tools provide users an opportunity to be best prepared for the potential impacts of weather, climate variability, and climate timescales from days to years. During this session, the audience gained an understanding of environmental intelligence and how to locate and use NOAA and partner products to best prepare for the potential impacts from environmental changes and extremes. They also gained insight on resources developed in conjunction with partners that provide advisory information on natural disasters including tropical cyclones, tsunami, and volcanic ash. The National Oceanic and Atmospheric Administration has been where science meets service for environmental awareness with products spanning the globe from the sun to the sea.

Presentation Title: ***Australia's Experience in Supporting Water Security in the Indo-Pacific***

Date: 21 May 2019

Time: 1525-1545

Theme: PESP Education Work Group Series



Speaker:

**Mr. Russell Rollason, Assistant Director - Water Management Team, Governance Fragility and Water Branch, Development Policy Division, Department of Foreign Affairs & Trade, Australia**

Biography:

Russell Rollason AM leads the Water Resource Management team within the Development Policy Division of the Department of Foreign Affairs and Trade. He served as First Secretary, Development Cooperation at the Australian High Commission, New Delhi (2010-13). After joining the then Australian Agency for International Development in 2005, he worked on the Mekong Regional Program and represented Australia at Mekong River Commission meetings. A Science Honours (Geology and Mineralogy) graduate from Queensland University, Russell holds a Master's degree in General Studies from the University of NSW. He is a former Executive Director (1983-95) of the Australian Council for Overseas Aid (ACFOA), now named ACFID. He has also worked as an international consultant, principally for the Asia Development Bank. In 1998, he was appointed a Member of the Order of Australia for services to international development and humanitarian aid through ACFOA, and to the promotion of social justice in Australia.

Presentation Summary:

Countries and regional organizations in the Indo-Pacific must face the emerging global water crisis in its many manifestations through a set of carefully devised and sophisticated strategies. The economic and health dimensions of water have long been understood, and the Sustainable Development Goals have introduced a new focus on the need to protect and restore water related ecosystems and improve water quality. More recently the focus has moved to the security aspect of the water problem as climate change leads to more erratic rainfall patterns and impacts with more frequent and intense weather events. Water insecurity has often been seen as a potential cause for conflict and there are many examples where water scarcity has exacerbated existing social and political tensions. Water is essential for life and can also be a tool for peace and stability. Australia has been well-placed to assist countries in the Indo-Pacific region by sharing experience and expertise in managing complex water challenges. The presentation outlined examples of Australian-supported programs that are helping to improve water resource management and build resilience to climate change impacts in the Pacific, the Mekong and in South Asia, highlighting best practice and lessons learned.

Presentation Title: ***Grounding of MV Solomon Trader: Its Intricacies and Related Experiences***

Date: 21 May 2019

Time: 1345 - 1405

Theme: PESP Mitigation Work Group Series

Speaker:



**Mr. Joe Horokou, Director of Environment and Conservation Division, Ministry of Environment, Climate Change, Disaster Management and Meteorology, Solomon Islands**

Biography:

Mr. Joe Horokou presently is employed by the Government of Solomon Islands in the Ministry of Environment, Climate Change, Disaster Management and Meteorology. He is the Director of Environment and Conservation Division (ECD), one of the technical divisions of the ministry. He has served with ECD for over twenty years and has been its director since 2008. Being the director, he ensures the mandated responsibility of his division to protect, manage and sustainably use the environment and natural resources for the maximum benefit of the government and people of Solomon Islands, is promoted and safeguarded.

Mr. Horokou received his undergraduate training at the University of the South Pacific (USP) in Fiji, with dual majors in geography and sociology. He later pursued postgraduate qualifications in environmental assessment and sustainable development at the University of Manchester and environmental impact assessment, environment auditing and environment management systems at the University of East Anglia, both in England, United Kingdom. He has represented his country in numerous regional and international environmental fora relating to the multilateral environment agreements (MEAs) to which Solomon Islands is a Party.

Presentation Summary:

The grounding of MV Solomon Trader within Lavangu Bay, Rennell Island in Renbel Province, Solomon Islands on February 4, 2019 was largely due to a severe weather event. Measuring 224.97 meters in length, with 10,850 metric tons of bauxite ore and 768 metric tons of fuel oil onboard, the bulk carrier was in the process of loading bauxite ore. The incident has witnessed concerted and coordinated efforts from various actors, both locally and internationally, under the overall management of the National Disaster Management office. Resolve Salvage and Fire Private Ltd has been engaged by Korea Protection and Indemnity Club to carry out the salvage operations including fuel removal from the vessel, shoreline oil spill cleanup and contaminated site remediation. Despite the level of collaboration displayed and progress made at different levels, there has been occasional disagreements in the various aspects of the salvage operations, nonetheless.

The remoteness of the site, involvement of different stakeholders, lack of infrastructure (including communication and specialized equipment) and lack of technical capability and capacity in the country to address a potential environmental disaster within sensitive coastal ecosystems have proven challenging to the salvage operations. However, efforts to carry out the operations were given a much needed boost through the networks of the National Disaster Management Office.

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Involvement of relevant expertise from the Australian Marine Safety Authority and other consultants and advisory roles have immensely helped the NDMO chairman and Solomon Islands' government team to ensure key players such as the P& I club, salvors and other specialist teams onsite carry out the operations in a methodical manner.

Presentation Title: ***Climate Change Adaptation and Mitigation through Sustainable Management of Wetlands in the Southern Most Two Atolls of the Maldives***

Date: 21 May 2019

Time: 1410 - 1430

Theme: PESP Mitigation Work Group Series

Speaker:



**Mr. Mohamed Hamdhaan Zuhair, Assistant Director, Environment Assessment, Environmental Protection Agency, Maldives**

Biography:

Mr. Mohamed Hamdhaan Zuhair works as an Environment Assessment Assistant Director at the Maldives Environmental Protection Agency. Hamdhaan has been working at the agency in different capacities since 2007. He received a Bachelor of Environmental Science from James Cook University, Australia and a Masters in Management and Sustainability from Waikato University, New Zealand. His main area of expertise is environmental impact assessment, and he has published work in this field. In addition to his work at the EPA, he has worked in implementing World Bank and EU funded projects.

Presentation Summary:

Wetlands play a key role in climate change adaptation and mitigation. Wetlands act as a natural flood mitigation barrier, providing shoreline protection from erosion; acting as a filtration system to purify water; serving as a habitat for many migratory and endemic birds; providing a nursery ground for many fishes and crustaceans; and delivering a high carbon sequestration capacity. This presentation focused on an EU funded, Climate Change Adaptation Project, implemented in the southernmost two atolls of Maldives, Addu and Fuvahmulah. These two atolls have two of the biggest protected wetland areas in the country. With urbanization, the threats to these wetlands have increased substantially. Activities such as waste dumping, sand mining and vegetation removal have become common practice. Through visitor infrastructure, awareness raising activities and improved governance, a mechanism to sustainably manage these wetlands has been established by the project. Today, these wetlands are the key attraction of the two atolls, and places of pride for the surrounding communities.



Presentation Title: ***Humanitarian Mine Action Program***

Date: 21 May 2019

Time: 1500 - 1520

Theme: PESP Mitigation Work Group Series

Speaker:

**Capt Julie Mages, Engineering Plans Officer (Reserves), U.S. Indo-Pacific Command**



Biography:

Captain Julie M. Mages serves as an Engineering Plans Officer for the USINDOPACOM Environmental Security Program, J445. She currently is working in the NE and SE Asia Regions. As a civilian, Capt Mages is the Engineering Flight Chief for the 611 Civil Engineer Squadron at JBER, Alaska. The organization is responsible for providing engineer support to 21 remote installations across the Pacific; 16 sites across Alaska, 4 in Hawaii and Wake Island. The engineering Flight is responsible for providing project planning, program development, design, energy management, project management, contract execution, and technical support for all of the sites.

Capt Mages is a native of Colorado and graduated from Colorado State University in 2006. She commissioned as a Civil Engineering Officer, her active duty assignments included base level programmer, Deputy Engineering Flight Chief, SABER Element Chief, and 554 REDHORSE Engineer. Her Civilian assignments included Construction Management Engineer, Project Engineer and Engineering Flight Chief.

While working for NAVFAC Marianas, Capt Mages worked as the Construction Management Engineer executing over \$210M in construction projects on the island of Guam. Specific projects included a two-phase wharf improvement valued at \$86M, and a \$5M communications building supporting the Navy's Pacific Fleet. She also directed an \$89M base-wide utility upgrade funded by the Government of Japan.

Capt Mages deployed to Ali Air Base in 2007 in support of Operation Iraqi Freedom. There she was the project engineer for multiple runway construction and repair projects, the environmental OIC for the base with 10 accumulation points and supported the Army's \$43M Camp Cedar move by providing engineering for the ammunition storage and renovations projects.

Presentation Summary:

The topic of this presentation was the Humanitarian Mine Action (HMA) program. The goal of the HMA program is to relieve human suffering and the adverse effects of landmines and explosive remnants of war on noncombatants. The program assists partner nations in achieving an indigenous HMA capability that is self-sufficient, effective, and sustainable. It also develops an enduring partnership and assists in capacity building to enhance global inter-operability, consequence management capabilities and restores valuable land for commercial use. Finally, the program supports partner nation commitments to minimize the risks and effects of explosive remnants of war and stockpiled munitions to the civilian population and valuable enterprises. One result of the 2018

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Regional Environmental Security Forum was an HMA project in Mongolia to develop a multi-year program to help train Mongolians to locate and dispose of unexploded ordnance. This program is in the planning stages with USACE, USINDOPACOM, and Mongolia, and has been funded for fiscal years 2019 and 2020.



Presentation Title: ***Conserving Natural Resources through Sustainable Design***

Date: 21 May 2019

Time: 1525 - 1545

Theme: PESP Mitigation Work Group Series

Speaker:

**MAJ Jim Servi, Engineering Plans Officer (Reserves), U.S. Indo-Pacific Command**



Biography:

Major Jim Servi has 14 years of military experience including service as a commander in Iraq and Afghanistan and strategic planner in South Korea. He holds a bachelor's degree in environmental science, a master's degree in Business Administration and is currently a PhD Candidate with research focused on leadership, cross-cultural dimensions, and strategy. Jim founded JAMPS Strategic Development that specializes in strategy, leadership development, and helping organizations grow and expand. He has taught over 50 college courses focused on leadership, entrepreneurship, and specializes in developing corporate leadership development programs. Jim lives on his family farm in Wisconsin with his wife and three boys.

Presentation Summary:

Through sustainable design, negative impacts on the environment are minimized by reducing waste and the use of non-renewable resources. Buildings are designed to improve performance and create a more productive environment. Energy consumption is reduced, water is conserved and protected, and every aspect of the operation are done with the environment in mind. The ultimate goal of sustainable design is to conserve precious natural resources and incorporate other environmental considerations into the planning, designing, and building process. During this workshop we will be covering the guiding principles of sustainable design, Leadership in Energy and Environmental Design (LEED®) green building certification system, and review case studies and best practices.



Presentation Title: ***Information Sharing***

Date: 21 May 2019

Time: 1345 - 1405

Theme: PESP Networking Work Group Series

Speaker:

**Mr. Jared Batzel, Pacific Disaster Center**



Biography:

Jared Batzel is an analyst at the Pacific Disaster Center, an applied research facility under the University of Hawai'i in Honolulu. He has supported humanitarian assistance and disaster relief (HA/DR) operations worldwide for over a decade. Through his military and civil affairs background, he has helped guide strategic information decision making for high-level disaster management and risk reduction efforts. He has also helped coordinate and facilitate large-scale, multinational disaster management and preparedness exercises involving numerous countries and stakeholders. Jared holds several degrees including a Master's in Public Affairs concentrating in International Development from Indiana University and a Master's in International Relations from Salve Regina University.

Presentation Summary:

This session discussed the current capabilities for networking and what capabilities the environmental security community will need to develop in the future. The gathering, processing, visualizing, and sharing of geospatial data is a vital effort to support environmental security. These problems are rarely limited to a single country, and many are global in nature. By networking and sharing information about challenges to the natural environment, we can provide knowledge to practitioners and find holistic solutions with fewer resources required.

Presentation Title: ***Using Diverse Networks to Find New Opportunities and Avoid Entrenchment***

Date: 21 May 2019

Time: 1410 - 1430

Theme: PESP Networking Work Group Series

Speaker:

**Dr. George Woodman, Director, Teng Hoi Conservation Organization Ltd.**



Biography:

George grew up in the UK but has lived and worked in Hong Kong since 1997. Building on a PhD in experimental physics, George started to apply his scientific training to tackle environmental issues, the first significant one being fish bombing. He was a founding director of Teng Hoi Conservation Organization, an NGO set up in Hong Kong that means ‘listen to the sea’ created to build a partnership with the UNEP and seven nations surrounding the South China Sea. This was a fertile training ground for learning the ropes of international diplomacy with governments, militaries, the private sector and other NGOs.

Over time George discovered through experience just how much was possible by building networks widely across organizations of very different natures. Moreover, he discovered that the only practical way to resolve many of the entrenched human problems he encountered was to work through networks to develop an understanding of the differences, and the common ground that could then inspire solutions.

George remains as involved as ever in the fish bombing project with many international partners. He also helped to found the Hong Kong Sustainable Seafood Coalition formed of businesses that handle seafood and has recently started to work on some solutions to the ocean plastics problem through the applications of a novel technology to develop a more holistic solution. These activities connect people from all over the globe, but with a shared vision of developing better outcomes for the environment and connected communities of people.

Presentation Summary:

“If you are not a part of the solution, you are a part of the problem.” However much you may agree or disagree with the analysis underlying the statement, the statement itself doesn’t serve as a guide about what to do when you come across people who are ‘part of the problem’.

The traditional structures of governments, militaries, businesses and not-for-profits inevitably put up some barriers to dialogue and developing broader networks. A natural tendency is for people to then operate in their silo. The PESF series is a good example of trying to break out of the constraints of operational silos by bringing together people from military and civilian backgrounds. We need to encourage and facilitate this interaction beyond the lifetime of workshops like this and build stronger and more diverse networks.



The issues and constraints as well as the need for more diverse and resilient networks were explored in this presentation. One example was the application of acoustic detection technology developed in the USA to help combat gun crime to the issue of the widespread use of explosives to catch fish in many areas of the developing world. The value of a detection system in providing near real-time accurate location information is clearly of value and has driven the project forwards. In addition to technical challenges, we have had to work with differences in language, culture, and worldviews.

Presentation Title: ***Security Cooperation - A Case Study of Successful Tiger Conservation***

Date: 21 May 2019

Time: 1500 - 1520

Theme: PESP Networking Work Group Series

Speaker:



**Mr. Sanjeev Pandey, Program Management Specialist, Office of Defense Cooperation, U.S. Embassy, Kathmandu, Nepal**

Biography:

Mr. Sanjeev Prasad Pandey is working as Military Program Management Specialist at the Office of Defense Cooperation (ODC) at the Embassy of the United States of America in Kathmandu Nepal since April 2006.

After joining the embassy, Mr. Pandey has been awarded with the Meritorious Honor Award in 2007; 2010, 2015 and 2017. Extra Mile Award in 2008 and 2010; Cash Award- 2008 and 2009, Excellence in Federal Government Award (Hawaii); Foreign Service National of the Year in 2012 and most importantly United States Department of State's Superior Honor Award in 2018.

Mr. Pandey is a graduate of Hawaii based Asia Pacific Center for Security Studies. He has also attended a Training Manager's Program at the George C. Marshall Center for European Studies based in Garmisch Partenkirchen, Germany and is also an alumni of Near East South Asia Center based in Washington D.C. Mr. Pandey's civilian education include Masters in Business Administration from Philippine Christian University, Manila and Masters in Social Anthropology from Tribhuvan University, Kathmandu. As the Training Manager for ODC Nepal, Mr. Pandey handles Department of Defense' International Military Education Training as well as Global Peace Operations Initiative. Mr. Pandey's logistical management skill allows ODC Nepal to take up to four Joint Combined Education Trainings, innumerable Subject Matter Expert Exchanges and Disaster Response Exercises and Events. Prior, working at the US Embassy in Kathmandu Nepal he was as the Market Promotion Officer for Asia and the Pacific Region at the Nepal Tourism Board (NTB) the National Tourism Organization of Nepal where he worked from November 2000- March 2006. He was instrumental in branding Nepal's tourism slogan, which has been in use till date with a slogan Naturally Nepal – Once is not Enough. Apart from that, he was equally involved in the Golden Jubilee Celebration of Mt. Everest in year 2003. Prior to his stint at the NTB, he was a teaching Marketing Management to the students of National Campus and Galaxy Hotel and Tourism Management School in Kathmandu. He has also worked as the Credit and Marketing Officer at Shree Investment and Finance Company from 1996-1998.

Mr. Pandey is a widely travelled man and has travelled extensively in South East Asia, South Asia, Middle East, Africa, Europe and the Americas. Mr. Pandey is a voracious reader, likes to cook, ride a bike and go out for a long walk. He is married to former Sneha Sharma and has a daughter Samvavi.





### Presentation Summary:

The Office of Defense Cooperation (ODC) Nepal has partnered with the Nepali Army and civilian organizations/institutions to accomplish environmental security projects in the country. ODC-Nepal has helped advance environmental security in the country through its unique ability to bring together civilians and the military to work collaboratively. The doubling of Nepal's tiger population in a decade is a classic example of it.

Experts have estimated there are now 235 wild Bengal tigers in Nepal, which is a huge leap from 2009, when there were just 120. In the last four years, their population jumped nearly 20% according to Nepal's Department of National Parks and Wildlife Conservation, along with conservation groups including Panthera and the Zoological Society of London. Scientists hope that Nepal's successful formula may inspire other countries within wild tiger ranges to increase their efforts to protect and study them. Though 235 may seem like a small number, it is still a significant conservation success as that represents a significant percentage of the world's total tiger population, estimated to be just under 4,000 in the wild. After a 2010 meeting of The Global Tiger Initiative, Nepal and 12 other countries that are home to the animals committed to doubling their tiger numbers by 2022 and it seems Nepal will be the first country to reach that target.

The success has likely been due to the commitment of the soldiers that patrol the country's protected areas. This presentation demonstrates how sharing lessons-learned and encouraging militaries, environmental stalwarts, locals and policy makers to plan, operate, and execute in a sustainable manner that supports regional cooperation will improve environmental security for all to include whole-of-government and the whole-of-society.

Presentation Title: ***Combatting Environment and Forestry Crime through Multiple Instruments of Law Enforcement: Case of Forest Fire in Indonesia***

Date: 21 May 2019

Time: 1525 - 1545

Theme: PESP Networking Work Group Series



Speaker:

**Dr. Rasio Ridho Sani, Director General of Law Enforcement of Environment and Forestry, Ministry of Environment and Forestry, Indonesia**

Biography:

Dr. RASIO RIDHO SANI is Director General of Law Enforcement of Environment and Forestry, Ministry of Environment and Forestry. He has started his office at 29th May 2015 and his main duty is to preserve Indonesia's environment and forest through bold law enforcement efforts. He leads directly the endeavor of environmental and forestry law enforcement, both by inspecting the field condition or by collaborating with key stakeholders to strengthen the network. Previously, he served as Acting Official of Deputy Assistant of Data and Information (2004----2005); Acting Official of Deputy Assistant of Mining, Energy, Oil, and Gas (2005----2009); Deputy Assistant of Mining, Energy, Oil, and Gas (2009----2010); Head of Planning and International Cooperation Bureau (2010----2013); Deputy of the Management of Hazardous Material and Hazardous Material Waste (2013----2014); and Secretary of Ministry of Environment (2014----2015). He received his Master of Commerce in University of Sidney, Master of Public Management in University of Potsdam, and PhD of Administrative Science in Universitas Indonesia. As a bureaucrat and academician, he has rich experiences regarding environmental, forestry, and governance issues in Indonesia. He also possesses vast experiences at international level, because of his attendances at numerous international events, either as keynote speaker, chairman, or member of delegation.

Presentation Summary:

Law enforcement became a priority of the Indonesian Government as Indonesian environment and biodiversity was threatened by forest fires, illegal logging, illegal wildlife trade, environmental pollution, and degradation. In 2015, MoEF established a special unit for law enforcement; the Directorate General for Law Enforcement on Environment and Forestry. Since 2015, this unit has fulfilled 3,001 complaint handlings, 3,651 inspections, 618 administrative sanctions, 25 civil lawsuits, 133 out-of-court environmental dispute resolution, 615 criminal cases brought to the Court, facilitating the Police and Attorney in handling 164 criminal cases, and conducted 1,021 forest and wildlife security operation.

From 2014 to 2015, Indonesia experienced severe forest fires that created transboundary haze. The number of hotspots during 2014 and 2015 reached 89,214 and 70,971 respectively. The total area burned in 2015 was 2,611,411 hectares. Forest fires occurred in concession and non-concession areas. There were intensive actions to stop forest fires, including through prevention such as public



awareness, patrol programs, mitigation of forest fires, weather modification, water bombing, and conducting law enforcement.

Since forest fires were mainly caused by humans, the government took serious law enforcement action to create a deterrent effect through deploying multiple instruments of law enforcement. This included administrative sanction, civil lawsuit, and criminal law enforcement. From 2015 to today, law enforcement conducted by Government of Indonesia issued 175 administrative sanctions, brought 69 cases to the Court, and applied 17 civil lawsuits. Civil lawsuit final decisions by the Court on 10 cases have judgements of USD 1.3 billion. Most of civil lawsuit cases are related to forest fire cases.

This presentation demonstrated that after serious efforts in combatting forest fires from 2015 to 2018, hotspot decline is 88.1 percent and reduction of land burned is 80.4 percent. Significant decrease of forest fires occurrence has also prevailed in concession areas. The compliance level of concession holders had increased due to the implementation of multiple instruments of law enforcement and other measures such as intensive patrol in vulnerable area.

In order to strengthen law enforcement, MoEF had established an Intelligence Center which was supported by Information Technology for improving surveillance and decisions making while also strengthening networks with other agencies and other law enforcement officers, experts and universities, and also with CSOs and international agencies. MoEF is also initiating collaboration among other law enforcement officers for conducting joint investigation through what is called multidoor approach. This approach is expected to increase deterrent effects.

Concerning lessons learned from combatting forest fire since 2015, law enforcement had proven effective for shock therapy. However, it had been shown that public awareness was crucial while science and technology were important tools for surveillance and decision making. Interagency commitment and effective collaboration were also needed as a precondition for the success of combatting forest fires.

Presentation Title: ***Climate Resilience practices in the U.S. Department of Defense***

Date: 21 May 2019

Time: 1345 - 1405

Theme: PESP Policy Work Group Series

Speaker:

**Lt Col Chad Gemeinhardt, Military Deputy, Office of the Secretary of Defense - Environment, USA**



Biography:

Lieutenant Colonel Chad A. Gemeinhardt is the Military Deputy, Deputy Assistant Secretary of Defense for Environment. He manages contingency location environmental, overseas clean-up, high performance and sustainable buildings, emergency management, and fire protection and emergency services programs for the Department of Defense. Additionally, he prepares congressional testimony, legislative proposals and represents the Department of Defense on Federal committees and work groups.

Lieutenant Colonel Gemeinhardt was born in Janesville, Wisconsin. He entered the Air Force in 2000 after obtaining his commission through the Reserve Officer Training Corps at the University of North Carolina at Charlotte where he also earned a Bachelor of Science degree in Civil Engineering.

Lieutenant Colonel Gemeinhardt has served at various civil engineer positions at the installation, MAJCOM and Air Staff levels. He has commanded at the squadron level two times and deployed five times to locations that include Saudi Arabia, Qatar, and Iraq. Prior to his current assignment, he was the Commander, 379th Expeditionary Civil Engineer Squadron, Al Udeid Air Base, Qatar.

Presentation Summary:

Lt. Col Gemeinhardt discussed current climate-related impacts to the U.S. Department of Defense, including a summary of recent reports, current efforts, and what's next. The U.S. Department of Defense considers resilience in the installation planning and basing processes, as well as for strategic and policy. Lt. Col Gemeinhardt's presentation focused on the climate resilience measures in the installation and basing processes. It showed that the effects of a changing climate are a national security issue with potential impacts to DoD missions, operational plans and installations. Climate change has impacted our bases through floods, wildfires and other environmental damage. The impacts from climate change have been shown to be increasing in intensity, frequency and duration.

Presentation Title: ***Climate Change and Defense: a National and International Roadmap***

Date: 21 May 2019

Time: 1410 - 1430

Theme: PESP Policy Work Group Series

Speaker:



**Dr. Nicolas Regaud, Special Representative to the Indo-Pacific, France**

Biography:

Dr. Nicolas REGAUD is currently Special Representative to the Indo-Pacific in the Directorate General for International Relations and Strategy at the French Ministry for the Armed Forces.

In October 2015, he organized in Paris the first international conference of defence ministers and senior officials on the implications of climate change for defence.

Previously, he was Assistant Defence Policy Director in charge of strategic foresight and policy planning, and also served for the Prime Minister's office in charge of security (SGDSN) in different positions and for the Ministry of Foreign Affairs in the Policy Planning Staff.

He received a MA in international relations, a MA in contemporary history, and a PhD in political science, all from Paris 1 Panthéon-Sorbonne University. He has published two books on war history in Indochina and numerous articles on contemporary security and strategic issues in Asia.

Presentation Summary:

Before 2015, the French MoD was only engaged in "green defense" activities: respecting environmental norms in military training areas, reducing fossil fuel consumption, developing renewable energy and eco-designed equipment.

COP21 was a wake-up call. The then Defense Minister chaired in October 2015 the first international conference of 16 defense ministers and 600 high officials from 36 delegations all over the world on the implications of climate change on defense. It was a top-down approach which helped to make up time and establish a political framework and a roadmap for all defense services.

Since then, the French MoD launched initiatives in several domains, in particular in the Indo-Pacific:

- 1) Knowledge & anticipation: establishment of a Research Observatory on climate and defence, able to conduct studies for all the MoD's services, thus generating interest and ownership.
- 2) Prevention: support to a scientific project on migratory birds in the Pacific able to anticipate tropical storms and cyclones, in coordination with other agencies.
- 3) Protection: establishment of a comprehensive methodology to assess climate change impact on critical infrastructures, notably military infrastructures.



- 4) Awareness and cooperation: participation to and organization of conferences for raising awareness on climate change and the role of defense institutions. As a member of the South Pacific Defense Ministers Meeting, France has proposed and led a joint study on the impact of climate change in the South Pacific, in three domains (critical infrastructures resilience, HADR operations and maritime surveillance). The study and concrete recommendations for action will be submitted to the next SPDMM, organized in Suva in May 2019.

In this context, PESF and the enhanced partnership envisaged have been more than welcome as they offered a regional platform for sharing experience and best practices while also developing cooperation on projects.

Presentation Title: ***Compliance Monitoring Of Sustainable Coastal Management of Offshore Islands with Support from NZDF and Other Maritime Agencies***

Date: 21 May 2019

Time: 1500 - 1520

Theme: PESP Policy Work Group Series

Speaker:



**Ms. Sarah Hucker, Senior National Resource Management Act Advisor, Department of Conservation, New Zealand**

Biography:

Sarah Hucker is a planner focused on sustainable coastal management. She is currently a Senior National Resource Management Act Advisor with the Department of Conservation (DOC) in New Zealand. She has worked in central government, for DOC, on coastal and marine policy and planning for 20 years, and local government for 3 years.

Sarah has a BSc with Hons and Master's degree in Physical Geography and Earth Science and a certificate of proficiency in resource management law all from Victoria University of Wellington. She is a member of the New Zealand Coastal Society and New Zealand Resource Management Law association.

Key achievements include the development of the Regional Coastal Plan: Kermadec and Subantarctic Islands, for the Minister of Conservation, which became operative in September 2017 and recently won an award for best practice from the New Zealand Planning Institute.

Sarah's work over the last 10 years has a strong focus on marine biosecurity – stemming from her work on the coastal plan for the Kermadec and Subantarctic Islands and engaging in this topic in other coastal plans around New Zealand. Other areas of work include supporting the Minister of Conservation's statutory coastal management functions under the New Zealand's Resource Management Act 1991 and coordinating DOCs engagement in marine consent processes in New Zealand's EEZ.

Presentation Summary:

The Kermadec and Subantarctic Islands and their marine environments are unique with very high biodiversity values – they have the highest levels of protection in New Zealand statute. The Subantarctic Islands are also UNESCO World Heritage Areas. A regional coastal plan for these two groups of islands (developed under New Zealand's Resource management Act 1991) established that the key risks to the islands and their marine environments are oil spills and biosecurity breaches. This presentation showed that climate change, specifically the warming and acidification of our oceans, will exacerbate the risks associated with marine biosecurity.

The coastal plan included a detailed regulatory approach to address these risks. To reduce the adverse effects of a fuel spill, if it should happen, the rules prohibit the use and carriage of heavy





fuel oil in the entire territorial seas of the two groups of islands. To minimize the risk of oil spill occurring, the rules restricted access close into shore using vessel length as a proxy for the many factors that can influence a vessels risk profile. To address the marine biosecurity risk of introducing invasive species, the rules required that the hull of all vessels intending to go any closer than 1000m off shore are to be free of biofouling.

Lastly, this presentation showed that the remote location of these two groups of islands presented challenges for monitoring compliance and enforcement. Monitoring has been successful only with the collaboration and support of NZ Defence, NZ Customs, the Ministry for Primary Industries and Maritime New Zealand.

Presentation Title: ***How to Reduce Open Burning in Southeast Asia***

Date: 21 May 2019

Time: 1525 - 1545

Theme: PESP Policy Work Group Series

Speaker:

**Dr. Qwanruedee Chotichanathawewon, Director of Research Center for Environmental Strategy, Division of Research Policy and Plan, The National Research Council of Thailand**



Biography:

Dr. Qwanruedee Chotichanathawewong is Director of Research Center for Environmental Strategy, Division of Research Policy and Plan, The National Research Council of Thailand. She was a Former President of Thailand Environment Institute (TEI). She also hold a position as an Executive Director in Thailand Business Council for Sustainable Development (TBCSD).

More than 30 years of experiences in the field of energy and environment, Dr. Qwanruedee is the expert in various fields of environment. Environmental pollutions, environmental economics, environmental policy, climate change and sustainable development are the key areas of her expertise. She also extensively engages in several projects and forums pertaining to energy, climate change, sustainable development, international cooperation, and other environmental issues.

Dr. Qwanruedee holds a Doctoral of Engineering degree in Energy Technology Division from Asian Institute of Technology (AIT). After holding DEng, she pursued a Post-Doctoral Program at Centre of International Research for Water and Environment (CIRSEE), Lyonnaise Des Eaux Dumez, France.

Presentation Summary:

This presentation focused on haze pollution from a variety of manmade sources and worsened by natural phenomena. Transboundary haze pollution has been a serious air quality problem in the ASEAN region. In the northern hemisphere, the peak period has been observed from January to April in the region including Myanmar, Lao PDR, Thailand, Cambodia and Vietnam, and in the southern hemisphere from August to October, with a transport of haze from Indonesia up to the southern part of Thailand. The ASEAN Agreement on Transboundary Haze has been set up on a voluntary basis of participation and ratification. Once a member country accepted to ratify, the National Master Plan on Open Burning Control and the Open Burning Control Plan of Implementation would then be developed and implemented. However, the situation has not improved, especially in the northern hemisphere.

Widespread uncontrolled forest fires, which originated from agricultural land clearing, have occurred every year. Open burning for agricultural purposes has been a common practice in many Asian countries. The major mitigations in Thailand strictly included prohibiting burning in forest areas, controlled burning in communities, agricultural areas and roadside during Jan – April, law and regulation enforcement related to fire and haze control, and establishing a single command at the



national level by Prime Minister and provincial level by governor. These mitigations were successful in 2018, especially in Chiangrai province. However, this presentation showed that the amounts of rice straw and stubbles available for open burning at the national and regional scale should be estimated and converted into energy equivalent in order to assess their potential for renewable energy.

Presentation Title: ***Environmental Security and Resource Sustainability Theme Introduction***

Date: 22 May 2019

Time: 0905 - 0915

Theme: Environmental Security and Resource Sustainability

Speaker:

**Mr. Justin Allan, Principal Maritime Policy Advisor, National Maritime Coordination Centre, New Zealand**



Biography:

Justin joined the National Maritime Coordination Centre from the Department of the Prime Minister and Cabinet in August 2017. Justin has been tasked primarily with shaping and delivering maritime security policy on behalf of the Maritime Security Oversight Committee.

Prior to joining the NMCC Justin has held senior advisor roles in the National Security Systems Directorate in DPMC and the Police Policy Group. Justin also spent time working on NZDF capability projects as an analyst in Army General Staff and has served overseas with the NZ Police as a mentor and performance advisor (Solomon Islands) and two operational tours with the NZ Army.

Justin has a Master of Arts (Hons) in Strategy and Defence from the Australian National University and BA (Hons) in Political Science from Canterbury University.

Statement:

Mr. Allan set the stage for the *Environmental Security and Resource Sustainability* theme and the subsequent panel session. In his presentation, he stressed the need for government action in facilitating a shift from a reactive to a proactive enterprise. He stressed that the maritime security environment has changed rapidly, and New Zealand is focused on enabling efficient and effective approaches in tackling this dynamic problem.

Presentation Title: ***Climate Change, Maritime Security and Resource Protection***

Date: 22 May 2019

Time: 0915 - 0935

Theme: Environmental Security and Resource Sustainability

Speaker:

**Rear Admiral David Proctor, Chief of the Royal Navy of New Zealand**



Biography:

Rear Admiral David Proctor was born in Napier, New Zealand. He joined the Royal New Zealand Navy as a Midshipman in January 1987.

Rear Admiral Proctor has held a number of senior logistics posts during his career, including operational logistics appointments at sea and overseas. He has significant procurement and commercial experience working with industry to deliver support for military outcomes. His operational service includes deployment to the Solomon Islands and being deployed as the Chief of Logistics, United Nations Mission in Support of East Timor. He was also the New Zealand Senior National Officer during this deployment.

In a staff capacity, Rear Admiral Proctor's early shore based appointments were primarily in the Human Resources arena. He was awarded the inaugural Deputy Chief of Navy Commendation for his performance as Deputy Director Naval Personnel Services. This role was responsible for drafting and overseeing the implementation of navy personnel policy and contributing to the development of NZDF strategic personnel policy. In 2000-01 he was the Acting Support Branch Personnel Officer responsible for delivering strategic human resource outcomes in the RNZN's support branch, including posting and career management of ratings. Rear Admiral Proctor has recent staff experience in capability development and delivery, having been appointed as Deputy Assistant Chief of Capability and Director Capability Portfolio Planning in 2013-14.

Promoted to Commodore and appointed Commander Logistics in December 2015, in March 2017 he was posted at short notice as Chief of Defence Strategy and Governance. This appointment saw him as a member of the NZDF Executive and as a permanent advisor to the NZDF Board.

Rear Admiral Proctor assumed the role of Deputy Commander Joint Force New Zealand in February 2018, and then Chief of Navy in November 2018.

Rear Admiral Proctor has a Masters in Management (Defence Studies), a Masters in Politics and Policy, and is a fellow of the Centre for Defence Strategic Studies. He is a member of the Kapiti Branch of the RNZRSA and is a member of the New Zealand Institute of Directors.

David is married to Wendy Proctor. They have two children Joshua (in the RNZAF) and Emma (Otago University – Bachelor of Physical Education).



### Presentation Summary:

This presentation discussed how the government of New Zealand has identified that climate change is the biggest challenge facing the international community. The impacts of climate change have been felt to varying degrees around the globe. However, the impacts around New Zealand have been acute. The consequences are not just the direct physical effect on the environment and people, such as coral bleaching, loss of arable land and extreme weather events causing humanitarian suffering. Second and third order impacts have been seen in threats to stability and prosperity brought about by economic, cultural, and social reaction to the physical effects of climate change. Battling climate change has required commitment from everyone around the world--personal, community, national and global responses were all required. Preparing for the wider has required commitment and coordination.

The presentation discussed how the most obvious threat to the New Zealand region has been an increase in extreme weather phenomenon, which could lead to disaster response events that require humanitarian assistance. It showed that this will impact how New Zealand's government designs and deploys its defense capabilities and other assets in the future. It will likely require New Zealand and regional partners to be ready to respond to concurrent Humanitarian Aid and Disaster Relief (HADR) and stability operations in the Pacific. Sea temperature rise and salinity changes have also been affecting fishing stocks and the migratory pattern of marine life. In turn, this may lead to changes in behavior of people who depend on the oceans for their livelihood, both at the subsistence and traditional level, but also in the national and international commercial fishing communities. Competition for resources will continue to increase. An effective framework of national and international organizations to assist in coordinating and managing maritime security and resource protection issues will be critical if conflict is to be avoided.

Given the scale of the problem we have been facing, it has been clear that climate change, maritime security and resource protection are intrinsically linked in our region and around the world. The future will be challenging. Only by working together can we be resilient, and be successful in achieving stability and prosperity for all.

Presentation Title: ***Maritime Domain Awareness and Resource Protection***

Date: 22 May 2019

Time: 0935 - 1000

Theme: Environmental Security and Resource Sustainability

Speaker:



**Ms. Sylvie Goyet, Director of Climate Change and Environmental Sustainability Programme, Pacific Community**

Biography:

Ms. Sylvie Goyet is Director, Climate Change and Environmental Sustainability at SPC –Pacific Community, based in Noumea, New Caledonia.

She has 20 years of experience in directing and managing environmental programmes, special expertise in coastal and marine issues, conservation finance and conservation trust funds, and a general background in organizational management and strategic planning.

From 2006 until end of 2014, she was the Director General of FIBA – Fondation Internationale du Banc d’Arguin, a private Swiss foundation working in West Africa on coastal and marine issues. In her previous assignments, she was Regional Coordinator of the UNOPS/UNDP/GEF MedWetCoast project, Programme Manager at WWF International and programme officer at UNDP Black Sea Programme, UNEP Caspian Sea Programme, and UNDP Fiji.

Sylvie is a French and Swiss citizen, holds a Master degree in Environmental Management from the University of London, an MBA in Finance from the University of Texas at Austin and a Master in International Business from the Business Management School of Lyon.

Sylvie presently serves on the Board of the BioGuine Foundation (Guinee Bissau) and on the Scientific and Technical Committee of the Prince Albert II of Monaco Foundation; she is President of the Wild Touch Association (France) and an Executive Committee member of the Conservation Finance Alliance (CFA).

Presentation Summary:

This presentation focused on the importance of sustainable development throughout the Indo-Pacific region. It addressed two particular interrelated issues in this region: maritime boundaries and fisheries security. Multinational efforts have been necessary in addressing disputes of maritime boundaries, an issue that has been exacerbated by moving and shifting landmasses. At the core of this dispute has been access to fisheries. Fishing has represented a major source of income to many nations. It was stated that the uncertain recognition of maritime boundaries may result in conflict over resources.

In addition, this presentation demonstrated that climate change has affected tuna stocks across the Indo-Pacific region. Rising ocean temperatures combined with the effects of El Nino and La Nina





have shifted tuna stocks to the east. One outcome predicted is that the high seas will become more crowded. It was also predicted that one winner of climate change may be freshwater aquaculture, which may represent an area of adaptation for climate change. Areas identified for future studies include the assessment of coral bleaching on household livelihoods. It was concluded that food security will be a future issue and that aggressive and immediate mitigation planning are required to minimize the effects of climate change.

Presentation Title: ***Biosecurity Intelligence – Assessing Future Biosecurity Threats***

Date: 22 May 2019

Time: 1030 - 1055

Theme: Environmental Security and Resource Sustainability

Speaker:



**Dr. Eve Pleydell, Team Manager - Biosecurity Intelligence, Ministry for Primary Industries, New Zealand**

Biography:

Eve Pleydell is a veterinarian with expertise in infectious disease prevention and control. Having previously worked for Crown Research Institutes and universities, she joined the Ministry for Primary Industries in 2014 and spent four years working within MPI's emergency response teams. In 2018, she took up a new position to develop and lead a new Biosecurity Intelligence team within Biosecurity New Zealand. This change in role took her focus from managing pests and diseases that have already entered New Zealand to assisting with the prevention of pests and diseases from getting here.

Presentation Summary:

This presentation presented an overview of a new team focused on enhancing biosecurity. Biosecurity is the exclusion, eradication or management of pests and diseases that pose a risk to the economy, environment, cultural and social values, including human health. The Ministry for Primary Industries (MPI) is New Zealand's lead agency responsible for managing biosecurity, which it has done in collaboration with a number of other agencies, organizations and people, including: the Department of Conservation, regional councils, Maori and industry groups. The Biosecurity 2025 partnership has aimed to make New Zealand's biosecurity system more resilient and future-focused. In order to achieve this, five strategic directions have been identified, the third of which is entitled "Smart, free-flowing information." This strategic direction included the goals of using big data and advanced data analytics to enhance biosecurity situational awareness, and developing a multidisciplinary intelligence warning system. To meet these goals, MPI has built a dedicated Biosecurity Intelligence (BSI) team that has been solely focused on assessing and forecasting biosecurity threats to all sectors: livestock, horticulture and aquatic. This brand-new team is multidisciplinary, comprising scientists, intelligence analysts and data modelers. One of the goals of the team has been to become the hub of a biosecurity intelligence network of government, research and industry experts, both nationally and internationally. The presentation stated that this will ensure all relevant knowledge is included within the team's own assessments, and will help to align advice regarding opportunities and vulnerabilities being presented by various biosecurity groups to decision makers.

Presentation Title: ***Eradication of Island Invasives in the New Zealand Subantarctic***

Date: 22 May 2019

Time: 1055 - 1120

Theme: Environmental Security and Resource Sustainability

Speaker:

**Mr. Stephen Horn, Maukahuka Pest-Free Auckland Island Project Manager, Department of Conservation, New Zealand**



Biography:

Mr. Horn works for the New Zealand Department of Conservation as a Project Manager in island invasive species eradication. Mr. Horn currently leads a team investigating the feasibility of eradicating pigs, cats and mice from Auckland Island, in New Zealand's Subantarctic region. Mr. Horn has worked in eradicating island invasive species for the past 10 years. His previous roles include leading a DOC project to eradicate mice from Antipodes Island in 2016 and working on Australia's Subantarctic Macquarie Island for two years as a dog handler and team leader, hunting the last remaining rabbits. Mr. Horn studied Chemistry at Otago University and Winemaking at Lincoln University before beginning my working life as a winemaker, completing 11 vintages in New Zealand, France and Italy before diving into conservation.

Presentation Summary:

This presentation discussed efforts related to the eradication of invasive species on the Antipodes Islands and progress towards zero invasives on Auckland Island. The New Zealand Subantarctic Islands are some of the least modified island systems in the world and have been globally recognized for their incredibly high biodiversity, ecological and cultural values. However, mammalian pests, introduced intentionally or inadvertently, have caused extensive damage to the ecological values of the region. For the past 30 years, the New Zealand Department of Conservation has led global efforts to eradicate invasive species from islands. Of the five island groups in the New Zealand Subantarctic, mammalian pests only persist on Auckland Island. The most recent success was eradicating mice from Antipodes Island in 2016. As a result of this success, a feasibility study has been underway investigating the ambitious goal of eradicating pigs, cats and mice from Auckland Island where they have severely impacted native and endemic flora and fauna. Eradicating any of the target species from Auckland Island is a large challenge. Key difficulties relate to the remoteness, scale, inhospitable environmental conditions and a lack of pre-existing infrastructure. Earlier this summer the Maukahuka team commenced field trials on Auckland Island to reduce uncertainty before the conclusion of the feasibility assessment. It was concluded that testing ideas on site will go a long way to towards helping us understand what it will take to successfully undertake this project.

Presentation Title: ***Lessons from the Past: What Can Traditional Environmental Knowledge Teach Us?***

Date: 22 May 2019

Time: 1300 - 1345

Theme: Environmental Security and Resource Sustainability

Speaker:

**Ms. Melanie Mark-Shadbolt, Kaihautu Chief Māori Advisor,  
Ministry for the Environment, New Zealand**



Biography:

Melanie Mark-Shadbolt is from Ngāti Kahungunu ki Wairarapa, Ngāti Porou, Te Arawa, Ngāti Raukawa, Ngāti Tuwharetoa, Te Atiawa, as well as Clans Mackintosh and Gunn. She is an indigeneous environmental sociologist and is currently the Kaihautū Chief Māori Advisor to the Ministry for the Environment, the Director Māori of NZ's Biological Heritage National Science Challenge and CEO of Te Tira Whakamātaki.

She is a specialist in traditional knowledge issues as they relate specifically to biosecurity and sustainable natural resource management. Her work has covered research in stakeholder values, attitudes and behaviours, social acceptability of management practices and risk communication, and the wider human dimensions of environmental health.

She currently serves on a number of national advisory bodies including the PMCSA's Plastics Panel, the Myrtle Rust Governance Group, Rauika Mangai and Ngā Pae o te Māramatanga climate change programme.

She was previously the Māori Research & Development Manager Kaiārahi at the Bio-Protection Research Centre Lincoln University, Ararau Coordinator for Ngāi Tahu tribal entity Te Tapuae o Rehua, and Chair of Te Waipounamu District Māori Council.

Presentation Summary:

This presentation discussed the need for the inclusion of indigenous people's practices, methods and practitioners in modern environmental management work, leaning heavily on the role that mātauranga Māori has played in managing contemporary environmental issues here in Aotearoa NZ. The presentation noted the wider issues and resistance surrounding the inclusion or exclusion of indigenous peoples and their knowledge in conservation globally.

Indigenous peoples have vast traditional knowledge's, which have evolved over a millennium, that are relevant to modern environmental management theories and practices. This knowledge has an important role to play in creating contemporary solutions that may address many urgent and 'wicked' issues like the threats to global biodiversity associated with climate change and the transportation of invasive species. However, the role of this knowledge in the conservation of our environment has yet to be fully explored and utilized despite it offering significant opportunities for



those states and jurisdictions that are prepared to resource indigenous participation in this increasingly important and dynamic area.

Given that all environmental concerns are, in some way, political-economic concerns, sustainability discourse has seen a convergence of state, corporate, and community forces as vital in the ongoing revision of environmental management. In Aotearoa New Zealand there is a growing acknowledgement of the opportunities that indigenous knowledge, known as mātauranga Māori, can contribute to environmental solutions. Some of these efforts have been reflected at the policy and strategy levels and are manifested by an increasing number of science research and environmental management collaborations with Māori.

Presentation Title: ***Multilateral Approaches to Environmental Security Theme Introduction***

Date: 23 May 2019

Time: 0905 - 0915

Theme: Multilateral Approaches to Environmental Security

Speaker:

**Air Commodore Kirrily Dearing, Director General Support J1/4, Headquarters Joint Operations Command (HQJOC), Australia**



Biography:

Air Commodore Kirrily Dearing graduated from the Australian Defence Force Academy in December 1990 as a Supply Officer. Her first posting was to RAAF Base Richmond as a duty Air Movements Officer. Other early postings included Logistics Officer at 76SQN, the lead in fighter SQN at RAAF Williamtown, and as the OIC Mobile Air Terminal Unit (MATU) at Richmond.

In 1998, AIRCDRE Dearing was posted to the Australian Defence Force Academy as a divisional officer for two years, and then as RAAF Marketing Officer in Defence Force Recruiting Headquarters.

On promotion to SQNLDR, she spent one year in the operational logistics Directorate at HQ Air Command, and the following year as Staff Officer to the Chief of Staff at HQ Australian Theatre (now HQ Joint Operations Command).

In 2004, AIRCDRE Dearing was posted as the S4 to 382 Expeditionary Combat Support Squadron, RAAF Base Amberley, and immediately deployed as the CO Combat Support Element in support of OP ANODE, the ADF's contribution to stabilisation efforts in the Solomon Islands. She also deployed the following year as the A4 to Medan as part of OP SUMATRA ASSIST, providing support to the tsunami relief efforts in the Banda Aceh region. As soon as she purchased a house in the Brisbane area, AIRCDRE Dearing was, of course, posted, and attended the Australian Command and Staff Course in Canberra, graduating in Dec 2006 on promotion to WGCDR.

AIRCDRE Dearing spent the following three years at HQJOC in the Logistics Planning Directorate. She deployed as the J4 to HQJTF633 in Jun 2009, as the senior logistics officer in support of ADF operations throughout the Middle East for OP SLIPPER.

Post deployment, AIRCDRE Dearing was posted as the Deputy Director Logistics Sponsorship at Logistics Branch, AFHQ, providing capability oversight to the development and training of the Logistics Employment Group. In 2012, she was posted as Commanding Officer of Number 1 Airfield Operations Support Squadron. 1AOSS provided specialist air terminal support, airfield engineering support, and tailored logistics support to a number of customers, and at seven different locations in the country.

On promotion to GPCAPT in 2014, she was posted to Joint Base Pearl Harbor Hickam as the RAAF Liaison Officer to HQ Pacific Air Forces. In 2017, she completed the Australian Defence and Strategic Studies Course. In 2018, she deployed to Afghanistan as part of the Resolute Support Mission as the



Senior Gender Advisor. This role encompassed advisory efforts to more effectively integrate women into the Afghan Defence and Security Forces to increase capacity and contribute to the peace and stabilisation efforts of the country. She is currently the Director General Support at HQ Joint Operations Command.

Statement:

AIRCDRE Dearing set the stage for the afternoon's discussion panel on *Multilateral Approaches to Environmental Security*. Her presentation described ongoing multilateral projects across the Indo-Pacific region and highlighted the necessity of continued efforts to bring diverse organizations together. The Pacific Environmental Security Partnership (PESP) has been envisaged to provide a framework for continuing to facilitate multilateral partners into achieving results.



Presentation Title: ***Multilateral Approach to Environment Security – A PIFS Perspective (Boe Declaration)***

Date: 23 May 2019

Time: 0915 - 0935

Theme: Multilateral Approaches to Environmental Security

Speaker:



**Mr. Terio Koronawa, Regional Security Officer, Pacific Islands Forum Secretariat**

Biography:

Mr. Terio Koronawa is currently the Regional Security Officer (RSO) with the Pacific Island Forum Secretariat (PIFS). Prior to his current appointment, Mr Koronawa was the Director Policy with the Ministry of Defence & National Security. He also served as the Director Intelligence & Assessment for the Government of Fiji for two years from 2017 - 2018. Mr Koronawa has a Master of Policing, Intelligence & Counterterrorism with an Intelligence Specialization from Macquarie University, Sydney. He is also a graduate of the Officer Cadet School of New Zealand in Waiouru and served with the Republic of Fiji Military Forces (RFMF) for 12 years from October 1998 to 2010. During his time with the Fijian military, Mr Koronawa undertook peacekeeping deployments in Lebanon, East Timor and the Sinai Peninsula.

Presentation Summary:

This presentation provided an opportunity for PIFS to share its experience on multilateral approaches to environment security. This was done by introducing the *Blue Pacific* narrative as the core driver of collective action for advancing the Leaders vision under the Framework for Pacific Regionalism. The *Blue Pacific* narrative emphasizes the collective stewardship over the Pacific Ocean as a way to protect the dignity of our way of life and ensure the wellbeing of all Pacific Island communities. The presentation also looked at the policy context for the Boe Declaration focusing on the key components of the leaders mandate and the policy intent. The focus of the presentation was on the Boe Declaration and how leaders view climate change as a security threat within the region. The presentation took a more in depth look at Climate Security and Environment & Resource Security (Strategic Focus Areas 1 and 3 in the Action Plan). It described some of the activities that are being undertaken at the regional level and highlighted how the Boe Declaration brings together all the existing activities of regional bodies and key partners. Finally, the presentation provided an opportunity to share with participants some of the important lessons learned on multilateralism within the Environment Security space from a PIFS and Pacific Islands perspective and identified linkages & possible areas of collaboration between the Boe Declaration and PESF.

Presentation Title: ***Importance of Multilateral Cooperation for Mitigating Potential Environmental Security Threats in the SPREP Region***

Date: 23 May 2019

Time: 0935 - 1000

Theme: Multilateral Approaches to Environmental Security

Speaker:



**Mr. Roger Cornforth, Deputy Director General, Secretariat of the Pacific Regional Environmental Programme**

Biography:

Mr. Cornforth has worked in Pacific international development for over 20 years including at SPREP as Programme Officer and Technical Advisory Committee member for the South Pacific Biodiversity Conservation Programme, and as a founding member of the Pacific Round Table for Nature Conservation and Protected Areas. He came to SPREP from the New Zealand Ministry of Foreign Affairs and Trade where he has held a number of senior leadership roles, and before that in the New Zealand Department of Conservation.

His career with NZ MFAT has spanned a range of roles including as Principal Environment Advisor; European-based Development Counsellor and Senior Vice Chair of the OECD Development Assistance Committee (DAC), where he was Chair of ENVIRONET, an examiner in DAC peer reviews of DANIDA and Irish Aid; and NZ representative on the Board of the World Food Programme. Immediately prior to joining SPREP Mr Cornforth was a member of the leadership team of the Pacific Development Division of the New Zealand Aid Programme. Mr Cornforth's environmental career in New Zealand included EIA management in the New Zealand Ministry for the Environment, Adviser to the Ministers of Environment and Conservation, and Manager of the New Zealand Government's coastal and freshwater management functions, based in the NZ Department of Conservation.

As Deputy Director General at SPREP Roger is responsible for strategic planning, project coordination, Pacific sub-regional offices, and information services.

Presentation Summary:

This presentation provided an overview of SPREP initiatives to pull partnerships together in delivering evidence-based solutions. It focused on three interrelated topics: climate change, disaster response, and marine and litter waste management.

Marine pollution was identified as one of the four major threats to the world's oceans, along with climate change, habitat destruction and over-exploitation of marine resources. Ship-sourced marine pollution such as oil spills, waste and garbage particularly plastics and abandoned, lost discarded fishing gear, wrecks, marine invasives, anti-fouling systems used on ship hulls were noted to be of particular concern to the Indo-Pacific region. It was noted that all these issues are intergenerational and multi-sectoral global environmental problem with lasting detrimental impacts upon ocean and coastal ecosystems, cultures and livelihoods.



The building of oil spill response capability through the national oil spill response plans (NATPLANS) and the regional Pacific marine spill response plan (PACPLAN) has been critical for sustaining environmental security. The deliberate discharge of non-degradable materials, especially fishing gear and plastics, from vessels is a well-studied threat to protected species, including whales, turtles and seabirds; but little effort has been made to ensure compliance with the provisions of MARPOL through awareness-raising or on-board inspections of fishing vessels.

This presentation highlighted the importance of increasing global ratification and improving implementation of international standards for vessels as being key to moving towards having an international mandatory safety regime for all vessels, particularly fishing vessels.

It was noted that there are over 800 WWII Wrecks in Pacific islands states EEZ and over 3000 in the Pacific region. Many of these wrecks still contain unexploded ordinances, bunker fuel with many leaking hulls and many are still war graves with the remains of the souls that went down with the vessel. These leaking wrecks and many others that still contain oil have been a ticking time bomb due to the corrosion of the hulls. In 2008 a corrosion study of some of these leaking wrecks in Chuuk Lagoon estimated the wreck hulls had around 10 to 15yrs (2018 to 2023) before failure due to corrosion. The use of military vessels on an opportunistic basis to provide surveillance to some of these wrecks in remote locations and deep waters, and the use of divers and underwater non-destructive sounding techniques could significantly improve the state of knowledge of some of these WWII vessels in the Pacific Islands region.

This presentation stated that the Pacific Ocean is the major driver of global climate, as evidenced by the current El Nino. The Pacific islands region has been highly dependent on global ocean observing efforts such as Argo, the Tropical Pacific Observing System, the Surface Drifter Program, and the Pacific Sea Level Monitoring Program for the monitoring of their oceans. The Tropical Pacific Observing System has also been crucial for monitoring and predicting ENSO conditions, and also provided valuable oceanographic and climatology data.

The presentation culminated by discussing the risk of climate change, increased sea level risk and impact of severe tropical cyclones. It stated that the Pacific region has been subject to constant threats of natural disasters; from November to April in the South Pacific and May to October in the North Pacific region. Recent tropical cyclones such as TC Pam and TC Winston have reached category 5 causing severe damages. The Framework for the Pacific Resilient Development of the Pacific (FRDP) establishment of a regional risk governance arrangement through the Pacific Resilience Partnership and the Pacific Resilience Partnership Taskforce provided a multi-sector and multidiscipline approach to addressing disasters and climate change impacts such as disaster waste issues.

Presentation Title: ***Bangladesh-India Sundarban Region Cooperation Initiative: A Vision for Joint Platform***

Date: 23 May 2019

Time: 1030 - 1050

Theme: Multilateral Approaches to Environmental Security

Speaker:

**Dr. Uttam Kumar Sinha, Fellow and Managing Editor, Strategic Analysis, Institute for Defence Studies and Analyses, India**



Biography:

Uttam Kumar SINHA is a senior fellow at the Nehru Memorial Museum and Library and on leave of absence from his parent organisation the Institute for Defence Studies and Analyses (IDSA). He holds various positions including the Managing Editor of Strategic Analysis, a peer reviewed journal published by Routledge and adjunct positions at the Malaviya Centre for Peace Research at BHU and the Institute of National Security Studies Sri Lanka.

A doctorate from Jawaharlal Nehru University his research areas include international politics, climate change, transboundary water issues and the Arctic region. He is recipient of many fellowships including a visiting fellow at the Peace Research Institute Oslo in 2006, a Chevening Scholar at the LSE in 2008 and in 2015 a visitor at the Harvard Kennedy School.

He is actively engaged in the Track 2 dialogue process and was India's representative to the CSCAP Working Group on Water Resources Security. He Chaired the Working Group on Water Dispute Resolution Mechanism of the Strategic Studies Network, National Defense University (NDU) Washington DC.

He is the author of the book Riverine Neighbourhood: Hydro-politics in South Asia (Pentagon Press, 2016) and editor an co-editor of the following volumes: The Modi Doctrine: New Paradigms in India's Foreign Policy (Wisdom Tree, 2016); Non-Traditional Security Challenges in Asia: Approaches and Responses (Routledge 2015); Arctic: Commerce, Governance and Policy (Routledge, 2015) and Emerging Strategic Trends in Asia (Pentagon Press, 2015)

Presentation Summary:

Dr. Uttam Kumar Sinha described how we live in an increasingly interconnected world in which we share risks and vulnerabilities. Distances have collapsed not in the physical sense but through the intricate connections of the ecosystem and the correlations of the global, regional and national interests. Striving for a balance between geography/climate and the lives that live alongside is becoming an important feature of regional cooperation and international partnership. He told how this increasing interconnectivity can be seen in the Indian and Pacific Oceans with the need to promote sustainable growth and stability. Shared ecological habitats and natural resources present a unique opportunity for cooperation and joint action. In the future, he reasoned, regions' dependence on shared natural resources such as forests, rivers and other ecological habitats will increase but so will be the threats these resources are exposed to. Preserving the ecological integrity



of these resources that transcend sovereign borders through joint action is thus of critical importance especially for regions like South Asia, for both human and national security.

Institutions like Institute for Defence Studies and Analyses (IDSA) have built networks to study and develop outcomes to cope with climate challenges in the South Asia, providing decision makers, development planners, and responders' greater insight into the region's climate vulnerabilities and enhancing the need for effective climate response. Since June 2015, the IDSA-led Bangladesh-India Sundarban Region Cooperation Initiative (BI-SRCI) consortium has been implementing a 'knowledge-based advocacy initiative' to facilitate and support effective bilateral cooperation in the Sundarban, a cluster of low-lying islands in the Bay of Bengal, spread across India and Bangladesh, famous for its unique mangrove forests and among the largest delta in the world.

The presentation outlined the evolution of the initial draft structure for the joint institutional platform or the BI-SRCI network and explained its attention on, 1) Evidence-based advocacy to key stakeholders in the government, strategic and diplomatic community, media and the civil society in Bangladesh and India on integrated management of the Sundarban Region; 2) Raising the global profile of the Sundarban Region as a region facing acute adaptation challenges in the context of climate change; 3) Promoting mutual community-oriented economic growth through advocacy on issues such as ecotourism, sustainable fisheries and aquaculture management; and 4) Facilitating creation of a joint institutional arrangement that spearheads bilateral co-operation in the Sundarban Region.

The initial thinking within the IDSA plus group was that such an institution BI-SRCI that is designed to address environmental challenges will herald the emergence of a new form of diplomacy - diplomacy for development of the people and nature in the Sundarban - between Bangladesh and India which is less adversarial and self-interested than traditional diplomacy. Boundaries of traditional diplomacy that have concentrated on national security and economic & commercial concerns would have to be extended to include, much broader concerns for global and regional sustainability. The presentation listed some attributes of the new ecological diplomacy that influenced the design of the draft structure proposed by the IDSA plus group.

BI-SRCI can become an important case study for future architect of regional environmental security organization in the Indo-Pacific.

Presentation Title: ***What, Who and How: Synergies for Environmental Security from a United Nations Perspective***

Date: 23 May 2019

Time: 1050 – 1120

Theme: Multilateral Approaches to Environmental Security

Speaker:



**Dr. Lisa Guppy, Asia and the Pacific Coordinator for Disasters and Conflicts, United Nations Environment Programme (UNEP)**

Biography:

Lisa is the Regional Coordinator for Disasters and Conflicts in the Asia Pacific, based at UN Environment in Bangkok. Lisa is the focal point for UN Environment's regional environmental security work and is focused on risk and resilience in an environmental context. Lisa has worked with several UN agencies including the United Nations University and OCHA in Asia, Africa, the Middle East, North America and Europe. She has a background in disaster risk reduction, humanitarian response and water management. Lisa has a PhD in chronic crisis management and a Masters in disaster management and sustainable development.

Presentation Summary:

Environmental Security has been emerging as a key concern for several United Nations agencies and organs including, increasingly, the Security Council. The UN Environment Programme (UNEP) has been strengthening its Environmental Security strategy in light of these trends. In the Asia Pacific Region, new thinking on how environmental issues including climate change can affect national security and community resilience mean that UNEP, the wider UN and other regional and global partners must synergize efforts to recognise key environmental security risks; determine how to most effectively address them; and work collaboratively to prevent escalating impacts.



Presentation Title: ***Environmental Security Exercise***

Date: 23 May 2019

Time: 1300 - 1315

Theme: Multilateral Approaches to Environmental Security

Speaker:

**Mr. Justin Pummell, Geographer, U.S. Army Corps of Engineers, USA**



Biography:

Mr. Justin Pummell is a Geographer with the U.S. Army Corps of Engineers (USACE). As a Geographer, Mr. Pummell supports USACE with program and project management related to Geographic Information Systems (GIS), emergency management, and international and interagency services. Mr. Pummell currently works on a variety of subjects, including emergency preparedness and response initiatives, geospatial applications, decision support, environmental security, database design, and form interaction.

Mr. Pummell has worked with USACE since 2001. He has served as an International Capacity Development Program Manager, a Disaster Response Exercise & Exchange Program Manager, a Civil-Military Emergency Preparedness Program Manager, and a GIS Specialist.

Mr. Pummell is currently an Emergency Support Function #3 (Public Works & Engineering) Assistant Team Leader, and has been the USACE Disaster Responder of the Year on two separate occasions. He has responded to both domestic and international disasters for the past sixteen years. His most recent deployment was to Super Typhoon Yutu in the Commonwealth of the Northern Marianas Islands in November 2018.

Mr. Pummell is a Certified Emergency Manager (CEM) with the International Association of Emergency Managers, a certified Geographic Information System Professional (GISP) through the Geographic Certification Institute, and a certified Project Management Professional (PMP) with the Project Management Institute. Mr. Pummell was recently awarded the Nepali Army Chief of Army Staff Commendation Star for his contributions to disaster mitigation in Nepal.

Presentation Summary:

Mr. Pummell led PESF participants through an interactive environmental security exercise designed to identify and analyze environmental threats and opportunities on a regional basis. Participants started the exercise by listing as many environmental security threats within the Indo-Pacific region that they can generate. Event planners then reduced the list to ten topics. Next, participants divided into geographic regional groups to review the threat list and rank order. Each threat was categorized based on its relationship to Military Readiness, Social Well Being, Economic Benefit, Political Stability, and Environmental Protection/Sustainability. Finally, a weighted multi-criteria analysis was performed, and the regional results were mapped in a Geographic Information System (GIS) to show trends and differences.



Presentation Title: ***Environmental Security Transformation Theme Introduction***

Date: 24 May 2019

Time: 0905 - 0915

Theme: Environmental Security Transformation

Speaker:

**Dr. John Wood, Director, Pacific Outreach (J9), U.S. Indo-Pacific Command**



Biography:

Dr. John Wood is the Director, Pacific Outreach (J9), at the US Department of Defense, U.S. Indo-Pacific Command, located in Hawaii. As the Director, Dr. Wood leads the Command's Strategic Public-Private Partnership Outreach; Senior Leadership Engagement and outreach to academia, think tanks, NGOs and the private sector; staff academic development and speaker series; All-Hazards campaign to reduce the risks of natural disasters, build resilient communities, and plan, align, and synchronize humanitarian response; civil-affairs coordination and management of a multi-million dollar disaster and civic aid fund; US government interagency alignment; US Indo-Pacific Command Historian; and Legislative Affairs outreach and coordination with the U.S. Congress and Hawaii state government.

Statement:

Dr. Wood introduced the *Environmental Security Transformation* theme. Dr. Wood stated that it was time to transform the PESF into an action-oriented activity. It was stated that a major facilitator of developing actionable plans are data fusion centers. These have the ability to distribute data and enhance the ability of island states to understand their regional environment. Data fusion centers, coupled with widespread broadband capabilities, would allow individual nations to utilize small patrol craft in responding to incidents in their regions. Dr. Wood reasoned that data fusion would allow countries to more effectively tackle regional problems such as illegal fishing.

Presentation Title: ***Pacific Environmental Security Partnership (PESP) Terms of Reference***

Date: 24 May 2019

Time: 0915 - 0945

Theme: Environmental Security Transformation

Speaker:

**Mr. Christopher Sholes, Environmental Program Manager, U.S. Indo-Pacific Command**



Biography:

Chris Sholes is the Environmental Security Program Manager within the USINDOPACOM Engineering Division. His duties include overseeing environmental compliance for bilateral exercises (e.g. Talisman Saber), and planning the Pacific Environmental Security Forum and international environmental workshops. He also monitors environmental impact assessments developed by the service components and coordinates projects with State of Hawaii offices and others on environmental matters. His previous experience includes project management of various environmental remediation projects throughout Hawaii and the Pacific including soil and water remediation and UXO clearance in Saipan, Guam, Japan and Korea, Palmyra and other remote islands. He has five degrees including two from the London School of Economics in International Relations and Economics and an MS in Systems Engineering from the Naval Postgraduate School. He is a certified contracts manager (CPCM) and certified project manager (PMP) from the respective US national certifying organizations.

Presentation Summary:

Mr. Sholes delivered a summary of the draft Pacific Environmental Security Partnership (PESP) Terms of Reference document, which has been prepared collaboratively between the U.S. Indo-Pacific Command, Australia Defence Force, New Zealand Ministry of Defence, and others. The draft Terms of Reference document serves as a baseline for strategic and operational organization of the PESP. The draft document includes a mission and vision statement, as well as partnership goals and objectives.

Mr. Sholes explained how the draft Terms of Reference were prepared, starting with an environmental security theory of change exercise that the United Nations Environment Programme supported. Next, Mr. Sholes provided an overview of the basic format of the proposed non-binding partnership, including the four main work groups (education, mitigation, networking and policy). Mr. Sholes also highlighted the basic PESP structure and how future PESP communication and publication can work. Finally, Mr. Sholes explained how the Pacific Environmental Security Forum (PESF) will operate in the future under the new PESP Terms of Reference.

Presentation Title: ***Pacific Environmental Security Partnership (PESP) Structure***

Date: 24 May 2019

Time: 0945 - 1000

Theme: Environmental Security Transformation

Speaker:

**COL Mike Goodyer, Senior Environmental Planner, SPT Branch, Headquarters Joint Operations Command, Australia**



Biography:

Colonel Michael Goodyer was commissioned into the Royal Australian Infantry Corps in December 1976 and has had an extensive career in command, regimental and joint appointments before transferring to the Reserves in 2004. He has served on operations in SE Asia, the Middle East and Afghanistan. He has been an exchange officer with the US Army and UK Army. As a Reserve officer he has worked within Headquarters Joint Operations Command as the Director Operational Evaluation and the Senior Environmental Planner. In the latter role he has developed and fielded an environmental compliance framework for military operations overseas.

Colonel Goodyer is a graduate of the Royal Military College, Duntroon, Australian Army Command and Staff College and the Joint Services Staff College. His academic qualifications include a Bachelor of Arts Degree in Military Studies (UNSW); Master's Degree in Defence Studies (Deakin); Master's Degree in Management Studies (UNSW); and Master of Environmental Management and Restoration (Charles Sturt).

Presentation Summary:

COL Mike Goodyer delivered an overview of the draft Pacific Environmental Security Partnership (PESP) organizational structure. He explained the main organizational components, including the Administrative Body (AB), Planning Team (PT), rotating Host Nation (HN), Partners, Observers, etc. COL Goodyer described how interested parties can become Partners in the future, and provided examples of how the new PESP structure differs from previous PESF efforts. At the conclusion of the presentation, COL Goodyer answered questions asked by participants and collected feedback to support necessary PESP structure enhancements in the future. The goal of the presentation was to leave all participants with a better understanding of the PESP structure, its primary components, and how various groups will interact to accomplish PESP goals and objectives.

Presentation Title: **2020 Southeast Asia Regional Environmental Security Forum**

Date: 24 May 2019

Time: 1430 - 1445

Theme: 2020 PESF

Speaker:

**CG/CDR Lazaro Ernesto C. Valdez, Jr., Chief of Staff, National Coast Watch Center, Philippines**



Biography:

Coast Guard Commander Lazaro Ernesto C Valdez Jr is a lawyer (attorney) by profession. He was admitted to the Philippine Bar in 06 June 1992. He read his Master of Laws in International Maritime Law in IMO-International Maritime Law Institute (IMO-IMLI) in Malta, European Union from 2008-2009.

He started his career in the government service as an attorney after his admission the Philippine Bar in various capacities from 1992. Upon receipt of his commission as Coast Guard Lieutenant in 2001, he was assigned at the Coast Guard Legal Service and held various positions in the different branches as attorney from July 2001 to 2004.

After earning his LLM, he was again assigned at the Coast Guard Legal Service, this time as Head of International Law Division. In 2012, he was assigned at the Marine Environmental Command (MEPCOM) as an attorney. When the then COMMODORE Joel S Garcia PCG PhD H.D Al Haj became MEPCOM Commander, CDR Valdez was appointed as the Chief of Staff, Legal Officer and concurrently the Director of National Operations Center for Oil Pollution (NOCOP).

Thereafter, when COMMODORE Garcia was appointed as the Officer-in-Charge of the PCG, CDR Valdez was appointed as the Deputy Chief of Coast Guard Staff for Marine Environmental Protection.

At present, he is the Chief of Staff of the National Coast Watch Center and Flag Secretary of the Deputy Commandant for Administration of the PCG, VICE ADMIRAL Joel S Garcia, the concurrent Director of the National Coast Watch Center.

Presentation Summary:

This presentation focused on the indispensable role of marine environmental activism in the restoration, preservation and protection of the marine environment of the region. The theme recognized the fact that many have become part of this evolving trend and, therefore, the necessity to talk about it.

The Southeast Asia region has been blessed with extensive coastlines ringed with unspoiled beaches deemed as among the finest in the world. The deep-blue, crystal-clear waters in the region have offered thousands of square kilometers of coral reefs teeming with a wide variety of marine life. The coastal or marine ecosystems—which include the coral reefs, mangroves, and seagrass—have been



some of the most productive and biologically diverse in the world. It is settled, therefore, that the protection and preservation of the marine environment is a matter of regional interest for Southeast Asia and as such, it is the paramount duty of every State in the region to ensure the same. However, with the worsening marine environmental problems caused by expanding population, evolving technology, increasing demands for marine resources, natural disasters, and all other modern factors, marine environmental protection has become a concern not only to national governments in the region but also to other sectors of the society. Various groups and organizations have initiated activities and programs that would help restore, protect and preserve the marine environment.

Presentation Title: ***Closing Ceremony Statement***

Date: 24 May 2019

Time: 1515 - 1530

Theme: Closing Ceremony

Speaker:

**Rear Admiral John J. Adametz, Commander, Naval Facilities Engineering Command Pacific, USA**



Biography:

Rear Admiral Adametz is a native of Belle Vernon, Pennsylvania and is a 1989 graduate of Virginia Military Institute, where he received a Bachelor of Science in Mechanical Engineering. He holds a Master of Science in Civil Engineering from Pennsylvania State University, an Executive Master of Business Administration from Naval Postgraduate School, and completed the Executive Management Program at the University of Virginia's Darden School of Business. He is the Commander, Naval Facilities Engineering Command Pacific/U.S. Pacific Fleet Civil Engineer. Adametz' operational tours include Electrical Officer, USS Nashville (LPD-13); Training Officer/Officer-in-Charge of Detail St. Lucia, U.S. Naval Mobile Construction Battalion 7; Contracting Officer, NATO Kosovo Force J4 Engineers; and Commanding Officer, U.S. Naval Mobile Construction Battalion 7. He also served as the Commodore of Naval Construction Group 2, the Atlantic Fleet Seabees. His shore assignments include Assistant Resident Officer in Charge of Construction, Naval Air Station, Oceana; Flag Housing Officer, Public Works Center, Norfolk; Assistant Public Works Officer, Naval Station Rota, Spain; Executive Officer, The Presidential Retreat, Camp David; Facility Support and Joint Basing Program Director, Commander, Navy Installations Command; Expeditionary Readiness Program Director, Office of the Chief of Naval Operations; and Operations Officer, Naval Facilities Engineering Command Mid Atlantic. He commanded Naval Facilities Engineering Command Southwest and Naval Facilities Engineering and Expeditionary Warfare Center. Rear Admiral Adametz is a registered professional engineer in the Commonwealth of Virginia, a member of the Defense Acquisition Corps, and a qualified Seabee Combat Warfare Officer, Surface Warfare Officer, and Fleet Marine Force Officer. He holds professional credentials as a Project Management Professional, Certified Facility Manager, and Certified Energy Manager, and is a member of the Society of American Military Engineers.

Statement:

Rear Admiral Adametz began his closing statement by thanking the New Zealand government for hosting the event, and for all of the participant contributions delivered throughout the week. He specifically thanked the Reserve military forces for their contributions. Rear Admiral Adametz explained his role as Commander of NAVFAC Pacific and COMPACFLT Civil Engineer and how they relate to cultural/natural resources and environmental compliance. Rear Admiral Adametz was encouraged by the depth of conversation related to all of the PESF themes, and stated that the next steps must be actionable. For example, the Admiral encouraged partners to return to their home countries and start working on preparing PESF endorsement letters. He also emphasized the importance of partners working together to mitigate environmental security risks, many of which were illuminated during the Day 4 project development session. Rear Admiral Adametz concluded



his closing remarks with gratitude towards the successful achievement of event objectives, and the opportunity to experience New Zealand. He encouraged all participants to leverage the relationships built through the PESF to overcome environmental challenges.



Presentation Title: ***Closing Ceremony Statement***

Date: 24 May 2019

Time: 1515 - 1530

Theme: Closing Ceremony

Speaker:

**Her Excellency Kay Harrison, Climate Change Ambassador, Ministry of Foreign Affairs and Trade, New Zealand**



Biography:

Kay heads the Climate Change Division at the Ministry of Foreign Affairs and Trade. A career public servant, Kay began her role at the Ministry in April 2019 after more than ten years at the Ministry for the Environment (MfE) where she was Lead Negotiator International Carbon Markets, and earlier Director Climate Change and Director Water Reform. Prior to commencing work for MfE, she held roles with Sport and Recreation New Zealand, Museum of New Zealand (Te Papa) and the Office of Treaty Settlements.

Kay attended Victoria University of Wellington where she gained a Master of Arts and a Master of Public Policy. She was also a Harkness Fellow at Harvard University at the Kennedy School of Government 1997-8.

Statement:

Ambassador Harrison started her closing remarks by congratulating all participants on the successful completion of the PESF. She thanked participants for traveling such far distances to meet in Wellington to discuss important environmental security topics. Ambassador Harrison re-emphasized New Zealand's commitment to the PESP. She remarked on how students across New Zealand were marching to Parliament to call for climate change action. Ambassador Harrison encouraged participants to recognize the role and impact climate change plays in the context of security. She thanked participants for making climate change "their business," and echoed Deputy Prime Minister Winston Peters' sentiment that climate change is "deadly serious." Ambassador Harrison also described New Zealand's proposed Zero Carbon Bill, and its reset to the Pacific. New Zealand views itself as an Asia-Pacific Nation, and is committed to working with its partners to amplify voices and accomplish shared resiliency. Ambassador Harrison concluded her remarks by hoping that all PESF participants were armed with connections, networks and ideas to resolve and act on environmental security matters.