



Pacific Environmental Security Forum

Virtual • 22-25 February 2021

Strengthening the Partnership
Amid Great Challenges



January 2021

PACIFIC ENVIRONMENTAL SECURITY FORUM – VIRTUAL 2021

Dear Forum Participant,

Welcome to the first virtual Pacific Environmental Security Forum, hosted by the United States Indo-Pacific Command, in partnership with the Australian Defence Force, New Zealand Ministry of Defence, and the Arizona State University's Julie Anne Wrigley Global Futures Laboratory.

While environmental stewardship and regional security cooperation are not new concepts, the nexus between environment and security is an emerging theme of increasing prominence. The Forum's program over four days provides a valuable opportunity to comprehensively explore these issues.

The relationships you build here can affect meaningful environmental security outcomes in your region. Fostering a strong civil-military community of practitioners will have a multiplier effect in building resilience and capacity across Asia and the Pacific. Enhancing collaboration, interoperability, and alignment on shared environmental security challenges will help underpin cohesion and partnership between states.

Please take full advantage of your time on the virtual event hub for the Pacific Environmental Security Forum, accessed via Accelevents: <https://www.accelevents.com/e/VirtualPESF2021>.

Best wishes for the first virtual forum,

A handwritten signature in black ink, appearing to read "J. Helwig".

Brigadier General Jared P. Helwig
Director, Logistics and Engineering
U.S. Indo-Pacific Command, United States of America

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SUBJECT: Virtual Pacific Environmental Security Forum

1. Purpose: To provide stakeholders with the concept, background, description and objectives for the Virtual Pacific Environmental Security Forum (PESF).

2. Background: Environmental security can be broadly defined as countering vulnerabilities caused by the abundance or scarcity of environmental resources and/or degradation. Increasingly, environmental factors—extreme and frequent weather and climate events, water resources, food security and environmental disasters—can affect national and regional security by exacerbating hunger, poverty, instability and conflict. Environmental factors often have cross-border impacts. Security improves for all when we share lessons-learned and encourage militaries and governments to plan, operate, and execute in an environmentally sustainable manner that supports regional cooperation.

The PESF is the cornerstone of U.S. Indo-Pacific Command's (USINDOPACOM) Environmental Security Program, which seeks to 1) increase understanding of environmental stewardship obligations among militaries in the Indo-Pacific region; and 2) lead a multilateral civil-military organization focused on mitigating environmental security threats, advancing collaborative partnerships, sharing information and resources, and developing strategy that advances the Indo-Pacific region.

The PESF recently underwent transformation from an event-centric initiative to a non-binding multilateral affiliation known as the *Pacific Environmental Security Partnership* (Partnership or PESP). At the 2019 PESF in Wellington, NZ, 34 countries established the Partnership Charter. The PESP is designed to be a sustainable mechanism for future cooperative environmental security in the Indo-Pacific region. PESP transformation will take time, and its path will be shaped by PESF activities.

The PESF will remain an annual event, PESP's keystone activity, where civilian and military partners can gather to discuss and share environmental security best practices and lessons learned. The PESF will also continue as a platform to service a community of action focused on prioritizing regional environmental security projects that couple unique civil and military capability and expertise, deliver tangible and efficient results, and advance security in the region.

Environmental security projects and cooperation are platforms for building relationships and opening doors for dialogue on other subjects. Ultimately, USINDOPACOM is dedicated to promoting environmental security awareness and sustainable environmental operations, and will continue to partner with civilian and military agencies in order to achieve environmental security objectives.

3. Description:

a) WHO:

- The forum will be virtual due to COVID-19, and aims to involve the countries and organizations in the Indo-Pacific region dedicated to advancing environmental security.
- New Zealand Ministry of Defence, Australian Defence Force, and Arizona State University's Global Institute for Sustainability & Innovation serve as the Partnership's working group focal points and were key partners, shaping the agenda and outcomes.

b) WHAT:

- The Virtual PESF is the tenth Indo-Pacific Environmental Security Forum and first virtual event.
- The event will include a combination of live and pre-recorded sessions.
- Each Forum day is dedicated to a PESF working group: 1) Education, 2) Policy, 3) Networking, 4) Mitigation.

c) WHEN:

- 22-25 February 2021 (US)

d) WHERE:

- Online virtual platform

4. Objectives: The Virtual PESF objectives are:

- To increase awareness of environmental security issues, best practices and lessons-learned in the Indo-Pacific region;
- To maintain a network of civil-military environmental security partners;
- To educate and advance partner capacity;
- To contribute to Indo-Pacific regional environmental security strategies; and
- To mitigate environmental security threats and vulnerabilities.

5. Points of Contact:

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Day One

Education Working Group



Pacific Environmental Security Forum

DAY
1

DAY 1 - EDUCATION WORKING GROUP

Note: Time Zones listed are Hawaii Standard Time (GMT-10)

AGENDA - MONDAY, 22 FEBRUARY 2021

1 5 0 0 - 1 5 3 0	EXPLORE EXPO & LOUNGES
1 5 3 0 - 1 5 4 5	Introduction <i>Mr. Christopher Sholes, Environmental Security Program Manager, U.S. Indo-Pacific Command, USA</i> USINDOPACOM Opening Remarks <i>Brigadier General Jered P. Helwig, Director for Logistics and Engineering, U.S. Indo-Pacific Command, USA</i>
1 5 4 5 - 1 6 0 0	Overview of Education Working Group Structure & Activities <i>Dr. Dave White, Deputy Director, Global Institute of Sustainability and Innovation, Arizona State University, USA</i> <i>Fmr. UN Ambassador Amanda Ellis, Director of Global Partnerships, Julie Ann Wrigley Global Futures Partnerships, Arizona State University, New Zealand</i>
1 6 0 0 - 1 6 1 5	United Nations Representative <i>Ms. Fekitamoeloa Katoa 'Utoikamanu, Under-Secretary-General & High Representative, United Nations-OHRLS, Tonga</i>
1 6 1 5 - 1 6 2 5	MAINSTAGE BREAK: Poet, Youth Climate Leader <i>Ms. Selina Neirok Leem, Climate Warrior, Republic of the Marshall Islands</i>
1 6 2 5 - 1 6 4 5	KEYNOTE: Carbon Drawdown <i>Dr. Klaus Lackner, Director of the Center for Negative Carbon Emissions, School of Sustainable Engineering and the Built Environment, Ira A. Fulton Schools of Engineering, Arizona State University, USA</i>
1 6 4 5 - 1 6 5 5	KEYNOTE LIVE Q&A: Carbon Drawdown <i>Dr. Klaus Lackner, Director of the Center for Negative Carbon Emissions, School of Sustainable Engineering and the Built Environment, Ira A. Fulton Schools of Engineering, Arizona State University, USA</i> <i>Moderated by Amanda Ellis, Arizona State University's Global Futures Laboratory, New Zealand</i>
1 6 5 5 - 1 7 0 0	BREAK



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1 7 0 0 - 1 7 4 0	SESSION 1: NATURE-BASED SOLUTIONS FOR CLIMATE ACTION • <i>Ms. Ulalia Woodside, Executive Director, The Nature Conservancy of Hawai'i, USA</i> • <i>Ms. Suzan Craig, Founder, Tahi, New Zealand</i> • <i>Dr. Netra Chhetri, Associate Professor, Arizona State University, Nepal</i> • <i>Ms. Thinley Choden, Chief Executive Officer, Center for Sustainability Studies Bhutan, Bhutan</i> <i>Moderated by Dr. Dayna Baumeister, Biomimicry 3.8, USA</i>
1 7 4 0 - 1 7 4 5	BREAK
1 7 4 5 - 1 8 2 5	SESSION 2: WATER SECURITY • <i>Dr. Naho Mirumachi, Senior Lecturer, Kings College London, Japan</i> • <i>Dr. Victoria Keener, Ph.D., Research Fellow, East-West Center; Lead Investigator, Pacific Regional Integrated Sciences and Assessments (RISA) Program, USA</i> • <i>Dr. Laura Brewington, Ph.D., Research Fellow, East-West Center, USA</i> <i>Moderated by Dr. Dave White, PESF Working Group Chair and Deputy Director, Global Institute of Sustainability and Innovation, Arizona State University</i>
1 8 2 5 - 1 8 3 5	MAINSTAGE BREAK: Artwork Featuring Pacific Landscapes Artwork by Vytas Bronius Kapociunas, Australia AND Hawaiian Artwork by Meleanna Meyer, USA
1 8 3 5 - 1 9 1 5	SESSION 3: ENVIRONMENTAL EDUCATION IN THE PACIFIC • <i>Ms. Maria Espinoza, Student Veteran, The Laboratory for Energy And Power Solutions (LEAPS), Arizona State University, USA</i> • <i>Dr. Chayun Tantivasakarn, Associate Professor, Faculty of Economics, Thammasat University, Thailand</i> • <i>Dr. Ben Newell, Professor of Cognitive Psychology and Deputy Head of the School of Psychology, University of New South Wales-Sydney, Australia</i> <i>Moderated by Dr. Austin Shelton, Center for Island Sustainability, University of Guam</i>
1 9 1 5 - 1 9 2 0	BREAK
1 9 2 0 - 2 0 0 0	SESSION 4: GENDER EQUALITY IN ENVIRONMENTAL EDUCATION AND SOLUTIONS WE Empower - women entrepreneurs supporting the UN SDGs through business • <i>Ms. Radhika Chaudhary, Deeya Panel Products Private Limited, India</i> • <i>Ms. Sasibai Kimis, Earth Heir Partners Sdn Bhd, Malaysia</i> • <i>Ms. Li Jen Lee, reach52 Pte Ltd, Singapore</i> • <i>Ms. Alison Price, SoilCyclers Pty Ltd, Australia</i> <i>Moderated by Amanda Ellis, Arizona State University's Global Futures Laboratory, New Zealand</i>
2 0 0 0 - 2 0 5 0	VISIT LOUNGES



Introduction to the Pacific Environmental Security Partnership (PESP)

USINDOPACOM Opening Remarks

Brigadier General Jered P. Helwig, Director for Logistics and Engineering, U.S. Indo-Pacific Command, USA

BIO



Brigadier General Jered P. Helwig is responsible for the planning, coordination, and integration of strategic logistics and engineering in support of operations across the Indo-Pacific region.

He was commissioned in the Transportation Corps and branch-detailed to Armor in 1994 after graduating from Wheaton College with a Bachelor of Arts in Communications. Additionally, he has earned a Master of Science in Public Policy from Georgetown University and a Master of Science in National Resource Strategy from the National Defense University (Eisenhower School).

Previous to this assignment, Brigadier General Helwig served as the 30th Chief of Transportation, United States Army, Fort Lee, Virginia. Additional experience includes Company Commander, 28th Transportation Battalion; field-grade key and developmental assignments, 82nd Airborne Division; Battalion Commander, 710th Brigade Support Battalion 3/10 IBCT then G4, 10th Mountain Division; and Commander of the 3rd Infantry Division Sustainment Brigade. He has two operational tours to Afghanistan, one to Iraq, one to Bosnia, and one to Haiti.

His awards and decorations include the Legion of Merit (2 OLC), the Bronze Star Medal (2 OLC), the Defense Meritorious Service Medal, the Meritorious Service Medal (4 OLC), and the Joint Service Commendation Medal.

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



BIO

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 Conferences 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,



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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.

Since its inception in 2010 he has developed the Environmental Security Program as a means for the U.S. Army Corps of Engineers, IWR, 130th Prime Power and other DoD components to engage internationally and innovatively, furthering the USPACOM engagement strategy to enhance partner nation resilience, capacity building, facilitate interoperability, and build trust and access for occasions of mutual benefit.

The goal of the USINDOPACOM ENSEC Engagement Program, incorporating the Commander USPACOM's lines of operation, is to strengthen relationships and partner-nation capacity development. This program, as part of the Defense Environmental International Cooperation (DEIC) program, is an effective and cost-efficient way to also support the SECDEF's Security Cooperation Guidance goals of: (i) Build defense relationships that promote specific U.S. security interests, (ii) Develop allied and friendly military capabilities and willingness for coalition operations with the U.S. military, and (iii) Improve force interoperability.

From the Pacific Environmental Security Forum series, USINDOPACOM has spun-off oil spill response workshops in South and Southeast Asia, has funded environmental management and alternative energy solutions to remote locations, and established environmental stewardship practices with Australia and other partner nations.

Overview of Education Working Group Structure & Activities

Dr. Dave White, Deputy Director, Global Institute of Sustainability and Innovation, Arizona State University, USA

BIO



Dave D. White is professor in the School of Community Resources and Development at Arizona State University, where he also serves as deputy director the Global Institute of Sustainability and Innovation in the Julie Ann Wrigley Global Futures Laboratory, and director of the Decision Center for a Desert City. White is internationally recognized for his contributions to science in support of sustainable development. He has published more than 50 peer-reviewed scientific journal articles advancing numerous fields including decision science, science and technology studies, sustainability science, and

natural resources management. Professor White is a contributing author to the Fourth U.S. National Climate Assessment.

His research develops theory and methods to understand and enhance the linkages between science and policy for sustainability. His work brings together scientists and stakeholders to cooperatively define challenges, develop credible and usable knowledge, promote social learning, build institutional capacity, and implement solutions attuned to cultural, economic, and political context.

Professor White is committed to use-inspired research with true global impact. He is an inaugural fellow of the PLuS Alliance, combines the strengths of three leading research universities on three continents - ASU, Kings College London, and University of New South Wales - to solve global challenges around health, social justice, sustainability, and technology and innovation. White was an inaugural fellow of the Global Security Initiative, a university-wide interdisciplinary hub for global security research. His work has been covered in popular media including The New York Times, Wall Street Journal and National Public Radio. White is a recipient of the President's Medal for Social Embeddedness from Arizona State University and the Celebrating Natural Resources Award from the University of Idaho.

**FMR UN Ambassador Amanda Ellis, Global Partnerships Director, Arizona State University
Julie Ann Wrigley Global Futures Laboratory, New Zealand**

BIO



Ambassador Amanda Ellis leads Global Partnerships for the ASU Julie Ann Wrigley Global Futures Laboratory and serves as Professor of Practice at Thunderbird School of Global Management. Previously New Zealand's Head of Mission and Permanent Representative to the United Nations in Geneva 2013-16, and Prime Minister's Special Envoy to Africa, Ambassador Ellis played a key role in New Zealand's successful UN Security Council bid. She served as co-chair of the UNSC High Level Group for Humanitarian access into Syria.

As Deputy Secretary in the NZ Foreign Ministry, Ambassador Ellis was the first woman to lead the NZ Aid program, managing an annual budget of \$0.6 billion. Prior roles include senior appointments at the World Bank, IFC, Westpac Banking Corporation and the OECD.

United Nations Representative

Ms. Fekitamoeloa Katoa 'Utoikamanu, Under-Secretary-General & High Representative, United Nations-OHRLLS (Tonga)

BIO



Ms. Fekitamoeloa Katoa 'Utoikamanu is the Under-Secretary-General and High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States. She assumed her role in May 2017.

Ms. 'Utoikamanu is responsible for monitoring and following up on the implementation of all three Programmes of Action under the purview of UN-OHRLLS. She is also called on to advocate for the issues and concerns of these vulnerable countries as well as to ensure their integration into and coherence with global processes, including those related to the 2030 Agenda and other global development frameworks.

Ms. 'Utoikamanu also coordinates advocacy work related to the Least Developed Countries (LDCs), Landlocked Developing Countries (LLDCs) and Small Island Developing States (SIDS) in forums and platforms outside the United Nations.

Prior to joining the United Nations, Ms. 'Utoikamanu was Chief Executive Officer of the Ministry of Tourism, Tonga; Acting Pro-Chancellor and Chair of the Council of the University of the South Pacific (2015); Deputy Pro-Chancellor and Deputy Chair of the Council of the University of the South Pacific

(2009-2016); Deputy Director General and Director of Education, Training and Human Development of the Secretariat of Pacific Community (2009-2015); Permanent Representative and Ambassador of the Government of Tonga to the United Nations, United States of America, Cuba and Venezuela and High Commissioner to Canada (2005-2009); and Secretary for Foreign Affairs and European Commission's National Authorizing Officer for Tonga (2002-2005).

A Tongan national, Ms. 'Utoikamanu speaks Tongan and English. She holds a Bachelor of Commerce in Economics (1980) and a Master's in Commerce in Economics (1983) from the University of Auckland in New Zealand.

MAINSTAGE BREAK: Poet, Youth Climate Leader

Ms. Selina Neirok Leem Climate Warrior, Republic of the Marshall Islands



BIO

Selina N. Leem, a 23-year-old climate warrior from the Marshall Islands, recently finished working as a Youth Representative at the Permanent Mission of the Republic of the Marshall Islands to the UN in New York.

Born and raised in the capital atoll of the Marshall Islands, Majuro, Leem, "a small island girl with big dreams" as she often called herself, credits her grandfather for her deep awareness of the increasing fate of her island home through his stories about how the ice

in the North Pole and South Pole were melting and would soon flood the Marshall Islands. He helped her become much more aware of her surroundings, of the fact that she was literally surrounded by water.

At age 16, Leem moved to Germany to finish high school in the UWC (United World College) Robert Bosch College in Freiburg, a prestigious international program that offers the International Baccalaureate Diploma, where she took on the role of a climate change advocate for her country. Representing the Marshall Islands, Leem was the youngest delegate at the COP21 (2015 UN Climate Change Conference in Paris). During the closing remarks, then Marshall Islands Foreign Minister Tony deBrum gave her the opportunity to give the final statement on behalf of her country. Leem told the world that the Paris agreement "should be the turning point in our story; a turning point for all of us."

KEYNOTE: Carbon Drawdown

Dr. Klaus Lackner, Director of the Center for Negative Carbon Emissions, Arizona State University, USA

BIO



Dr. Klaus Lackner is the director of Center for Negative Carbon Emissions and professor at the School of Sustainable Engineering and the Built Environment of the Ira A. Fulton Schools of Engineering, Arizona State University. Lackner's research interests include closing the carbon cycle by capturing carbon dioxide from the air, carbon sequestration, carbon foot-printing, innovative energy and infrastructure systems and their scaling properties, the role of automation, robotics and mass-manufacturing in downscaling infrastructure systems, and energy and environmental policy.

Lackner's scientific career started in the phenomenology of weakly interacting particles. Later searching for quarks, he and George Zweig developed the chemistry of atoms with fractional nuclear charge. After joining Los Alamos National Laboratory, Lackner became involved in hydrodynamic work and fusion related research. In recent years, he has published on the behavior of high explosives, novel approaches to inertial confinement fusion, and numerical algorithms. His interest in self-replicating machine systems has been recognized by Discover Magazine as one of seven ideas that could change the world.

Trained as a theoretical physicist, he has made a number of contributions to the field of carbon capture and storage since 1995, including early work on the sequestration of carbon dioxide in silicate minerals and zero emission power plant design. In 1999, he was the first person to suggest the artificial capture of carbon dioxide from air in the context of carbon management. His recent work at Columbia University as Director of the Lenfest Center for Sustainable Energy advanced innovative approaches to energy issues of the future and the pursuit of environmentally acceptable technologies for the use of fossil fuels.

ABSTRACT

Dr. Klaus Lackner and his team at Arizona State University are deploying and scaling a first-of-its-kind carbon-capture technology with Arizona State University and Silicon Kingdom Holdings (SKH). The revolutionary "mechanical trees" are thousands of times more efficient at removing CO₂ from the air than a planted tree with the dual benefit of storing or selling the excess carbon dioxide for commercial purposes. Unlike other drawdown technologies, these mechanical trees passively drawdown CO₂ and represent a low-cost and scalable solution that is commercially viable.

SESSION 1: NATURE-BASED SOLUTIONS FOR CLIMATE ACTION

ABSTRACT: Nature-based solutions are a core scientific strategy towards global climate restoration. High-carbon ecosystems including mangroves and old-growth forests both drawdown and sequester carbon while providing co-benefits including storm buffers, prevention of soil erosion, providing wildlife habitat, and retaining and purifying water at scale. Experts agree that natural climate solutions represent over 30% of the solutions to climate restoration but currently receive less than 3% of existing climate mitigation funding. This panel will explore the opportunities and obstacles of nature-based solutions.

Ms. Ulalia Woodside, Executive Director, The Nature Conservancy of Hawai'i, USA

BIO



When Ulalia Woodside took the helm as Hawai'i executive director in 2016, she felt as if she had been preparing for the job her entire life. The daughter of a wildlife biologist and a Hawaiian cultural practitioner, she grew up in a family dedicated to protecting the environment. "Conservation is what we did," she says. "It's what I know and what I've made my life's calling."

Woodside served as director of natural and cultural resources at Kamehameha Schools, the state's largest private landowner, prior to coming to TNC. She was also a member of the State Board of Land and Natural Resources, a past commissioner of the Hawai'i

Natural Area Reserve System, and a kumu hula, or teacher of hula, a tradition passed down from her mother at age three.

Following graduation from Honolulu's Punahou School, Woodside worked as an intern and later a land agent with the Hawai'i State Department of Land and Natural Resources, where she gained a broad understanding of land tenure and ownership in Hawai'i.

At the University of Hawai'i, she earned undergraduate degrees in Political Science and Hawaiian Studies and completed graduate coursework in Urban and Regional Planning, then went to work in the private sector, doing everything from cultural and environmental assessments to masterplan developments. In 2002, she joined Kamehameha Schools Land Assets Division, and during her 14-year tenure there rose to regional director, responsible for a 200,000-acre portfolio and the natural and cultural resources programs.

As Hawai'i executive director, Woodside oversees forest and marine conservation programs on five islands and a climate change research laboratory at Palmyra Atoll. She resides in the community of Waimanalo in windward O'ahu and during her spare times enjoys serving on community organization boards, hula, hiking and traveling.

Ms. Suzan Craig, Founder, Tahī, New Zealand

BIO



The people of Tahī call our founder, Suzan Craig, our guardian, as she has chosen to care for this special place and bring it back to life. A founding member of The Long Run Global Ecosphere Retreats, Suzan has a deep-rooted connection to this place – and is not afraid to do the hard mahi (work) to bring our sustainable philosophy to life.

Suzan has a respect for nature and a deep understanding of its fragility that has been nurtured since childhood. Her father is Professor John Craig (ONZM), widely recognised as one of New Zealand's conservation experts, who has helped inform and guide Suzan's drive for doing what is right. Beekeeping has also been in Suzan's family for generations: since her great-uncles began one of New Zealand's first beekeeping companies, circa 1888!

Today, Tahī is a restored, biodiversity-positive nature sanctuary, a self-sustaining business where nature can benefit everyone. By harnessing The Long Run's 4Cs – conservation, culture, community, and commerce – into every decision we make, Suzan is guiding the way for positive-impact land management.

Dr. Netra Chhetri, Associate Professor School for the Future of Innovation in Society, College of Global Futures, Arizona State University, Nepal

BIO



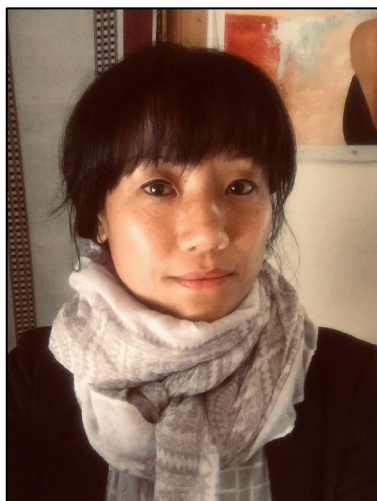
Netra B. Chhetri has been in the forefront of advancing innovative approaches to climate adaptation that tie together and link multi-scalar processes between environmental dynamics and social outcomes. Working at the complex intersections of climate change adaptation, food security, resource governance, grassroots innovation, and public engagement Professor Chhetri's skill set allows him to span the boundary of knowledge and practice, so that each reinforces the other.

As a scholar, Professor Chhetri's efforts to develop a method for assessing the multiple sources of environmental impacts on society is unique and an important tool for designing and prioritizing climate adaptation strategies. As a practitioner, he has more than a decade of experience working at the complex intersection of science and policy and developing most promising solutions that focus on scalability, impact, and sustainability.

Professor Chhetri's expertise in global food security has evolved to focus on the impacts of climate change on global food systems, leading him to be one of the contributing authors to the Fourth (2007) and Fifth (2014) Assessment Reports of the United Nations Intergovernmental Panel on Climate Change (IPCC). His work appears in numerous prestigious and peer-reviewed publications including *Nature* and the *Journal of the National Academy of the Sciences*. He is also a part of a team exploring how biofuel crops such as perennial grasses can be grown sustainably in the United States.

Ms. Thinley Choden, Chief Executive Officer, Center for Sustainability Studies, Bhutan, Bhutan

BIO



Thinley Choden is a social entrepreneur and consultant possessing a portfolio of eco-system career work in climate change and sustainability issues encompassing entrepreneurial leadership/solution building, impact investing, green economy, climate governance, and youth. She is a Climate Reality Leader.

In addition to her role as the CEO of Center for Sustainability Studies Bhutan, she is the founding Curator for Global Shapers Thimphu Hub, Bhutan Country Advisor for Give2Asia and founder/CEO of Bhutan Tours and Travels, a knowledge travel company. She is working on founding Impact Bhutan - an impact investment fund. In 2008, she founded a successful non-profit, READ Bhutan. She volunteers her time mentoring young people.

Ms. Choden is part of numerous globally prestigious and competitive programs like Vital Voices GROW Women Entrepreneur (2020), Acumen Global Fellow (2016/2017), Delegate Entrepreneur at the Global Entrepreneurship Summit hosted by President Obama (2016), SOCAP Fellow, Social Capital Market (2017), Cordes Fellow (2017), Asian Feminist Fellow at Ewha University, Seoul (2016), Draper Hills Fellow at Stanford University (2015), ADB Youth Forum on Sustainable Development (2007), Asia Pacific Leadership Fellow and Degree Fellow at East-West Center (2002/2003 and 2005/2007).

She holds an Executive Certificate in Strategic Decision Making from Wharton Business School, a MPA and a certificate on Disaster Management and Humanitarian Assistance from University of Hawaii, Manoa, and a BA in Economics from Beloit College, Wisconsin.

She loves staying actively healthy and traveling. She enjoys running and outdoor adventures/hiking/trekking.

MODERATOR: Dr. Dayna Baumeister, Co-founder, Biomimicry 3.8, USA

BIO



Dayna Baumeister is a co-founder of Biomimicry 3.8 and professor of practice. With a devotion to applied natural history and a passion for sharing the genius of nature, she has worked in the field of biomimicry with business partner Janine Benyus since 1998, traveling the world as a biomimicry thought-leader, business consultant, and professor. Together, they founded the Biomimicry Guild consulting practice, The Biomimicry Institute 501c3, and Biomimicry 3.8, a B-Corp social enterprise that helps clients find innovation inspired by nature and offers the highest level of

biomimicry training to professionals worldwide.

Her foundational work has been critical to the biomimicry movement, establishing it as a fresh and innovative practice, as well as a philosophy to meet the world's sustainability challenges. She has helped more than 100 companies consult the natural world for elegant and sustainable design solutions, including: Nike; Interface; General Mills; Boeing; Herman-Miller; Kohler; Seventh Generation and Procter & Gamble. She's been a featured speaker at the National Science Foundation, Robert Wood Johnson Foundation, International Congress on Biodiversity of the Guyana Shield 2016, GreenBiz 2016, SXSW Eco 2015, and more.

In 2008, she designed (and continues to teach) the world's first Certified Biomimicry Professional Program, an in-person, two-year master-level course that trains, certifies, and connects biomimicry professionals with practitioners worldwide. She also co-designed the Biomimicry Specialist Program. Biomimicry 3.8 and ASU partnered in 2015 to create an online graduate certificate program and the world's first Master of Science in biomimicry. She serves as co-director of ASU's Biomimicry Center.

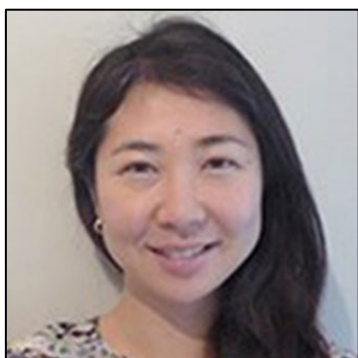
She is senior editor of "Biomimicry Resource Handbook: A Seed Bank of Knowledge and Best Practices" (2014), where she compiled more than a decade's worth of practical biomimicry experience into a comprehensive biomimicry handbook. She is also a Dana Meadows Fellow with the Sustainability Institute.

SESSION 2: Water Security

ABSTRACT: The United Nations projects that two-thirds of the world's population will be water-stressed by 2025 with 1.8 billion people experiencing severe water scarcity. Other regions also experience the inverse water challenges with flooding and sea-level rise from anthropogenically-caused climate change. The issue of too much or too little water will shape further global security challenges in politically destabilized regions, displacing millions more climate refugees. In this session, we will discuss risks to environmental security and plausible solutions pathways based in lessons from transboundary water governance, climate adaptation planning, and multi-stakeholder collaborations, with illustrations from the Mekong River basin and the Pacific Islands.

Dr. Naho Mirumachi, Senior Lecturer, Kings College London, Japan

BIO



Dr. Naho Mirumachi is a Senior Lecturer in Geography at the Department of Geography. Trained in political science, international studies and human geography, she has research interests in the politics and governance of the environment, particularly water.

Her latest book, Transboundary Water Politics in the Developing World (Routledge) brings together some of her thinking on the political economy of international transboundary river basins and conflict and cooperation over shared waters.

Naho is a Visiting Research Fellow at the Water Security Research Centre & School of International Development, University of East Anglia, and collaborates on water security research. She has also been an active member of the London Water Research Group, an independent network of academics, practitioners and activists. She is a Senior Research Fellow for the international research network on Earth System Governance under Future Earth. Prior to joining King's, she taught at the Department of Geography and Environment, London School of Economics and Political Science.

Dr. Victoria Keener, Ph.D., Research Fellow, East-West Center, USA

BIO



Dr. Victoria Keener is a Research Fellow at the East-West Center in Honolulu, Hawai'i, and the Lead Principal Investigator of the Pacific Regional Integrated Sciences & Assessments (Pacific RISA) program. Dr. Keener also does research on enabling practical applications of climate science for regional decision making. Much of her modeling work uses multivariate time-series analysis and varied spectral methods to identify dominant climate trends in hydrological variables and how they change through time.

In addition to research, as the Lead Principal Investigator of Pacific RISA, Dr. Keener coordinates an interdisciplinary team of social and physical scientists that aims to reduce the vulnerability of Pacific Island communities to climate change by translating academic research into actionable knowledge for a variety of stakeholders at the local, state, and regional level. The Pacific RISA program strives to enhance knowledge and capacity to sustainably manage freshwater resources in Hawai'i and the Pacific Islands. Projects include producing downscaled climate and hydrological projections to estimate future water availability; assessing stakeholders' decision-support needs and their capacity to use seasonal forecasts; identifying opportunities for adaptive measures within the existing law and policy framework in Hawai'i; and network analysis of climate professionals in the region. She was the Lead Editor and a Chapter Author for the 2012 Pacific Islands Regional Climate Assessment (PIRCA) report, the regional technical input to the US 2014 National Climate Assessment.

Dr. Keener received her Ph.D. in 2010 in Agricultural & Biological Engineering from the University of Florida, specializing in hydro-climatological research dealing with the effects of climate variability and the El-Nino/Southern Oscillation on both physical modeling and statistical hydrology of freshwater pollutant loads.

Dr. Laura Brewington, Ph.D., Research Fellow, East-West Center, USA



BIO

Dr. Laura Brewington is a Research Fellow at the East-West Center, the Lead Investigator of the Pacific Islands Climate, Health, and Migration project, and the Co-Lead Investigator of the Pacific Regional Integrated Sciences and Assessments (RISA) program. She designs and conducts collaborative, policy-oriented research to support climate adaptation in Pacific Islands. She received her Ph.D. in Geography from the University of North Carolina–Chapel Hill based on research in agriculture, invasive species, and conservation in the Galapagos Islands of Ecuador. She co-founded the Pacific Regional Invasive Species and Climate Change (RISCC) management network and represents the East-West Center on the Pacific Invasives Partnership, promoting a regional coordinated approach

to international biosecurity and natural resources management. Before joining the Center, she held a quarantine and biosecurity fellowship with WildAid, an international marine-conservation NGO, where she coordinated a comprehensive evaluation of the Galapagos quarantine chain. She also completed a post-doctoral fellowship with the Center for Galapagos Studies at the University of North Carolina–Chapel Hill.

MODERATOR: Dr. Dave White, PESF Working Group Chair and Deputy Director, Global Institute of Sustainability and Innovation, Arizona State University, USA

BIO

See above.

MAINSTAGE BREAK: ARTWORK

Featuring Pacific Landscapes Artwork by Vytas Bronius Kapociunas, Australia and Hawaiian Artwork by Meleanna Meyer, USA

Mr. Vytas Bronius Kapociunas



BIO

Arriving in Australia as a six-year-old displaced person from central Europe in 1949 has affected Vytas Kapociunas' attitude toward life and art. Vytas identifies with the struggles of ordinary people, their toil, joy, and creation of sanctuaries. Social comment characterizes his artwork more than his Lithuanian stylistic inheritance. He identifies closely with the arid Australian hinterland and its inhabitants. His steel and wood sculptures, paintings, etchings and mixed-media works are held in public and private collections in

Australia, New Zealand, Korea, Malaysia, Canada, the United States and Britain.

Vytas grew up in Adelaide and graduated from the South Australian School of Art in 1965. He won a two-year travelling scholarship, and spent his postgraduate years in Spain, France and the United Kingdom where he exhibited paintings and drawings. He later worked in Malaysia, Korea, the United States and again, Spain where he has exhibited sculptures, paintings and etchings.

Vytas has held more than 30 solo and group exhibitions in Australia, the United States, Europe and Asia. He retired from the University of South Australia after 30 years lecturing in painting and drawing. His artwork is featured in publications on Australian artists including Bernard Smith Australian Painting, Max Germaine Artists and Galleries of Australia and Nancy Benko Art and Artists of South Australia.

Ms. Meleanna Aluli Meyer

BIO



Meleanna Aluli Meyer, is a life-long advocate for culture and the arts. She has spent her career as a practicing artist, arts educator, documentary filmmaker, advocate and creative in community. Her aspirations are to work for truth, reconciliation and healing in all that she does. Peace and wellness are the ultimate goals of her work.

Beyond her formal training at Stanford (BA '78) an M.A. in Educational Foundations, UH, Manoa, she has taken her commitment to all things Hawaiian, very seriously. An East-West Center grantee, APAWLI and Salzburg fellow, she has been a recipient of numerous awards and distinctions that have broadened her world view and opportunities to workshop and share her insights and work through local and international venues. A recipient of the prestigious James Borelli Art Prize while at Stanford, the Lamakū award for work in community from the UH at Manoa, along with the most recent distinction of Kumu Kukui, being honored as a Master Educator, continues to bolster Meyer's lifelong commitment to all things creative, spirit inspired, community supported, and grounded in culture.

SESSION 3: Environmental Education in the Pacific

ABSTRACT:

This session will provide an overview of three unique environmental education programs in the Pacific. From green jobs training for veterans and environmental education for remote areas to coral transplanting for Island conservation and leading cultural change for sustainability on a university campus, we will explore groundbreaking initiatives helping to advance environmental education and climate action in the Asia-Pacific region.

The three initiatives will be:

- ASU's Laboratory for Energy and Power Solutions (LEAPs) provide renewable energy education and training to help Veterans transition to green jobs.

- Thammasat University won the International Sustainable Campus Networks (ISCN) 2020 award for “Cultural Change for Sustainability.” The university was awarded this honor for its campaign “Thammasat Campus Life: No more single-use plastics.”
- The International Universities Climate Alliance (IUCA) provides a central hub for universities to share the latest climate research with the public and enable greater collaboration between leading research teams, supporting global leaders, policy makers and industry in planning for and responding to climate change.

Ms. Maria Espinoza, Student Veteran, The Laboratory for Energy And Power Solutions (LEAPS), Arizona State University, USA

BIO



Maria Espinoza served five years in the United States Navy stationed at Marine Corps Base Hawaii in Kaneohe Bay as an Avionics Electronics Technician on the P-3 Orion, a maritime surveillance aircraft. Maria is a junior at Arizona State University studying Mechanical Engineering Systems and pursuing a certificate in Energy and Sustainability.

She joined ASU’s Laboratory for Energy And Power Solutions in 2020 as a Workforce Development Specialist. There she assists in the creation of online training courses focused on renewables, microgrids, and grid modernization topics. Maria is a strong veteran advocate on campus serving as a Pat Tillman

Veterans Center’s military ambassador and a student representative on the Veteran Advocacy and Affairs Committee.

Dr. Chayun Tantivasadakarn, Ph.D. Associate Professor, Faculty of Economics, Thammasat University, Thailand – Sustainability Campus and Teaching Approach

BIO



Dr. Chayun Tantivasadakarn is an Associate Professor in the Faculty of Economics at Thammasat University, Thailand. He specializes in the area of Environmental Economics (Climate Change) and International Trade. He currently serves as a Committee Member on several committees including the Working Committee on Carbon Markets, Thailand Greenhouse Gas Management Organization (a public organization), the National Climate Change Policy Committee, the Evaluation Board of Thai Health Promotion

Foundation, the Human Resource Development and Enhancement Committee of the National Economic and Social Development Board and the Toyota Thailand Foundation Award.

He has served as the Dean, Faculty of Economics, Thammasat University, the Director of the Policy Research Center on Green Economy (PRO-Green), a committee member on the Academic Board of Pathumwan Institute of Technology and the committee on Telecommunication Service Trade Negotiation Strategy.

His published works include a textbook written in the Thai language entitled “Economics of Climate Change, Thammasat University Press, 2019, and “Carbon Pricing and International Competitiveness



Pacific Environmental Security Forum

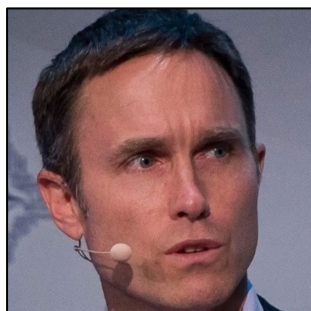
DAY

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for Thailand and ASEAN”, Thammasat Review of Economics and Social Policy, Vol. 6, No. 2, July-December 2020.

Dr. Ben Newell, Professor of Cognitive Psychology and Deputy Head of the School of Psychology, University of New South Wales – Sydney, Australia – International University Climate Alliance

BIO



Dr. Ben Newell is Professor of Cognitive Psychology and Deputy Head of the School of Psychology at UNSW Sydney. His research focuses on the cognitive processes underlying judgment, choice and decision-making and the application of this knowledge to environmental, medical, financial and forensic contexts. Ben has worked with industry and government partners on projects including climate change communication, and retirement wealth-planning. A key theme of much of this work is over-coming the myopic thinking that tends to cloud our judgment when we are making decisions about an uncertain future. Ben

is a member of the Academic Advisory Panel of the Behavioural Economics Team of the Australian Government.

MODERATOR: Dr. Austin Shelton, Executive Director, University of Guam/Director UOG Sea Grant Program Center for Island Sustainability, University of Guam (UOG)



Austin Shelton is a native of Guam who became a marine and environmental scientist to help solve island environmental challenges. He serves as the executive director of the University of Guam Center for Island Sustainability and director of the UOG Sea Grant Program. Shelton conducts research and community engagement activities focused on reviving watersheds, coral reefs, and fisheries. He earned a B.S. degree in marine biology from Hawaii Pacific University and both an M.S. and Ph.D. in zoology with a specialization in marine biology from the University of Hawaii at Mānoa.

SESSION 4: Gender Equality in Environmental Education and Solutions

WE Empower-Women Entrepreneurs Supporting the UN SDGs through Business

ABSTRACT: The International Organization for Migration (IOM) estimates that by 2050 there will be an additional 200 million climate refugees, creating security and environmental issues. Women are more likely than men to be affected by climate change and the majority displaced. However, despite the systemic obstacles, innovative women "solutionaries" are architecting transformative futures. As Melinda Gates stated, "women are not just victims of a broken world; they can be architects of a better one."

The WE (women entrepreneurs) Empower UN SDG Challenge is a global business competition for women social entrepreneurs who are advancing the UN Sustainable Development Goals and inspiring entire communities to act to create the world we want by 2030. During this session, we will hear from incredible women entrepreneurs from across the Asia-Pacific region as they discuss tangible, innovative business solutions for advancing the UN SDGs, both locally and globally.

Ms. Radhika Chaudhary, Director and Chief Finance Officer of Deeya Panel Products Ltd., India

BIO



Radhika Chaudhary is the Director & CFO of Deeya Panel Products Private Limited (Ricron Panels) and holds degrees in Economics and Finance from the Ohio State University, USA. A banker turned entrepreneur, Radhika has previously worked in IDFC Capital and Ernst & Young. Her startup addresses the problem of multi layered waste plastics (MLP) and converts these low value plastic waste into high quality building materials.

Multi-layer plastics (MLP), which are usually seen as the most common packaging material in industries such as FMCG, processed food, cosmetics, pharmaceuticals etc., are virtually impossible to recycle. An MLP refers to any material used for packaging that has at least one layer of plastic as its main ingredient in combination with one or more layers of paper and aluminum foil in the form of a laminate or a co-extruded structure. Most companies prefer MLPs as they are three times more waterproof, light weight, reduce shipping

volume and help in increasing shelf life of products. The cost of recycling and the techniques involved make it unviable to recycle and most such plastics end up in the environment. Some studies estimate that MLPs constitute 14% of the entire plastic waste generated in the world.

Since inception, her startup's patented technology has helped remove 7 million KGs of waste plastic from entering the environment and saved nearly 100,000 trees from being cut down. For every 600 sq. ft. of one-bedroom house created using Ricron panels, over 3,500 plastic packaging items are

recycled and nearly 1,000 kg of building materials in the form of timber, plywood, and metal sheets etc. is avoided from being used.

Ms. Sasabai Kimis, Founder and CEO of Earth Heir Partners, Sdn Bhd, Malaysia

BIO



Sasibai Kimis is the Founder & Chief Innovation Officer of Earth Heir, a Malaysian conscious lifestyle brand and social enterprise, creating handcrafted heritage pieces made by women, refugees and indigenous persons. Prior to Earth Heir, Sasi was a Vice President in the Investments division at Khazanah Nasional (Malaysia), a Director in the Private Equity team at First Avenue Partners LLP (London), worked in Ghana with

Opportunities Industrialization Centers International (advising gold mining companies), the United Nations Development Program in Accra, and in New York as an Investment Banking Analyst at Lehman Brothers.

Sasibai received a B. S in Economics (Finance and Management) cum laude from the Wharton School, University of Pennsylvania and an M. Phil in Environment and Development from Cambridge University. She is a 2019 VitalVoices GROW Fellow and a 2015 Women's Leadership Programme Fellow with Eisenhower Fellowships.

Ms. Li Jen Lee, Chief Operating Officer, reach52, Singapore

BIO



Li Jen Lee is the Chief Operating Officer at reach52, an award-winning, tech social enterprise providing affordable healthcare for the 52% of the world without access to health services. Their offline mobile apps and platforms enable the delivery of screening, testing, affordable medicines and health insurance for +400 communities in South East Asia. They equip community members with the apps to run the services and partner with governments, multi-laterals and the private sector (pharma, medtech, insurance) to deliver the products that communities need most. As a result, reach52 establish sustainable healthcare systems for all powered by technology.



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Ms. Alison Price, Founder and Managing Director, SoilCyclers, Australia

BIO



Alison Price is the founder and managing director of SoilCyclers, a business working with construction, waste and mining industry clients to recycle unsuitable materials on their sites and transform them into materials they can use in their projects. Their mission is to make onsite recycling 'business as usual' for these industries by providing innovative, cost-effective and planet-saving solutions that reduce the use of virgin resources,

avoid the risk of importing contamination to sites and transform onsite waste into reusable materials. Each year, they recycle around half a million cubic meters of soil and take about 30,000 truckloads of waste off local roads. The business also creates high-paying jobs for women and young people in a traditionally male-dominated industry through their Trainee Plant Operator program.

MODERATOR: FMR. Ambassador Amanda Ellis, Global Partnerships Director, Arizona State University Julie Ann Wrigley Global Futures Laboratory

BIO

See above.



Day Two

Policy Working Group



Pacific Environmental Security Forum

**DAY
2**

DAY 2 - POLICY WORKING GROUP

Note: Time Zones listed are Hawaii Standard Time (GMT-10)

TUESDAY, 23 FEBRUARY 2021

1 5 0 0 - 1 5 3 0	EXPLORE EXPO & LOUNGES
1 5 3 0 - 1 5 4 5	Overview of Policy Working Group Structure & Activities <i>Ms. Jane Neilson, Senior Policy Analyst (Climate Change and Security), Ministry of Defence, New Zealand</i>
1 5 4 5 - 1 6 1 5	ONLINE NETWORKING
1 6 1 5 - 1 7 0 0	SESSION 1: Ministry of Defence Workshop on Policy Making and Climate Considerations <i>Mr. Tom Haristias, Desk Officer, Climate Security, Directorate General for International Relations and Strategy (DGRIS) of the French Ministry of Armed Forces, France</i> AND <i>Ms. Jane Neilson, Senior Policy Analyst (Climate Change and Security), Ministry of Defence, New Zealand</i> <i>Moderated by Ms. Chesna Cocker, Senior Analyst, Ministry of Defence, New Zealand</i>
1 7 0 0 - 1 7 1 0	BREAK
1 7 1 0 - 1 7 3 0	SESSION 2: Conducting Disaster Relief in the COVID Pandemic <i>Mr. Yuki Yamamoto, Deputy Director, International Policy Division, Japan Ministry of Defense, Japan</i>
1 7 3 0 - 1 7 5 0	SESSION 3: Defense Responses to Climate Security Threats in the Indo-Pacific <i>Ms. Erin Sikorsky, Director, The International Military Council on Climate and Security, USA</i>
1 7 5 0 - 1 8 0 0	BREAK
1 8 0 0 - 1 8 2 0	SESSION 4: Incorporating Women, Peace & Security in Addressing Climate Change Security Threats <i>Ms. Sharon Bhagwan Rolls, Pacific Global Partnership for the Prevention of Armed Conflict, Fiji</i>
1 8 2 0 - 1 8 4 0	SESSION 5: Building Climate Capabilities for Island Nations <i>Ms. Nenenteiti Teariki-Ruatu, Director, Ministry of Environment Lands and Agricultural Development, Environment & Conservation Division, Kiribati</i>
1 8 4 0 - 1 9 4 0	VISIT LOUNGES

Overview of Policy Working Group Structure & Activities

Ms. Jane Neilson, Senior Policy Analyst (Climate Change and Security), Ministry of Defence, New Zealand

BIO



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.

SESSION 1: Ministry of Defence Workshop on Policy Making and Climate Considerations

ABSTRACT

Unpredictability and the combination of new forms of risk and threats are now the prevailing form of the strategic environment. Climate change is at the forefront of these risks. It undermines the resilience of the states, and the flow-on implications exacerbate conflicts and crises.

In this workshop, The French Ministry for the Armed Forces and New Zealand Ministry of Defence will share their experience in integrating climate change as part of Defence policy and provide tangible examples of how the defence forces have adapted to meet the challenges of climate change.

Through sharing these experiences, we aim to increase cooperation and to develop and strengthen long-term exchanges with our partners in particular in the Indo-Pacific region to ensure Defence and Security organisations are prepared for the challenges climate change will intensify in the coming decades.

Mr. Tom Haristias, Desk Officer, Climate Security, Directorate General for International Relations and Strategy (DGRIS) of the French Ministry of Armed Forces, France

BIO



Tom Haristias is the desk officer for climate security at the Directorate general for international relations and strategy (DGRIS) of the French Ministry of Armed Forces. He works on the implications of climate change on defense and security and supervises the “climate and defense” observatory – a research tool developed in 2016 that aims at bettering the MoD understanding of the subject. He previously worked at the French CNO Cabinet. Tom is a graduate of the University of Ottawa, where he received a Bachelor of Honors in international management. He also holds a master’s degree in international relations from the Paris School of Higher International and Politic Studies.

Ms. Jane Neilson, Senior Policy Analyst (Climate Change and Security), Ministry of Defence, New Zealand

BIO

See above.

MODERATOR: Ms. Chesna Cocker, Senior Analyst, Ministry of Defence, New Zealand

BIO

Chesna is a senior analyst at the New Zealand Ministry of Defence, working on Pacific and national security issues. She joined the Ministry in September 2020. Prior to working at the Ministry she worked as a diplomat with the Ministry of Foreign Affairs and Trade from 2009 – 2020. She held roles in Europe, South East Asia and APEC divisions. Chesna completed two postings in the Pacific (Tonga and Papua New Guinea), completing her most recent role as New Zealand's Deputy High Commissioner to Papua New Guinea in July 2019.

Chesna completed her tertiary study at Victoria University of Wellington. She holds a Bachelor degree in English and Theatre and Film, a post graduate diploma in secondary teaching and a Masters in Development Studies.

SESSION 2: Conducting Disaster Relief in the COVID-19 Epidemic

Mr. Yuki Yamamoto, Deputy Director, International Policy Division, Japan Ministry of Defense, Japan

BIO



Yuki Yamamoto graduated from University of Tokyo in March 2010, with a Bachelor of Liberal Arts, and began his career with the Ministry of Defense in Equipment Policy Division. From 2011 to 2012, he was assigned to International Operation Division and Personnel Division, followed by the promotion to Chief in Aircraft Division in December 2012. Until June 2014, he was engaged in various procurement programs including F-35, and next Air Force One. From June 2014, he studied at Syracuse University, New York, and completed his two-year overseas study in June 2016, with a Master of Public Administration and Master of Arts in International Relations.

He was then appointed as Deputy Director, General Affairs Division, Ministry of Defense, and engaged in coordination with the diet. In August 2017, he was seconded to Cabinet Satellite Intelligence Center as Deputy Director, Cabinet Intelligence and Research Office. After completing three-year seconded period, he returned to the Ministry of Defense as Deputy Director, International Policy Division, Ministry of Defense in August 2020 (current position). He is leading Regional Policy Unit, and in charge of defense cooperation and exchanges with countries such as ROK, New Zealand, Australia, India, and Canada.

ABSTRACT

In response to torrential rain in Western Japan (Kyushu area) in July 2020 during the COVID pandemic, Japan Self Defense Forces (JSDF) was engaged in disaster relief operations by fully implementing infection prevention measures. They successfully accomplished their month-long mission with none of the members infected with the virus.

Japan Ministry of Defense/JSDF would like to share lessons learned from HA/DR operations for torrential rain and typhoons during the COVID pandemic, including infection prevention measures among evacuees as well as among JSDF personnel, hoping that each country could make use of these lessons in their own response to natural disasters such as hurricanes and cyclones.

SESSION 3: Defense Responses to Climate Security Threats in the Indo-Pacific

Ms. Erin Sikorsky, Director, The International Military Council on Climate and Security, USA



BIO

Erin Sikorsky is the Deputy Director of the Center for Climate and Security (CCS), and the Director of the International Military Council on Climate and Security (IMCCS). Previously, she served as the Deputy Director of the Strategic Futures Group on the National Intelligence Council (NIC) in the US, where she co-authored the quadrennial Global Trends report and led the US intelligence community's environmental and climate security analysis. She is also the founding chair of the Climate Security Advisory Council, a Congressionally mandated group designed to facilitate coordination between the intelligence community and US government scientific

agencies. Ms. Sikorsky worked in the US intelligence community for over a decade. Prior to joining the NIC, she led teams covering a range of issues related to the Middle East and Africa. Ms. Sikorsky earned a Master of International Affairs at Columbia University, and a B.A. in government from Smith College.

ABSTRACT

The Indo-Asia Pacific region is highly exposed to climate change-driven hazards, including extreme hydrometeorological and heat events, sea level rise and acidifying oceans. These unprecedented hazards arrive in a region that already faces a broad spectrum of conventional, unconventional and hybrid security risks and challenges. This includes growing geostrategic competition such as maritime boundary disputes and military buildup in contested zones of the South China Sea, expanding military capabilities across many countries (three of which are seeking to develop nuclear triads), weapons of mass destruction (WMD) threats from North Korea, ongoing conflicts related to separatist movements and transnational violent extremist organizations, as well as piracy and serious organized crime. Climate change-exacerbated impacts such as increasing food and water insecurity, forced migration and displacement, disaster response and recovery that does not meet expectations, and broader economic impacts, can seriously complicate these existing security vulnerabilities - eroding coping capacities, increasing grievances and worsening underlying tensions and fragilities. Climate change impacts will interact with an evolving regional security landscape and likely give rise to new risks, which could emerge in ways that are foreseeable but difficult to predict.

These dynamics also have direct implications for regional militaries and the broader security sector. This includes increasing demand for Humanitarian Assistance and Disaster Relief (HADR) operations due to the rising frequency and intensity of extreme weather events, and related crises. Military capabilities will likely be essential to supporting comprehensive disaster resilience, and the long-range planning functions the military provides within government can influence their responses to threats that accelerate in the medium term. In this context, regional security communities may play an important role in managing current and future climate-related stressors, alongside and in support of development and diplomatic actors. These climate-driven phenomena are largely foreseeable, given the strength and accuracy of climate models to date. Armed with this foresight, security communities can preparing for the unavoidable effects of climate change through advancing adaptation, and working with other sectors to prevent adverse security outcomes through significant climate mitigation.

SESSION 4: Incorporating Women, Peace & Security in Addressing Climate Change Security Threats

Ms. Sharon Bhagwan Rolls, Pacific Global Partnership for the Prevention of Armed Conflict, Fiji

BIO



Sharon Bhagwan Rolls has been working on the localisation³⁰ of UNSCR1325 since its adoption on October 31, 2000 and contributed to the development and adoption of the Pacific Regional Action Plan on Women, Peace and Security. She served on the UN's high-level advisory group to the Global Study on UNSCR1325 and contributed to the successful inclusion of "climate change" in UNSCR2242 adopted that year. As Gender Liaison of the International Steering Group of the Global Partnership for the Prevention of Armed Conflict (GPPAC) since 2009, she has successfully contributed to the adoption of a Gender Transformative approach to the application of WPS in conflict prevention and human security action across the global

network and establishment of a global network of gender focal points across the 15 regions of G-PAC. Sharon continues to work on progressing the peace-development-humanitarian nexus approach in her advocacy work at regional and global level. She is presently a task force member of the Generation Equality Forum WPS and Humanitarian Action Compact. Sharon is presently the Board Chair of GPPAC and the co-chair of the Global Fund for Women Board of Directors. She is the Technical Adviser of the Shifting the Power Coalition.

ABSTRACT

The adoption of United Nations Security Council Resolution 1325 (Women, Peace and Security) demonstrated what is possible when women's activists and civil society step forward supported by



member states and the multilateral system to define our peace and security. UNSCR 1325 brought women into the UNSC. It has enabled women to be innovative and redesign processes to ensure our inclusion.

As we live with the reality of climate change women peacebuilders of the Global Partnership for the Prevention of Armed Conflict (GPPAC) Pacific network amplify the call for a shift from reaction to prevention. From traditional militarized responses during humanitarian crises to inclusive human security and preventative action approaches.

The consultation for the 2020 Peacebuilding Architecture Review on Gender, Climate and Peace in the Pacific was a reminder of the vital role the Pacific women peacebuilders played to integrate language on climate change in the Global Study on UNSCR1325 and supported the innovative – at that time – language of Security Council Resolution 2242 on the impacts of climate change and the global nature of health pandemics on the trajectory of conflict.

That is also why in 2016 GPPAC Pacific members forged an important feminist alliance with women rights activists from the humanitarian sector and disability movement. The establishment of the Shifting the Power Coalition the only women-led regional alliance focused sustaining support for diverse women leaders to increase capacity to engage in humanitarian and disaster coordination mechanisms is bringing attention to the inclusive peace-development-humanitarian nexus approach through women's leadership.

We are showing how to redesign the table and shift the power to those who have the biggest stakes in sustaining peace and human security in the region: women, young people, faith leaders and our local communities. That is how we can realize inclusive Climate Security.

SESSION 5: Building Climate Capabilities for Island Nations

Ms. Nenenteiti Teariki-Ruatu, Director, Ministry of Environment Lands and Agricultural Development, Environment & Conservation Division, Kiribati

BIO

Unavailable at the time of posting.

ABSTRACT

Kiribati is both a least-developed country and a small island developing state in the Pacific region. As one of the few true atoll states around the world, Kiribati is one of the highly vulnerable frontline countries to the impacts of climate change. Climate change is one of the Government's important development priorities at the national level. Short, medium, and long term impacts of climate change threaten the people, their health, and homes, as well as threatening sustainable development and the three pillars - environment, economic, and socio-cultural aspects of society in Kiribati.

Long-term planning to respond to climate change impacts is critical to the Government of Kiribati and has established two important mandates and portfolios to adequately cover climate change issues. The Office of the President is responsible for climate change policy coordination and



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responses, while the Ministry of Environment, Lands, and Agricultural Development (MELAD) is responsible for the climate change technical implementation and science/research. Simultaneously, the Ministry of Finance and Economic Development (MFED) is responsible for the climate finance portfolio. These are the primary Government Ministries with important leading roles in national matters of importance that surround the climate change policy, coordination, and response needs; climate change science and technical implementations or interventions needs; and climate finance needs. Supporting roles and responsibilities of all other Ministries, Non-Government Organizations (NGOs), Church Groups, and local communities in either climate change adaptation and/or mitigation, are fully recognized and this is centralized with the establishment of the Kiribati National Expert Group (KNEG).

MELAD, through the Environment & Conservation Division (ECD), has the mandates on the climate change science and technical implementation at the national level. This is embedded in the overall mandate that focus on addressing environmental problems that threatens and have the potential to undermine the protection, management, and sustainable utilization of the atolls' environment and the terrestrial and marine natural resources found therein at the national level. Thus, all climate change technical interventions are linked to enhancing either the climate change adaptation and/or climate change mitigation at all levels of society. Multi-disciplinary and multi-sectorial approaches are central in these interventions.



Day Three

Networking Working Group



DAY 3 - NETWORKING WORKING GROUP

Note: Time Zones listed are Hawaii Standard Time (GMT-10)

AGENDA: WEDNESDAY, 24 FEBRUARY 2021

1 5 0 0 - 1 5 3 0	EXPLORE EXPO & LOUNGES
1 5 3 0 - 1 6 0 0	Overview of Networking Working Group Structure & Activities <i>COL Mike Goodyer, Environmental Security Advisor, Headquarters Joint Operations Command, Australia</i> <i>AIRCDRE Kirrily Dearing, Director General, Support Operations J1/4, HQJOC, Department of Defence, Australia</i>
1 6 0 0 - 1 6 3 0	SESSION 1: UN Environmental Management Handbook for the Military Commanders in Peace Operations (2021) <i>Colonel Stephanie Tutton, Chief of the Policy and Doctrine Team, Office of Military Affairs, Department of Peace Operations, United Nations</i>
1 6 3 0 - 1 7 0 0	ONLINE NETWORKING
1 7 0 0 - 1 7 2 0	SESSION 2: Green Conversations Event Series: A Multi-Disciplinary Dialogue on Conservation <i>Ms. Piyumi Kalyanawansa, Head of Operations, Environmental Foundation Limited, Sri Lanka</i>
1 7 2 0 - 1 7 4 0	SESSION 3: Building a Regional Response Against Environmental Security Threats in the Indian Ocean <i>Dr. David Brewster, Senior Research Fellow, National Security College, Australian National University, Australia</i>
1 7 4 0 - 1 7 5 0	BREAK
1 7 5 0 - 1 8 1 0	SESSION 4: Blackrock Redevelopment project (Fiji) Sustainable Building Design <i>LTCOL Karl Reynolds, International Policy Division, Australian Defence Force, Australia</i>
1 8 1 0 - 1 9 1 0	VISIT LOUNGES

Overview of Networking Working Group Structure & Activities

Colonel Michael Goodyer, Environmental Security Advisor, Headquarters Joint Operations Command, Australia



BIO

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); Masters Degree in Defence Studies (Deakin); Masters Degree in Management Studies (UNSW); and Master of Environmental Management and Restoration (Charles Sturt).

AIRCDRE Kirrily Dearing, Director General, Support Operations J1/4, HQJOC, Department of Defence, Australia



BIO

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.

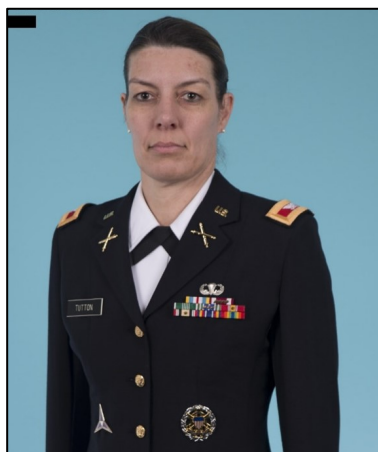
AIRCDRE Dearing's interests include eating good food cooked by someone else, watching and participating in a range of different sports and travelling.

She has a Master's in Strategy and Management.

SESSION 1: United Nations Environmental Management Handbook for Military Commanders

Colonel Stephanie Tutton, Chief of the Policy and Doctrine Team, Office of Military Affairs, Department of Peace Operations, United Nations

BIO



Colonel Stephanie J. Tutton is currently seconded to the United Nations, Office of Military Affairs as the Chief of Policy and Doctrine. She was deployed to Bamako, Mali, as the Command Group Advisor to the MINUSMA Force Commander from late 2018 through early 2020. Her responsibilities included oversight of the Advisors and Special Staff, strategic reporting to the United Nations, and Budget management. Prior to her deployment she served at the Joint Requirements Assessment Division Chief (J8), Joint Staff, the Pentagon, Washington, D.C. She was responsible for providing the Chairman, JCS assessments on force structure issues and capability assessments of US military forces. She was responsible for the DoD Joint Capabilities Integration and

Development System (JCIDS) policy, overall management of JCIDS system, and support to the Joint Requirements Oversight Council for validation of Joint military requirements.

Colonel Stephanie Tutton graduated from the U.S. Military Academy in 1991 with a degree in Economics. She was commissioned into the Field Artillery and served in numerous artillery units for eleven years including Battery Command at Fort Sill, Oklahoma and a second Command at Fort Carson, Colorado. She is now an Operations Research/Systems Analyst and has served in assignments that included support to Korea strategy and force structure, planning and strategy for Africa, and NATO operations.

ABSTRACT

Dedicated attention to the potential environmental impact as a result of United Nations peace operations has increased in the past decade which has led to calls for environmental strategies to strengthen our responsibility to “do no harm” and to leave a positive legacy. The *Action for Peacekeeping* initiative launched by the UN Secretary-General in 2018 to enhance peacekeeping performance reaffirms that UN military, police, and civilian staff all need to act responsibly. The Declaration of Shared Commitments which was endorsed by over 150 Member States and organizations under this initiative recognizes the importance of sound environmental management and environmentally responsible solutions for peace operations and mandate delivery.

In this light, the Office of Military Affairs of the United Nations is currently developing its first *United Nations Environmental Management Handbook for Military Commanders in UN Peace Operations* in collaboration with the Department of Operational Support with a view to deploying responsible missions that achieve maximum efficiency in their use of natural resources and operate at minimum risk to people, societies and ecosystems. This presentation will introduce this

handbook for military commanders to be used when planning and implementing environmental management actions in peace operations across five pillars: energy, water and wastewater, waste, wider impact, and management systems. The handbook can be used as a tool to increase awareness that failure to integrate environmental management considerations into planning increases the risks to the health and safety of military personnel and civilians as well as risks to the environment of the host country.

SESSION 2: Green Conversations Event Series: A Multi-Disciplinary Dialogue on Conservation

Ms. Piyumi Kalyanawansa, Head of Operations, Environmental Foundation Limited, Sri Lanka

BIO



Ms. Piyumi Kalyanawansa serves as the Head of Operations at Environmental Foundation (Guarantee) Limited, a premier, non-profit, civil society organisation in Sri Lanka that is mandated to conserve the environment through legal and scientific means. In addition to engaging in public interest litigation and conservation and research projects, the organisation strives to raise awareness of current environmental issues amongst a wide range of stakeholders.

Equipped with a background in science and the arts, Piyumi is responsible for managing overall operational activities of EFL in addition to attending to administrative work. She is an MBA from the University of Wales Trinity Saint David, UK and holds an MSc in Biodiversity, Ecotourism and Environment Management from the University of Peradeniya, Sri Lanka. Moreover, she has been involved in environmental investigation work carried out by the organisation for the last four years, and takes special interest in protected area management, sustainable design and waste management. Prior to her involvement in the environmental sector, Piyumi has been a practicing designer focusing on environment friendly design.

ABSTRACT

Sri Lanka's conservation of its natural resources stands at a crossroad amidst a growing population and accelerated development efforts. Environmental damage continues unabated despite the efforts of multiple government authorities, and concerned academics and ordinary citizens. This degradation has left society insecure. With a citizenry that often lacks basic scientific knowledge of the surrounding diverse ecosystems, ignorance too often causes damage. Stakeholder disunity exacerbates this.

So Environmental Foundation Limited (EFL) organized the Green Conversations event series to stimulate impactful knowledge sharing. Each Green Conversations 90-minute event discusses a

pressing Sri Lankan topic, with presentations from a multi-disciplinary panel representing the government, academia, private/business sector, civil society, legal fraternity inter alia the military.

The general public has been keen to learn more and share across society.

SESSION 3: Building a Regional Response Against Environmental Security Threats in the Indian Ocean

Dr. David Brewster, Senior Research Fellow, National Security College, Australian National University, Australia

BIO



Dr. Brewster is a Senior Research Fellow with the National Security College, Australian National University, where he is one of Australia's leading experts on security in the Indian Ocean region.

Dr Brewster's books include *India as an Asia Pacific power*, about India's strategic role in the Asia Pacific and *India's Ocean: the story of India's bid for regional leadership* which examines India's strategic ambitions in the Indian Ocean. His latest edited volume is *India and China at Sea: Competition for Naval Dominance in the Indian Ocean*.

Dr. Brewster's recent reports include:

- Australia's Second Sea: Facing our Multipolar Future in the Indian Ocean which proposes a new economic and security strategy for the Indian Ocean region.
- Ocean Horizons: Strengthening maritime security in Indo-Pacific island states, Australian Strategic Policy Institute, 2019 (with Anthony Bergin and Aakriti Bachhawat).
- Geo-environmental Security Challenges in the Indian Ocean Region: Setting a Regional Agenda, Emirates Diplomatic Academy, 2019.
- Environmental security in the eastern Indian Ocean, Antarctica, and the Southern Ocean: A risk mapping approach, National Security College, 2019 (with Anthony Bergin, François Gemenne and Paul Barnes).

ABSTRACT

Recent incidents involving the explosion and fire on board a supertanker off Sri Lanka and a potentially disastrous oil spill in Mauritius are reminders of the range of environmental security threats faced in the Indian Ocean.

For many Indian Ocean countries, especially the island states, environmental issues are among their highest security priorities. It seems increasingly likely that responding to environmental threats will become an important future mission for the Australian Defence Force, in cooperation with relevant civil and military agencies across the region. But there is currently a lack of standing arrangements among Indian Ocean states to address these threats.

A recent Australian Senate inquiry on Australia-France relations recommended that Australia should work with France and other like-minded countries to address environmental security threats including through the establishment of an Indian Ocean environmental security forum. The importance of regional cooperation on environmental issues was also discussed at the first ever trilateral meeting of foreign secretaries from Australia, France and India in September.

Australia should consider working with partners such as France, India, the United States and Japan (perhaps as a 'Quad Plus' project) in developing collaborative arrangements. This would allow for the pooling of expertise and resources of the Quad Plus countries and other local partners, with a focus on collaboration among military and civilian officials.

Efforts to develop collaborative mechanisms to address environmental security risks in the Pacific, including through the Pacific Environmental Security Partnership, will provide valuable lessons for a similar collaborative mechanism focused on the Indian Ocean.

SESSION 4: Blackrock Redevelopment Project (Fiji) Sustainable Building Design

LTCOL Karl Reynolds, International Policy Division, Australia

BIO



LTCOL Karl Reynolds entered the Australian Defence Force in 1998 and studied a Bachelor of Civil Engineering. Following graduation from the Royal Military College, LTCOL Reynolds followed a career path and professional development stream that provided him with significant military engineering experience in operating in joint, interagency and multinational teams. Throughout his career he has continued to build on his qualifications through continued professional development programs and instructional responsibilities in the fields of horizontal and vertical construction techniques, as well as construction and project management skills. In 2019-20, LTCOL Reynolds was the Commanding Officer and Chief Engineer of 19th Chief Engineer Works, responsible for significant domestic and international infrastructure projects along with the responsibility for developing and maintaining the Australian Army's managed works capability.

As part of the Governments 'Pacific Step-Up' Initiative, LTCOL Reynolds is currently posted to International Policy Division as the Deputy Director of Infrastructure and Contracting. He is deeply involved in the planning and delivery of key strategic infrastructure projects in the Indo-Pacific in order to support the Department of Defence's International Policy Division and Whole of Government objectives through enhanced partner nation security capabilities.



ABSTRACT

Blackrock Camp redevelopment project (Fiji) – sustainable building design – in the context of networking and knowledge sharing to improve resilience to climate change impacts in PICs.

As part of the Australian Government's Pacific Step-up, the Department of Defence is partnering with Fiji to redevelop the Blackrock Peacekeeping and Humanitarian Assistance and Disaster Relief Camp (Blackrock Camp) for the Republic of Fiji Military Forces.

The new facilities at Blackrock Camp will support Fiji's security and military training requirements and enhance Fiji's ability to respond to natural disasters and other humanitarian crises in the region.

An extensive design and consultation process was undertaken to ensure environmental sustainability principles were suited to Fiji. The new buildings at Blackrock Camp were designed to enhance the use of each space and achieve good performance using low energy systems to maintain comfort. All major buildings for the project are positioned so that operational spaces have access to daylight and external views, and the harsh effects of the summer sun are minimised through good design.

The Blackrock Camp redevelopment project is a significant infrastructure project that is due for completion in 2021.



Day Four

Mitigation Working Group



Pacific Environmental Security Forum

**DAY
4**

DAY 4 - MITIGATION WORKING GROUP

Note: Time Zones listed are Hawaii Standard Time (GMT-10)

AGENDA: THURSDAY, 25 FEBRUARY 2021

1 5 0 0 - 1 5 3 0	EXPLORE EXPO & LOUNGES
1 5 3 0 - 1 5 4 5	Overview of Mitigation Working Group Structure & Activities <i>Mr. Christopher Sholes, Environmental Security Program Manager, U.S. Indo-Pacific Command, USA</i>
1 5 4 5 - 1 6 1 5	ONLINE NETWORKING
1 6 1 5 - 1 6 3 5	SESSION 1: US Indo-Pacific Command: Environmental and Cultural Stewardship <i>Major General Suzanne P. Vares-Lum, Mobilization Assistant to the Commander, U.S. Indo-Pacific Command, USA</i>
1 6 3 5 - 1 6 5 5	SESSION 2: Sea Level Rise and Implications to the Philippines as an Archipelagic Nation <i>Dr. Laura David, Director, Marine Science Institute, University of Philippines, Philippines</i>
1 6 5 5 - 1 7 0 5	BREAK
1 7 0 5 - 1 7 2 5	SESSION 3: Creating Models of Climate Change Adaptation & Mitigation through Multi-stakeholder Partnerships & Smartly Designed Projects <i>Dr. Rashneh N. Pardiwala, Founder & Director, Centre for Environmental Research and Education (CERE), India</i>
1 7 2 5 - 1 7 4 5	SESSION 4: Marine Protected Areas - Sister Sites: American Samoa and Palau <i>Mr. Atuatasi Peau, Superintendent, National Marine Sanctuary of American Samoa, American Samoa</i> AND <i>Dr. Yimnang Golbuu, CEO, Palau International Coral Reef Center, Palau</i>
1 7 4 5 - 1 7 5 5	BREAK
1 7 5 5 - 1 9 5 5	Project Collaboration Development Sessions* <i>One-on-One sessions with country representatives and SMEs</i> *Also to take place throughout the day
1 9 5 5 - 2 0 5 5	VISIT LOUNGES



Overview of Mitigation Working Group Structure & Activities

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

BIO

See above.

SESSION 1: U.S. Indo-Pacific Command: Environmental and Cultural Stewardship

Major General Suzanne P. Vares-Lum, Mobilization Assistant to the Commander, U.S. Indo-Pacific Command, USA

BIO



Major General (MG) Suzanne P. Vares-Lum is the Mobilization Assistant to the Commander, U.S. Indo-Pacific Command (USINDOPACOM) at Camp H. M. Smith, Hawaii. In this role, MG Vares-Lum served as the Acting Deputy Commander from 27 JUL to 17 SEP 2019, and Acting Chief of Staff from 27 SEP 19 to 2 DEC 19. Prior to her current assignment, she served as the Mobilization Assistant to the J5, Director of Strategic Plans and Policy, U.S. Pacific Command from OCT 2015 to MAY 2018. Major General Vares-Lum joined the Army Reserve as a Private First Class in 1986 and later commissioned as a Distinguished Military Graduate in the Military Intelligence Corps on May 15, 1988 through the Army ROTC program at the University of Hawaii at Manoa.

Previous assignments include: Trailblazer Platoon Leader, 103rd (CEWI) Military Intelligence Battalion, 3rd Infantry Division; Company Executive Officer, Headquarters and Headquarters Support, 103rd MI BN; Division Artillery Fire Support Intelligence Officer, 3rd Infantry Division, Wurzburg, Germany; Battalion S-2, 29th Support BN; Commander, 229th Military Intelligence Company; G-2, 29th Separate Infantry Brigade; Commander, 2nd Battalion, 298th Multifunctional Training Unit, Hawaii Army National Guard (HIARNG); J2, Joint Forces Headquarters, Hawaii National Guard; Commander, 298th Regiment, Multifunctional Training Unit (RTI); and Hawaii National Guard Vice Chief of the Joint Staff and Chief of the Joint Staff (Army and Air National Guard).

Major General Vares-Lum established and led the Joint Intelligence Center in Balad, Iraq during Operation Iraqi Freedom III.

Her military schools include the Military Intelligence Officer Basic Course, Military Intelligence Officer Advanced Course, Combined Arms and Services Staff School, Command and General Staff Officer's Course, the U.S. Army War College (DDE), Airborne School, and Air Assault School.



Major General Vares-Lum received a Bachelor of Arts degree in Journalism in 1989, a Master of Education in Teaching in 1996 from the University of Hawaii at Manoa, and a Master of Strategic Studies degree in 2011 from the U.S. Army War College.

Her awards include the Defense Superior Service Medal, Legion of Merit, Bronze Star Medal, Meritorious Service Medal, Army Commendation Medal, Army Achievement Medal, National Defense Service Medal, and Global War on Terrorism Expeditionary Medal, Armed Forces Reserve Medal, Army Service Ribbon, Overseas Service Ribbon, and the Iraqi Campaign Medal. She is also a 2017 recipient of the Ellis Island Medal of Honor.

ABSTRACT

Environmental and cultural resources are valuable aspects of the many countries within the Indo-Pacific region. Proper stewardship of these assets are managed variously by governments and other entities. Major General Vares-Lum provides the INDOPACOM perspective on a method and philosophy for addressing preservation as a priority.

SESSION 2: Sea Level Rise and Implications to the Philippines as an Archipelagic Nation

Dr. Laura David, Director, Marine Science Institute, University of Philippines, Philippines

BIO



Dr. Laura David is a Professor of Oceanography. She makes use of remote sensing and modelling to explore how ocean physics influences the distribution and state of ocean flora and fauna. Currently, she is also the Director of UP Marine Science Institute, Chair of the CHED Technical Committee in Marine Science, part of the National Panel of Technical Experts of the Climate Change Commission, Climate Fellow of the OML Center, and Board member of TAO-Philippines, a women-led non-profit, NGO of technical professionals who help guide housing issues in urban and rural areas. Internationally, she is also a Scientific Steering

Committee Member of Geo-BLUE Planet and Academy Member of Future Earth Coasts. Both organizations are committed to people-relevant ocean science.

ABSTRACT

Filipinos are highly reliant on its marine resources for food and livelihood. At the same time the Philippines is recognized to have high exposure to climate changes such as increase in ocean temperature, disturbed water budget and sea level rise. This study describes the likely impact of these changes to the different coastal habitats and consequently to our food security. Using distribution maps of habitats, fisher population and fisher density, the most vulnerable provinces were identified. Site specific interventions include protection of all three habitats and supplemental livelihood for the fishers. In addition, storm surge and sea level rise simulations were used to investigate which municipalities in these identified vulnerable provinces are most vulnerable to

coastal inundations. Interventions include relocation and technical assistance for sea level rise adaptations. Finally, the study introduced the concept of using the carbon sequestration of our mangrove and seagrass and proposed that the Philippines studies the possibilities of doing a debt trade in the protection of its coastal habitats for its carbon sequestration and its marine biodiversity.

SESSION 3: Creating Models of Climate Change Adaptation & Mitigation through Multi-stakeholder Partnerships & Smartly Designed Projects

Dr. Rashneh N. Pardiwala, Founder & Director, Centre for Environmental Research and Education (CERE), India

BIO



Dr. (Ms.) Rashneh N. Pardiwala is an Ecologist from the University of Edinburgh having specialized during her MSc and PhD in the field of Climate Change. She is the Founder & Director of the Centre for Environmental Research and Education (CERE), a Mumbai-based not-for-profit organization that works to promote environmental sustainability through formal education, government collaborations, corporate partnerships and public awareness campaigns. CERE has successfully completed many rural and urban, national-level research and development projects.

In 2005, Dr. Pardiwala was recognized as one of the youngest 'Social Entrepreneur for Change' and was awarded the Ashoka Fellowship. In 2009 Dr. Pardiwala was selected as one of Asia's 21 Young Leaders by Asia Society. In 2011, Rashneh was selected by the Svenska Institute in Stockholm for Fellowship program on Corporate Responsibility and Sustainability. In 2013, Dr. Pardiwala was awarded the Ford Fellowship to study at Columbia University, NY. Dr. Pardiwala presently serves as a Director on the Board of Studies, St. Xavier's College, Mumbai, is a Subject Expert to for prominent educational foundations and charitable trusts.

ABSTRACT

Climate change presents a serious challenge for the 21st century and needs to be a priority for countries across the world. Actions by the government alone, however, are not enough. Addressing this and other environmental challenges does not only become the responsibility of a country, but also every organisation, company and individual. Over the past 18 years, the Centre for Environmental Research and Educations (CERE) has successfully implemented several projects that address the issues of Urban Sustainability and Climate Change by bringing together companies, civil society organisations and the local community. In this presentation, we will focus on three of CERE's programs: (1) Urban Afforestation (UAP), 2) Schools on Solar (SoS) and 3) Rainwater Harvesting. Through these programs, we will explore how CERE builds successful models of climate change mitigation and adaptation at the community level and leverages partnerships with educational

institutions, governmental entities, and corporates. CERE capitalises on its multi-layered project designs that bring several benefits to all its varied stakeholders which include carbon offsets, education, financial gains, brand visibility, community goodwill and legal compliances. Projects woven with beneficial elements for all the participating stakeholders tend to scale up faster and easily. This profitable, multi-stakeholder, participatory approach highlights the importance of designing projects differently and goes beyond identifying technical solutions to climate change. As such the presentation may have relevance to the Education, Policy and Networking Groups as well.

SESSION 4: Marine Protected Areas – Sister Sites: American Samoa and Palau

Mr. Atuatasi Peau, Superintendent, National Marine Sanctuary of American Samoa, American Samoa

BIO



Mr. Atuatasi Lelei Peau is Acting Superintendent for the National Marine Sanctuary of American Samoa. In his position he is the liaison for relationships with the American Samoa Government in Marine/Ocean conservation. He holds a Master's Degree in Urban and Regional Planning from the University of Hawai'i at Manoa and a Bachelor's Degree in Political Science from UCLA. He has more than 30 years of service from the American Samoa Government as well as international and regional partnerships from service on the US Coral Reef Task Force (USCRTF) and MPA Federal Advisory Committee before joining the sanctuary in 2014. He holds a High Talking Chief Title of "Atuatasi" from his village of Fagasa, American Samoa.

Dr. Yimnang Golbuu, CEO, Palau International Coral Reef Center, Palau

BIO



Dr. Yimnang Golbuu is the CEO at the Palau International Coral Reef Center. In 2012, he received a commendation by the Palau National Congress for his contributions to the sustainability of Palau's natural resources. In 2013, he was awarded a Pew Fellowship in Marine Conservation. He has served as a board member of Palau Conservation Society, Chairman of the Northern Reef Management Planning Team and Chairman of the Protected Areas Network Technical Committee and Vice President of the International Society for Reef Studies. Presently, he is a Member of the Northern Reef Co-Management Committee, the Palau National Commission of UNESCO, Palau National Marine Sanctuary Executive Committee, and Palau's Point of Contact (POC) for the US Coral Reef Task Force. Yimnang received his B.S. in Biological Sciences from the University of California at Davis,



M.S. in Biology from the University of Guam and Ph.D. in coral reef ecology at Southern Cross University in Lismore, Australia.

ABSTRACT

The US and Palau have agreed on shared commitments to conserving and protecting coastal and marine ecosystems, marine resources, and cultural heritage through the implementation of Large-Scale Marine Protected Area's via a signed Memorandum of Understanding (MOA.)

The joint effort will foster cooperation on activities of mutual interests and explore the potential for strengthening effective MPA management to support thriving social- ecological communities and to build coastal resilience. The sister sanctuary agreement between the National Marine Sanctuary of American Samoa (NMSAS) and the Palau National Marine Sanctuary (PNMS) provides a unique opportunity to build on global Large-Scale MPA management, research, and enforcement. This partnership will focus on the development of mutually beneficial and management driven scientific research, best practices, capacity building and enhanced communication and education.

The Republic of Palau reaffirmed its commitment to global ocean conservation with the development of the PNMS in 2015, a no-take Large-Scale Marine Protected Area (LSMPA) that covers 80% (193,143 square miles) of Palau's Economic Exclusion Zone. This LSMPA, which came into effect in January 2020, builds on Palau's legacy of ocean conservation which now not only encompasses nearshore coastal environments but extends offshore and to the deep ocean. The overarching aim of the PNMS is to conserve Palau's ocean heritage and increase the sustainable contribution of the ocean to livelihoods and human wellbeing. This will be achieved through science driven MPA conservation and management, by nurturing stronger pelagic fisheries for Palauans and by attracting responsible tourism to Palau. The PNMS is thus committed to both ocean conservation as well as the development of sustainable ocean resources.

The National Marine Sanctuary of American Samoa (NMSAS) is the largest national marine sanctuary and is thought to supports the greatest diversity of marine life in the Sanctuary system. It is made up of six protected areas, covering 13,581 square miles of nearshore coral reef and offshore open ocean waters across the American Samoan Archipelago. NMSAS' management plan from 2012 describes goals to address sanctuary resource management issues, including community engagement, cultural heritage, ecosystem conservation, climate impacts, ocean literacy and enforcement.

PNMS and NMSAS share many management challenges and ecosystem characteristics. This new partnership provides an opportunity for knowledge exchange and capacity development for effective MPA management in a changing ocean.