



2018

NORTHEAST ASIA
REGIONAL
ENVIRONMENTAL
SECURITY
FORUM

PRESENTATION SUMMARIES

Co-sponsored by: | Mongolia Ministry of Defense & U.S. Indo-Pacific
Command



TABLE OF CONTENTS

Day 1 – Opening Ceremony

	Mr. Kurt Aufderheide, Political Section Chief, U.S. Embassy – Mongolia4
	Ms. T. BULGAN, Head of Green Development Policy and Planning Department, Ministry of Environment & Tourism, Mongolia6
	BG G. SAIKHANBAYAR, Chief of Strategic Policy and Planning Department, Ministry of Defense, Mongolia 7

Day 1 – Establishing an Environmental Security Habit of Dialogue

	" <i>Environmental Security Opportunities through the State Partnership Program</i> ," by Colonel Kimberly DeRouen Slaven, Chief of the Joint Staff, Alaska National Guard, USA.... 9
	" <i>Environmental Security: USINDOPACOM Perspective</i> ," by Mr. Christopher Sholes, Environmental Program Manager, U.S. Indo-Pacific Command..... 11
	" <i>Mongolia Environmental Security Overview</i> ," by Ms. T. BULGAN, Head of Green Development Policy and Planning Department, Ministry of Environment & Tourism, Mongolia 12
	" <i>China Environmental Security Overview</i> ," by Senior Colonel XIE Chaoxin, Professor, Army Logistics University, People's Liberation Army, China 13
	" <i>Korea Environmental Security Overview</i> ," Mr. SUNG Gil Soo, Director, Environmental Cooperation Team, Ministry of National Defense, Republic of Korea 14

Day 2 – Food-Water-Energy Nexus

	" <i>Introduction to Food-Water-Energy Nexus Theme</i> ," by BG Chimeddorj SOSORBARAM, Director, Institute for Defense Studies, National Defense University, Mongolia 15
	" <i>Major Communicable Diseases in Livestock in Recent Years in Mongolia</i> ," by Mr. BATMUNKH Damdindorj, Director General, Livestock Policy, Ministry of Food, Agriculture and Light Industry, Mongolia 17
	" <i>Dietary Reference Intakes for Mongolians</i> ," by Dr. J. TUYATSETSEG, Professor and Director of Industrial Technology School, Mongolian University of Science and Technology, Mongolia 18
	" <i>Ecological Perspectives on Previously Used Military Sites</i> ," by Dr. Associate Professor and Lieutenant Colonel OYUNTSETSEG Luvsandash, Senior Specialist of Strategic Policy and Planning Department, Ministry of Defense, Mongolia 21



TABLE OF CONTENTS (CONTINUED)

	" <i>State Policy on Energy Sector</i> ," by Mr. Sh. GANZORIG, Specialist of Policy and Planning Department, Ministry of Energy, Mongolia	23
---	---	----

Day 3 – Environmental Security in Contingency Operations

	" <i>Introduction to Contingency Operations Theme</i> ," by Brigadier Craig Dobson, Director General Support (J1/J4), Headquarters Joint Operations Command (DGSPT HQJOC), Australia	25
	" <i>Environmental Security as a Cause / Threat to Instability</i> ," by Mr. COL Mike Goodyer, Senior Environmental Planner, SPT Branch, Headquarters Joint Operations Command, Australia	27
	" <i>The United Nations and Environmental Peacebuilding</i> ," by Dr. Lisa Guppy, Disaster and Conflict Regional Coordinator (Asia/Pacific, United Nations Environment Programme (UNEP)	28
	" <i>Heritage Under Fire: Preservation and Protection of Heritage</i> ," by LCDR Andrea Argirides (Royal Australian Navy), PhD, Deputy Chief Joint Effects Headquarters Joint Operations Command, Australia	29
	" <i>Benefits of Incorporating International Standards into Contingency Operations Planning</i> ," by MAJ Travis Collins, Environmental Planner, Headquarters Joint Operations Command, Australia	30

Day 4 – Maintaining an Environmental Security Habit of Dialogue

	" <i>Identifying, Evaluating, and Selecting Environmental Security Projects</i> ," by COL Jeffrey Bryan, Civil Affairs, J9, U.S. Indo-Pacific Command	31
	" <i>Proposed Future Environmental Security Project for Mongolia</i> ," by COL Lhundev BATTSENGEL, Vice Director, National Defense University, Mongolia	33
	" <i>Proposed Future Environmental Security Project for Mongolia</i> ," by Dr. Associate Professor and Lieutenant Colonel OYUNTSETSEG Luvsandash, Senior Specialist of Strategic Policy and Planning Department, Ministry of Defense, Mongolia	34
	" <i>2019 Pacific Environmental Security Forum Proposal</i> ," by Ms. Jane Neilson, Climate Change and Security Policy, Ministry of Defence, New Zealand	36

Day 4 – Closing Ceremony

	CAPT Jeffrey Deviney, Joint Engineer, U.S. Indo-Pacific Command, United States of America	38
	Mr. T. DULAMDORJ, Deputy Minister, Ministry of Defense, Mongolia	40



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

Date: 18 September 2018

Time: 0900 - 0910

Theme: Opening Ceremony

Speaker:

Mr. Kurt Aufderheide, Political Section Chief, U.S. Embassy – Mongolia



Biography:

Kurt Aufderheide joined the State Department's Foreign Service in 2002, serving his first assignment in Moscow, Russia. A tour in the department's Bureau of Intelligence and Research (INR) was followed by service in Guangzhou, China, via language training in Beijing. Kurt subsequently served in political-military positions in Baghdad, Iraq, and Tokyo, Japan. He was assigned to Embassy Ulaanbaatar as Political Section Chief in 2017.

Statement:

Thank you for attending the 8th Annual Regional Environmental Security Forum hosted here in Ulaanbaatar, Mongolia. I am grateful that each of you has taken the time out of your busy schedules to be here with us. It is encouraging to see so many individuals who are dedicated to improving the environments in which we live.

Over the coming week, international representatives will meet to discuss and plan ways to combat environmental security concerns not only in Mongolia but throughout the region. You all are here today because you understand what few do: environmental security is central to national security. For this reason, it is imperative that we maintain focus, expand cooperation, and continue to improve our understanding of the many challenges facing our environment today.

This week you will have the opportunity to look at many facets of environmental security, such as international communication and coordination channels, the food-water-energy nexus, and environmental security in contingency operations. This forum gathers experts, policy makers, and dedicated professionals to advance our mutual security goals by strengthening regional coordination, increasing our awareness of environmental security challenges, and developing concrete measures we can take to mitigate environmental threats.

I would like to note that Mongolia has taken serious steps towards enhancing its environmental security, and has shown their dedication in developing many civil and military conservation projects. They have actively participated in previous forums and have benefitted from hearing about similar projects throughout the region. For example, Mongolia implemented the Integrated Water Resource Management project, which improved water quality, contributed to groundwater modeling, and has had a positive impact on rural and urban populations. One of the highlights of this forum will be when Mongolia provides us with a valuable glimpse into their future plans that will undoubtedly build on the already significant steps taken to improve environmental security in the region.



Finally, I would like to thank the Mongolian Ministry of Defense and Ministry of Environment for being wonderful hosts and for providing the opportunity to learn from their environmental security leadership, and to see some of the rich culture that Mongolia offers. I truly appreciate the efforts of Mongolia to gather us together to continue important discussions on regional environmental security challenges and to jointly develop a strong unified strategy.

I encourage all of you to make the most of this opportunity, to share the great work your nations are doing, and to bring home with you a renewed sense of inspiration and dedication as we tackle this important challenge together.



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

Date: 18 September 2018

Time: 0910 - 0920

Theme: Opening Ceremony

Speaker:



**Ms. T. BULGAN, Director General, Department of Green Development Policy and Planning,
Ministry of Environment & Tourism, Mongolia**

Biography:

Mrs. T. Bulgan has been working as Director General for the Department of Green Development Policy and Planning, Ministry of Environment and Tourism since 2013. Previously, she held positions as senior officer at the National Security Council of Mongolia, consultant at Standing Committee on Environment, Food and Agriculture, Secretariat of the State Great Khural (Parliament) of Mongolia, engineer, chief engineer at Central Laboratory of Environmental Monitoring. She graduated from the State Hydrometeorological University of Sankt-Petersburg, Russia and completed a master of the National University of Mongolia.

Statement:

Ms. Bulgan outlined the challenges Mongolia faces relating to climate change and depilation of resources. Mongolia is one of the most vulnerable countries in the world to climate change and understands the importance of improving environmental security. We have a positive relationship with the USA, and the U.S. Army Corps of Engineers has been involved in aiding in Mongolia's advancement in this area. We must use this forum to generate positive change and develop new projects and a path forward.



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

Date: 18 September 2018

Time: 0920 - 0930

Theme: Opening Ceremony

Speaker:



BG G. Saikhanbayar, Chief of Strategic Policy and Planning Department, Ministry of Defense, Mongolia

Biography:

LAST NAME:	Gursed
GIVEN NAME(S):	SAIKHANBAYAR
DATE OF BIRTH:	1968
PLACE OF BIRTH:	Ulaanbaatar. Mongolia
MARITAL STATUS:	Married /with 2 children
RANK:	Brigadier General
ORGANIZATION:	Ministry of Defence, Ulaanbaatar, Mongolia
PRESENT POSITION:	Director of Strategic Policy and Planning Directorate, Ministry of Defense, Mongolia

EDUCATION BACKGROUND:

- Defense Management Academy, Mongolia, 1989
- Institute of the Public Administration and Management Development, Mongolia, 1995
- Strategic Course, National Defense University, People's Republic of China, 2002
- The General Staff Academy, Russian Federation, 2012-2014

PROFESSIONAL EXPERIENCE:

- Director of Public Administration Directorate, Ministry of Defense, 2005-2010
- Deputy Director of the Public Administration Directorate, Ministry of Defense, 2000-2005
- Chief, Department of Information, Public Affairs and Education, General Staff HQ, MAF, 1997-2000
- Staff Officer, Training Department, General Staff HQ, MAF, 1994-1997
- Public Affairs Officer, Unit #318, MAF, 1993-1994
- Deputy Company Commander, Unit #318, MAF, 1990-1993
- Deputy Company Commander, Unit #121, MAF, 1989-1990



Statement:

BG Saikhanbayar stated the importance of cooperation and planning for future activities. This event will aid in the improvement in Mongolia's environmental security. Mongolia supports working and using this forum to assist in moving forward in a positive direction.



Presentation Title: ***Environmental Security Opportunities through the State Partnership Program***

Date: 18 September 2018

Time: 0950 - 1020

Theme: Establishing an Environmental Security Habit of Dialogue

Speaker:



Colonel Kimberly DeRouen Slaven, Chief of the Joint Staff, Alaska National Guard, USA

Biography:

Colonel Kimberly DeRouen Slaven enlisted into the California National Guard, 649th Military Police Company in 1983, and served full time in various enlisted positions. Colonel DeRouen Slaven was commissioned in 1988 thru the California Military Academy. Colonel DeRouen Slaven was branched as a Transportation Officer and assigned as a Transportation Platoon Leader with the 2632nd Transportation Company and served their full time. Colonel DeRouen Slaven deployed to Operation DESERT STORM with the 2220th Transportation Company, Arizona National Guard. Upon her return, Colonel DeRouen Slaven transferred to the Louisiana National Guard. Colonel DeRouen Slaven has served in staff officer assignments at the Brigade, Division and Army Service Component Command, Army Staff and Joint Staff levels. In 2015, Colonel DeRouen Slaven transferred to the Alaska Army National Guard, and is currently serving full time as the Chief of the Joint Staff.

Colonel DeRouen Slaven's previous assignments include: Executive Officer Forward Area Support Company South West Asia; Executive Officer, 1083rd Transportation Company, Louisiana National Guard; S3, 735th Corps Support Battalion and S1, 35th Engineer Brigade Missouri National Guard; S1, 192nd Support Battalion Puerto Rico National Guard; Operations Officer in the 2nd Infantry Division Rear Tactical Operations Center (United States Army Reserves); J1 Plans and Operations United States Forces Korea; 343rd Support Center, Reserve Advisor and Protocol Officer, Eighth United States Army Korea and Observer/Controller 2nd Battle Command Group. In 2006, Colonel DeRouen Slaven transferred to the Wyoming National Guard and served as the Equal Opportunity Advisor for The Adjutant General and the G1. She then transferred to the California National Guard where she served as the Family Program Manager, J4 Logistic Planner, and Commander 746th CSSB. In 2015 she transferred to the Alaska National Guard where she was assigned as the J1, Director of Manpower and Personnel and is currently assigned as the Chief of the Joint Staff.

Colonel DeRouen Slaven holds a Bachelors of Science Degree in Nursing from Inter-Americana Universidad Puerto Rico and a Master's Degree in Strategic Studies from the United States Army War College, Carlisle Pennsylvania. Colonel DeRouen Slaven military education includes: the Dual Status Commander's Course, United States Army War College, the United States Army Command and General Staff Officer Course, the Combined Arms and Services Staff School, the Reserve Component National Security Course, the Support Operations Course, the Equal Opportunity Advisor Course, the



Reserve Component Theater Sustainment Course and 7th Infantry Division Noncommissioned Officer (NCO) Academy.

Colonel DeRouen Slaven awards include: the Meritorious Service Medal, Joint Service Commendation Medal, with one Bronze Oak Leaf Cluster; the Army Commendation Medal, with one Bronze Oak Leaf Cluster; the Joint Service Achievement Medal; the Army Achievement Medal; Army Good Conduct Medal; the Army Reserve Component Achievement Medal, with one Silver and three Bronze Oak Leaf Clusters; the National Defense Service Medal, with one Bronze Service Star; the Southwest Asia Service Medal, with one Bronze Service Star; the Kuwait Liberation Medal; the Noncommissioned Officer Professional Development Ribbon; the Army Service Ribbon; the Overseas Service Ribbon; the Army Reserve Components Overseas Training Ribbon; the Armed Forces Reserve Medal, with "M" Device; the Global War on Terrorism Service Medal and the Korean Defense Service Medal.

Presentation Summary:

Col DeRouen Slaven provided an overview of the Alaska Organized Militia (AG) is structured. The AG provides emergency response throughout the State and if needed the county. The AG relies on the Immediate Response Authority to conduct search and rescue and medical aid. The AG initially supports civilian response until that agencies capabilities are exhausted. The AG uses exercises to insure that the capabilities and readiness is at its maximum level. Environmental stewardship is a key component of the AG's exercises and day to day operations. Hazardous material management is an example of this. The National Guard State Partnership Program (SPP) is a key activity of the AG. AG is partnered with Mongolia and falls under USINDOPACOM to fulfill this function. Imbedded resources and expert exchange is one way in which AG supports Mongolia. This is both mil-to-mil and civ-to-mil as exemplified by University of Alaska involvement in mining operations.



Presentation Title: ***Environmental Security: USINDOPACOM Perspective***

Date: 18 September 2018

Time: 1040 - 1100

Theme: Establishing an Environmental Security Habit of Dialogue

Speaker:

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



Biography:

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

Presentation Summary:

Mr Sholes outlined how the PESF has evolved and what its purpose is. Focus of this event is to develop new partnerships with attending countries and hear what issues Mongolia faces. The end state would be to determine future projects optimizing knowledge sharing. The key is working together to help other countries. Progress from community of discussion to action to international cadre of SMEs to PESO, an organization. Outlined objectives and working groups. Examples of success such as the oil spill response training. The example shows how this can be improved by working jointly. Explained the 2019 PESF structure and focus. Again highlighted that this is a project generating forum.



Presentation Title: ***Mongolia Environmental Security Overview***

Date: 18 September 2018

Time: 1100 - 1120

Theme: Establishing an Environmental Security Habit of Dialogue

Speaker:



**Ms. T. BULGAN, Director General, Department of Green Development Policy and Planning,
Ministry of Environment & Tourism, Mongolia**

Biography:

Mrs. T. Bulgan has been working as Director General for the Department of Green Development Policy and Planning, Ministry of Environment and Tourism since 2013. Previously, she held positions as senior officer at the National Security Council of Mongolia, consultant at Standing Committee on Environment, Food and Agriculture, Secretariat of the State Great Khural (Parliament) of Mongolia, engineer, chief engineer at Central Laboratory of Environmental Monitoring. She graduated from the State Hydrometeorological University of Sankt-Petersburg, Russia and completed a master of the National University of Mongolia.

Presentation Summary:

Mongolia is one of the most vulnerable countries to the impacts of climate change due to its geographical and climate conditions as well as the economic pattern and development level of the economic sectors, and the lifestyle of the people. Over the last 70 years, due to the impacts of climate change and anthropogenic activities, Mongolia has been facing the environmental challenging issues such as desertification, land degradation, the shortage of water-resource, increasing number of forest and steppe fire occurrence, and decreasing the number of plants and animals.

Moreover, environmental pollution has increased due to the many issues such as the increasing migration from rural to urban areas, unplanned urbanization the lag in technology as well as the poverty. It has become the crucial issue for the country because it has affected to the health of people, economic growth and social development of the country.

The security of the natural environment is reflected in the key national long term policy documents of Mongolia. According to the National Security Concept of Mongolia, which was approved in 2010 by Resolution 48 of Parliament of Mongolia, "maintaining a balance of nature, protecting water resources, mitigating impact of climate change and land degradation, preventing harm from a variety of biological deficiencies, reducing risks of environment pollution, natural disasters and adversities shall be prerequisites for assuring healthy human life and security as well as preserving the natural environment". Besides, the Action program of the Government of Mongolia for 2016-2020 defines "preserve and leave to the next generation the virgin nature and ecosystem balance, protect natural resources, prevent their depletion, ensure their appropriate use and possibility of rehabilitation and promote environment-friendly inclusive economic growth as the basis of sustainable social development".

This paper gives the brief overview on the current status of challenging issues for environmental security of Mongolia and national policies for tackling climate and environmental issues.



Presentation Title: ***China Environmental Security Overview***

Date: 18 September 2018

Time: 1120 - 1140

Theme: Establishing an Environmental Security Habit of Dialogue

Speakers:



Senior Colonel XIE Chaoxin, Professor, Army Logistics University, People's Liberation Army, China

Biography:

XIE Chaoxin, Army Logistical University of the PLA, Senior Colonel, is engaged in teaching and research of military environment protection.

Presentation Summary:

The Green Building Practice in the People's Liberation Army (PLA)

As an essential part in ecological civilization construction for the country, the PLA has attached great importance to green buildings. In the presentation, it introduces the green building designed and constructed by our university with multi-purposes for accommodation, catering, teaching, offices and meetings. From 2007, it went through the investigation, demonstration, simulated calculation and preliminary design. Until September 2011, it was finally built and put into use. According to the operating data up to 2018, the practice of the green building indicates that the university green building has achieved great environmental and economic benefit; meanwhile, it has played a demonstrative role in spreading and promoting ecological construction by means of aiding teaching.



Presentation Title: ***Korea Environmental Security Overview***

Date: 18 September 2018

Time: 1140 - 1200

Theme: Establishing an Environmental Security Habit of Dialogue

Speaker:



Mr. Sung Gil Soo, Director, Environmental Cooperation Team, Ministry of National Defense, Republic of Korea

Biography:

- Date of Promotion to Secretary Official (C4) : '07.8.
 - '94. 9 : M.A. Economic Development Policy Birmingham University U.K
 - '82. 2. : B.A. Public Sociology, Jeonbuk University
- Major Careers (MND)
 - '00. 8. ~ '02. 6. : Assistant Director, American Policy Div. MND
 - '02. 7. ~ '05.12. : Assistant Director, Investment & Evaluation Div. MND
 - '06. 1. ~ '07. 8. : Assistant Director, Military Pension Div. MND
 - '07. 8. ~ '10. 8. : Assistant Director, Audit & Inspection Div. MND
 - '10. 9. ~ '13.12. : Assistant Director, Logistics Planning & Management Div. MND
 - '14. 1. ~ '15. 1. : Director, Government Properties Division
 - '15. 1. ~ '17. 1. : Director, National Icheon Cemetery
 - '17. 1. ~ '18. 1. : Director, Reserve Mobilization Div. MND
 - '18. 1. ~ : Director, Division Environmental Coordination Div. MND
- Government Citation
 - '01. 12. : Commendation for Merit by Minister of National Defense
 - '95. 12. : Commendation for An Exemplary Official by Prime Minister
 - '82. 12. : Commendation for Merit by Director of Board of Audit & Inspection

Presentation Summary:

Mr. Sung described the Ministry of National Defense (MND) Environmental Policy. The focus is on the military environmental conservation management and strengthening conservation activities of military locations. Also supporting the negotiation of US military bases and cleaning up of the sites for handover. Focus was given on the sewage water policy by providing an overview of how the policy works. Waste water policy was also discussed. Another policy that was outlined was soil environment. Prevention of contamination and the immediate cleanup of events are the key pillars. An example of an oil leak cleanup was outlined. Lesson learned from this event lead to improvements in prevention being identified. Other items discussed were noise control, specifically at military ranges. Noise abatement measures and physical structures have been successfully implemented at aerodromes and shooting ranges. Nature conservation policies have also been implemented. Sustainability and minimization of impact are the cornerstones on which the policy is based. Air quality was the last subject to be discussed. Like the others subjects the assessments of impacts and determining methods for mitigation of impacts were outlined.



Presentation Title: ***Introduction to Food-Water-Energy Nexus Theme***

Date: 19 September 2018

Time: 0900 - 0910

Theme: Food-Water-Energy Nexus

Speaker:

**BG Chimeddorj SOSORBARAM, Director, Institute for Defense Studies,
National Defense University, Mongolia**



Biography:

Full Name: Chimeddorj SOSORBARAM
Date of Birth: June 4 1958
Marital status: Married with 3 children

Education

1965-1975	Secondary school # 21, Ulaanbaatar, Mongolia
1975-1979	Military academies, Ulaanbaatar Mongolia
1985-1989	Military staff college-signal, Leningrad, USSR
1995-1996	US Command General Staff College
2000-2001	US Army War college

MA degree in military equipment at the University of Defense, Mongolia

MA degree in security and strategic studies at the US Army War College

PhD -Doctor of history 2011 at the National University of Mongolia

Career

1979-1996	Platoon and Company commander, deputy chief of staff of the regiment, various positions at the Ministry of Defense and GS,
1996-1997	Head of Division and deputy of the Policy, planning Department of Ministry of Defense
1997-2000	Officer of the National Security Council, senior officer at the Presidential office
2001-2002	Counselor to the Chief of General Staff of the Mongolian Armed Forces
2002-2009	Head of Policy and Strategic planning Department of the Ministry of Defense
2009-2012	Head of information and Analyses Department of the GIA
2012-2015	Senior advisor to the Standing committee on Security and Foreign Policy. Parliament of Mongolia
2015-2018	Head of the Foreign Cooperation Department of the Ministry of Defense
2018-present	Head of Center of Defense and Security Studies, Institute for Defense Studies, National Defense University, Mongolia



Statement:

BG SOSORBARAM outlined the topics to be discussed. The current status of Mongolia's water risk, over 90% is at a high level of risk. There are limited rivers that provide water for industry and population consumption. Life of the nomadic people is under threat due to water shortages which impacts livestock. Over 30% of Mongolians still live the nomadic life style.



Presentation Title: ***Major Communicable Diseases in Livestock in Recent Years in Mongolia***

Date: 19 September 2018

Time: 0910 - 0940

Theme: Food-Water-Energy Nexus

Speaker:

**Mr. BATMUNKH Damdindorj, Director General, Livestock Policy,
Ministry of Food, Agriculture and Light Industry, Mongolia**

Biography:

No biography provided.



Presentation Summary:

The speaker discussed the effects of infectious livestock diseases outbreaks effect on national security. Several outbreaks have occurred such as sheep pox, cow and pork measles, and foot-mouth. The regularity of the outbreaks have increased in recent years. Within the last 18 years 4 types of diseases have been registered. These outbreaks are concentrated in the eastern portion of Mongolia. The spread is located along the water sources, mainly along the river. Shared pastures combined with the increase in the number of livestock and cross boarder movement. Currently 7.2 M livestock have been vaccinated, these must be procured external to Mongolia. The main cause is livestock breeding, around 35%. Beef measles originated on the Ivory Coast and reached Mongolia in 2016. To date over 83K of cattle have been impacted. Great effort have been made to quarantine the disease. The outbreak has spread to an endangered species, the Saiga. Because they are wild it is difficult to quarantine or vaccinate the animal. Securing the boarder is a key initiative to mitigate the spread of diseases from neighboring countries. These outbreaks impact not only local households, but economic development. Interruptions in the 60% demand of foreign goods flowing into Mongolia would have significant impacts. The monitoring and control operations at border crossings is a key initiative. Also better monitoring via a national database.



Presentation Title: ***Dietary Reference intakes for Mongolians***

Date: 19 September 2018

Time: 0940 - 1010

Theme: Food-Water-Energy Nexus

Speaker:

Dr. TUYATSETSEG Jambal, Associate Professor and Director of School of Industrial Technology, Mongolian University of Science and Technology, Mongolia



Biography:

Sample Education/Qualifications:

Name and city of institutions of study	Years of study		Field of study	Degrees/Certificate
	from	to		
Ministry of Food, Agriculture and Light Industry, Ulaanbaatar, Mongolia	January, 2009		Food Processing	Certificate of Consulting Engineer Mongolia
Mongolian University of Science and Technology, Ulaanbaatar, Mongolia	2005	2008	Technical Science	Doctor of Philosophy in Technical Science
The United Nations University Fellowship at National Food Research Institute, Tsukuba, Japan	April 2004	April 2005	Food Biochemistry	Certificate of Fellowship
Mongolian University of Science and Technology, Ulaanbaatar, Mongolia	1996	1998	Technical Science	Master of Food Engineering



Food Technology University, Moscow, Russia	1982	1988	Food Engineering	Bachelor Degree
--	------	------	------------------	-----------------

Recent Employment:

Name and address of work	Years of service		Title of your post	Type of organization
	from	to		
Mongolian University of Science and Technology, Baga toiruu-42, Ulaanbaatar, Mongolia	1997	2004	Lecture, Scientific secretary,	public
	2004	2009	Director School of Industrial Technology	
	2009	nowadays		

Present Job Duties:

Responsible for teaching students, conducting and supervising researches, organizing graduate and postgraduate courses in fields of Food Processing & Technology Equipment.

Teaching Subjects:

Teaching the following courses was taught to the Bachelor and M. Sc. student in Food Engineering:

- 1) L.FE204 Food Process and Apparatus
- 2) L.FM336 Food Equipment
- 3) L.FM523 Food Engineering
- 4) L.FM332 Food Processing Line & Operation Model

Publications:

Author of 8 books, editor of 4 books, published more than 30 scientific articles in Mongolian and International journals, attended and gave presentation in 5 International Conferences and Meetings.



Presentation Summary:

In order to improve the nutritional status and with reference to the recommendations of other countries, the first edition of Recommended Dietary Requirement (RDA) for Mongolian was established by Ministry of Health (MOH) in 1981. During that time, Russian experts leading the estimated the Daily Requirement of nutrients and it was covered the different age groups, such as infants, toddlers, teenagers, adults and elderly. In 1991, the Democratic Revolution had been started and our society changed, most of food factory closed and number of unemployment had increased. In light of the fast changing political, economic, environment and migration from countryside to city of Mongolia, a timely update of the nutrition situation in the country is needed in order to adjust policy and program strategies to address the unmet nutrition needs of the population.

To assess the nutrition status of Mongolian were conducted the National Nutrition Survey I (NNS I) in 1992, NNS II in 1999, NNS III in 2004, NNS IV in 2010 and NNS V in 2017 by MOH with support from international organization. Based on these findings, the government of Mongolia implemented various initiatives to reduce the burden of malnutrition including: breastfeeding promotion, child growth promotion, salt fortification with iodine for reduce iodine deficiency, moreover vitamin A, vitamin D and multi-micronutrient supplementation.

In the same time, RDA and dietary guidelines were revised concurrently as the results of national nutrition survey showed dietary and nutrient deficiency of Mongolian population. The results showed that the prevalence of chronic diseases, including overweight, obesity, diabetes mellitus, CVD etc. On the basis of these findings were required to update the RDA for Mongolian population for preventing the chronic diseases. Therefore, 1997, 2008 and 2017, the RDA for Mongolian had been revised and during the updating calories from daily food had decreased, average calories were 2800 kcal in 1997, it was decreased to be 2600 kcal in 2008 and now we used to recommend 2400 kcal in 2017. In 2000, the first edition of dietary guidelines for Mongolian was established and published "Ger" (traditional house) guidelines by MOH. The main purposes of the guidelines were to guide nutritional professionals and to plan diet for preventing population from nutrients deficiency and diseases. As the eating behavior and food related diseases may change, the governments and nutrition societies should keep revising and updating the dietary guidelines and recommended dietary allowances to prevent diseases and encourage public health.



Presentation Title: *Ecological Perspectives on Previously Used Military Sites*

Date: 19 September 2018

Time: 1030 - 11000

Theme: Food-Water-Energy Nexus

Speaker:



Dr. Associate Professor and Lieutenant Colonel OYUNTSETSEG Luvsandash, Senior Specialist of Strategic Policy and Planning Department, Ministry of Defense, Mongolia

Biography:

LAST NAME:	Luvsandash
GIVEN NAME:	OYUNTSETSEG
PLACE OF BIRTH:	Ulaanbaatar
RANK:	Lieutenant Colonel
ORGANIZATION:	Ministry of Defense, Ulaanbaatar, Mongolia
PRESENT POSITION:	Senior Expert (Policy) of Strategic Policy & Planning Department and Coordinator, Science and Technology Council, Ministry of Defense, Mongolia

EDUCATIONAL BACKGROUND:

1985-1990	Mathematic & Physics Faculty, National University of Mongolia, Ulaanbaatar, Mongolia	Bachelor's degree. Diploma No 22688
1996-1998	Postgraduate School, Defense University of Mongolia, Ulaanbaatar, Mongolia	Master's degree. Diploma No 98023
2008-2010	Postgraduate School, National University of Mongolia, Ulaanbaatar, Mongolia	Doctor's Degree of the Computer Science (Ph.D.). Diploma No F20104073

CAREER APPOINTMENTS:

- 1990-1995, Math & Computer Science teacher, High School # 48, Ulaanbaatar;
- 1995-2004, Computer Science Instructor, Computer Training Center, Defense University of Mongolia;
- 2004-2011, Head, Computer Training Center, Defense University of Mongolia;
- 2011-Apr. 2015, Senior Expert (Policy) of Strategic Policy & Planning Department and Coordinator, Science and Technology Council, Ministry of Defense, Mongolia
- Oct., 2015-present, Senior Expert (Policy) of Strategic Policy & Planning Department and Coordinator, Science and Technology Council, Ministry of Defense, Mongolia



Presentation Summary:

Legislation and other legal acts regulate the prevention of soil pollution in Mongolia and the protection of soil from degradation and rehabilitation.

In Mongolia, the main source of soil pollution is caused by mining, processing factories, ger district sanitation, improper solid waste disposal, and the burning of coal. In urban areas, bacterial pollution associated with ger sanitation is high, whereas mining is more commonly a rural issue. The waste of municipalities, aimag, and soums are the main cause of soil pollution.

The amount of mercury, chromium, zinc and strontium in soil in most of Ulaanbaatar's soils is higher than in previous years.

There is soil pollution in Arkhangai, Bayankhongor, Bulgan, Gobi-Altai, Govi-Sumber, Darkhan-Uul, Zavkhan, Orkhon, Selenge, Tuv, Uvs, Khovd and Khovsgol aimags. For example, the maximum concentration of lead in the Bayan Nexuses point at Govisumber aimag exceeded 580.5 mg/kg, and the harmful levels of zinc content reached 7.8 times.

Research studies found that 10.9 thousand hectares of land, 30 of which were used for military purpose, were mostly destroyed by the collapse of the former military sites.

In collaboration with the Institute of Geography and Geo-Ecology of the Mongolian Academy of Sciences, the Mongolia Ministry of Defense conducted a survey of soil pollution in 18 military locations. The research discovered that most sites are contaminated with oil products, and in some areas, heavy metals and construction wastes are causing ecological vulnerability and population risk.

Therefore, it is necessary to prioritize long-term programs and projects to determine the extent of the rehabilitation of the land of abandoned military sites.



Presentation Title: ***State Policy on Energy Sector***

Date: 19 September 2018

Time: 1100 - 1130

Theme: Food-Water-Energy Nexus

Speaker:

**Mr. Shagdursuren GANZORIG, Specialist of Policy and Planning Department,
Ministry of Energy, Mongolia**



Biography:

Education

- 2014-2016: Master's degree of Science in Engineering, Seoul National University, South Korea
- 2008-2010: Master's degree of Engineering in Power Electric System, Mongolian University of Science and Technology
- 2003-2007: Bachelor's degree of Engineering in Power Electrical System, Mongolian University of Science and Technology

Language & Degree of Proficiency

- Mongolian – Native
- English – good
- Germany – good
- Russian – good

Membership of Professional Societies

- Member of the board of Mongolian Civil Health Association

Employment Record

- (2012-2018) Senior Officer in charge for Policy and Planning at Policy and Planning Department, Ministry of Energy
- (2011-2012) Officer in charge for Energy policy and planning at Energy Policy Department, Ministry of Mineral resource and Energy
- (2009-2011) Officer in charge for Power flow Analysis Stability Analysis of electricity network at Electrical division, Government implementing Agency Energy Authority



- (2006-2009) Research engineer, Supervisor engineer at Contract- tender and technical monitoring division at Energy Research and Development Center under the Ministry of Fuel & Energy
- (2003-2006) as Researcher, as Technician of Power flow calculation in Erchim research center.

Presentation Summary:

The presentation focused on the current state policy of the energy sector in Mongolia. The presenter provided national statistics on energy capability, as well the current challenges Mongolia faces with energy. The main source of energy comes from coal 88% and has been used to meet the growing energy demand. The power grid loses a significant amount of power. Crude oil is 100% exported then import petroleum products from mainly Russia. The presentation highlighted Mongolia's legal environment framework as it relates to energy, and the speaker will explain the State Policy on Energy 2015-2030 for Mongolia. The presenter emphasized that Mongolia is focused on renewable, environmentally-friendly technology development in the future to ensure a sustainable approach. The three main priorities are safety, efficiency, and environment. This will rely on privatization of the power system. The presentation concluded with a short description of large planned power projects in Mongolia in the future.



Presentation Title: ***Introduction to the Environmental Security in Contingency Operation Theme***

Date: 20 September 2018

Time: 0905 - 0915

Theme: Environmental Security in Contingency Operations

Speaker:

Brigadier Craig Dobson, Director General Support (J1/J4), Headquarters Joint Operations Command (DGSPT HQJOC), Australia



Biography:

Brigadier Dobson was born in Shepparton, Victoria in 1970 and completed a Bachelor of Commerce at Deakin University before entering RMC Duntroon in January 1991. Brigadier Dobson was commissioned into the Royal Australian Army Ordnance Corps in June 1992.

Brigadier Dobson's career has been characterised by command and staff appointments in logistics and career management roles. His formative experiences included postings to 2nd Field Supply Battalion, 3rd Brigade Administrative Support Battalion and Army Logistic Training Centre. These experiences were further developed through posting to the 1st Battalion, The Royal Australian Regiment as the Second-in-Command of Administration Company, Aide-de-Camp to the Support Commander-Army and culminated in promotion to Major and appointment initially as the Battalion Operations Officer, and then Officer Commanding, 2nd Field Supply Company, 10th Force Support Battalion (10 FSB).

Brigadier Dobson attended Australian Command and Staff College in 2005 and was subsequently posted to the Directorate of Officer Career Management-Army (DOCM-A) as Career Advisor Ordnance. This posting marked a transition to more advanced command and staff appointments including the Senior Officer Manager – Army (2007-08) within DOCM-A, Commanding Officer 10 FSB (2009-10) and as the SO1 Domestic Commitments (2011) and Chief of Staff (2012) both within Military Strategic Commitments (MSC) Branch. Prior to attending the Defence and Strategic Studies Course in 2016, he was the Director of Officer Career Management – Army (November 2012 to October 2015). Brigadier Dobson was promoted to his current appointment as Director General Support (J1/4), HQ Joint Operations Command in December 2016.

While Commanding Officer 10 FSB, Brigadier Dobson deployed to Op SLIPPER to command Force Support Unit – 2 (July 2009 to April 2010) and when a sub-unit commander, he deployed to Op ANODE as the Officer Commanding of the Force Support Squadron (November 2004 to March 05). Brigadier Dobson has also served as a Military Observer and Operations Officer within the Observer Group Golan - Damascus element of the United Nations Truce Supervision Organisation (June 2001 until July 2002).

Brigadier Dobson holds post-graduate qualifications in Management (Defence Studies) from the University of Canberra and in Engineering (Integrated Logistics Management) from the Royal Melbourne Institute of Technology. In the Queen's Birthday honours list of 2016, Brigadier Dobson was appointed a Member of the Order of Australia and in 2012 he was awarded a Conspicuous



Service Cross. He has also been awarded a Chief of Army Commendation and a Commander Australian Theatre Commendation. He is married to Lisa and his leisure interests include travel, reading, snow skiing and bush-walking/trekking.

Statement:

The Brigadier outlined the themes of the presentation that will focus on environmental Security shaping the nation. This national identity is formed through policy and formed between the nexus of the components of environmental security. He presented examples of damage done to culturally important and environmental damage resulting from conflict.



Presentation Title: ***Environmental Security as a Cause / Threat to Instability***

Date: 20 September 2018

Time: 0915 - 0935

Theme: Environmental Security in Contingency Operations

Speaker:



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

Biography:

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

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

Presentation Summary:

Over the last 60 years up to 40% of all intrastate conflict has arisen from environmental issues. This includes control of high value resources such as minerals, oil and timber, as well as scarce resources such as water and arable land. War has led to many impacts on the environment and loss of biodiversity. With global populations continuing to rise and with the added threat multiplier of climate change, the threat of conflict to control environmental resources is likely to increase. A fragile environment that is further stressed by factors such as internationally displaced people sourcing wood and contaminating water sources are two examples that provides a negative feedback loop to both people and the environment. To effectively manage the interrelationships between security and sustainable development the global community involved with the business of contingency operations needs to acknowledge more broadly the importance of environmental peacebuilding to better support national sovereignty.



Presentation Title: ***Environmental Peacebuilding: Defining, Managing and Measuring It in Conflict Affected Areas for Resilience Building***

Date: 20 September 2018

Time: 0935 - 0955

Theme: Environmental Security in Contingency Operations

Speaker:



Dr. Lisa Guppy, Disaster and Conflict Coordinator, Asia-Pacific Region, United Nations Environment Programme (UNEP)

Biography:

Dr. Lisa Guppy joined UN Environment in August 2018, as the Disaster and Conflict Coordinator for the Asia Pacific Region. An Australian national, Lisa moved from Canada where she was working with the United Nations University Institute for Water, Environment and Health. Previous to that, Lisa worked in disaster risk reduction, early recovery and humanitarian response in Europe, Asia, Africa and the Middle East. Lisa has a PhD focusing on the management of chronic crises from the University of Western Australia and University College London.

Presentation Summary:

Environmental peacebuilding aims to engage with natural resource management and ecosystem services as part of mitigation, recovery and resilience building in conflict-affected areas. It can and is contributing positively too many peacebuilding contexts around the world. This is relevant as over the last 60 years, nearly half of all armed conflicts have been fuelled or financed by natural resources.

Peacekeeping operations can contribute to state security by introducing environmental peacebuilding initiatives at a strategic level. It can also contribute initiatives that help to build community resilience. At a community level, insecurity can be related to complex interactions between inter-community, intra-household and gendered conflict concerns. At this level, peacekeepers must consider how they measure and manage environmental peacebuilding that is linked to at least three themes: first, human security; second, natural resources – for example, water security; and third, shocks and stresses related to the environment, which are in the main driven by hydro-meteorological hazards and can be addressed through the emerging umbrella of climate security. Questions that peacekeepers should address include: is natural resource exploitation contributing to conflict, and if so, how is it being addressed? Is the peacekeeping mission itself degrading environments and potentially undermining community health and wellbeing? And how can the impact of climate on conflict be predicted, managed and monitored? Answering these questions may not only contribute to environmental peacebuilding but more secure communities in the long term.



Presentation Title: ***Heritage Under Fire: Preservation and Protection of Heritage***

Date: 20 September 2018

Time: 0955 - 1015

Theme: Environmental Security in Contingency Operations

Speaker:



LCDR Andrea Argirides (Royal Australian Navy), PhD, Deputy Chief Joint Effects Headquarters Joint Operations Command, Australia

Biography:

Dr. Andrea Argirides is a Lieutenant Commander (LCDR) with the Royal Australian Navy Reserve, and has been serving on full time service since 2003. She has held a variety of appointments and has deployed to the Middle East on several occasions. Dr. Argirides holds six degrees with 2 Masters [Program Evaluation (Education) and Defence Studies (with a major in North Asia)]. In July 2018, she graduated with a PhD in Archaeology and Cultural Heritage from the School of Historical and Philosophical Studies, Centre for Classics and Archaeology at the University of Melbourne, Australia. Dr. Argirides is currently posted at Headquarters Joint Operations Command, Canberra Australia as a LCDR in the Joint Effects Directorate.

Presentation Summary:

Heritage used as a weapon of war is big business, as demonstrated by Daesh in the past three years, notwithstanding other forms of cultural heritage (CH) destruction in places like Iraq, Afghanistan, Syria, Timbuktu, Bosnia, Lebanon and Cyprus. Obligations are clear under the Hague Convention. Benefits of protecting cultural heritage will aid alignment of coalition goals with host nation goals. Desecration, or targeting of these sites, will have tangible deleterious primary, secondary or tertiary operational effects.



Presentation Title: ***Benefits of Incorporating International Standards into Contingency Operations Planning***

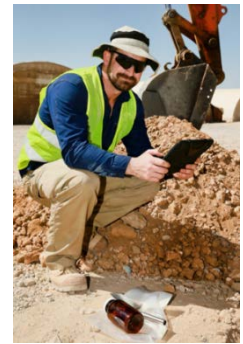
Date: 20 September 2018

Time: 1045 - 1105

Theme: Environmental Security in Contingency Operations

Speaker:

MAJ Travis Collins, Environmental Planner, Headquarters Joint Operations Command, Australia



Biography:

Major Travis Collins joined the Army through the Ready Reserve scheme in 1995 and was commissioned into the Royal Australian Infantry Corps. His military career has included regimental postings that have allowed for short periods of service in Malaysia, USA and also in support of the year 2000 Sydney Olympics. After a role in Defence Recruiting, he is now posted to the Headquarters Joint Operations Environmental Cell.

As an Environmental Scientist, his civilian career has primarily been with the Department of Defence. He has lead environmental management for Exercise Talisman Sabre from 2005 – 2011, developed ADF policy for environmental management deployed operations. This also includes directing the environmental aspects of closing Australian bases in East Timor, Solomon Islands and Afghanistan. He now runs two environmental programs in Defence's Environment Branch.

He holds a Bachelor of Science with Honours, a Graduate Certificate in Environmental Studies and a Masters of Environmental Law. He has also been awarded a Chief of Joint Operations Commendation.

Presentation Summary:

In armed conflict, there are direct and indirect environmental protection links within international human rights law, humanitarian law, and criminal law. History has shown the environmental requirements in the laws of armed conflict and the relevance of international environmental law requires greater consideration in contingency operations planning. In considering the ways, ends and means, focus on the resilience of both the environment and the population need to be more closely weighted to determine priority setting. Contingency operations planning will benefit from a holistic approach that incorporates environmental protection into planning and leverages environmental principles and standards into response options. A contingency operations planning environmental protection toolbox is needed to aid environmental and peacebuilding outcomes.



Presentation Title: ***Identifying, Evaluating, and Selecting Environmental Security Projects***

Date: 21 September 2018

Time: 0905 - 0930

Theme: Maintaining an Environmental Security Habit of Dialogue

Speaker:



COL Jeffrey Bryan, Civil Affairs, J9, U.S. Indo-Pacific Command

Biography:

Colonel Jeff Bryan is currently serving as the Director, Theater Civil Affairs Planning Team at U.S. Pacific Command assuming those responsibilities on 25 July 2017. His previous assignments include over 31 years of service, 28 active and 3 years of Army National Guard service.

Colonel Bryan is a native of Osceola Nebraska. He enlisted in the Nebraska Army National Guard as an Aircraft Weapons System Technician in 1986. He earned a bachelor's degree in business management and commission through ROTC from the University of Nebraska-Lincoln in June 1989. He also attended the Armor Officer Basic Course and Scout Platoon Leaders Course; Quartermaster Transition and Advanced Course; US Army Recruiter course; the Combined Arms and Services Staff School; the Command and General Staff College; Joint Planners Course; the Civil Affairs Qualification Course, the Africa Regional Studies and the Inspector General Qualification Course.

His previous assignments include platoon leader, company executive officer and support platoon leader in 3-67 Armor deploying in support Desert Shield and Desert Storm. He commanded the North Bay Army Recruiting Company, Santa Rosa California for 30 months. Following command he was assigned to the 21st TSC, Germany serving as a supply and service officer, a battalion operations officer, culminating with command of the 574th Supply Company. Following CGSC in 2002 COL Bryan attended the Civil Affairs Officers Course and was assigned to the 96th CA battalion where he served as a detachment commander and selected for a third company command deploying to Iraq on two occasions supporting Operation Iraqi Freedom (OIF). Colonel Bryan was then transferred to Joint Base Lewis McChord, Washington where he was assigned to the 42nd MP Brigade serving as the CMO officer during an OIF deployment and brigade XO after returning to home station. Colonel Bryan was then assigned to the 62nd Medical Brigade serving as the CMO officer during its 15 month OIF deployment. Upon returning from Iraq COL Bryan commanded the I Corp Special Troops Battalion rear detachment for 17 months. While in command COL Bryan was selected to command the Special Operations Recruiting Battalion, Ft Bragg North Carolina from July 2010 to Aug 2012. COL Bryan returned to JBLM in 2012 where he was assigned as the Command Inspector General for 7th Infantry Division. COL Bryan was promoted to his current rank on 1 Jan 2014; he then served as the Eighth Army's Deputy Chief of Staff G9 - Civil Military Operations from 7 June 2014 until 2 July 2017 when he transitioned to PACOM J9 to serve as the Theater Civil Affairs Team chief.

His Awards and decorations include the Legion of Merit, the Bronze Star medal (1 OLC), the Meritorious Service Medal (5 OLCs), the Army Commendation Medal (6 OLCs), and the Army Achievement Medal (3 OLCs) in addition to the Army Parachutist Badge, Army Recruiter Badge and Air Crewman Badge.



Presentation Summary:

The presentation covered the Overseas Humanitarian Disaster and Civic Aid (OHDACA) resourcing timeline and project lifecycle. The resourcing timeline showed how USINDOPACOM receives, prioritizes, and validates all OHDACA project submissions each fiscal year. The project lifecycle displayed all the different coordination and approval gates that a project must pass through to be approved, funded, executed and completed in USINDOPACOM's Overseas Humanitarian Assistance Shared Information System (OHASIS).



Presentation Title: ***Proposed Future Environmental Security Projects for Mongolia***

Date: 21 September 2018

Time: 0930 - 0945

Theme: Maintaining an Environmental Security Habit of Dialogue

Speaker:



COL Lhunde Battengel, Vice Director, National Defense University, Mongolia

Biography:

Colonel Lhunde Battengel assumed the position of Vice Director of Mongolian National Defense University in 2016.

Colonel L. Battengel's previous positions include Deputy Director and Director of Policy Implementation Directorate of MOD, Defense Attache at the Mongolian Embassy to the Russian Federation. Where he was responsible for implementation of defense reform policy and equipment procurement policy of Armed Forces.

He graduated former Soviet Military Academy in Kiev specialized on armored vehicle engineer in 1987, he earned Ph.D degree at the Military University of Mongolia and he successfully accomplished Science Doctor's (Sc.D) degree at the Army Military Education and Research Center, Russian Federation in 2016.

Presentation Summary:

COL Battengel presented on a future environmental security project in Mongolia that the Ministry of Defense and Mongolian Armed Forces would like to complete to advance mitigation efforts. The primary project proposal had three phase that focus on the National Defense University Shar Khad contamination site located near Ulaanbaatar. The first phase involved netting the river or placing a fence to stop trash from the landfill from flowing down the river during heavy rain or flood events. The second phase of the project requested the entire Shar Khad location be fenced in with a concrete fence to prevent blowing trash from entering the site. The final phase included the construction of a wash house and camp restroom as well as a proper waste water treatment system. Mongolia would like to work collaboratively with U.S. Indo-Pacific Command to start cleaning up the site, managing soil contamination, and identifying solutions related to solid waste management.



Presentation Title: ***Proposed Future Environmental Security Projects for Mongolia***

Date: 21 September 2018

Time: 0945 - 1000

Theme: Maintaining an Environmental Security Habit of Dialogue



Speaker:

Dr. Associate Professor and Lieutenant Colonel OYUNTSETSEG Luvsandash, Senior Specialist of Strategic Policy and Planning Department, Ministry of Defense, Mongolia

Biography:

LAST NAME:	Luvsandash
GIVEN NAME:	OYUNTSETSEG
PLACE OF BIRTH:	Ulaanbaatar
RANK:	Lieutenant Colonel
ORGANIZATION:	Ministry of Defense, Ulaanbaatar, Mongolia
PRESENT POSITION:	Senior Expert (Policy) of Strategic Policy & Planning Department and Coordinator, Science and Technology Council, Ministry of Defense, Mongolia

EDUCATIONAL BACKGROUND:

1985-1990	Mathematic & Physics Faculty, National University of Mongolia, Ulaanbaatar, Mongolia	Bachelor's degree. Diploma No 22688
1996-1998	Postgraduate School, Defense University of Mongolia, Ulaanbaatar, Mongolia	Master's degree. Diploma No 98023
2008-2010	Postgraduate School, National University of Mongolia, Ulaanbaatar, Mongolia	Doctor's Degree of the Computer Science (Ph.D.). Diploma No F20104073

CAREER APPOINTMENTS:

- 1990-1995, Math & Computer Science teacher, High School # 48, Ulaanbaatar;
- 1995-2004, Computer Science Instructor, Computer Training Center, Defense University of Mongolia;
- 2004-2011, Head, Computer Training Center, Defense University of Mongolia;
- 2011-Apr. 2015, Senior Expert (Policy) of Strategic Policy & Planning Department and Coordinator, Science and Technology Council, Ministry of Defense, Mongolia
- Oct., 2015-present, Senior Expert (Policy) of Strategic Policy & Planning Department and Coordinator, Science and Technology Council, Ministry of Defense, Mongolia



Presentation Summary:

TITLE: Opportunities for expanding cooperation between military and civil organizations in the reduction and rehabilitation of soil and groundwater pollution in areas used for military purposes

One of the world's most pressing issues is environmental security.

In recent years, population and vehicle numbers in urban areas have grown rapidly, with increasing production and services have been increasing, with an increase in air, soil and water pollution levels. The main source of soil pollution in Mongolia is mining, processing factories, sanitation, waste and air pollution in ger areas. In urban areas, bacterial contamination with sanitation facilities (latrines and pit water) is high in cities and settlements, while in the rural areas, the waste of aimag and soum centers is the main cause of soil pollution.

30 locations that are former military sites were studied, a total of about 10.9 thousand hectares in Mongolia. According to the study, soil pollution assessment was conducted at 18 locations and the main pollutants were oil products, lead, zinc and chromium. Soil and groundwater pollution in the land used for forsaken military sites in Mongolia can adversely affect the security of our country and Northeast Asian environment.

The project proposed included a study of the sites to develop a prioritization of the cleanup based on severity, use and impact on civilian populations. Cleanup would involve UXO remediation as well as contaminated soil remediation, especially that affecting the groundwater and nearby rivers.



Presentation Title: ***2019 Pacific Environmental Security Forum Proposal***

Date: 21 September 2018

Time: 1315 - 1345

Theme: Maintaining an Environmental Security Habit of Dialogue

Speaker:



Ms. Jane Neilson, Climate Change and Security Policy, Ministry of Defence, New Zealand

Biography:

Jane Neilson is an Intermediate Analyst in the Policy Branch of the New Zealand Ministry of Defence, where her primary focus is on the security and defence implications of climate change, with particular applicability to the South Pacific. She began this role in October 2017 on secondment from the New Zealand Defence Force.

Before focusing on climate change, Jane was an Asia-Pacific strategic analyst with the New Zealand Defence Force, a role she started in February 2014. Prior to her appointments with defence, she was an intern at the European Parliament in Brussels, Belgium in 2012.

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

Presentation Summary:

New Zealand's 2018 Strategic Defence Policy Statement highlights the security challenges posed by the effects of climate change, notably in the Pacific region. New Zealand will co-host the 2019 Pacific Environmental Security Forum (PESF) with USINDOPACOM, emphasizing climate change and resiliency. In the presentation, New Zealand's Ministry of Defence will outline its policy work on the security impacts of climate change, and introduce key concepts for the 2019 PESF including resiliency, transformation, and multilateral partnerships.

New Zealand and the Pacific Island countries are increasingly impacted by climate change-related problems. These problems include climate risks, human security, and de-stabilizing forces. Climate change will necessitate more Humanitarian Assistance and Disaster Response and stability operations and civil defense. Large changes in temperatures are occurring and therefore have the potential to warm portions of East Antarctica.

The Pacific Islands Region varies greatly in geography, history, culture and language. Many Pacific Islanders call the island of New Zealand home. The Blue Pacific narrative was developed at a Pacific Islands forum and is a collective establishment for islands to work together for the sustainable



progress of their people and their environment. New Zealand already supports many initiatives that support shared environmental security concerns. This PESF will enhance these initiatives, and help build relationships with Pacific countries. They have developed a list of potential topics for the forum, and are taking suggestions from participants. The PESF will allow a multilateral approach to environmental security.



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

Date: 21 September 2018

Time: 1530 - 1545

Theme: Closing Ceremony

Speaker:



CAPT Jeff Deviney, Joint Engineer, J44, U.S. Indo-Pacific Command, USA

Biography:

No biography provided.

Statement:

To our distinguished guest Mr. T. Dulamdorj, Major General Sukhbat, senior civil and military leaders from across the Indo-Pacific, ladies and gentlemen...it's an honor to be with you for the 2018 Regional Environmental Security Forum closing ceremony. I'm honored to say I attended the first Pacific Environmental Security Conference held in Hawaii seven years ago, and I'm excited to hear how far we've come. Although Hawaii is nice, Mongolia is such a beautiful country with an outstanding environmental landscape. It's no wonder why it has been showcased to host this event.

On behalf of ADM Philip Davidson and the United States Indo-Pacific Command, I'd like to thank our co-sponsor, the Mongolia Ministry of Defense. The Mongolia Ministry of Defense has been an outstanding partner, and I am grateful for all of their invaluable contributions to the Forum.

Together, we enjoyed collaborative discussion and an exchange of ideas, opportunities, and challenges that we all face associated with environmental security...as described this week by representatives from Australia, China, Japan, Korea, Mongolia, New Zealand and the United States. Perhaps what is most important to take away, aside from actions and future opportunities for collaboration, is "Why?" we meet in these forums. It's always important to start with "Why?" – We want a better environment for our children, and our children's children – they are our legacy and it is incumbent upon us and our respective nations to take actions today so that future generations will not have to face the same environmental security challenges associated with depleted natural resources that impact food, water, and energy security. We are also here together this week, because the military has a role in environmental security. At the start of the forum, it may have not been obvious, but I am hopeful that now you have a better understanding of why the military cares, our environmental stewardship obligations, and how if militaries do not act, there are significant environmental consequences. And as we shape our missions in the future, national and military leaders should be aware of future environmental threats that may destabilize our peaceful region or exacerbate natural resource management and threaten our societies.

Through sharing best practices, lessons learned (both good and bad), and the collaboration between both civilian and military expertise from across the international community, we all recognize the global importance of the Northeast Asia region and understand that challenges are best met together. We've shared numerous examples this week of "How?" to respond when environmental



stresses occur and that dialogue and action are at the root of any potential solution. We must work together to solve common issues related to pollution, biosecurity, water security, protection of heritage and environmental stewardship. The military has a vital role in this through its unique logistical capability, subject matter expertise, and ability to plan and act to resolve large problems. For example, Mongolia shared its challenges at the Shar Khad site this week. Soil pollution, solid waste management, unexploded ordinance, and other environmental challenges are real. And, working together, we can help resolve these issues to revitalize training lands, be good neighbors to the surrounding areas, and ensure our lands are healthy and productive.

We have learned and shared much over this past week, reinforcing the importance of “Why” we host these environmental security forums. Now, we transition from a community of discussion and action to hopefully a multilateral organization in the future...a means to involve environmental security partners from across the Indo-Pacific region to plan and execute environmental security initiatives together to affect four key pillars:

- 1) Education – to advance capabilities which strengthen regional environmental security measures.
- 2) Networks – to advance environmental security partnerships and mentorship opportunities throughout the Indo-Pacific Region.
- 3) Mitigation – to reduce environmental security threats and vulnerabilities with tangible projects that address specific capability requirements.
- 4) Policy – to identify common terminology, standards, and procedures to allow Forum members to collaborate more efficiently.

In closing, we should work together, civil and military, to counter vulnerabilities caused by the abundance or scarcity of environmental resources and/or degradation. We must continue to share tools and build response and resiliency capacity. Environmental security is a global problem whose impacts do not recognize national borders. As such, environmental security remains a fundamental priority for the US Indo-Pacific Command to continue enhancing our alliances and build partnerships so that all nations benefit from an environment that safeguards security, stability, prosperity, and peace for the entire region. We remain committed to broadening ties with all of our partners. Thank you again to the Mongolia Ministry of Defense for hosting the 2018 RESF, the National Defense University for providing this fantastic venue, the event planners that worked tirelessly to make the forum a success, and participating nations for traveling to Mongolia to make this activity a priority. I look forward to all of you joining us in New Zealand in 2019.



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

Date: 21 September 2018

Time: 1530 - 1545

Theme: Closing Ceremony

Speaker:



Mr. Dulamdorj Togooch, Deputy Minister, Ministry of Defense, Mongolia

Biography:

Mr. Dulamdorj Togooch, Deputy Minister of Defense of Mongolia was born in Arvaikheer, Uvurkhangai aimag of Mongolia on 31 August 1977.

He is married with 3 children.

EDUCATION

1995: Graduated High school in Darkhan-Uul aimag

2001: Graduated from the Ulaanbaatar Institute as a lawyer

2005: Graduated from Academy of Management with Management and Public administration specialty

PROFESSIONAL CAREER

2016-Present: Deputy Minister of Defense

2015: Executive Director at Mongol Post (State owned company)

2012-2015: Chief of National Emergency Management Agency

2012: Councilor of Deputy Minister at Government of Mongolia

2009-2012: Councilor at Secretariat of Government

2007-2009: Councilor of Mayor at Bayangol District

2005-2007: Legal councilor at Secretariat of Bayangol district

2003-2005: Deputy Chief at secretariat of Bayangol district

2001-2002: Specialist at Citizen Public Hural of Bayangol district

FOREIGN LANGUAGES

English and Russian



Statement:

Mr. Dulamdorj thanked all participants for attending the RESF, and celebrated the hard work and communication delivered during the event. He thanked USINDOPACOM for co-hosting, and stated that he is hopeful that environmental security projects such as Shar Khad can be completed to advance Mongolia's environmental security program. Mr. Dulamdorj went on to state that Mongolia is committed to working with the region on environmental security. He wished everyone a safe return home, and he looks forward to the next time RESF participants can partner again.