



PACIFIC  
ENVIRONMENTAL  
SECURITY FORUM

# AFTER ACTION REPORT

Co-Sponsored by: | Australian Department of Defence and  
the U.S. Pacific Command



**DEPARTMENT OF THE ARMY**  
**U.S. ARMY CORPS OF ENGINEERS, INSTITUTE FOR WATER RESOURCES**  
**7701 TELEGRAPH ROAD**  
**ALEXANDRIA, VA 22315**

REPLY TO  
ATTENTION OF CEIWR-ICI

**MEMORANDUM FOR RECORD**

20 May 2013

**SUBJECT:** After Action Report, Pacific Environmental Security Forum, Sydney, Australia, 16-19 April 2013

**BLUF:**

- a. Issue: Pacific Environmental Security Forum (PESF).
- b. Summary: The U.S. Army Corps of Engineers (USACE) supported the U.S. Pacific Command (USPACOM) and the Australian Department of Defence (ADoD) to lead the Pacific Environmental Security Forum 16-19 April 2013 in Sydney, Australia.
- c. Discussion: The PESF featured 85+ participants from 19 different countries in the Pacific region. It was designed to build military readiness in response to growing climate change impacts, which threaten regional peace, security and prosperity. The forum's themes were environmental sustainability, biosecurity, disaster management and climate change adaptation. Additionally, attendees met in workshops on planning, environmental baseline and close-out surveys. The Forum also featured a defence facilities overview of Sydney Harbour, cultural awareness and pollution prevention walking tours, and an oil-spill response demonstration led by the Royal Australian Navy in partnership with the Sydney Ports Corporation.

The list of participating nations included Australia, Bangladesh, Cambodia, China, India, Indonesia, Japan, Laos, Malaysia, Maldives, Nepal, New Zealand, Papua New Guinea, the Philippines, Thailand, Timor L'este, the U.S. and Vietnam.

The Forum generated a number of lessons learned, which were shared to increase knowledge and facilitate collaboration. These included an admission that climate change requires a proactive military response, information sharing, and a common approach to capacity development including multi-lateral exercises and security assistance. These lessons learned now set the stage for the first-ever multi-lateral baseline for future environmental sustainability, biosecurity and disaster management collaboration.

- d. Way Ahead: Budget permitting, the 2014 Pacific Environmental Security Forum will be held in the Maldives and co-hosted by the Maldives National Defence Force (MNDF). The event will focus on South Asia, and potential topics include water security, water management, drought, energy security, wastewater management, emerging technologies, and alpine climate considerations.

USPACOM J4 will work with MNDF to start preparations for the 2014 event, with an Initial Planning Conference likely to be conducted in August 2013.

1. EVENT DATES: 16-19 April 2013
2. EVENT LOCATION: Sydney, Australia
3. BACKGROUND: The 2013 Pacific Environmental Security Forum is the third continuous subject engagement led by USPACOM. The initial Pacific Environmental Security Conference (PESC) event was held in Honolulu, Hawai'i in 2011. The event featured speakers and sessions on climate change adaptation, environmental security and sustainability, water resource management and disaster preparedness. The PESC was followed by last year's Southeast Asia Regional Environmental Security Conference (RESC) in Jakarta, Indonesia. There, fourteen countries met to evaluate top environmental security concerns related to pollution, global warming, deforestation, overfishing and water supply in an ASEAN (Association of Southeast Asian Nations) context. The RESC included a table-top oil spill exercise requiring each country to respond and coordinate with their regional neighbors through the ASEAN Humanitarian Assistance (AHA) Centre.

In preparation for the PESF, the U.S. and Australia met in Sydney and Canberra for an Initial Planning Conference (IPC) and a Final Planning Conference (FPC). Prior to the IPC, planning included a series of internal USPACOM team meetings and phone calls to the ADoD. Through these conversations, USPACOM prepared an information paper, overview presentation, draft Administrative Procedures Agreement, draft invitation letters, work breakdown structure, and decision point list for delivery and discussion at the IPC. Australia also prepared two documents outlining their perspective on the goals, objectives, format and desired expectations of the PESF.

The IPC was held in Sydney 20-24 Aug 2012. During the meetings, USPACOM and ADoD developed a draft Administrative Procedures Agreement (APA), agenda, themes, participant requirements, and site visit/demonstration platforms. The teams corroborated planning and execution requirements, reviewed the initial event concept, finalized the primary venue location, and set a path forward for future planning engagements to the FPC.

In preparation for the FPC, the teams held regular monthly Interim Progress Review (IPR) meetings. At these meetings, the teams worked on the draft agenda to refine requirements, identify speakers, prepare and release invitations, and develop draft materials.

The FPC was conducted 28 Jan-01 Feb 2013 in Sydney and Canberra. USPACOM and ADoD discussed the final requirements of the event, as well as the remaining steps necessary to successfully execute the PESF. Throughout the FPC, USPACOM was able to gain answers to many outstanding issues and concerns, including speaker status, facilitators, supporting activities, as well as arrangements for the Sydney Harbor Oil Spill Response demonstration, Defence Facilities Overview tour, and Garden Island site visit.

After the FPC was complete, additional IPR teleconferences were held with ADoD to finalize PESF preparation requirements.

4. MISSION: To execute the Pacific Environmental Security Forum (PESF) in partnership with USPACOM J4 and ADoD in Sydney, Australia 16-19 April 2013.

5. PURPOSE: To build military resilience to the impacts of climate change and mature environmental security partnerships, diplomacy and awareness in the Pacific region. The 2013 PESF focused on four key themes to accomplish this. The themes include: 1) Sustainable environmental management from planning to close out; 2) Lessons learned from military support to disaster relief operations; 3) Managing and preventing biosecurity risks; and 4) Evaluating new approaches to mitigating and adapting to climate change impacts.

6. VISION: To strengthen and advance alliances and partnerships by enhancing the capabilities of regional states in the Pacific theatre to assess causes and impacts of environmental security issues, develop response strategies to mitigate these issues, and conduct contingency planning for crisis response.

7. OBJECTIVES: The following objectives were set for the 2013 Pacific Environmental Security Forum:

- Participatory sharing of lessons learned, operating procedures and environmental security information
- Develop sustained cooperation between partner and support nations to ensure sustainable environmental management
- Address biosecurity risk management in a military context
- Develop a “network of networks” of experienced military environmental planners to assist in operations and disaster management
- Increase understanding of climate change issues among partner and supporting nations

8. POINT OF CONTACT: Justin Pummell, Geographer, U.S. Army Corps of Engineers, Institute for Water Resources, [justin.d.pummell@usace.army.mil](mailto:justin.d.pummell@usace.army.mil) or +1 (808) 234-4633.

9. COUNTRIES DISCUSSED: Australia, Bangladesh, Cambodia, China, India, Indonesia, Japan, Laos, Malaysia, Maldives, Mongolia, New Zealand, Nepal, Papua New Guinea, Philippines, Thailand, Timor L’este, United States, and Vietnam. Canada, Brunei and Singapore were also invited, but were unable to attend.

10. AGENDA: Reference enclosed documents.

11. PHOTOS: Reference enclosed documents.

12. PARTICIPANTS:

## a. AUSTRALIA

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	Ms. Helen Blain	Department of Defence
2	Mr. Daniel Giltrap	Department of Defence
3	Ms. Julia Bowett	Department of Defence
4	Ms. Stacey Hannon	Department of Defence
5	Mr. Michael Healy	Department of Defence
6	Mr. John Owens	Department of Defence
7	Mr. Nick Parker	Department of Defence
8	Ms. Marika Behr	Department of Defence
9	CMDR Stephen Cole	Royal Australian Navy
10	Ms. Margaret Ross	Department of Defence
11	Air Commodore Richard Owen	Headquarters Joint Operation Command (HQJOC)
12	Mr. Glenn Forrest	Department of Defence
13	Mr. Travis Collins	Headquarters Joint Operation Command (HQJOC)
14	Mr. Malcolm Harrison	Headquarters Joint Operation Command (HQJOC)
15	Ms. Kate Tropman	Department of Defence
16	Ms. Alice Fenwick	Department of Defence
17	Mr. Rick Zentelis	Department of Defence
18	CAPT Howard Furness	Royal Australian Navy
19	LS Grant Langlands	Royal Australian Navy
20	Mr. Paul Nixon	Department of Agriculture, Fisheries and Forestry
21	Ms. Joanne Wienert	Department of Agriculture, Fisheries and Forestry
22	Mr. Allan O'Connor	Department of Defence
23	Ms. Rosanna Jeffrey	Department of Defence
24	AVM Neil Hart	Vice Chief Defence Forces Group
25	Mr. Scott Callinan	Department of Defence

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
26	Dr. Fred Ford	Department of Defence
27	LCDR Ian Brown	Royal Australian Navy
28	Ms. Jane Holloway	Department of Defence
29	Mr. Phillip Vavasour	Department of Defence
30	Ms. Eloise Ockwell	Department of Defence
31	Ms. Cheryl Durrant	Vice Chief Defence Forces Group
32	Mr. Kael Da Costa	Army Headquarters
33	COL Timothy Bayliss	Army Headquarters
34	CDRE Mark Sackley	Vice Chief Defence Forces Group
35	COL Neil Greet	Army Headquarters
36	Mr. Bruce Cook	
37	HE David Feeney	Australian Parliament
38	Ms. Kathryn Shields	Department of Defence

## b. BANGLADESH

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	MG (ret) A.N.M. Muniruzzaman	Bangladesh Institute of Peace and Security Studies
2	Lt Col Mohammad Mahmud	Bangladesh Army
3	Maj Faruque Ahmed	Bangladesh Armed Forces Division

## c. CAMBODIA

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	Mr. Ku Bunnavuth	National Committee for Disaster Management
2	Mr. Rithirak Long	Ministry of Environment

## d. CHINA

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	Col Li Jiangfan	People's Liberation Army,

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
		Environmental Protection Bureau
2	Dr. Xie Chaoxin	People's Liberation Army, Logistical Engineering University
3	Dr. Song Yajun	Academy of Military Medical Sciences

## e. INDIA

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	BG Amit Sanyal	Indian Army, HQ Integrated Defence Staff

## f. INDONESIA

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	COL Ibnu Fatah	Tentara Nasional Indonesia, Army Topographic Directorate
2	Capt Jhonny Silalahi	Directorate of Sea and Coast Guard-Ministry of Transportation

## g. JAPAN

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	Mr. Shingo Ito	Ministry of Defense
2	Mr. Tetsuya Ito	Ministry of Defense

## h. LAO PDR

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	LTC Khamsai Sanykeo	Ministry of National Defense
2	LTC Somkhith Sisomphone	Ministry of National Defense

## i. MALAYSIA

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	Dr. Mohana Anita Anthonysamy	Department of Biosafety, Ministry of Natural Resources and Environment
2	Dr. Aznida Yusuf	Science and Technology Research Institute for Defence (STRIDE)

## j. MALDIVES

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	BG Zakariyya Mansoor	Maldives National Defence Forces
2	Mr. Mohamed Ahmed	Ministry of Defence and National Security
3	LTC Abdul Rauf	Maldives National Defence Forces

## k. MONGOLIA

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	Dr. Purevjav Gomboluudev	Institute of Meteorology, Hydrology and Environment

## l. NEW ZEALAND

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	Maj Mark Walters	New Zealand Defence Forces
2	CDR Kevin Whishart	New Zealand Navy

## m. NEPAL

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	SSP Sudip Acharya	Nepal Police Headquarters
2	SSP Durga Kunwar	Nepal Armed Police Headquarters

## n. PAPUA NEW GUINEA

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	MAJ Roderick Noyamefa	Army
2	LTC Craig Solomon	Army

## o. PHILIPPINES

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	LTC Cabugon Francis	Department of National Defense, Philippine Army
2	Mr. Vercision San Jose	Philippine Armed Forces
3	COL Jonas Suizo	Philippine Armed Forces

## p. THAILAND

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	Col. Borworn Wongsangchantra	Office of Civil Affairs, Office of Policy and Planning
2	Col. Phongphat Songsoontorn	Joint Civil Affairs, Royal Thai Armed Forces Headquarters

## q. TIMOR L'ESTE

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	Mr. Armindo Dos Santos	Secretary of State for Defense RDTL

## r. UNITED STATES

<b>NUM</b>	<b>NAME</b>	<b>ORG</b>
1	Brig. Gen. Mark McLeod	USPACOM
2	CAPT John Sommer	USPACOM
2	Mr. Christopher Sholes	USPACOM
3	Mr. Bruce Fink	USPACOM
4	Col Ray Tsui	USPACOM
5	Lt Col (P) Kevin Thomas	USPACOM
6	LTC Eric Quan	USPACOM
7	LN1 Gabriela Guerrero	USPACOM

NUM	NAME	ORG
8	Mr. Justin Pummell	USACE
9	Dr. James Zeidler	Colorado State University
10	LTC (ret) Daniel Brewer	Liberty University
11	Ms. Ninette Sadusky	OSD

## s. VIETNAM

NUM	NAME	ORG
1	Dr. Le Hung Nam	Directorate of Water Resources
2	Mrs. Pham Hanh	Ministry of Agriculture and Rural Development

## t. OTHERS

NUM	NAME	ORG
1	Dr. Adam Sparks	International Rice Research Institute
2	Dr. Nguyen Van Duyen	Mekong River Commission

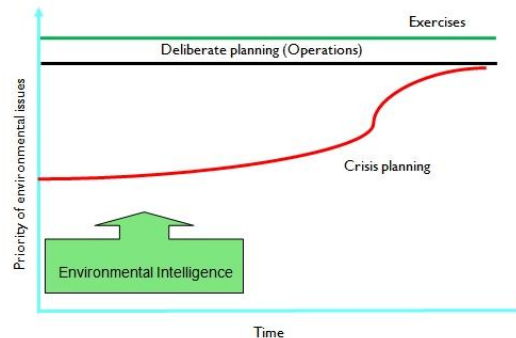
13. **DAILY SUMMARY:** The details found in the section below summarize the daily activities that occurred during the event. They were recorded on the denoted day, and reflect the current status of that day.

a. 16 APRIL 2013

The first day of the PESF focused on environmental sustainability. US and Australian event leads provided opening statements, including: Mr. John Owens (Head of Infrastructure, Australian Department of Defence), Senator David Feeney (Australian Parliament), and Brig Gen Mark McLeod (Director for Logistics, Engineering and Security Assistance, USPACOM). All opening ceremony speakers highlighted the current impacts of climate change to the Pacific region and the need to further collaborate and share knowledge so that militaries are more resilient. Senator Fenney stated, “Whether as users of resources such as fuels and water or as providers of assistance during environmental disasters, the roles and responsibilities of militaries can only be expected to grow in the face of global climate change.”

Following the opening ceremony, Air Commodore Richard Owen (Joint Operations Command, ADoD) introduced himself as the environmental sustainability theme leader. He provided a unique perspective on why climate

change and environmental considerations have impacted him past, present and future. He encouraged the participants to think about how the environment plays a role in military decision-making, and how the more intelligence we have on the subject, the more prepared we will be to support it in contingency operation planning and closeout. He provided the following chart to summarize this concept.



Upon conclusion of his introduction, Air Commodore Owen invited COL Ibnu Fatah from the Indonesian Army Topographic Directorate to deliver his presentation. COL Fatah spoke on how the Indonesian military accounts for environmental factors, specifically in non-military activities (e.g. disaster response coordination with civilian agencies). He explained environmental damages that can result from defense, and what the Indonesian Army is doing to try to mitigate those impacts. COL Fatah explained the legislation that has been established by the Indonesian government to support the environment. However, he stated that much work remains, especially when it comes to education and action by the military.

The next presenter was MG (ret) Muniruzzaman from the Bangladesh Institute of Peace and Security Studies who highlighted the security implications of climate change across a wide spectrum. He stated that climate change is not only a threat-multiplier, but will also generate new threats that the world has not seen before. MG Muniruzzaman summarized that the major vulnerabilities and threats from climate are human displacements and migration, water security, reduced agricultural productivity and food insecurity, loss of livelihood, health hazards, energy crises and disaster security. He emphasized that the nexus between water, food, and energy security will threaten the very stability of impacted states. MG Muniruzzaman also encouraged the participants to think about how an interconnected and interdependent world will experience regional consequences from climate change.

MG Muniruzzaman was followed by LTC (ret) Daniel Brewer from Liberty University. LTC Brewer described lessons-learned from his deployments in Iraq and Afghanistan as the US Central Command (CENTCOM) Environmental Officer. LTC Brewer explained his experience on the frontlines of contingency operations, providing examples of what environmental measures worked and did

not work. He shared sobering pictures of failed efforts to manage waste, and how this led to CENTCOM developing new environmental regulations and procedures.

The last environmental sustainability speaker was Dr. James Zeidler from Colorado State University. Dr. Zeidler focused his presentation on cultural heritage in contingency operations, and the need to protect these resources whenever possible. He stated that the greatest success rates in cultural resource preservation occur when militaries have ready access to location-based information. This reduces potential damage to sensitive sites in contingency operations. Dr. Zeidler also highlighted that understanding cultural landscape features is a critical intelligence component during ethnic conflicts, offering predictive capability for potential flashpoints and terrorist actions.

After the presentations, a panel session was held with all of the speakers. Participants asked the speakers a variety of questions. The highlights were:

- During planning, military representatives need to understand and weigh environmental operations into the overall process. This will allow a balanced view between operational goals and environmental effects.
- Environmental management is essential to overall mission success. If not included in the process, militaries will likely experience bad press and public relations by making poor environmental decisions that could potentially impact the local populace.
- The Indonesian military was not aware of any changes made in their environmental processes since last year's Regional Environmental Security Conference. However, they have increased their environmental training and hope to enhance their capabilities in the future.
- If the Pacific region is to be successful in solving regional climate change impacts, it will take an "international community approach" with common responses, common capabilities training opportunities, and common mitigation methods.
- South Asia has more work to do on regional climate change adaptation, and it needs a mechanism to do so that is void from politics. Opinion among the attendees was SAARC is not currently the mechanism to move this initiative forward.

The day's last effort focused on the Environmental Sustainability Workshops. ADoD presented a common scenario of a United Nations Peacekeeping Operation in a fictitious island (Trinder Island). The participants met in five work groups, with two facilitators. The groups collectively worked through questions associated with contingency response planning and environmental baseline and closeout procedures. The first workshop featured planning questions. The planning centered on environmental considerations for the following actions:

- Maritime mine-sweeping activities in Trinder Island waters
- An amphibious landing at Turtle Beach and Palm Point
- Establishing forward operating bases at Cedar Valley and Jasmine Hill
- Establishing a field hospital at Cedar Valley
- Stability operations

Facilitators captured responses on these topics, and a spokesperson from each work group presented their collective results to the larger audience.

The second workshop featured discussion on environmental baseline and closeout surveys at Trinder Island, as well as lessons-learned from various experiences that participants shared. Again, ADoD presented a short scenario for the work groups to consider, and emphasized the need for work groups to document their efforts pre- and post-deployment. The work groups discussed priority environmental management subjects, and then presented their results to the entire workshop.

Air Commodore Owen concluded the day with a short summary of the Environmental Sustainability Workshops. Mr. Michael Healy then provided a preview of the biosecurity activities planned for the next day.

b. 17 APRIL 2013

Biosecurity was the Day 2 topic. Commodore Mark Sackley (Joint Logistics Command, ADoD) led the proceedings. He began by providing an overview of biosecurity threats in Australia, and how the military has adapted its processes and policies to plan accordingly. He shared several examples that he experienced managing military logistics over the past 30 years.

After his theme introduction, Commodore Sackley introduced Dr. Adam Sparks from the International Rice Research Institute (IRRI). Dr. Sparks is a Plant Disease Management Specialist, and he spoke on biosecurity risks in Southeast Asia, especially how they relate to rice and other food transport. He highlighted several considerations related to rice biosecurity. First, price-volatility makes small shareholder farmers and poor consumers more vulnerable to poverty. Second, while there are endemic diseases present in many countries, they frequently may not be found in nearby countries. Third and last, climate change is beginning to affect the way rice is grown in many countries in Asia. Many of these countries are not as equipped to deal with, adapt to, or mitigate the impacts of climate change and its effects on agriculture as developed countries. Some of these impacts that most impact rice production include floods, tropical storms and prolonged periods of drought. However, climate change can also affect insects and diseases leading to increased yield losses.

Following Dr. Sparks, Ms. Joanne Weinert from the Australian Department of Agriculture, Fisheries and Forestry (DAFF) presented. Ms. Weinert spoke on how biosecurity is managed by DAFF, and how Australia takes biosecurity very

seriously. She explained that Australia is predominately exotic pest and weed free because of tough national and domestic biosecurity measures. This is important for their economy, as well as agricultural product export. Biosecurity compliance in a military context is also very important. Ms. Weinert indicated that her organization works closely with ADoD and other countries (such as the United States) to ensure strict biosecurity laws and regulations are enforced. Her organization provides guidance to visiting militaries, and more detail can be found at <http://www.daff.gov.au/aqis/avm/military/visiting-military>.

The last speaker of the day was Dr. Nguyen Van Duyen from the Mekong River Commission (MRC). Dr. Duyen presented on climate change vulnerabilities occurring along the Mekong River and its tributaries, especially wetland areas. He described the key role wetlands play for peoples' livelihoods, including food security, and how wetlands are under pressure from environmental changes, including climate change. Dr. Duyen explained a major study the MRC conducted in 2011-12 on vulnerability and adaptation of wetlands to climate change, with an assessment on the resilience and vulnerability of important Mekong River wetland habitats and species.

The biosecurity forum speakers then formed a short panel session, with highlights including:

- Procedures for cleaning military machinery to curb pest infestation should be shared with countries not yet incorporating these. Basic, less-costly techniques should be developed to enhance capabilities throughout the Pacific region.
- Garden Island experienced a recent biosecurity concern with bees involving many shipyard stakeholders. Australia has done a remarkable job protecting its bee population, and other countries could learn from their experience.
- ADoD's planning for inadvertent native pest exportation to offshore locations is less organized nor as properly managed. This requires more work.
- To examine biosecurity threats for people arriving into Australia, x-ray systems and dogs are often used.
- Biosecurity education is key to reducing impacts in the future.
- Since the MRC covers the entire Mekong River basin, it may be an ideal organization to monitor biosecurity threats. However, MRC already does much monitoring, including for biodiversity and water quality, and are challenged to do more.

- When discussing biosecurity, water security should lead the conversation. Several participants recommended a water security specialist be included in the panel session next year.

In the afternoon, the participants walked to the Sydney Opera House to take the Forum's group photo. The participants then boarded a ferry and enjoyed a tour of several ADoD harbour facilities, including HMAS Kuttabul, HMAS Watson, HMAS Platypus, HMAS Penguin, and others. The tour lasted approximately two hours and provided historical background on the harbor and how ADoD manages its facilities and the environment in a large city with a watchful public eye.

At the conclusion of the ferry tour, the vessel docked at the Garden Island Navy Base, where the participants formed five groups and walked through the base. Stops along the tour included heritage features, as well as examples of how ADoD manages pollution and biosecurity risks. The walking tour featured 14 different locations, and was guided by the Royal Australian Navy. A guide book, posted signs, and narration were also provided.

The day concluded with an icebreaker at the Navy Heritage Centre on Garden Island.

c. 18 APRIL 2013

Brig Gen Mark McLeod (USPACOM) led the third day of the PESF, with disaster management as its prevalent theme. Brig Gen McLeod provided an informative introduction to the theme by explaining how the U.S. supports international disasters, and at what point the military gets involved. He clarified the relationship between USAID-OFDA and DoD, and emphasized that DoD always works in support of OFDA and the effected nation or area. Brig Gen McLeod also showcased USPACOM's security cooperation and capacity development programs, which support disaster preparedness throughout the theater. He specifically mentioned the Bangladesh Multi-Purpose Cyclone Shelters as an effective tool in providing services in direct benefit to the civilian populace.

At the conclusion of the introduction, Brig Gen McLeod welcomed Mr. Tetsuya Ito from the Japan Ministry of Defense to the stage. Mr. Ito delivered a presentation on the role of the Japan Self Defense Forces (JSDF) after the Great Tohoku Earthquake and Tsunami. He highlighted valuable lessons-learned, which included:

1. Improvement to surge troops and to ensure manpower in affected areas.
2. The necessity to examine roles of SDF during large-scale disasters, when local governments' breakdown, collapse, or are overwhelmed.
3. Strengthening the capabilities to respond to nuclear disaster.
4. Strengthening the capabilities to maneuver for disaster relief.
5. US-Japan coordination improvement.

6. Posture/procedures improvements to better accept and process aid from foreign countries.

The second disaster management presenter was Maj Mark Walters from the New Zealand Defence Forces. Maj Walters discussed lessons-learned associated with planning an emergency response exercise in Tuvalu. Exercise Tropic Twilight resulted from the 2009 Samoa tsunami, and the recognized need to design exercises that were scenario-based. New Zealand and its partners had conducted previous iterations of Exercise Tropic Twilight as largely independent operations to deliver medical assistance and light construction projects. While significant planning and training benefit accrued from these activities, they were not scenario-based or set in the complex and uncertain context of response to a natural disaster in the South West Pacific.

Exercise Tropic Twilight 10 was conducted in Tuvalu in July 2010 within the context of a fictional tropical cyclone. This exercised the NZDF HADR-specific contingency plans. HQ Joint Forces New Zealand conducted the deployment was coordinated by HQ Joint Forces New Zealand with high importance placed on coordination between New Zealand agencies and French partners. The exercise was field-based and featured multiple waves of effort, personnel and equipment.

Following Maj Walters, the last disaster management presentation was delivered by Col Jonas Suizo from the Philippines Armed Forces (AFP). Col Suizo showed a video of disaster management facts and response efforts led by civilian and military organizations in the Philippines. After the video, he explained the AFP role under the National Disaster Risk Reduction Management Act (NDRRM), as well as AFP's experience during emergencies. Col Suizo discussed practical applications of the law with respect to Disaster Risk Operations involving foreign military assets. Col Suizo also described defense disaster planning guidance to show AFP direction in this mission. Lastly, Col Suizo provided updates on the recent dynamics between the Climate Change Act of the Philippines and the NDRRM Act.

Brig Gen McLeod then chaired a panel session with the speakers. Some highlights were:

- Mortuary affairs and media relations were a challenge during the Japan earthquake and tsunami response. All militaries should include these pieces into their disaster management planning efforts.
- To have a good disaster management exercise, a strong scenario will train all HADR aspects in a realistic manner. In the Tuvalu example, this meant having assessment teams deploy first, followed by the main body. This staging added realism to the event, and allowed for a field exercise that examined the requirements for equipment, personnel and procedures through the entire response phase.

- Future PESF events should investigate water-related disasters. Droughts are especially important to discuss because climate change is increasing their frequency and severity too. Droughts are not currently in the “interagency conversation.”
- Involving military reservists in disaster response is an important component to success. This requires training and continual practice. More militaries in the region should consider activating reservists to support future HADR missions.
- The panel addressed whether it is appropriate to have a dedicated military component for HADR. Some countries felt it was, while others indicated that many militaries are too small to have personnel dedicated solely to HADR. They must wear multiple “hats.”

In the afternoon, the Royal Australian Navy and the New South Wales Port Authority performed an oil spill response exercise, which included a boom deployment to contain the spill. Additionally, a small skimmer boat responded to the scenario to remove oil from the water’s surface. Rain shortened the demonstration.

d. 19 APRIL 2013

The last day of the PESF focused on climate change adaptation and mitigation. The day was chaired by Air Vice-Marshal Neil Hart (ADoD) and Col Neil Greet (ADoD). AVM Hart introduced the climate change adaptation theme, and stated in his opening comments that it is the military’s role to be ready. This readiness must be carried over to environmental stewardship and adapting to the impacts of climate change. Additionally, militaries need to enhance their disaster management and energy posture to prepare for future challenges. AVM Hart also noted that many militaries are large land owners. As such, they must ensure those properties are protected and that they proactively perform measures to support future climate change challenges.

After AVM Hart, COL Greet introduced the first presenters as Ms. Jane Holloway and Ms. Cheryl Durrant from ADoD. The co-presentation discussed climate change impacts on defence preparedness from the Australian point of view. Ms. Holloway and Ms. Durrant delivered ideas about what militaries might do differently to combat climate change. This included taking wider perspectives that go beyond national security, and focus on regional and global security responses. Ms. Holloway and Ms. Durrant argued that the impacts of global change will require militaries to engage more with non-traditional partners, including people from industry, science and other institutions. They concluded with some practical suggestions about ways to build resilience and adaptivity in the military. These include improved forecasting, more joint, regional and whole-of-government exercises and engagement, and building adaptivity and resilience into platforms, bases and operating procedures.

The next presenter was Dr. Purevjav Gomboluudev from the Mongolia Institute of Meteorology, Hydrology & Environment. Dr. Gomboluudev spoke on climate change in Mongolia, and provided a “cold weather” perspective with the challenges his country faces. According to historical observations, the annual mean air temperature over Mongolia has increased by 2.1°C and precipitation has decreased nearly 10% from 1940 to 2012. Thus, Mongolia is becoming drier due to increasing evaporation and more extreme weather. During the last 20 years, extreme event frequency has increased two-fold, and the intensity and duration has also changed. Dr. Gomboluudev stated that in the future, the climate of Mongolia will get milder with heavier snow in the winter, and drier, hotter summers. This means that current climate change patterns will continue to increase, enhancing the frequency, intensity and duration of extreme events. The Mongolian society must prepare for this.

Following, Dr. Gomboluudev, BG Zakariyya Mansoor from the Maldives National Defence Force (MNDF) presented on climate change impacts to his country. BG Mansoor highlighted that the Maldives is a small island nation, which at its highest point, sits only 1.3-meters above sea level. Therefore, it is extremely vulnerable to rising sea levels and disaster events. The Maldives was devastated by the 2004 Boxing Day tsunami, crippling an already frail economy. Compared to other nations, the loss-of-life was lower in the Maldives, but the damage to infrastructure was colossal.

BG Mansoor showcased how the Maldives National Defence Forces worked with regional partners in the tsunami response. Following the disaster, MNDF identified needed resources for future disaster events. MNDF has acquired Fast Attack Craft (FAC) for such responses and to decrease reaction time over its extended territory. It also has increased joint operations with other nations to harmonize interoperability.

At the conclusion of BG Mansoor’s presentation, COL Greet led a panel session with the climate change speakers. Some of the highlights include:

- Politics often drives discussion and direction in climate change matters. Militaries should avoid politics and focus on what it can do at the ground-level to make changes.
- There is much work for militaries still on waste management systems to support environmental sustainability. This topic needs further evaluation in future environmental security events.
- The military operates and owns training ranges. As such, they need to be good environmental stewards and set the example to the broader community that the environment is important and should be protected.

- Climate change is increasing water security and drought concerns. More discussion on this topic is required.
- Militaries across the Pacific need to focus on risk reduction, risk adaptation, and capacity development on a regional level to succeed.
- Climate change will continue to drive food security concerns, which can lead to political instability.
- Countries in the Pacific need to have strong connections and friendship with their neighbors, because when a disaster strikes, the neighbors will have to act first to support.
- The local community can help drive change, and more local involvement is required. Militaries should engage the local community to gain and learn from their perspective.
- Small nations need assistance to take proactive climate change adaptation measures. Therefore, resources should be put into place to support them.

Following the panel session, Mr. Michael Healy (ADoD) provided his six key items he learned from the Forum. They were:

- 1) Iraq – waste management
- 2) Southeast Asia – rice/food security
- 3) Mekong Delta – climate change vulnerability
- 4) Japan – tsunami response
- 5) Philippines – typhoon response
- 6) Maldives – climate change adaptation

The formal After Action Review (AAR) followed. Each of the participants gathered in their work groups to answer the following questions:

- What worked?
- What did not work?
- What topics were the most interesting?
- What do you recommend for the future?

The below highlights were collected from the work groups:

#### SILVER GROUP

- Worked: social interaction, panel sessions, videos, exposure to new ideas
- Did Not Work: oil spill demonstration
- Topics of Interest: civil-military integration
- Recommendations: high-altitude perspective, more civil-military integration, rotate participants through work groups

### GREEN GROUP

- Worked: civil-military collaboration, sharing of best practices and lessons learned
- Did Not Work: oil spill demonstration
- Topics of Interest: civil-military interaction
- Recommendations: table-top exercise, wastewater issues, water security issues, air pollution issues

### RED GROUP

- Worked: event organization, objectives, work-group format, disaster management topics
- Did Not Work: oil spill demonstration
- Topics of Interest: variety of subjects, Garden Island tour, heritage, links between food/water/disaster management
- Recommendations: practical equipment demonstration, civil-military interoperability, involving more of the scientific community, panel sessions

### BLUE GROUP

- Worked: environmental considerations in military planning, diversity of participants, civil-military interaction
- Did Not Work: start with climate change adaptation first, and then end with the environmental sustainability workshops
- Topics of Interest: waste management in Iraq, total aspects of environmental considerations
- Recommendations: social media alerts, more time for workshops, extending the PESF from four days to five days

### YELLOW GROUP

- Worked: event format, flow of activities, flexibility of planners
- Did Not Work: oil spill demonstration, timing of event (New Year's holiday in SE Asia is same time).
- Topics of Interest: water, energy
- Recommendations: water, energy, civil-military integration, technologies

Following the group AAR comments, each country was given a short opportunity to deliver their final remarks. Please find below some of the highlights:

- New Zealand: Militaries need to consider energy efficiency in the future; small changes (ex. LED lights) can make a big difference over the long term.

- Cambodia: Gained from the civil-military cooperation, oil spill response demonstration; would like to see a more diverse audience in the future.
- China: thankful for the event planners hard work; felt it was a good format; wish to work with partners on environmental topics more in the future; all invited to come to China.
- Bangladesh: all participants need to use their knowledge for change and good.
- Papua New Guinea: the topics of climate change and their ties to migration and conflict were interesting and they can relate to these subjects.
- Vietnam: food security is an important topic; sea level rise will make food security more unstable in the future; Vietnam is open to discuss these topics more in the future.
- Philippines: include climate change foundation members to the invitation list in the future.
- Laos: will take lessons learned from the PESF back to Laos and attempt to incorporate the information in daily activities.
- India: the event was well-planned.
- Maldives: look forward to hosting the event next year; ready for the challenge.
- Malaysia: the event was well-organized; need to look more at human impacts of climate change; need the scientific community and first responders more involved.
- Japan: PESF was appropriate for connecting people to environmental management topics.

The event concluded with statements by Brig Gen Mark McLeod (USPACOM) and AVM Neil Hart (ADoD). Upon conclusion of the closing ceremony, all participants received a certificate, group photo and event CD. In exchange, the participants provided their evaluation form.

14. PRESENTATION SUMMARY: Reference enclosed documents.

15. ENVIRONMENTAL SUSTAINABILITY WORKSHOP RESULTS: Reference enclosed documents.

16. DAILY INTERNAL HOTWASH SUMMARY: At the conclusion of each day, USPACOM held an internal hotwash to quickly summarize gaps and issues that require resolution in the future. These issues are noted below and are organized by date.

1) 10-14 APRIL 2013, Advanced Echelon On-Site (ADVON)

**Issue:** Scope Creep/Administrative Inefficiency

**Discussion:** During the forum, it became apparent that our joint partners were unclear as to the exact requirements or expectations, e.g. who would scribe outputs from working groups; who would collate the certificates, who would be primary on signature of certificates, etc.

**Recommendation(s):** Conduct a roll-call at the beginning of each day and a “hot wash” at the conclusion with joint partners to clarify and adjust roles as needed. Recommend lead project managers from both host nations play forcing function role in this area. Underway adjustments will always occur, to achieve synergy; joint planning and joint operations require lateral communications. Both countries must agree to a comprehensive Administrative Procedures Agreement (APA) and then comply with requirements in good faith. E.g. leave registration to one team as sole responsibility with a joint presence publically.

2) 15 APRIL 2013, Monday, Day 0

**Issue:** Hotel/Forum Site Issues

**Discussion:** During the ADVON and the registration period, the hotel account manager made herself available upon request to the team. Issues like forum spelling on electronic signage; early/late check-in; hotel security deposits; exchange rates; agreed upon room rates; HVAC in functional spaces; use of business center; computer hardware; printers; banner placement; etc. were ultimately resolved to team satisfaction but not without varying levels of lag time.

**Recommendation(s):** In order to stimulate responsiveness and dialogue, recommend future events designate a standing sync meeting with hotel account manager or representative with appropriate authorities every morning before formal agenda begins. At the forum end-state, that became the working solution.

-----  
**Issue:** Funding Title-10 Countries for hotel and per diem

**Discussion:** Due to contracting restrictions and limitations on how to disburse funding, this PESF had funds MIPR-ed to ODCs for disbursement to attendees. The plan required cash disbursements at US Embassies and the attendees would travel to the PESF and pay for hotels with US dollars. Problems encountered included, exchange rate conversion issues, reluctance to lodge in reserved rooms, etc.

**Recommendation(s):** The ideal solution is to avoid Forum attendees traveling with and accounting for relatively large sums of currency. Establish a prepaid room block with Title-10 funding and allow Title-10 eligible attendees to utilize lodging from a pre-established room block. If this is not possible, then during the FPC, the hotel coordinator from the USPACOM team needs to sit down with the hotel management to ensure it is clear how charges are made, and what other fees or security deposits they will need so that we can plan for these accordingly. These should also be discussed during the contract bid period. This does not address the hotel management communicating throughout its “chain of command,” but it establishes USPACOM’s intention to management.

---

**Issue:** Facilitator Training

**Discussion:** Facilitators and small unit leaders have a short window of opportunity to get all facilitators up to the same level of training and expectations. In the case of Sydney, many facilitators arrived the day of the training event or as the training was in progress. The ability of the facilitators to prime the discussion points and steer the small groups towards the learning points is crucial to the success of the overall forum. The small groups bring the lecture portions of the presentations to life through interaction, discussion, personal testimony and inspired debate/dialogue.

**Recommendation(s):** To expedite that process recommend all attendees send professional biography and detailed read-ahead packages be provided to all personnel designated in these key positions.

3) 16 APRIL 2013, Tuesday, Day 1

**Issue:** Room Acoustics/Language Barriers

**Discussion:** Due to room acoustics and language barriers, some participants may not have been able to follow the discussion or material as closely as others.

**Recommendation(s):** Emphasize to presenters that speaking slowly, clearly, and presenting that material to an audience comprised mainly of foreign language speakers may require adjusting their style and materials. In addition, pre-execution checks of visibility and acoustics from all aspects of functional space are crucial.

---

**Issue:** Effectiveness of Small Groups

**Discussion:** The small group working projects represents an opportunity for bonding and collaboration during the forum schedule. This is where adept facilitators and moderators are keenly important.

**Recommendation(s):** To avoid stratification and the natural tendency for people to gravitate into their comfort zone, planners should organize the small groups using the strategic placement of name tents with a mix of personalities, languages, roles, and experience to try to drive a fulfilling learning experience and engagement. Additionally, if we ever do multiple days of work groups in the future, the planning team should consider making up new groups for each day to help participants further interact with different people. This could be done during the working lunches as well.

4) 17 APRIL 2013. Wednesday, Day 2

**Issue:** Participant Attendance

**Discussion:** Based on name tents, it became apparent that some participants unilaterally decided to skip certain presentations or parts of the program.

**Recommendation(s):** Emphasize in the read-ahead package to participants that their input and collaboration is vitally important to a successful event. Reinforce that message through strategic communications during and after the event. Require collaboration and deliverables during small group sessions that will stimulate consistent engagement. Additionally, a daily roll call could be held and participants could be warned that lack of attendance will result in their certificate not being issued.

---

**Issue:** Name tags were one sided

**Discussion:** Since name tags were one-sided, about 50% of people were anonymous until they were requested to flip it over or introductions were made.

**Recommendation(s):** Use a clip on or print both sides if a lanyard system is employed.

---

**Issue:** Icebreaker

**Discussion:** The icebreaker is a critical event to stage the participants for meaningful collaboration later in the forum.

**Recommendation(s):** Schedule the event on day one, make the event casual, and task the facilitators and joint working group with stimulating discussions and meetings.

---

**Issue:** Sequencing for event photograph

**Discussion:** On the way from one event to another may not be ideal since some people were left out of the photo.

**Recommendation(s):** Schedule it right before lunch during a plenary session for maximum participation. Provide a second CD or a website to distribute event photographs.

5) 18 APRIL 2013, Thursday, Day 3

**Issue:** Social Event Consistency

**Discussion:** The facilitators and personnel assigned as small unit leaders during social events were inconsistent as far as knowledge and preparation.

**Recommendation(s):** Conduct training in-person or via read-ahead to ensure consistency.

19 APRIL 2013, Friday, Day 4

**Issue:** Compiling Presentations as Forum was in Progress

**Discussion:** Some presenters came with electronic media which was corrupted with virus and other data issues.

**Recommendation(s):** Bring a laptop preloaded from J6 with virus detection and malware scrubbers to screen presentations.

17. OPPORTUNITIES: From the Pacific Environmental Security Forum, several emerging opportunities were gained. The presentations, workshops, panel sessions and tours/demonstrations all provided a medium where opportunities were revealed and expanded. Please find below some of the most prominent opportunities that were developed during the event. Items listed are not in any particular order.

- The Administrative Procedures Agreement (APA) is a document signed between USPACOM and the partner nation to define roles and responsibilities and set a schedule for deliverables. For the PESF, the APA was signed between USPACOM and ADoD. In some instances, the agreed to terms were either not met or the timelines were not enforced. This led to some critical materials being completed at the last minute (ex. Environmental Sustainability Workshops) or another party (ex. USPACOM) having to complete work that the other partner was scheduled to perform. The results were unnecessary stress, long hours preceding the event's commencement, and schedule changes that could not be reflected in the (already) printed material. For future events, the APA should be signed at a higher level (ex. J44 or J4) to ensure the document can be enforced. Additionally, USPACOM's planning team will need to send more reminders to the partner when critical due dates arrive.

- ODCs are extremely busy, and do not necessarily view the PESF as a priority. Although most ODCs are responsive, there are a few who have been difficult to communicate with. Recommend the J4, or at the very least the J45, contact ODCs at the start of the fiscal year to alert them of the support they will need to provide for upcoming events. Additionally, the USPACOM planning team will need at least an O6 to communicate directly with the ODCs, because most of them are themselves O6's.
- Work-group assignments for the Environmental Sustainability Workshops were not made until the Facilitator Training session the day prior to the start of the activity. This resulted in some last minute scrambling to pull off an improvised system for delineation of groups (ex. colored stickers). The process worked out, and the color-coded group settings were organized and should be considered for future events. However, the work group assignments should be made with more advance notice so things are not completed at the last minute. USPACOM will need to work with the partner nation to ensure full participant rosters can be provided sooner, and that the partner nation fulfills its obligation of assigning work groups if the task is defined in the APA.
- A monumental effort was undertaken to ensure a few of the foreign participants could obtain their visa to Australia. Some of this effort was performed the week prior to the PESF, and required close coordination with country teams, the participant, and the partner nation(s). To avoid this issue in the future, it will be necessary to contact participants that are having trouble with their visa by phone, and have the respective ODC get involved as quickly as possible. In some instances, the situation may be unavoidable, but the impact of last minute visa issues is something to be avoided. Furthermore, ADoD worked to inform their embassies to help streamline the visa process. This should be done at the very beginning of the invitation process by the host nation. For example, as part of the IPC, the planning team needs to make sure the host country takes the action to start streamlining their visa process where possible throughout their various embassies.
- A file for the banner was provided to the hotel a couple weeks before the USPACOM team arrived in Sydney. However, the hotel didn't let the team know the file format wasn't conducive to a large banner until we got there. In the future, the team will need better communication with the hotel to make sure they're working the banner/issues before departing from the US.
- Separate press releases were issued by USPACOM and ADoD. ADoD released a statement to the media following HE Senator David Feeney's speech on the opening day. USPACOM published its press release after the closing ceremony of the PESF. Per the APA, there should have been only one joint press release issued at the conclusion of the PESF. The press release needs to be better coordinated in the future to avoid duplication and maximize the number of outlets it is released too. The USPACOM press release issued through the USEMB in Canberra did not get picked up by any major media inside or outside of Australia.

- Many of the Title 10 participants were initially overcharged by the InterContinental Hotel and required to pay an incidental fee. This resulted in a majority of the Title 10 participants having their available advance cash tied up in unforeseen hotel expenses. This was a major problem, which the planning team had to resolve. The overcharge fee was related to the conversion of Australian and US dollars. The PESF contract stated a room charge of \$250 USD per night, but the InterContinental Hotel initially charged \$250 ASD per night. The planning team was able to refer back to the contract, and after a day or two, currency conversion funds were returned to Title 10 participants. The hotel also returned incidental funds, which were the equivalent of two nights of hotel cost. The hotel explained this was necessary in case any damages occurred to the room. Since most of the Title 10 participants did not have a credit card, the upfront incidental fee had to be paid by cash. After working with the hotel, the planning team was able to get these funds returned to the Title 10 participants so they could have money for food. In the future, the planning team will need to work with hotel staff to ensure the contract currency is followed, and that upfront incidental fees are not charged when checking into the hotel.
- The requirements for the facilitator training session need to be included in future PESF contracts. The requirements, for example projector and screen, were not in the contract, and resulted in the planning team having to negotiate with the venue to cover the expenses. All future PESF contracts should include the facilitator training session requirements to avoid any last minute bartering and headaches.
- The continuity from last year's Regional Environmental Security Conference (RESC) in Indonesia did not occur. The Tentara Nasional Indonesia (TNI) speaker did not include any details on what progress has been made between TNI and the Indonesia Ministry of Environment. As such, the purpose of this presentation fell short, and the tie to last year's accomplishments remains unknown. In the future, the planning team will need to more closely coordinate with the ODC to ensure the speaking topic is clear, and that the speaker is ready and capable of delivering a presentation that provides a summary from last year's activities and the progress made. Therefore, USPACOM will need to coordinate closely with ADoD to ensure whatever briefing they provide next year provides continuity. Additionally, USPACOM needs to contact the ODC in Jakarta to request a paper or presentation on the progress that has been made since the RESC.
- In some instances, presenters spoke very quickly. This made it difficult for participants to understand the subject matter. Knowing that most participants' first language is not English, it is imperative that speakers present slowly and not use technical terms. USPACOM will need to add a note to the speaker guidance document to ensure all presenters understand the circumstances. Additionally, the planning team should also remind the speakers to present slowly before they enter the stage.
- During the PESF, several participants stated there was no central mechanism to share environmental security information. It is recommend that USPACOM or another partner nation develop a web portal or other tool in the future where environmental

security and management documents can be shared. This could potentially be APAN, but additional resources and modifications will be necessary to make it a viable option. APAN is not currently configured to be an ideal solution because it is cumbersome to navigate and is not focused on environmental topics/issues.

- A few of the PESF presenters spoke on sensitive issues that may have upset other participants. The planning team needs to reinforce the message that the PESF is not the forum for political statements and/or accusations. The PESF needs to be an environment of open, courteous, and professional dialogue where all participants are welcomed and can feel comfortable.
- The opening ceremony concluded much more rapidly than the allotted time on the agenda. The extra time was quickly absorbed, and it turned out to be a non-issue. However, the planning team should go with its experience and initial practice, and ensure the total time for opening ceremonies is limited to 30 minutes. This will ensure the schedule stays on track and break services do not require adjustment.
- Despite the ADoD's disinterest in recording environmental sustainability work group notes, it is imperative for USPACOM to gather this information for the ADoD. This will ensure future PESF activities can learn from the discussions that take place in the work groups.
- The departure of the participants from the InterContinental Hotel to the Sydney Opera House for the group photo was disorganized. One of the work groups left after the rest of the participants, and as a result, was late for the group photo. The group photo had to be re-taken multiple times. Instructions in the future need to be clear, and a map of how to walk from the venue to the group photo location needs to be shared with all facilitators. The planning team should also include the facilitators in a portion of the daily hotwash session to go over issues such as this.
- The group photo was re-scheduled from Day 1 to Day 2. This resulted in the photo being taken in front of the Sydney Opera House, which was a nice touch. However, it also resulted in a mix of attire for the photo. In some instances, participants were dressed in their military uniform out in public, which made some feel uncomfortable. Others dressed casually for the ferry tour afterwards, which was inappropriate for the official group photo. In the future, the group photo should remain on Day 1 so everyone can be dressed appropriately and not feel uncomfortable.
- The final event CD that was distributed to all of the participants was missing one presentation and the Day 3 and 4 photos. The files were missing because the contract required materials be delivered to the vendor at a certain time, which was the start of Day 3. For future events, the event planners will need to work with presenters to ensure they provide their materials on Day 1. For the Day 3 and 4 photos, these materials will have to be burned to a separate disk on Day 4, posted to a photo sharing site for the participants to download, or have the contract modified to include a later file transfer time.

- The approximate start time each day was 0845. As each day progressed, the number of participants that showed up on time dwindled. In the future, the team should consider an incentive to entice participants to show on time (ex. food). Additionally, the planning team needs to be cognizant that some cultures typically do not start their daily work activities until 0900 or 1000.
- By embedding a Maldives planner with the USPACOM team, next year's event is already ahead of schedule. This was a very positive outcome of the PESF, and USPACOM should consider doing this in the future to get next year's activity off on the right foot. It was very beneficial to have the Maldives planner observe daily planning activities and summaries. The Maldives planner now has a greater understanding of what is required to successfully execute an event of this type.
- The oil spill response demonstration organized by the Royal Australian Navy did not turn out as planned. The event was shortened due to rain. However, the major issue was that no one really understood what was happening. The demonstration should have included a public announcement system so facilitators could explain the scenario and what was taking place in the water. Additionally, the demonstration should have focused on just one aspect of oil spill response. There was a great time lag that occurred between the boom deployment and the arrival of the skimmer vessel. In the future, these types of demonstrations should be tested at the FPC to ensure it works and will be beneficial to the participants.
- The location for participants to observe the oil spill response demonstration was next to the dry dock. During the demonstration, the dry dock had two boats being serviced. This resulted in strong chemical odors that could not be avoided. Additionally, it resulted in many participants watching the dry dock work instead of the oil spill response demonstration. For future activities, demonstrations should be performed in open areas that are void of strong odors and other work that will distract participants.
- One of the speaker presentations provided to the planning team had a virus embedded in it. This resulted in a computer being infected. For future events, all presentation materials should be scanned on a separate computer provided by the venue to ensure viruses can be removed. The venue contract should include a requirement for the latest anti-virus software.
- Participant evaluation forms were included in the welcome bag provided to all participants upon their registration to the PESF. The evaluation forms were kept separate from the event booklet, which allowed for them to be easily accessible. However, by the time Day 4 arrived, most participants were not carrying their bag with them that included the evaluation form. This resulted in the planning team having to re-print and re-distribute the forms to participants. In the future, it may be most practical to distribute the participant evaluation forms on Day 1 when the participants first sit down. Facilitators can then explain the purpose of the forms and recommend that participants fill in the form after each presentation so their comments

are fresh in their memory. If this is not possible, then distributing the evaluation forms on Day 4 to avoid any re-printing would be good.

- The distribution of group photos, certificates and event CDs was well-organized and went much more smoothly than last year. This occurred because the planning team organized the materials alphabetically and by country, and gathered a group of staff to distribute items efficiently. This process should be repeated in the future.
- Some of the participating nations brought gifts to exchange with USPACOM. The planning team had coins available to distribute, but in some instances, these were not an appropriate equivalent. In the future, the planning team needs to consider that additional gifts may be necessary. These gifts should be added to the protocol process so the J4 is ready to exchange with others. Furthermore, if the participant bags are considered gifts, then the planning team needs to ensure they are constructed within a high standard. The bags distributed by ADoD consistently had broken zippers.
- In some instances, members of the planning team were also assigned facilitator duties. This made it challenging for these individuals to meet all requirements tasked. In the future, planning team members should not act as facilitators. If planning team members are tasked to be facilitators because of budget reasons, then USPACOM will need to plan for the dual-role and ensure no one becomes overwhelmed by the requirements.
- Some of the facilitators were unable to attend the training session held the day prior to the PESF's commencement. This left these individuals at a slight disadvantage in being prepared to execute their duties. In the future, all facilitators should arrive in-country prior to the facilitator training session so they can adjust to the new time zone and attend.
- If it is possible, facilitators should be vetted during the FPC to ensure they are capable of supporting the requirements necessary for group interaction and discussion. This did not happen during the PESF, and it resulted in some facilitators not meeting expectations.
- Involving senior leadership to act as theme leads and panel sessions moderators was a strong approach. The senior leaders fostered strong dialogue and good discussion on the various subjects broached. This approach should be continued in the future, if possible.
- In some instances, a few of the participants felt that the Environmental Sustainability Workshops should have been conducted on Day 4 instead of Day 1. This would have allowed more time to understand environmental considerations in contingency operations.
- The flow of activities and themes, and the inclusion of outside activities, was well received by the participants. The planning team should include site visits and

demonstrations in the future to get participants outside and break up the rhythm of continual presentations.

- Water security was a clear gap voiced throughout the duration of the PESF. As a result, future environmental security activities need to include discussion on water and include water security subject matter experts.
- PESF registration was performed manually using a Microsoft Word form. In the future, the PESF team may want to consider an Adobe or web-based form that can electronically sync to a database to avoid having to re-type all of the information.
- The videos shown at lunch turned out to be a hit with the audience. This practice should be continued in the future, as long as the volume is managed and participants have enough time to socialize and network.
- The dates of PESF execution (16-19 April) fell in the middle of many Asian countries' New Year celebrations. The planning team should consider moving the execution dates in the future to avoid this holiday.
- The participants appreciated the civil-military approach taken to environmental security. This diversity of participants should be continued in future activities.
- As budgets become more constraint, the planning team should use all FY13 funds. This means that the FY14 contract should be solicited as soon as possible so the funds are applied and not lost. This will require the planning team to coordinate closely with the Maldives and hold the IPC before 30 September 2013. In this way, the venue can be identified and funds can be applied before expiration. (Note: This may not be possible due to the "bonafide need" rule. Last year, the team tried to use FY12 funds to purchase the 2013 PESF conference space, but the contracting officer disapproved the request. The most the contracting officer would do is award the contract with the IPC as the base award and the FPC and conference itself as options to be funded with FY13 funds [since the events would occur in FY13]).
- To ensure there are no last minute changes in US participant names, USPACOM and OSD need to coordinate sooner in the planning process. The planning team could consider holding a conference call with OSD at two months and one month prior to PESF coordination to finalize participant names and vetting requirements.
- Scope-creep: ADoD consistently pushed the APA requirements onto USPACOM with the associated costs (e.g. speakers' travel costs were to be paid by the inviting nation.) Solution: Write an appendix to the APA that succinctly lists responsibilities and associated costs.
- Deadlines not met: Agenda and base-ops environmental material were revised consistently late in the process. Solution: Develop an automated tickler on Outlook

warning of approaching deadlines. Also, stick to IPR's--the US was on track but Australia was consistently opaque about its progress.

- Version control-e.g. USPACOM had an older post-conference participant list than available and this has delayed sending out the thank-you notes. Solution: Establish a common document nomenclature that includes version number and date.
- Use Dropbox: Only two of five members used Dropbox.
- Stakeholder list under-utilized: constant intra-team requests for contact information cluttered the process. Solution: review Stakeholder list at every meeting to increase familiarization.
- Documents in Drop-Box hard to find. Solution: expand folders and naming and share this information regularly within team. Consider sharing this tool with the Maldives.
- Often event organizers who should participate in the proceedings were left to run administrative errands. This meant they left the conference room and lost opportunities to react with participants and follow the flow and content of the presentations and other moments. At least two administrative “runners” should be on-hand and ready to carry messages and run other such errands so the event leads can participate and be present throughout. This could be a host nation function.

18. PARTICIPANT EVALUATION SUMMARY: At the conclusion of the PESF, participant evaluation forms were disseminated to everyone to gain feedback on the event. Each question was ranked from 1 to 5, with 5 being the highest and 1 the lowest. The percentages, and/or grades, were calculated by assigning the following values/weights:

1 = 0  
 2 = 25  
 3 = 50  
 4 = 75  
 5 = 100

The value that is highlighted indicates the majority vote by the participants.

1) Do you believe this event helped you gain a better understanding of environmental issues and threats in the region? **89%**

1

2

3

4

**5**





The overall participant results can be found in the below table:

	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
1	0	0	23	0	0	0	1	3	0	0	0	0	0	27
2	0	0	6	0	0	0	0	7	1	0	0	0	0	14
3	0	4	28	9	1	7	5	17	3	2	8	2	3	89
4	19	21	23	25	23	17	23	13	20	19	16	18	24	261
5	25	19	0	10	20	20	15	4	20	23	20	24	17	217
	44	44	80	44	44	44	44	44	44	44	44	44	44	
	89.20	83.52	N/A	75.57	85.80	82.39	78.98	54.55	83.52	86.93	81.82	87.50	82.95	81.06

19. WORK GROUP EVALUATION SUMMARY: In addition to individual participant evaluations, each of the five work groups involved in the conference provided their feedback on what worked during the PESF, what did not work, what topics were the most interesting, and future recommendations. The results of this query can be found below.

- **Blue Team**

Worked:

- The need for including environmental considerations in military operations.
- Different experiences/perspectives from military/non-military countries.
- Coordination between civil/military in response.
- Work group continuity.

Did Not Work:

- Oil spill was problematic. Have facilitators in same venue with people.
- Start with climate change, then what we can do. Perhaps move workshop to end to integrate what we learned.
- Work on approach to workshop (de-militarize).

Topics of Interest:

- Waste management in Iraq – getting forces to improve.
- The total aspect of environmental of environmental security in military operations – environmental security is a force enhancer not hinder. Fellow delegates – chance to connect.

Future Recommendations:

- Utilize social media to spread word/presentations to wider audiences.
- Have different countries present to enhance perspective.
- More time for PESF (4 days to 5 days).
- Topic – How US responded to grounding on reef.

- **Green Team**

Worked:

- Civil-military integration and collaboration.
- Sharing (locally/regionally/international) challenges, issues, and best practices.
- Format.

Did Not Work:

- Oil spill exercise (table top versus spectator sport)

Topics of Interest:

- Other nation's perspectives, issues, concerns, priorities.
- How civil-military collaboration is leveraged and established.

Future Recommendations:

- Waste management, water management, air issues (pollution), altitude
- Increase breadth/diversity of whole of government representation.

- **Red Team**

Worked:

- Work program fulfilled objective
- Videos of good value
- Group discussions and group approach
- Working in teams
- Networking good
- Disaster management and different perspectives (strategic, tactical)
- Shared perspectives

Did Not Work:

- Oil spill demonstration was not illustrative, although good to see some Navy activities at GI
- Presentations before hand

Topics of Interest:

- Variations in presenters sharing knowledge of country situations
- Garden Island tour
- Food-energy-water linkages and interconnections w/disaster management
- Include more heritage and culture
- Human impacts

Future Recommendations:

- Small practical demo of equipment may be better
- More inclusion of civil organizations and links with military
- More focus on coordination of civil/military
- More scientists share research
- Case study based on real crisis/disasters real time
- Use of panel in the case study

- **Silver Team**

Worked:

- Social (lunch/morning tea) for networking.
- Panel sessions.
- Videos/photos in presentations.

Did Not Work:

- Oil spill

Topics of Interest:

- Breadth of experts.

Future Recommendations:

- Regional water security in South Asia.
- Energy security
- Coastal vulnerability
- More small group activities (but balanced against presentation and panel sessions)
- More national presentation on best practices.
- Broader community interaction – Universities, “town” meeting

- **Yellow Team**

Worked:

- Construct, format of PESF flow, flexibility, experience preservations
- Comprehensive
- Timely arranged
- Themes of PESF

Did Not Work:

- Oil spill demo
- New Year holiday in some countries (ex: Thailand)
- More participants from each country, more countries

Topics of Interest:

- Disaster management
- New ideas and regulations
- Civil—mil interoperability
- Access to information – sharing resources on environment

Future Recommendations:

- Water topics
- Civil military
- Sea level rise /climate changes
- Energy
- Broader/regional approach to solving common climate issues
- Adaptation/technology