



SOUTH ASIA
REGIONAL
ENVIRONMENTAL
SECURITY FORUM

AFTER-ACTION REVIEW



Co-Sponsored by: | Maldives National Defence Force and
the U.S. Pacific Command



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, INSTITUTE FOR WATER RESOURCES
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REPLY TO
ATTENTION OF CEWR-ICI

MEMORANDUM FOR RECORD

04 July 2014

SUBJECT: After-Action Report, South Asia Environmental Security Forum, Kurumba, Republic of Maldives, 2-5 June 2014

BLUF:

- a. Topic: South Asia Regional Environmental Security Forum (RESF).
- b. Summary: The U.S. Army Corps of Engineers (USACE) supported the U.S. Pacific Command (USPACOM) and the Maldives National Defence Force (MNDF) in executing the South Asia RESF 2-5 June 2014 in the Maldives.
- c. Discussion: The RESF featured 75+ participants from eight different countries. It was designed to enhance military resiliency to climate change, and identify environmental activities to operationalize in South Asia. The Forum's themes were water security, waste management, resource protection, and energy. Additionally, attendees performed integrated water resource management (IWRM) group activities and a Table-Top Exercise (TTX). The Forum also featured a site visit to Thulusdhoo Island, where participants viewed and discussed coastal erosion, solid waste management, water desalinization, land reclamation and cultural applications to climate change adaptation. The event concluded with an After-Action Review (AAR) where ideas were exchanged on themes for next year's Forum, as well as projects that can be operationalized in the near future.

The list of participating nations included Australia, Bangladesh, India, Maldives, Nepal, Sri Lanka, Thailand, and the U.S. China and Japan were the only other countries that were invited that did not attend. Indian governmental participation was limited to the Defense Attaché posted locally in the Maldives. A full list of participants can be found in Section 12.

The Forum generated numerous lessons-learned and potential opportunities in the future. These lessons and opportunities are captured in Sections 16 and 17 of this AAR. A few lessons-learned include involving students in the Forum, conducting speaker and facilitator training, and rehearsing logistical and administrative details. A few opportunities include applying IWRM and Shared Vision Planning (SVP) techniques across South Asia, expanding oil spill response partnerships, and partnering with local communities to reduce waste generation.

A summary of the event can be reviewed at:

<http://www.pacom.mil/Media/News/NewsArticleView/tabid/7464/Article/9185/maldives-teams-with-uspacom-to-support-environmental-security-action.aspx>

- d. Way Ahead: Budget permitting, the 2015 Pacific Environmental Security Forum will be held in Thailand and co-hosted by the Ministry of Defence (MoD). The event will focus across the Pacific theater, and potential topics include water, energy, disaster risk reduction, climate change adaptation, technological innovation, and trans-boundary pollution (ex. air, inland waterways, etc). USPACOM J4 will work with the Thai MoD to start preparations for the 2015 event, with an Initial Site Survey (ISS) likely to be conducted 25-29 August 2015. The format of the ISS event may be modified so that it can be run similar to USPACOM's Concept Development Work Group (CDWG). This would allow for "actionable" projects to be identified and, hopefully, implemented in the future. Security Cooperation Officers (SCOs) from various U.S. Embassies (USEMB) can be invited to assist with the process and also look for opportunities to inject environmental security language into country plans. For PESF execution, there may be an opportunity to migrate the TTX into a Field Training Exercise (FTX). This would reinforce the "action" theme. However, a specific topic and activity would need to be coordinated with Thailand to determine what is possible.

For the Maldives and South Asia, several security cooperation activities will be executed in 2015 as a follow-on to the RESF. Below are a few examples.

1. Using Overseas Humanitarian Disaster and Civic Aid (OHDACA) funds, an Environmental Sensitivity Index (ESI) will be prepared for atolls near the main Zero Degree shipping channel. The ESI maps will assist first responders prioritize actions during an oil spill based on human, biological and coastal characteristics.
2. An oil spill response workshop may be conducted between Sri Lanka, Maldives and India to further regional response. The workshop, if funded, is likely to take place in the first or second quarter of Fiscal Year (FY) 2015.
3. A Defense Environmental International Cooperation (DEIC) proposal will be prepared to utilize Shared Vision Planning (SVP) to evaluate and enhance waste stream management in local communities. The proposal will be coupled with the overall 2015 Pacific Environmental Security Forum proposal.
4. USPACOM will investigate if pumps can be purchased and donated to the Maldives to assist local communities remove flood water during the monsoon season.

1. EVENT DATES: 2-5 June 2014

2. EVENT LOCATION: Kurumba, Vihamanafushi, Republic of Maldives

3. BACKGROUND: The 2014 Regional Environmental Security Forum is the fourth annual event led by USPACOM. The initial Pacific Environmental Security Conference (PESC) was held in Honolulu, Hawaii in 2011 and featured sessions on climate change adaptation, environmental sustainability, water resource management, and disaster preparedness. The PESC was followed by the 2012 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 Centre. In 2013, USPACOM partnered with the Australian Department of Defence, inviting 17 countries to discuss four main themes: 1) sustainable environmental management in military operations from planning to close out; 2) lessons learned from military support to disaster relief operations; 3) managing bio-security risks in the military context; and 4) emerging technologies and new approaches to mitigating and adapting to climate change impacts.

In preparation for the RESF Initial Site Survey (ISS), a series of internal USPACOM team meetings and phone calls to the MNDF were conducted. Through these conversations, USPACOM prepared an information paper, overview presentation, draft Administrative Procedures Agreement (APA), draft invitation letters, work breakdown structure, and decision point list for delivery and discussion at the ISS.

The ISS was successful held in the Maldives 15-22 Aug 2013. During the meetings, USPACOM and MNDF developed and signed an APA, agenda, themes, participant requirements, and site visit/demonstration platforms. The teams corroborated planning and execution requirements, reviewed the initial event concept, and set a path forward for future planning engagements to the Final Site Survey (FSS).

In preparation for the FSS, the teams held regular monthly Interim Progress Review (IPR) meetings. At these meetings, the teams worked on the draft agenda to refine requirements, identified potential speakers, prepared and released invitations, and developed draft materials such as the TTX.

The RESF FSS was successfully completed 23-28 February 2014 in partnership with MNDF. The team was able to review the draft event agenda, and make decisions regarding formatting, speakers, activities, logistics and administration. MNDF and the U.S. Embassy (USEMB) Colombo Office of Defense Cooperation (ODC) assisted USPACOM with prioritizing speaking roles, identifying additional speakers, and strategizing timelines. The team also reviewed the IWRM interactive session and TTX to refine content, add realism, and target questions more appropriate to the anticipated audience. The team also made a site visit to Thulusdhoo Island

and evaluated coastal erosion, sewage outfall, solid waste management, and water source issues. This evaluation allowed the team to prepare a tour map of the island, which was included in the RESF event booklet.

After the FSS, USPACOM and MNDF continued to conduct monthly IPRs and finalize logistical and administrative arrangements. Formalities associated with the opening and closing ceremony, gift exchange, event booklet, registration, and other documentation was reviewed and completed. The team also confirmed all speakers, prepared invitational travel orders, provided speaker guidance, prepared senior leader read-ahead documents, distributed invitations and collected registration forms.

The team worked closely with Kurumba Resort, which was the venue selected by the U.S. Navy contracting office. The team provided room configurations, break/lunch timing, audio/visual equipment requirements, and coordinated participant rooms.

USPACOM also worked with the Joint Military Advisory Group (JUSMAG) Thailand and the Thai Ministry of Defence to confirm Thailand as the 2015 host of the Pacific Environmental Security Forum.

4. MISSION: To execute the South Asia RESF in partnership with USPACOM and MNDF in the Republic of Maldives from 2-5 June 2014.

5. PURPOSE: To build military resilience to the impacts of climate change; to identify opportunities to operationalize environmental activities; to mature environmental security partnerships, diplomacy and awareness in the South Asia region; to focus on developing persistent cooperation between partner nations to ensure sustainable environmental management; to share sustainable and integrated water resource solutions and best practices; to address waste-stream management in a military context; and to communicate strategies and techniques in energy management to find interoperability solutions and resource savings.

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 2014 South Asia RESF:

- Develop persistent cooperation, including operationalized activities, between partner nations to ensure sustainable environmental management.
- Address waste-stream management in a civil-military context.
- Share sustainable and integrated water resource solutions and best practices.

- Showcase regional alternative energy approaches.
- Identify ways for militaries to increase resource protection.
- Develop a “network of networks” of experienced military environmental planners to assist in operations and planning.
- Identify future environmental security initiatives, which can be operationalized in the field.

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

9. COUNTRIES DISCUSSED: Australia, Bangladesh, India, Maldives, Nepal, Sri Lanka, Thailand, and the United States. Bhutan, China and Japan were also invited, but were unable to attend.

10. AGENDA: Reference enclosed documents.

11. PHOTOS: Reference enclosed documents.

12. PARTICIPANTS: Please find below a generic list of all participants that attended the RESF. For full contact information and details, please reference the enclosed participant list, which includes each participant’s name, title, e-mail address, etc.

a. AUSTRALIA

NUM	NAME	ORG
1	Col Michael Goodyer	Australia Department of Defence
2	Ms. Jane Holloway	Australia Department of Defence

b. BANGLADESH

NUM	NAME	ORG
1	Brig Gen Inge Shayekhuzzaman	National Telecommunication Monitoring Centre, Ministry of Home Affairs

NUM	NAME	ORG
2	Mr. Waji Ullah	Ministry of Water Resources
3	Mr. Manoj Mitra	Ministry of Disaster Management & Relief
4	Mr. MD Anowarul Islam	Ministry of Power, Energy & Mineral Resources

c. INDIA

NUM	NAME	ORG
1	Capt R.S. Sunil	Indian High Commission to the Republic of Maldives

d. MALDIVES

NUM	NAME	ORG
1	HE COL (Ret.) Mohamed Nazim	Ministry of Defence and Homeland Security
2	HE Thoriq Ibrahim	Ministry of Environment & Energy
3	HE Ahmed Adheeb Abdul Gafoor	Ministry of Tourism
4	HE Dr. Mariyam Shakeela	Ministry of Health
5	Maj Gen Ahmed Shiyam	Maldives National Defence Force
6	Brig Gen Ahmed Mohamed	Maldives National Defence Force
7	Brig Gen Ali Zuhair	Maldives National Defence Force
8	Brig Gen Ahmed Shahid	Ministry of Defence and Homeland Security
9	COL Ibrahim Mohamed	Maldives National Defence Force
10	COL Hamid Shafeeq	Maldives National Defence Force
11	COL Abdulla Zuhuree	Maldives National Defence Force
12	LTC Ahmed Ghiyas	Maldives National Defence Force
13	LTC Mohamed Saleem	Maldives National Defence Force
14	LTC Abdulla Ibrahim	Maldives National Defence Force
15	MAJ Ahmed Thohir	Maldives National Defence Force
16	MAJ Ahmed Shareef	Maldives National Defence Force

NUM	NAME	ORG
17	MAJ Hussain Ali	Maldives National Defence Force
18	CPT Hassan Amir	Maldives National Defence Force
19	CPT Ibrahim Ashraf	Maldives National Defence Force
20	CPT Mohamed Firdhous	Maldives National Defence Force
21	CPT Zubair	Maldives National Defence Force
22	CPT Nadheem	Maldives National Defence Force
23	CPT Mujthaba	Maldives National Defence Force
24	FLT Ibrahim Thaufeeq	Maldives National Defence Force
25	FLT Ahmed Moomin	Maldives National Defence Force
26	FLT Azim Shareef	Maldives National Defence Force
27	WO1 Shammass Rasheed	Maldives National Defence Force
28	WO1 Ahmed Shahee	Maldives National Defence Force
29	LT Mafaaz	Maldives National Defence Force
30	SGM Ahmed	Maldives National Defence Force
31	SSGT Ibrahim Faisal	Maldives National Defence Force
32	Mr. Ahmed Rasheed	National Disaster Management Centre
33	Ms. Fathimath Thasneem	National Disaster Management Centre
34	Mr. Abdul Mannan Yoosuf	Maldives Police Service
35	Ms. Aminath Shaufa	Ministry of Health & Gender
36	Ms. Sana Saleem	Ministry of Health & Gender
37	Ms. Fathimath Naziya	Ministry of Tourism
38	Mr. Shareef Muawiath	Maldives Energy Authority
39	Mr. Akram Waheed	Maldives Energy Authority
40	Mr. Mohamed Rasheed	Male' Water & Sewerage Company
41	Mr. Maeed Md. Zahir	Eco-Care Maldives
42	Mr. Mohamed Musthafa	Environmental Protection Agency
43	Mr. Ibrahim Naeem	Environmental Protection Agency
44	Mr. Ahmed Muruthaza	Environmental Protection Agency

NUM	NAME	ORG
45	Mr. Hussain Haneef	Ministry of Education
46	Mr. Abdul Malik Thaufeeq	State Electric Company

e. NEPAL

NUM	NAME	ORG
1	Mr. Purushottam Tiwari	Department of Environment

f. SRI LANKA

NUM	NAME	ORG
1	Lt Col G.P.H. Chandraratne	Sri Lankan Air Force
2	Sqn Ldr Nuwan Welagedara	Sri Lankan Air Force
3	LCDR Chaminda Wijesiri	Sri Lankan Navy
4	Capt Chamil Deshapriya	Sri Lankan Navy

g. THAILAND

NUM	NAME	ORG
1	Col. Borworn Wongsangchantra	Ministry of Defence, Office of Policy and Planning
2	Col Pradit Phosri	Ministry of Defence, Office of Policy and Planning
3	Gp. Capt. Paween Rojanaparnich	Ministry of Defence, Office of Policy and Planning

h. UNITED STATES

NUM	NAME	ORG
1	AMB Michele Sison	USEMB, Colombo
2	MG Richard Stevens	USACE
3	Brig. Gen. Mark McLeod	USPACOM
4	CAPT Joseph Grealish	USPACOM
5	Col Kevin Thomas	USPACOM

NUM	NAME	ORG
6	LTC Eric Quan	USPACOM
7	LTC Pat Schuler	USEMB, Colombo
8	LT Dave Chesson	USEMB, Colombo
9	CPT James McCabe	USEMB, Colombo
10	LN1 Gabriela Guerrero	USPACOM
11	Ms. Ninette Sadusky	OSD
12	Mr. Bruce Fink	USPACOM
13	Mr. Christopher Sholes	USPACOM
14	Mr. Justin Pummell	USACE
15	Dr. Michelle Haynes	USACE
16	Ms. Nicole Griffin	MARFORPAC
17	Mr. Kawakahi Amina	USPACOM
18	Dr. Winnie Lau	USAID/Sri Lanka
19	Dr. Ari Nathan	USEMB, Kathmandu

i. OTHERS

NUM	NAME	ORG
1	Mr. Keyvan Izadi	SNV Netherlands Development Organisation - Bhutan
2	Cdr (Ret) Neil Gadihoke	Society for Policy Studies
3	Dr. Arunabha Ghosh	Council on Energy, Environment, and Water
4	Dr. Sandip Shah	Statkraft
5	Mr. Dipak Gyawali	Nepal Academy of Science and Technology
6	Dr. Nalin Wikramanayake	Open University of Sri Lanka
7	Dr. Herath Manthrithilake	International Water Management Institute
8	Ms. Chamina Priyankari Alexander	South Asia Cooperative Environment Programme

NUM	NAME	ORG
9	Ms. Karen Bennett	Chemonics/Maldives

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. 02 June 2014

The RESF officially started today with an opening ceremony led by the MNDF and Maldives Ministry of Defence. The MNDF Cultural Band led a procession of chanting, dancing and ceremonial display. Minister of Defence Nazim, MG Stevens, Maj Gen Shiyam (MNDF), and the official party followed the procession. Once seated, a citation from the Holy Quran was performed by MNDF. Next, MG Stevens took the stage to deliver his opening comments. He highlighted the necessity for militaries to move environmental security from a community of discussion to a community of action. He provided examples of how this being done in certain parts of Asia, and how more can be done across South Asia. MG Stevens provided some background on the RESF, as well the agenda for the week. Finally MG Stevens concluded his remarks by encouraging all of the participants to talk about ways to operationalize environmental security.

Following MG Stevens, Minister of Defence Nazim addressed the Forum. He welcomed all participants to the Maldives and highlighted how climate change and sea-level rise are impacting the Maldives. The Minister stated that 28% of Maldives Gross Domestic Product (GDP) is tied to tourism and the environment. If the Maldives cannot protect the environment and maintain an interest in people coming to visit, then their economy and social well-being will be significantly degraded.

Next, all participants gathered for a group photo outside. Following the photo, MG Stevens introduced the water security theme. In his introduction, he focused on four topics, which included defining water security, what the U.S. Army Corps of Engineers is doing to operationalize water security, how the U.S. Army is designing a water security strategy, and suggestions for what leaders can do to ensure water security is included in the planning process.

The first water security presentation was delivered by Dr. Herath Manthrithilake from the International Water Management Institute (IWMI). His presentation was entitled, “Water: A Potential Trigger for Conflicts?” He highlighted how South Asia must engage its citizens, sharing relevant risk information and presenting it in a way that communities can understand while promoting robust methodologies to mitigate risks to suit different needs. The second presentation was given by Mr. Dipak Gyawali

from Nepal. He stressed the need for all participants to think about water security from a smaller, more localized perspective than a global or regional level. He highlighted several examples in Nepal and India where issues could have been averted if the local community had been engaged and incorporated into the decision-making process.

The final water security presentation was delivered by Mr. Mohamed Rasheed from the Male' Water & Sewerage Company. Mr. Rasheed described a myriad of challenges with providing water to Maldivian citizens, including overpopulation and urbanization on Male', the tyranny of distance between islands, salt water intrusion into ground water resources, and the destruction of rainwater catchment systems after the 2014 tsunami.

Next, MG Stevens, Dr. Manthrithilake, Mr. Gyawali and Mr. Rasheed participated in a panel session. Forum participants asked questions related to water security threats in the region, actions that may mitigate water challenges, and the connection between water and energy.

After lunch, Dr. Michelle Haynes from USACE's Institute for Water Resources led a work group activity centered on Integrated Water Resource Management (IWRM) and Shared Vision Planning (SVP). All participants divided into five work groups, and worked through a series of questions associated with siting a new building on a military installation. Each group had to decide what factors, threats, and influences needed to be considered to properly place the buildings. This included a variety of environmental, energy, water, and resource protection criteria. After the groups went through the activity, they made a decision on a building site. The results were briefed, and all groups compared their responses.

To conclude the day, all participants traveled to Kudos Bandos Island for an icebreaker.

b. 03 June 2014

Mr. Mohamed Musthafa, Director, Maldives Environment Protection Agency (EPA), introduced the waste management theme. In his opening statement, he provided background on waste management challenges in the Maldives, as well as how his organization balances those challenge with environmental sensitivity. He described how waste in the Maldives is typically burned, and how the effluent is used for land reclamation. He also stated that many of the outer islands do not have an organized waste management system, and as a result, some of it is not properly disposed.

After the theme introduction, Mr. Musthafa introduced the first waste management speaker. Brig Gen Ibne Fazal Shayekhuzzaman (Bangladesh Army) presented on the Rana Plaza building collapse in Bangladesh, and how the debris was managed after

the response effort concluded. Brig Gen Shayekhuzzaman described how all aspects of Bangladesh (public, private, government, military, etc) joined together to respond to the terrible situation. He described the debris removal process, how debris was sorted, and the different locations used for recycling, disposal, and dead body management. He stated that the current Standing Order on Disasters (SOD) does not include a formal debris management plan. However, the Department of Disaster Management (DDM) is now working on it. This is a project that USPACOM helped fund starting in 2012.

Next, Ms. Chamina Priyankari Alexander from the South Asia Environmental Co-Operative Programme (SACEP) presented on the different waste management strategies used across South Asia. She presented a country-by-country approach, and summarized the need for more work in this subject. Ms. Alexander also provided examples of ongoing SACEP initiatives to support waste management in the region. Several of them could be applied in other parts of South Asia, but require consensus from all SACEP members before they can proceed.

Following Ms. Alexander, Ms. Nicole Griffin (MARFORPAC) presented a “Desktop Demonstration of a Waste Management Unit in an Island Environment.” She described the challenges, such as logistics and limited available space. She provided examples of two types of waste-to-energy solutions that are currently being used by the U.S. military. This included the Green Energy Machine (GEM) and the Micro Auto Gasification System (MAGS). Ms. Griffin also delivered a demonstration of how MAGS could be sited at Thulusdhoo Island, and the requirements necessary to identify the appropriate location.

After a short break, a waste management panel session was led by Mr. Mohamed Musthafa (Maldives EPA). All three waste management theme speakers joined the panel session. The panel session featured a lot of good questions from the participants and students. One of the students asked how the Maldives can better manage its waste, and a recommended action from the moderator was to do more composting.

Next, all participants divided into work groups and traveled to Thulusdhoo Island. There, the participants toured the island to view coastal erosion from the 2004 tsunami, land reclamation procedures, waste disposal, and water de-salinization and bottling. Each group spent approximately 15 minutes at each stop before moving to the next location. The tour provided insight into the environmental challenges local Maldivians experience every day, as well as strategies currently being employed to combat climate change in daily life.

The day concluded with a return trip to Kurumba. Upon arrival, a short meeting was conducted with MNDF to prepare for tomorrow’s activities.

c. 04 June 2014

Brigadier General Ahmed Shahid (Director General, Department of International Defence Cooperation and Policy, Ministry of Defence and National Security, Republic of Maldives) started the day by introducing the resource protection theme. Brig Gen Shahid emphasized the fragile Maldivian environment and the need for the Government of Maldives to do more to protect the environment. He stated that Maldives has a goal to be carbon neutral by 2020. He explained that resource protection can and should be performed at all levels starting from education in the school house to government policy and enforcement.

Following the theme introduction, Mr. Keyvan Izadi took the stage. Mr. Izadi (SNV Netherlands Development Organisation – Bhutan) spoke on Payment for Environmental Service (PES). He provided examples from his ongoing work in Bhutan, and described PES as a tool to achieve poverty reduction & environmental security. PES is a market-based “pay-for-performance” approach to financing conservation and sustainable community development whereby environmental service providers receive payments from users/buyers that are conditional on specific conservation performance. Mr. Izadi described how the payments are designed to offset the opportunity cost of conservation for the environmental service providers.

Next, Dr. Wikramanayake (Open University) spoke on globalization, marine pollution and regional environmental security. His presentation began with an overview of maritime pollution and its occurrence at global, regional and national scales. He provided examples from the shipping and ship-breaking industries, as well as oil spills. These examples highlighted the relationship between the increased international integration of economic activities and regional maritime pollution. Dr. Wikramanayake also provided details on how marine pollution is related to regional environmental security through the goods and services provided by the marine environment. Ultimately, he highlighted that greater regional cooperation is needed to reduce maritime pollution in South Asia.

Mr. Ibrahim Naeem from the South Asia Association of Regional Cooperation (SAARC) Coastal Zone Management Centre was the last resource protection theme speaker to take the stage. He presented on coastal zone issues and challenges in the Maldives. The presentation explained how the low-lying land of the Maldives is vulnerable to sea-level rise and seasonal fluctuations. He described the connection between beach shape change and the monsoon season. Mr. Naeem also provided details on erosion generated from wave energy, reduction of sediment supply, and removal of sand from the littoral system. Finally, Mr. Naeem described how man-made coastal infrastructure is impacting the coastal zone, sand stock, and nearshore infrastructure.

Following the presentations, all speakers joined Brig Gen Shahid for a resource protection panel session. The panel session involved several very productive discussions on the topics presented in the morning. All speakers fielded questions from the audience. Students were invited to ask questions to the panelists, and an outstanding question was posed on what students could be doing now to impact environmental security.

After lunch, a TTX overview was delivered by Mr. Pummell (USACE). The presentation explained the TTX process and exercise scenario. The exercise featured a series of pirate boats overtaking a container vessel. The vessel is wrecked by the pirates on a reef near the zero degree channel. The wreck results in an oil and container spill.

During the TTX, the participants were presented a series of injections for their groups to answer. The injections were broken down into two phases (planning and operations). The questions posed to the groups were related to all four Forum themes (water, waste, energy and resource protection), as well as disaster management, counter-piracy, marine ecosystem restoration, boat salvage, etc.

At the conclusion of the TTX, each work group briefed their results. The responses provided valuable insight into how the South Asia region can partner to respond to an oil spill in the Maldives.

Following the TTX, a behind the scenes tour of Kurumba Island's environmental sustainability practices was offered. Participants got an opportunity to see how the island recycles, grows vegetables, produces energy, and manages waste.

To conclude the day, all participants were transported by MNDF to Bandos Island for an official dinner hosted by the Maldivian Government.

d. 05 June 2015

The final RESF day commenced with an Energy theme introduction by Brig Gen Mark McLeod (USPACOM). Brig Gen McLeod started his introduction by encouraging participants to think about the science, technological and sociological aspects of energy, and the correlation between these topics. Brig Gen McLeod explained why energy is important to the military, how USPACOM manages its energy considerations, and its role in operationalizing energy security. He stressed fuel diversity, energy agility, and energy efficiency.

At the conclusion of his opening remarks, Brig Gen McLeod introduced the first energy speaker, Commander (Retired) Neil Gadihoke from the Society for Policy Studies. Mr. Gadihoke spoke on energy implications for India's maritime domain. In his presentation, he highlighted India's current energy strategies, needs and resources

used. Despite the capability, Mr. Gadihoke stated that India remains energy deficient and will likely look to wind and tidal energy in the future to supplement needs and reduce the carbon footprint. He showcased how carbon emissions from ships are often overlooked, and militaries and the shipping industry must do more to reduce its impact on the environment. Mr. Gadihoke concluded that India, as South Asia's largest energy consumer and polluter, needs to lead the energy revolution in the region by example.

Following Mr. Gadihoke, Dr. Sandip Shah (Nepal) presented on electricity supply security through regional cooperation in South Asia. Dr. Shah emphasized the need for public-private partnership when it comes to meeting South Asia's energy needs. He also stressed that the South Asia region must work together to develop a common network to support energy needs. Currently, he stated, all countries of the region are facing major deficits in electricity supply. Rolling blackouts are common, and seasonal fluctuations often occur throughout South Asia. Dr. Shah called for privatization of generation, transmission and distribution with transparent regulation in South Asia. He also stated that to achieve a balanced electrical supply system with affordable cost of electricity, it is essential to have a good generation from a mix of various electricity supply sources. The cost of unused energy, climate change, and safety in production are some of the challenges which are impacting the way the electricity supply industry will grow in South Asia.

Next, Dr. Arunabha Ghosh, the Chief Executive Officer for the Council on Energy, Environment, and Water, presented. Dr. Ghosh spoke on de-centralizing renewable energy. He emphasized beginning renewable energy implementation from the local level. Dr. Ghosh argued that investments in the off-grid energy sector depend on at least one of three necessary conditions, namely, the promise of a long-term revenue stream; reduced risks for investors; and reduced operational costs. He concluded his presentation by describing how a network of decentralized energy entrepreneurs can deliver common operational services (information services; technology development and testing; and skills, training and capacity building), lower their costs and give opportunities to scale operations. These techniques could also be employed by militaries in South Asia and throughout the world.

The final energy speaker was Ms. Jane Holloway from Australia. Ms. Holloway presented on the Australian Defence Energy Integration Framework (DEIF). Ms. Holloway started her presentation by describing some of the energy challenges the Australian Defence Forces face. She highlighted that DEIF sets out an integrated risk management approach to ensure future energy productivity. The challenge is to use energy as a strategic advantage rather than bear it as a burden. Ms. Holloway concluded her presentation by stating that outcomes of the DEIF process include greater situational awareness of energy risks – inside and outside defense – and the emergence of a whole-of-defense view of future energy issues is critical.

At the conclusion of the presentations, Brig Gen McLeod chaired an energy panel session with the speakers. Similar to previous days, participants were able to ask questions to the speakers. During the panel session, several valuable questions were asked. A few examples are: 1) Is there any plan to connect South Asia to China for energy collaboration? 2) Are there currently any energy projects in the Maldives that use wind or wave energy to reduce oil consumption?; and 3) What do you see as the biggest energy gaps in the South Asia region?

In the afternoon, an After-Action Review (AAR) was conducted. This included participants completing their evaluation forms, and each country delivering an outbrief in response to the following questions.

1. What subjects or themes would you like to consider for the next Forum?
2. List two or more environmental projects in your country (or the South Asian region) that can be operationalized in the future.

A summary of responses was collected by the event planners and will be included in the final After-Action Review report.

The RESF concluded with a closing ceremony led by Ambassador Michele Sison (US), the Honorable Thoriq Ibrahim (Maldives Ministry of Environment & Energy), the Honorable Col (Retd) Mohamed Nazim (Maldives Ministry of Defence), and Brig Gen Mark McLeod (USPACOM). All representatives made outstanding speeches that highlighted the need for action, the connection to the World Environment Day, and the vulnerabilities that exist in the Maldives due to climate change.

Upon conclusion of the closing ceremony, certificates, group photos, and event proceedings were distributed to all participants.

14. PRESENTATION SUMMARIES: Reference enclosed documents.

15. TABLE-TOP EXERCISE SUMMARY: Reference enclosed documents.

16. LESSONS-LEARNED: 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. They are in no particular order of priority.

1) 26-31 May 2014, Advanced Echelon On-Site (ADVON)

- 1) **Issue:** Print and shipping requirements missing from the Administrative Procedures Agreement (APA)

Discussion: Prior to arriving in the Maldives, the USPACOM team reviewed the APA, and there was no requirement listed for printing or shipping. As such, USPACOM and MNDF agreed to add the requirement to the MNDF task list, and USPACOM would reimburse MNDF for the cost. The revised APA was then signed prior to the start of the RESF.

Recommendation(s): Print and shipping requirements and responsibilities should be defined and agreed to at the Initial Site Survey, and included as part of the APA. If changes are required, the APA should be revised and then re-signed.

2) Issue: The event booklet, agenda, biographies and other documents were changed after being delivered to the printer.

Discussion: After setting a deadline to turn in all documents to the print vendor, revisions were made to the event booklet, agenda, and other documents that resulted in the print materials not matching what actually occurred during the event. This was due to some unavoidable political changes in the Maldivian government. Announcements were made to RESF participants so the changes were known. The digital version distributed to all participants was also revised to match what actually occurred. The impact was minimal.

Recommendation(s): The planning team needs to remain flexible when the situation is fluid. Small changes to the agenda can be corrected and provided electronically to participants. A deadline should be set for printing to avoid a delayed delivery of materials. Do a “press check” of materials to catch errors if possible.

3) Issue: India participation in the RESF

Discussion: Given this year’s event focused on South Asia, it was important to ensure India was involved in the discussion, contributed its expertise, and shared its lessons-learned. Despite seeking Indian participation early, the team was unable to confirm any Government representation through the Office of Defense Cooperation (ODC) in New Delhi. Instead, participation was limited to two NGO speakers, and the local Defense Attaché. USAID was able to provide two names of civilian Indian government representatives, but the ODC was uncomfortable selecting them without working through the Indian Ministry of Defence.

Recommendation(s): This seems to be an issue every year. Indian participation was encouraged as early as possible and at the highest level. This may mean coordinating at the OSD level for participation. It also means getting all aspects of the USEMB involved in the planning process, including the ODC, DAO, USAID and the State Department.

4) **Issue:** Bhutan participation in RESF

Discussion: There was no Bhutanese participation in the RESF. The planning team attempted to identify up to two Bhutan representatives through the U.S. Embassy in New Delhi, as well as through the South Asia Association of Regional Cooperation (SAARC) and the Asia-Pacific Center for Security Studies (APCSS). Despite numerous attempts, no participants were identified. SAARC representatives were interested, but they could not come because of a schedule conflict.

Recommendation(s): Since the US does not have any official diplomatic relations with Bhutan, it will remain challenging to gain Bhutanese participation. The team should continue to work with the USEMB New Delhi, SAARC, and the US State Department Regional Environmental Program Manager to identify future Bhutanese participants. The team should also try to identify an appropriate point of contact within the Bhutanese government and share the AAR with them to get them interested in attending in the 2015 event.

5) **Issue:** China participation in RESF

Discussion: For the first time in the event's history, there was no Chinese representation at the RESF. The US planning team reached out early to the USEMB in Beijing for assistance, and obtained OSD approval to invite China. However, no Chinese participants were identified. MNDF also tried to identify at least one Chinese participant through the local Defense Attaché, but they also did not receive any confirmation.

Recommendation(s): The 2016 event will be regionally focused on Northeast Asia. The planning team should consider asking if China would like to host the event to gain their participation. For next year in Thailand, the planning team should reach out to China to see if they would like to speak on a particular topic. This could increase the likelihood of their participation.

6) **Issue:** Room configuration changes

Discussion: Upon arrival in the Maldives, the team learned from MNDF that additional projectors and banners would be placed in the conference hall. This had not been pre-arranged with the hotel, so the team was concerned about being charged for changes to the room configuration, as well as damage to the facility. There ended up being no

additional charges, and this was a result of working closely with the Kurumba staff and MNDF.

Recommendation(s): Room configuration needs to be finalized during the Final Site Survey. If this is not possible, then desired changes should be vocalized during the monthly Interim Progress Reviews to ensure all requirements can be incorporated without incurring additional charges or generating confusion.

7) Issue: Strategic communications and public affairs

Discussion: Prior to arrival in the Maldives, the U.S. planning team prepared a media plan and shared it with the U.S. Embassy in Colombo. Upon return from the Final Site Survey, USPACOM J4 also worked with the USPACOM Public Affairs Office (PAO) to prepare a Proposed Public Affairs Guidance (PPAG) document. These documents defined a strategy for press engagement and communication. However, the team did not have a PAO specialist assigned to travel to the event. As such, the team had to cover these duties. This included coordinating directly with the USEMB in Colombo, and the American Center in the Maldives. Neither of these facilities was able to send a representative to cover the event. Therefore, the primary media coverage and coordination was led by MNDF. They performed an outstanding job, which resulted in good coverage of the event. The team also prepared a press release on the closing day of the event, which was published on the USPACOM web site and other digital locations.

Recommendation(s): If the budget permits, the team should consider adding a PAO representative to the team to provide a US perspective on the event. The PAO can also coordinate more closely with the USEMB, and look for additional opportunities to increase awareness of the event. The team cannot rely or assume that the USEMB or the host will be willing to support.

8) Issue: Work group assignments and designation

Discussion: Prior to arrival in the Maldives, USPACOM and MNDF agreed that participants would be divided into five groups, and groups would be color-coded to expedite coordination and location. USPACOM designated the work group colors as red, blue, green, silver and gold. However, MNDF assigned colors of black, white, red, silver, and blue. They also purchased hats for each of the work groups to wear matching these colors. This resulted in some initial confusion, but the team was able to get the colors finalized before the start of the event.

Recommendation(s): Work group color designation should be made well in advance of the event, and all parties should agree to the designation so that purchased supplies can match. The work group designations should be visible on the table tents, name tags, and other accessories. This will ensure the groups stay together and know where to report. In addition, when transitioning from plenary to breakout sessions, put a large colored sticker on the bottom of the name tents to facilitate the room turnover.

9) Issue: Daily battle rhythm undefined

Discussion: Upon arrival to the Maldives, a daily battle rhythm was not well defined. Once it was defined, it was not regularly enforced. This resulted in meetings starting late or being cancelled, and some mis-communication between planners. Eventually, the battle rhythm was set, but it should have taken place much sooner.

Recommendation(s): In the future, a daily morning and evening meeting should be announced upon arrival at the event location. Participation in these meetings should be mandatory, and the schedule should be maintained. They should start on time, and be completed efficiently. The meetings should be run by one designated person. Post standard format with times in the administrative room.

10) Issue: Biographies and presentation summaries in event booklet

Discussion: In the event booklet, biographies and presentation summaries were split into two sections. This organized materials into a logical flow. However, by splitting these subjects into two sections, it resulted in participants having to flip back and forth to read everything related to a presentation.

Recommendation(s): For future event booklet design, the biographies and presentation summaries should be combined, if possible. Planners should request that biographies be limited to one or two paragraphs, and presentation abstracts continue to be capped at 250 words. This information will be combined together, which will reduce participants from having to flip back and forth through the event booklet.

11) Issue: Venue contract amendment and MIPR requirements

Discussion: Because the specific number of participants was unknown until the start of the event, the venue contract needed to be amended to ensure the total number of meals served did not exceed legal limitations. This resulted in the venue contract having to be

amended, and the planning team having to send an additional MIPR to NAVSUP FLC in Singapore. The MIPR also had to be sent twice, since NAVSUP FLC only accepts “direct cite” versus “reimbursable” MIPRs.

Recommendation(s): Administrative Procedures Agreement language needs to restrict the total number of participants to a specific number, and that number should not be allowed to increase. Furthermore, language in the APA needs to state that the final list of participants be provided in advance of the event, so the total number of meals can be determined before the event commences. Lastly, future MIPRs to NAVSUP FLC should be marked as “direct cite” to avoid rejection and delay.

2) 01 June 2014, Sunday, Day 0

1) **Issue:** Name tags

Discussion: In the Administrative Procedures Agreement (APA), USPACOM was responsible for preparing the event name tags. As such, a design was prepared, and the name tags were filled with participant names. However, MNDF also prepared their own design, which used a lanyard, featured smaller font, and included group color codes. After a short discussion, the team decided to use the MNDF name tags. This duplicated effort, but was advantageous.

Recommendation(s): The name tag format and design should be finalized with the host at the Final Site Survey. This will avoid duplicating efforts. However, the U.S. team should incorporate enhancements in name tag design presented by MNDF. This included color-coded lanyards, color-stripping on the name tag design, and having the name tags double-sided. It is paramount the font be large enough to clearly see each name. Maintain a posted running log of name and title corrections.

2) **Issue:** Main hall and administrative room setup

Discussion: The administrative room was setup with tables, chairs, four desktop computers and two printers that were networked together using a common drive. While this was adequate for the U.S. team, it did not leave enough room for MNDF to setup all of its equipment. It also placed an additional burden on print requests, which were very slow. Additional tables had to be added to the room to accommodate their needs, however, print requests remained slow. Additionally, half of the administrative room was designated for VIPs. This portion of the room had couches, but was underutilized with the exception of the facilitator training session. This space could have been used to expand administrative equipment and setup.

In the main conference hall, the US planning team had agreed with the hotel staff on a particular configuration. However, MNDF ended up changing it slightly, adding additional projectors to the ceiling. This resulted in MNDF and hotel staff having to stay up very late the night preceding the opening ceremony.

Recommendation(s): The administrative room configuration should be reviewed by all parties well in advance of arriving at the site. This will ensure adequate space for everyone. Additionally, more space should be allocated for administrative equipment, and less for VIP coordination. Finally, main conference hall configuration should be settled with all parties before arriving on-site. This will ensure no one has to stay up late and scramble to add last minute changes. Schedule a morning and afternoon regular meeting with the hotel rooming manager with the logistics manager. Post significant acts/events for the day and D+24 in the administrative room. Post emergency contact numbers and also procedures in a conspicuous place. Computer and printer specifications and test speeds should be performed to ensure there are no major issues.

3) Issue: Facilitator training

Discussion: A facilitator training session was held on the afternoon prior to the event's commencement. The session allowed all work group facilitators to meet each other, understand their roles and responsibilities, and receive a preview and instruction on activities and duties. This session was very positive, and promoted team-building from the start.

Recommendation(s): A facilitator training session should be continued for future events. All requirements for the facilitator training session should be included in the event contract. Include a roster of all group names/members for the lead facilitator.

4) Issue: Liaison Officer

Discussion: USPACOM requested that MNDF post a liaison officer in the administrative room to help facilitate communication back to staff on Male'. This was a good idea, as it reduced telephone and text cost, and ensured constant communication between all parties.

Recommendation(s): A liaison officer should be requested for future events to ensure efficient and constant communication between USPACOM and the host nation. Coordinate as happened in Maldives for a joint "arrivals" team to greet and facilitate movement of guests from transfers to room.

3) 02 June 2014, Monday, Day 1

1) Issue: The J4 was unable to deliver opening ceremony remarks.

Discussion: The J4, J44, J440 and OSD representative were unable to attend the opening ceremony due to a cancelled flight out of Honolulu. This resulted in MG Richard Stevens (USACE) having to deliver the opening remarks. The U.S. planning team had to prepare a statement for MG Stevens to deliver from scratch, as there were no talking points available. If MG Stevens had not been present to cover the opening ceremony, then Col Kevin Thomas or LTC Pat Shuler would have had to deliver comments.

Recommendation(s): If the budget permits, opening ceremony speakers should arrive to the event location at least one day prior to the start to avoid any last minute schedule changes. Additionally, opening ceremony talking points should be prepared in advance of the event, and shared with the planning team.

2) Issue: Student participation in RESF activities

Discussion: At the suggestion of MNDF, students from local high schools were invited to attend each day of the event. A new set of students rotated each day, and observed and participated in various activities. The students also asked questions during the panel sessions and joined work groups. This added tremendous value to the event, and also allowed all participants to hear a different perspective on environmental security challenges.

Recommendation(s): Student participation should be encouraged in future environmental security events. They are the world's future leaders, and any opportunity for them to learn and promote environmental sustainability should be supported. If possible, the team should plan and budget for their participation and look for opportunities for them to support the event proceedings.

3) Issue: The official party discussion session, planned before the opening ceremony, did not take place.

Discussion: Prior to the opening ceremony, the official party was scheduled to hold instructions and have a short discussion. However, this did not take place because VIPs from Male' left the pier late. As a result, MG Stevens and Maldivian senior officials did not get time to talk prior to the opening ceremony. They ended up having to go directly into the opening ceremony procession without formal introductions.

Recommendation(s): Formal introductions by senior representatives should occur before the opening ceremony commences. Therefore, additional time should be planned on the agenda to ensure this can take place. This will avoid any mis-communication before VIPs speak to all participants.

4) Issue: Master of Ceremony duties were not clearly defined or understood at the start of the RESF

Discussion: MNDF had agreed to perform Master of Ceremony (MC) duties during the RESF. They performed these duties brilliantly during the opening ceremony, but then stopped doing them afterward. As a result, the USPACOM team had to step in and support this effort unscripted. There were no major issues that arose, but it did give the impression that the U.S. was leading the effort. The intention was to always promote MNDF as the leader. At the conclusion of the first day, a short After-Action Review was conducted, and the MC issue was vocalized. MNDF explained they were unable to perform MC duties after the opening ceremony due to the requirement of having to pick up late U.S. arrivals from the airport. This explained the gap, and MNDF agreed they would perform MC duties the remainder of the event. They did, and they did an outstanding job.

Recommendation(s): MC duties need to be spelled out in the APA, and the tasked entity needs to be prepared to perform those duties at all times during the event. If an issue arises when this is not possible, then their script should be shared with the planning team so they can quickly support.

5) Issue: Administrative announcements were disorganized and not well coordinated at times

Discussion: On the first day of the event, administrative and logistical announcements were slightly disorganized. This resulted in multiple people having to jump on the microphone, and time lost. This could have potentially been avoided if one person collected and vocalized all of the announcements.

Recommendation(s): Administrative and logistical announcements should be collected by one person, and presented to the Forum at a singular time. The announcements should be delivered to the MC in advance, and any issues or clarification should be provided prior to the start of the announcements.

6) Issue: Several speakers exceeded their presentation time limit

Discussion: Throughout the course of the event, several of the speakers exceeded their presentation time limit. This resulted in breaks having to be shortened, follow-on speakers having their time reduced, and people losing interest in the subject matter. Time cards to flash at speakers were not available on the first day, so there was no way to warn speakers about their time limits. After the first day, time cards were prepared, but some speakers either did not see them or ignored them.

Recommendation(s): Speakers must constantly be reminded of their time limits and the impacts of overrunning their available time. Furthermore, if a light can flash on the screen to warn them discreetly, then this should be done. Speakers must also be briefed on how to properly use the presentation controls so that this does not cause additional delays.

7) Issue: Group Photo

Discussion: MNDF arranged the group photo, and it was well strategized and executed. MNDF had all participants report to the designated location in advance of the official party and get situated. They added scaffolding to ensure everyone could be seen in the photo. The official delegation then arrived leisurely, and the photo was quickly taken. It was well organized.

Recommendation(s): This strategy should be sustained for future activities. Having the participants situate first, allowed time for the official party to chat and not be troubled by unnecessary chaos. It also expedited the photo process and ensured everyone could be seen in the photo.

8) Issue: Opening Ceremony

Discussion: Per the APA, MNDF was responsible for leading the execution of the opening ceremony. They rehearsed the opening ceremony multiple times the day prior, and also allowed the U.S. delegation to participate, which ensured it was well understood. As a result, the opening ceremony was conducted on time and was extremely efficient and productive. MNDF did a fantastic job coordinating it.

Recommendation(s): Opening ceremony rehearsals should be sustained in future events, and all responsible parties should ensure they attend to understand their roles and responsibilities.

9) Issue: Table Tents

Discussion: Table tents were prepared, but did not have any color-code designation on them. This resulted in extra time being spent on Day 1 to determine who was going to site where.

Recommendation(s): Table tents should be color-coded to match the name tags and work group assignments. This should occur before the first work group activity so the table tents can be organized and distributed quickly.

10) Issue: Thailand delegates did not regularly attend daily After-Action Review sessions

Discussion: At the end of each event day, a short After-Action Review was conducted to summarize issues. Thailand delegates were invited to attend these sessions, so they could learn more about the daily battle rhythm of the event and hear the USPACOM and MNDF perspective. However, they did not attend the events on a regular basis, potentially missing out on lessons-learned and best practices that can be incorporated into next year's event. Their absence at some of the sessions was unclear, but the USPACOM team could have done more to provide advance warning and direction on the meeting time and location.

Recommendation(s): USPACOM should regularly touch base with the future host nation to encourage them attend all meetings, including daily AARs. In the future, the future host nation should be briefed on the daily battle rhythm so that they do not miss opportunities to learn. Consider taping and uploading the conversation for later review using internet resources.

11) Issue: Lunch Videos

Discussion: During each lunch session, a video was played related to the daily theme. It was shown in the Kahlu Room, which was an ideal setting to play the video. However, it was not located in the same place as where lunch was being served. This resulted in very low attendance. Additionally, there were no signs posted the first day indicating the location of the video.

Recommendation(s): For attendance rates to improve, the video must be shown in the same location as where lunch is being served. This will ensure participants know where to go, and are exposed to the video. If this is not possible, then the video should be

shown at a dedicated time that does not interfere with other activities. For example, the videos could have been shown the last half of the lunch session, or directly after each day's activities concluded. Have the hotel rearrange the lunch room from double seating to four or six persons per table to continue discussions. Also prearrange with catering managers what discretionary items will be covered by contract.

4) 03 June 2014, Tuesday, Day 2

1) Issue: The Thulusdhoo Island brochure was underutilized

Discussion: Thulusdhoo Island brochures were distributed to each participant once they arrived on the island. This ensured the brochures were not lost prior to arrival on island, but also limited the time for participants to utilize and learn from the brochures. Many participants simply stuffed the brochures in their pockets and never used them.

Recommendation(s): The brochures should be distributed to all participants prior to arrival to the site. This will give them time to review the material. A good time to distribute may be the morning of the event. This will ensure the materials do not get lost.

2) Issue: Work group organization during Thulusdhoo Island site tour

Discussion: For the Thulusdhoo Island site tour, participants were divided into the same five work groups used for the IWRM activity on Day 1. The work groups were color-coded, and each participant was given a hat that matched the color of their group. MNDF also posted group facilitators, which managed time and ensured no one from the group wandered off or got lost. Radios were used to communicate between groups to ensure no overlap. This was efficient and effective. The results were the site visit was well organized and the tour finished on time.

Recommendation(s): The color-coded hats and radio communication ensured the groups stayed together and moved between stops efficiently. These techniques should be employed during future site visits and tours, if possible.

3) Issue: Waste management presentations had to be re-ordered to accommodate the late arrival of a presentation

Discussion: One month prior to the start of the RESF, speakers were requested to bring their presentations on a CD to the Maldives. This would ensure the master computer did not get a virus from a USB stick. This request was made multiple times leading up to the event. All speakers complied. However, one speaker did not properly burn the

presentation to the CD, and as a result, the file was corrupt. This led to some last minute scrambling, where the presenter had to call back to the home office to have a co-worker e-mail the final to the event planners. To avoid any delay in the event proceedings, the speaker was moved to the last presentation slot, and others were moved up. The planners ended up receiving the file via e-mail about five minutes before the required start of the presentation.

Recommendation(s): Event planners should request speakers to check their presentation CD before leaving their home duty station. Additionally, planners should recommend speakers carry a backup copy of the presentation in their e-mail or on a hard-drive.

4) Issue: The SACEP waste management presentation should have been presented first.

Discussion: In retrospect, the South Asia Co-Operative Environment Programme presentation should have been presented first on the Waste Management day. Ms. Alexander's presentation provided a regional perspective, as well a country-by-country account of waste management strategies. By delivering this presentation first, it would have provided all participants with a broader background on waste management issues and challenges, before jumping into specific examples.

Recommendation(s): In the future, regional presentations that help shape theme and perspective should be delivered first before country-specific examples are given. This will ensure participants gain knowledge on the subject earlier in the process.

5) Issue: Boat mechanical failure

Discussion: For the Thulusdhoo Island site visit, participants were loaded into three separate boats to travel from Kurumba to Thulusdhoo. Approximately halfway through the journey, one of the boats experienced mechanical failure due to contaminated fuel. This left the boat dead in the water. However, MNDF had a spare boat on standby as a precautionary measure, and participants on the failed boat were able to quickly transfer to an operable boat and reach Thulusdhoo safely.

Recommendation(s): The boat failure did not hinder event timing or execution because MNDF had a backup plan in place. For future field activities, this example should be referenced on how to do things the right way.

6) Issue: Waste Management theme moderator

Discussion: To prepare all RESF theme moderators, the team prepared read-ahead packets which included suggestions on introductory statements, truncated speaker introduction paragraphs, and prepared questions for the panel session. This packet was beneficial in ensuring all speakers were properly introduced, and that the moderator did not have to spend a lot of time reading each speaker's full biography. Additionally, the packet provided moderators with questions to ask panelists when no participants asked questions.

The packet also became tremendously helpful during the Waste Management theme, as the scheduled moderator from the Maldives Ministry of Environment & Energy canceled. As a result, the read-ahead packet was provided to his replacement from the Maldives Environmental Protection Agency (EPA), and it was a helpful tool to guide the moderation of the theme. Without it, the EPA moderator would have likely stumbled through the process.

Recommendation(s): Read-ahead packets for theme moderators should continue to be prepared. These documents help prepare theme leaders, guide the session, and provide valuable input that drives the theme and discussion in a focused direction.

5) 04 June 2014, Wednesday, Day 3

1) **Issue:** Nautical Charts

Discussion: To support the TTX, MNDF agreed to provide five nautical charts (one per work group) of the zero-degree channel. MNDF provided these maps the morning of the TTX, and had taped A4 sections of the chart together because they did not have a large plotter available. This did not cause a problem. However, the nautical charts provided were of the 1.5 degree channel instead of the zero degree channel. This generated some minor confusion because the TTX scenario and injections referenced the zero degree channel. A quick explanation had to be made to remedy the situation. In actuality, the 1.5 degree channel is the more commonly used shipping lane, and this is why MNDF provided those maps.

Recommendation(s): To avoid a similar situation in the future, event planners should request a copy of the maps at least one day in advance of the TTX to ensure the maps can be reviewed and there are no major issues. This will allow enough time to either correct the maps, or alter the scenario to match the maps. Additionally, all planners should review the TTX scenario for accuracy and ensure the incident location and resulting information is as accurate and realistic as possible.

2) **Issue:** TTX response collection

Discussion: During the TTX, each work group recorded their injection responses on designated flip charts. This information was hand-written, and sometimes difficult to read. Upon conclusion of the TTX, event planners collected this information, and MNDF agreed to type it up. The typed responses were then e-mailed to USPACOM for inclusion in the final AAR.

Recommendation(s): For future events, planners may want to consider having TTX responses collected digitally on a laptop by a designated member of each work group. This will save time, ensure the information that is collected is recorded by someone that was in the group and witnessed the activity, and reduce paper waste. However, planners will have to budget for access and use to, at minimum, five laptops.

3) **Issue:** Participant list on final event CD

Discussion: The deadline to turn in the master event CD to the vendor was at the end of Day 3. At that time, event planners compiled all relevant information, and burned it to disk. However, the participant list which was placed on the event CD was not the final version. By accident, a previous version was provided and burnt to disk. This resulted in all participants receiving inaccurate information. The situation was remedied by e-mailing all participants a revised copy of the file.

Recommendation(s): It is paramount that event planners review all materials burnt to the master disk to ensure accuracy. This can also be placed on a webhost for future reference.

6) 05 June 2014, Thursday, Day 4

1) **Issue:** There was too much waste generated during the event.

Discussion: For an event centered on environmental security and sustainability, there was too much waste generated. For example, in the venue contract, the team could have requested that bottled water not be provided. Rather, cooler water could have been used to reduce waste. The amount of printed material could have also been reduced. For example, the team could have distributed the event booklet electronically to all participants before arriving, and this could have been viewed on portable devices. The TTX could have also been completed on laptops instead of flip charts. Presentations could have also been provided electronically rather than on CDs.

Recommendation(s): For future events, the planning team should ensure contract negotiations have environmental considerations in place to reduce waste and lead by example. Furthermore, the team should try to reduce the amount of print materials, and

look to distribute and share information electronically. This could include the development of an event web site.

2) Issue: The final event CDs distributed to all participants did not include pictures from the final two days of the RESF.

Discussion: The final CDs distributed with the certificates did not include photos from Day 3 or Day 4 of the event. As a result, many of the participants requested these photos after the event completed. Unfortunately, the contract required the event CDs be provided to the vendor at the completion of Day 3. This did not leave MNDF enough time to edit the files so they could be loaded onto the master event CD.

Recommendation: Rather than burning pictures to the event disk, in the future, pictures should be hosted to a web site where all participants can download them. This will ensure everyone gets a copy, and deadlines do not permit access to information. The signing boards also should be placed in a very visible spot with numerous back and silver sharpie markers to include as many persons as possible.

3) Issue: Closing Ceremony Length

Discussion: The closing ceremony ran longer than planned due to additional speeches and the delivery of certificates and gifts to each participant. This resulted in many participants not paying attention or losing interest in the activity.

Recommendation: If possible, the number of speeches should be limited to one per co-host. Additionally, certificates and gifts should be distributed to participants after the closing ceremony so that the time is not excessive.

4) Issue: The Energy theme had four speakers instead of three.

Discussion: Unlike the previous days, the Energy theme featured four speakers instead of three. This was at the request of senior leadership and to ensure Australia had an opportunity to present. This resulted in each speaker's allotted time being reduced from 30 minutes to 20-25 minutes. All Energy speakers were warned of the reduced time, and reminder prior to taking the stage. However, the warning and reminders did not make a significant impact because a majority of the speakers ran over. This resulted in a very lengthy session, some presentations being cut short, and participants losing interest.

Recommendation: The format was designed for three speakers. Planners should have stuck with the format, and not tried to add a fourth speaker. The results of a fourth speaker impacted all of the Energy presentations. If a similar format is used next year, then planners should push back on adding any more than three speakers. Planners should also continuously remind presenters to stick to their allotted time, and review their slides before the presentation starts to practice the timing.

5) Issue: Press Release

Discussion: Similar to last year, event planners prepared a draft press release on the final day for review by the J4 and the USEMB. The press release was then edited and pushed to USPACOM, USEMB and others for release. The release ended up being posted to USPACOM's web site, and Stars and Stripes have requested an interview with the J4. This year's release was especially timely because it was World Environment Day.

Recommendation: Getting the word out on environmental security is an essential piece of this activity. Therefore, press releases should be encouraged at the beginning and end of the event to ensure messaging and strategic communication is maximized.

6) Issue: Photo Distribution

Discussion: Each day of the RESF, MNDF provided a digital copy of all photos taken. Each photo was approximately 4MB, so the files were too large to place on the final event CD. Additionally, CD production limited the deadline for photo inclusion on the event disks. As a result, many participants requested a copy of all photos. However, there was no mechanism to widely share all of the photos due their large file size.

Recommendation: In the future, all photos should be posted to a public-accessible web site or share portal (ex. Dropbox) where participants can download the pictures.

17. OPPORTUNITIES: From the South Asia RESF, several emerging opportunities were gained. The presentations, workshops, panel sessions, exercise, and site visit 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.

a) General

1) **Issue:** MNDF is a tremendous partner, and future collaboration between USPACOM and MNDF should be openly encouraged.

Discussion: The support provided by MNDF during the 2014 RESF exceeded expectations. Rather than having to negotiate or request various logistical or administrative support, MNDF made it happen, was well organized, and efficient. MNDF was proactive, and introduced creative ideas for event planning. This included thoughtful gestures, such as work group hats, welcome packets, gifts, boat ferries to Male', icebreaker, and official dinner. Some of these ideas were not well communicated to US planners, but MNDF delivered. Most of these activities were not requested by USPACOM. MNDF did it using internal financial means, creativity and generosity. The results were exceptional. USPACOM could not be more pleased with the support MNDF extended to the RESF.

Recommendation(s): MNDF is a capable, willing, and supportive partner on environment and disaster management initiatives. USPACOM should continue to work enthusiastically with MNDF to operationalize environmental security in South Asia. This includes providing follow-on support, projects, and equipment, as well as partnering with MNDF on climate change, disaster management and environmental security matters. MNDF has much it can teach USPACOM.

2) **Issue:** Student involvement in the RESF

Discussion: Similar to the 2012 Forum in Jakarta, USPACOM encouraged MNDF to invite student to the event. USPACOM desired this because they were looking for volunteers to take notes. However, MNDF took this student idea and added value to the concept. Each day, MNDF invited ten student from local schools to observe the Forum. Students were situated in the back of the conference hall. However, they did not merely observe the Forum. Rather, the students were encouraged to ask questions during the panel session and participate in all work group activities. The results were exceptional. The students introduced questions and ideas that Forum participants would likely not have covered. At the conclusion of each day, MNDF also presented each of the students with a certificate.

Recommendation(s): Local students should be encouraged to attend and participate in future Forums. Planners should budget for their participation. The ideas they present, as well as the assistance they can provide, is immeasurable. It is an opportunity to involve future leaders, spark new ideas, and promote education.

b) Water Security

1) **Issue:** Water pumps

Discussion: During the monsoon season, many rural islands in the Maldives flood. Flooding occurs for many reasons, but primarily occurs because the islands are low-lying and have some form of coastal protection that results in rainwater following towards the center of the island rather than offshore. However, many islands do not have pumps, generators or hoses to remove the water. As a result, the water sits stagnate, causing potential health issues and damage to infrastructure.

Male' is many tall buildings, and more are being constructed. Many of these buildings require booster pumps to raise the water to higher floors. However, the government does not have enough booster pumps to keep up with demand, slowing potential growth and economic development. The island's water use plan for 2020 has been exceeded by nearly 50,000 people because so many people migrated to the capital after the 2004 tsunami.

Recommendation(s): USPACOM and the USEMB ODC should work with the Republic of Maldives to identify the number and type of water pumps needed to support monsoonal de-watering. Once a list of requirements is prepared, USPACOM should identify financial means to purchase pumps, generators and hoses, and have them shipped to the Maldives. Additionally, USPACOM should reach out to additional donors, such as USAID and the private sector, to look at cost-sharing this activity. USPACOM should also look to see if there is any excess property that can be donated to the Republic of Maldives.

2) Issue: IWRM and SVP

Discussion: Upon completion of the Integrated Water Resource Management work group activity, many participants expressed additional interest in Shared Vision Planning techniques. This interest came from multiple South Asian countries, as well as applying the decision-making techniques not just to water, but also to waste management. The US Army Corps of Engineers is already providing SVP workshops in Southeast Asia through the assistance of USAID. USPACOM is also funding a SVP workshop in Mongolia. There is a desire to expand SVP engagements to South Asia, and apply the decision-making process and tools not just to water, but also to waste management.

Recommendation(s): USACE should partner with the International Water Management Institute (IWMI) to prepare a 2015 DEIC or 2016 OHASIS proposal for a South Asia regional IWRM SVP workshop series. The workshops would focus on a select watershed basin in South Asia, and look to partner with local communities to enhance decision-making. Furthermore, USACE should consider partnering with the South Asia Cooperative Environment Programme (SACEP) to prepare a waste management SVP workshops series for South Asia. If USPACOM cannot fund all of these activities, then USACE should reach out to USAID, STATE, and others for potential funding. Given

that the waste issues in some South Asia countries amount to crises, USACE may be able to apply for USAID's Complex Crisis Funds.

c) Waste Management

1) **Issue:** Composting

Discussion: After conducting the Thulusdhoo Island site tour, it is clear that a majority of local island waste could be reduced if composting programs were introduced.

Composting and waste separation would allow for the current waste piles on Thulusdhoo to be reduced by nearly 50% or more. This would be a low-cost measure that could quickly be implemented to make a difference. This effort could be led by representatives from the USEMB, for example, the Civil-Military Support Element (CMSE) or USAID.

Recommendation(s): USPACOM J445 should prepare a Minimal Cost composting proposal for Thulusdhoo Island in OHASIS and look for USEMB or CMSE support to execute the project. If the process works well, then additional composting projects could be performed in the Maldives and beyond. USPACOM could also include this as part of future DEIC Forum proposals, so a separate request for funds becomes unnecessary.

2) **Issue:** Oil spill response

Discussion: After discussion with civilian and military representatives at the Forum, there is a strong desire to increase regional oil spill response capability in South Asia. For example, the Maldives and Sri Lanka currently do not possess enough equipment to be able to adequately respond to an oil spill. They are relying on India to support them. There is also a draft regional oil spill response plan prepared by SACEP and others, but increased awareness of the plan is necessary.

Recommendation(s): USPACOM and others should seek funding to conduct an oil spill response workshop for South Asia. Currently, a 2015 APRI proposal was submitted, but it falls below the USPACOM J45 cutline. USPACOM J44 should request the scoring of the proposal be reconsidered. If it does not move above the cutline, then DEIC funds should be pursued. Another option is to conduct a workshop before 30 September 2014, before the 2014 DEIC funds expire.

USPACOM should work with SACEP to prepare the concept, goals, and deliverables for the workshop. South Asian nations should come prepared to the workshop with a list of current oil spill response equipment, as well as prioritized gaps.

d) Resource Protection

1) Issue: Environmental fee

Discussion: The Republic of Maldives currently does not charge tourist an entry fee to enter the country. However, tourists generate significant waste while in the Maldives, which the government and local communities are left with to clean up.

Recommendation(s): The Republic of Maldives should consider charging each tourist that enters the Maldives an environmental sustainability fee of \$10USD. This fee could be used to better manage waste management throughout the country. This could lead to an enhanced recycling program, composting, and less of a need to burn trash. USPACOM and others should provide literature to the Maldives on how to manage and operate a Payment for Environmental Service (PES) program.

e) Energy

1) Issue: Technological innovation should be considered as a theme for the 2015 RESF

Discussion: Even prior to the Energy theme, various participants and speakers were proclaiming the need to consider Technological Innovation as a theme for next year's event. Participants are eager to learn what tools and equipment various countries are using to increase environmental security, reduce waste, increase energy production, and gain access to sustainable water resources.

Recommendation(s): If the host nation concurs, then one of the themes for the 2015 Forum should be "Technological Innovations to Promote Environmental Security".

2) Issue: Waste-to-Energy

Discussion: South Asian countries are acutely interested in waste-to-energy solutions. However, the solutions need to be cost effective and applicable to local communities. MARFORPAC presented on the Micro Auto Gasification System (MAGS) and Green Energy Machine (GEM). These could potentially be applied in South Asia. However, they are bulky and expensive. Simple and cost effective solutions at a smaller scale would be more appropriate.

Recommendation(s): USPACOM should partner with local organizations in the South Asia region to identify a more simplified and cost effective waste-to-energy tool that can be employed at a local community level. This requires coordinating with organizations like the South Asia Cooperative Environment Programme and the Council on Energy, Environment and Water.

f) Administrative

1) Issue: Event web site

Discussion: RESF registration, event coordination, and invitation are all currently being formed using forms and e-mail. There has been a call from speakers and participants to put Forum materials online so that information is easier to access. This includes the need to post photographs, videos, etc following the event.

Recommendation(s): USPACOM should consider developing a Pacific Environmental Security Forum web site that is publically accessible. One way to do this may be through USACE's Institute for Water Resources. Currently, IWR hosts several publically accessible web sites through ".us" domains. USACE will inquire into the cost of operating and maintaining the web site. Another option may be to purchase a domain from a vendor (ex. Dot Easy), and then have of the planners build, manage and maintain the site. Regardless, USPACOM needs to find ways to promote awareness of the event, increase ease and access to information, and share environmental security information.

18. PARTICIPANT EVALUATION SUMMARY: At the conclusion of the South Asia RESF, 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 regional environmental issues and threats in South Asia? **84.2% (↓ 4.8% from last year and ↑ 0.2% from two years ago)**

1 2 3 **4** 5

- 2) Were the four themes of water security, waste management, resource protection and energy the most appropriate environmental issues to highlight for South Asia? **81.8%**

1 2 3 **4** 5

- 3) Of the four themes discussed at the event, which topic resonated the most with you, and should be highlighted more in the future? Circle all that apply. (↔ **Disaster Management was the most popular theme last year**)

- A. Water Security **25**
 B. **Waste Management 27**
 C. Resource Protection **21**
 D. Energy **24**
 E. None of the Above **0**

- 4) What are the environmental issues pertaining to your country/region that could be incorporated in future events? Please list below.

Water, waste management, de-confliction of renewable energy products, maritime pollution, energy, disaster response, climate change, coastal protection/beach erosion, air pollution, ecosystem restoration, environmental contingency planning, food security, debris management, fuel management, waste-to-energy solutions, emission control/monitoring, illegal wildlife trafficking, dam safety, sea-level rise, urbanization, flash floods and sediment management, deforestation, effects of pesticides/herbicides/fertilizers, industrial waste disposal, environmental compliance, hazardous waste, sewerage issues, telecommunications, natural resource protection, drought, biodiversity loss, carbon emission, energy logistics, noise pollution, environment and human health, vector disease control, hospital waste, wildlife protection, and El Nino effects.

- 5) Do you feel you were given an adequate amount of time to discuss your perspective on environmental security in South Asia? **75.0%** (↓ **1.0% from last year and ↔ no change from two years ago**)

1 2 3 **4** 5

- 6) Was the delivery of three subject matter expert presentations followed by a panel session an effective means of explaining the four themes of the event? **82.5%** (↓ **3.5% from last year**)

1 2 3 **4** 5

- 7) Was the Integrated Water Resource Management (IWRM) interactive session on Day 1 beneficial? **75.0%**

1 2 3 **4** 5

- 8) Do you believe the Thulusdhoo Island site visit increased your awareness of the impacts of climate change in the Maldives? **79.6%** (↑ **0.6% from last year's site visit to Garden Island**)

1 2 3 4 **5**

- 9) Did you believe that the Table-Top Exercise conducted on Day 3 was helpful in understanding and working through environmental security concerns in South Asia? **83.3%** (↑ **4.3% from two years ago**)

1 2 3 **4** 5

- 10) Do you think the length of the forum was appropriate, and that it had the right balance between presentations, discussion, and activities? **83.9%** (↓ **0.1% from last year and ↑ 10.9% from two years ago**)

1 2 3 4 **5**

- 11) Do you believe that the event was prepared and delivered in a professional and worthwhile manner? **91.0%** (↑ **4.0%** from last year and ↑ **13.0%** from two years ago)

1 2 3 4 **5**

- 12) Would you want to conduct another Environmental Security Forum in the future? **89.4%** (↑ **7.4%** from last year and ↑ **12.4%** from two years ago)

1 2 3 4 **5**

- 13) Will you take lessons-learned from this event and apply them to your job in the future? Which lessons were most valuable to you? **87.5%** (↓ **0.5%** from last year and ↑ **7.5%** from two years ago)

1 2 3 4 **5**

- 14) Were there adequate recesses between sessions so you could interact with all other participants you wished to meet? **84.4%** (↑ **1.4%** from last year and ↑ **7.7%** from two years ago)

1 2 3 4 **5**

- 15) Are there real-world projects your country/organization would wish to pursue in partnership with the U.S. or other countries? Please elaborate.

Renewable energy technology, Sattihip Port, climate change adaptation, Integrated Water Resource Management, Shared Vision Planning, disaster management, biofuel interoperability, environmental sustainable transport, agriculture biomass into energy, waste management, waste-to-energy, marine meteorology forecasting, vegetation re-planting in de-salinized areas, regional transmission grid, regional power trade agreement, environmental disaster mitigation, cities as forces for good, recycling, land reclamation issues, civ-mil disaster response, integrated energy modeling, and health/hospital waste management.

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

	1	2		3	5	6	7	8	9	10	11	12	13	14	Total
1	0	1	Water	25	1	0	0	1	0	0	0	0	0	0	28
2	0	0	Waste	27	0	0	2	1	1	0	0	0	0	0	31
3	2	3	Resource	21	7	3	5	8	1	6	0	3	1	4	60
4	27	25	Energy	24	28	27	28	13	25	19	17	11	21	20	265
5	20	19	None	0	10	17	9	21	18	23	30	26	24	21	217
	49	48			46	47	44	44	45	48	47	40	46	45	
FY14	84	82		NA	75	83	75	80	83	84	91	89	88	84	83
FY13	89	NA		NA	76	86	NA	79	NA	84	87	82	87	83	81
FY12	84	NA		NA	75	NA	NA	NA	79	73	78	77	80	76	79

Overall, this year's event was rated 2.1% higher than last year and 4% higher than two years ago.

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

a) Australia

Lessons-Learned:

- Working with Environmental Groups instead of fighting them.
- Public-Private Partnership can work.

Environmental Projects to Operationalize:

- Wave Energy or Wind Turbine Demonstration
- Environmental Collection Fee for Tourists Visiting the Maldives.
- Solid Waste Management

Future Subjects/Themes:

- Energy Efficiency
- Regional Environmental Doctrine

b) Bangladesh

Lessons-Learned:

- Water and Energy link

- Payment for Environmental Services
- Waste recycling needs an enforcement mechanism

Environmental Projects to Operationalize:

- Coastal Zone Management/Protection
- Recycling Programs

Future Subjects/Themes:

- Water-Bourne Disaster Management
- Integrated Water Resource Management and Regional Water Sharing

c. Bhutan (Mr. Keyvan Izadi)

Lessons-Learned:

- The RESF should be expanded to include field exercises.

Environmental Projects to Operationalize:

- Payment for Environmental Services (PES)
- A project should be conducted after each RESF to leave a legacy.
- Watershed Management

Future Subjects/Themes:

- Food Security
- Climate Smart Agriculture

d. India

Environmental Projects to Operationalize:

- Waste Management
- Waste-to-Energy

Future Subjects/Themes:

- Oil/Gas in the South China Sea
- Pipeline Development and Environmental Considerations
- Hydro-Power and Sustainable Development along the Mekong River

e. Maldives

Lessons-Learned:

- All countries in South Asia have similar challenges.
- There is a desire to collaborate throughout the region. Transparency is needed.

Environmental Projects to Operationalize:

- Sustainable, Local Community Water Projects

- Food Preservation and Reservation
- Reef Re-Generation Projects

Future Subjects/Themes:

- Sea-Level Rise and Climate Change Adaptation
- Wastewater Management
- Technological Advancements
- Food Security in Small-Island Environments

f. Nepal

Lessons-Learned:

- The Maldives and Nepal have more in common than they thought. They would like Maldivian representatives to come visit Nepal.

Environmental Projects to Operationalize:

- Workshop on In-Land Navigation (Rivers to Sea)
- Workshop on Landslide Disasters
- Removal of River Pollution
- Separation of Organic Waste Projects

Future Subjects/Themes:

- Incorporation of Social Sciences
- Trans-boundary basin collaboration within the Mekong Region
- Air Pollution
- Payment for Environmental Services

g. Sri Lanka

Lessons-Learned:

- The military has a vital role in environmental security. Operational projects should be given to them to execute. They will get it done.

Environmental Projects to Operationalize:

- Maritime Logistics Efficiency
- Solid Waste Management
- Environmental Technology Assessment
- Oil Spill Response

Future Subjects/Themes:

- Disaster Management
- Environmental Management
- Sea-Level Rise
- Community Interface

h. Thailand

Lessons-Learned:

- There is a lot of work involved in hosting the RESF.
- Issues in South Asia are not much different than in Southeast Asia.

Environmental Projects to Operationalize:

- Oil Spill Response
- Civil-Military Integration
- Alternate Energy Technologies
- Disaster Risk Reduction
- Community Capability Generation

Future Subjects/Themes:

- Water
- Waste Management

i. United States

Lessons-Learned:

- The inclusion of students in the RESF was a great idea and should be continued in the future.

Environmental Projects to Operationalize:

- Military Coordination to Counter Trafficking and Wildlife Resources
- Dam Safety/Dam Management
- Human-Wildlife Conflict; Establishment of Buffer Zones

Future Subjects/Themes:

- International Implication of Dam Construction on Mekong River
- Trans-National Air Pollution
- Wildlife Trafficking and Illegal Fishing

20. **NEXT STEPS:** The below table provides a list of milestones that should be considered in preparation for the 2015 Pacific Environmental Security Forum Initial Site Survey, which has tentatively been set for 25-29 August 2014.

Action	Date
Send follow-up e-mail to all South Asia RESF participants thanking them for their participation in the event and provide link to documents and photos	16 Jun
Determine if ISS dates will work with 2015 host and US country team	20 Jun
Contact country team for guidance on approaching 2015 host	25 Jun
Prepare South Asia RESF AAR	26 Jun

Action	Date
Identify potential pump assistance for the Maldives	27 Jun
Send MNDF, NDMC, MoEE and EPA Addu Atoll ESI concept	30 Jun
Prepare Waste Management SVP language to be included with 2015 PESF DEIC proposal	04 Jul
Distribute South Asia RESF AAR	07 Jul
Post South Asia RESF documents to APAN	08 Jul
Engage and request feedback from USAID and STATE on 2015 concept	09 Jul
Conduct July IPR	10 Jul
Discuss with 2015 host operational projects	11 Jul
Submit 2015 DEIC proposal	14 Jul
Request feedback from 2015 host on main PESF themes	15 Jul
Update information paper	17 Jul
Identify venue for ISS	23 Jul
Prepare country clearance, hotel reservations, and flight itinerary	24 Jul
Prepare ISS agenda	25 Jul
Prepare ISS concept PPT	29 Jul
Coordinate with Service Components for ideas into 2015 PESF concept	31 Jul
Determine if rental vehicle and driver will be necessary to support ISS	01 Aug
Prepare ISS stakeholder list	04 Aug
Prepare ISS due out list	05 Aug
Conduct August IPR	06 Aug
Prepare travel orders	11 Aug
Prepare ISS situation report template	12 Aug
Prepare ISS storyboard template	13 Aug
Prepare ISS trip report template	14 Aug
Prepare ISS sign-in sheet	15 Aug
Request ISS participant list from 2015 host	19 Aug
Conduct ISS Pre-Deployment Brief	20 Aug
Execute ISS	25-29 Aug
Distribute ISS Storyboard	01 Sep
Prepare ISS Trip Report	05 Sep
Distribute ISS Trip Report	10 Sep