

INSTITUTE FOR DEFENSE ANALYSES

A History of the Defense Environmental International Cooperation Program

Susan L. Clark-Sestak, Project Leader

April 2019 Approved for public release; distribution is unlimited. IDA Document D-10600 Log: H 19-000182

INSTITUTE FOR DEFENSE ANALYSES 4850 Mark Center Drive Alexandria, Virginia 22311-1882



The Institute for Defense Analyses is a non-profit corporation that operates three federally funded research and development centers to provide objective analyses of national security issues, particularly those requiring scientific and technical expertise, and conduct related research on other national challenges.

About This Publication

This work was conducted by the Institute for Defense Analyses (IDA) under contract HQ0034-14-D-0001, project AM-6-2557, "International Defense Environmental Activities," for the Office of the Deputy Assistant Secretary of Defense for Environment. The views, opinions, and findings should not be construed as representing the official position of either the Department of Defense or the sponsoring organization.

Acknowledgments The author wishes to thank Dr. Alison Lawrence for her review of this document.

For More Information: Ms. Susan L. Clark-Sestak, Project Leader sclark@ida.org, 703-845-2166 ADM John C. Harvey, Jr., USN (Ret), Director, SFRD jharvey@ida.org, 703-575-4530

Copyright Notice © 2019 Institute for Defense Analyses 4850 Mark Center Drive Alexandria, Virginia 22311- 1882 • (703) 845-2000

This material may be reproduced by or for the U.S. Government pursuant to the copyright license under the clause at DFARS 252.227-7013 (a)(16) [June 2013].

INSTITUTE FOR DEFENSE ANALYSES

IDA Document D-10600

A History of the Defense Environmental International Cooperation Program

Susan L. Clark-Sestak, Project Leader

The Defense Environmental International Cooperation (DEIC) program has been a tool for the Office of the Secretary of Defense and the geographic Combatant Commands (CCMDs) to use as part of their security cooperation engagement activities with other nations. The projects that DEIC has supported focus on defense-related environmental themes, with special priority on projects that promote mission sustainment; innovative approaches to environment, safety, and occupational health (ESOH) risk management; and building capacity for strategic partnerships. The author has provided programmatic and research support to the DEIC program since its creation in Fiscal Year (FY) 2000. The last year of DEIC funding was FY2018.

This document reviews the history of the DEIC program and its accomplishments, including its final year of execution. The historical review focuses on the motivations for DEIC's creation, trends in the program's budget and in the demand signal from the CCMDs, the types of activities supported by DEIC, challenges in execution, and the scope of the program's reach. The assessment of the FY2018 program parallels previous IDA annual assessments, documenting the allocation of resources across the CCMDs, the projects executed, and qualitative and quantitative characteristics of those projects.

Over the course of its existence, the CCMDs have recognized the value of DEIC's contribution to their engagement programs. Their demand signal has always been considerably greater than the budget available. With an annual budget of about \$1.5 million, approximately 90 nations hosted at least one DEIC-funded event, and more than 50 other countries participated in a multi-lateral or regionally focused DEIC-funded event.

The FY2018 budget of \$960,000 was the lowest in DEIC's history. Nevertheless, the CCMDs collectively were able to execute 25 projects involving 67 countries during this final year. For the future, the guidance from OSD and the Joint Staff is that the CCMDs will need to secure financial support from other sources available to them, assuming a continued demand signal for future engagements on environmental matters.

Contents

1.		History of the Defense Environmental International Cooperation (DEIC) gram	1
	A.	Motivations for the DEIC Program's Creation	
	B.	Budget Trends and the Demand Signal for DEIC	
	<u>С.</u>	Challenges in Executing the DEIC Program	
	D.	The DEIC Program's Impact	
2.	Ove	erview of the FY2018 DEIC Program Execution and the DEIC Program	
		cesses	7
	A.	Overview of the FY2018 DEIC Program	7
	B.	The DEIC Submission and Approval Process	8
3.	Con	nbatant Command Execution of DEIC Projects	
	A.	AFRICOM	
	B.	CENTCOM	13
	C.	EUCOM	14
	D.	NORTHCOM	14
	E.	PACOM	14
	F.	SOUTHCOM	15
4.	Ass	essment of the DEIC Program	17
	A.	FY2018 Accomplishments	
	B.	Qualitative Impacts	17
	C.	Quantitative Metrics	19
	D.	Comparison of Metrics across Fiscal Years	19
	E.	Conclusions	
App		A. Defense Environmental International Cooperation (DEIC) Fiscal Year () 2018 Call for Proposals	A-1
App	endiz	K B. Defense Environmental International Cooperation (DEIC) Fiscal Year () 2018 Approved Program	
App	endiz	x C. Defense Environmental International Cooperation (DEIC) Fiscal Year	
	(FY) 2018 Spreadsheet	C-1
App	endiz	x D. Illustrations	D-1
App	endiz	x E. References	E-1
App	endiz	x F. Abbreviations	F-1

1. The History of the Defense Environmental International Cooperation (DEIC) Program

Because Fiscal Year (FY) 2018 represents the last year that the DEIC Program was funded, the Institute for Defense Analyses (IDA) was asked to provide an historical overview of the program. IDA has been involved with DEIC since its creation in FY2000 and has produced an annual assessment of the program's activities and accomplishments since FY2010. This historical review focuses on the motivations for DEIC's creation, trends in the program's budget and in the demand signal from the geographic combatant commands (CCMDs), the types of activities supported by DEIC, challenges in execution, and the scope of the program's reach.

A. Motivations for the DEIC Program's Creation

The U.S. Department of Defense (DOD) participated in international environmental cooperation as early as the 1970s, mainly through the North Atlantic Treaty Organization's Committee on the Challenges of Modern Society (NATO CCMS). When the Environmental Security Office was established in 1993 within the Office of the Secretary of Defense (OSD), international environmental activities constituted part of its portfolio. While the office continued to support activities under CCMS, it also sought to develop bilateral and trilateral initiatives to address a broader range of important environmental topics, including the U.S.-Australia-Canada trilateral, U.S.-Norway-Russia Arctic Military Environmental Cooperation (AMEC) program, and bilateral engagements with countries such as Finland, Sweden, and South Africa. Because the size of this OSD staff was small, the services' environmental staffs were often asked to support some of these engagements, with subject matter expertise and financial resources.

In 1996, Secretary of Defense William Perry unveiled his Preventive Defense strategy, which advocated promoting peace and stability through friendly interactions and establishing closer relations between the U.S. military and foreign militaries. The coincidence of Secretary Perry's initiative and the more robust international environmental engagements led by the Environmental Security Office led to a desire to expand these engagements to all the CCMDs.

Beginning in 1999, efforts congealed to establish a more structured and sustainable approach to international environmental activities, which came to be known as the DEIC program. Congressional funding was sought and obtained for DEIC.¹ The second step

 $^{^{1}}$ The first year for which IDA has budget data is FY2002, when DEIC was allocated \$1.2 million.

occurred in 2000 when, in addition to using DEIC funds to support OSD-led international environmental initiatives, OSD created a structured process for reaching out to the CCMDs to solicit their inputs for engagement activities that were tied to national/OSD-level strategic planning guidance and CCMD theater campaign plans. For the first few years, OSD's activities accounted for approximately half of the overall budget; however, OSD activity expenditures gradually diminished so that by the final years of the program, all the funding was sent to the CCMDs to address their requirements. The creation of a three-member Oversight Group—the Deputy Assistant Secretary of Defense for Environmental Readiness and Safety (DASD/ERS), a representative from the Joint Staff's J-4 division, and a representative from OSD Policy—represented an important third element of the DEIC program's creation. This group has convened annually to review the project proposals from the CCMDs and recommend an approved DEIC program for the following fiscal year.²

B. Budget Trends and the Demand Signal for DEIC

With the exception of one year, DEIC's annual budget has always been less than \$2 million. The exception came in FY2012 when DEIC was identified as one of the programs that DOD could leverage to help address defense-related climate change issues internationally. That budget plus-up did not prove sustainable in future years, however. With available funding having to be spread across all the geographic CCMDs, the majority of DEIC's projects were, of necessity, small financially compared to many DOD programs.

Figure 1 illustrates the annual DEIC budget since FY2002 as well as the total value of proposed projects. As is evident, over the course of DEIC's existence, the CCMDs have recognized the value of its contribution to their engagement programs, and their demand signal has always been considerably greater than the budget available. In recent years, the Advisory Group has often factored in the extent to which the CCMDs are able to bring other resources (financial and manpower) to the table to support their proposed projects. Leveraging resources is one way of demonstrating the importance that the CCMDs place on executing these engagements.

² In FY2012, the Oversight Group was renamed the Advisory Group, reflecting the recognition that this group was making a recommendation to OSD's Installations and Environment leadership for an approved program.

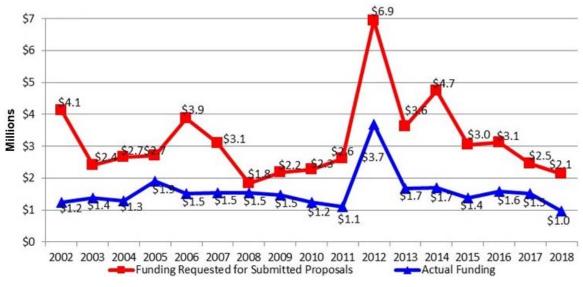


Figure 1. Annual DEIC Program Budget and Funding Requested

C. Challenges in Executing the DEIC Program

Any international cooperation program inherently confronts challenges in the form of frequently differing national priorities, capacities, capabilities, and timelines. A fair degree of flexibility is therefore necessary to be able to address these differences. For environmental cooperation, for example, some defense establishments have environmental programs equal to (or better) than the U.S. DOD, while others even today remain in their infancy. The nature and scope of collaboration is clearly shaped by these considerations. Important in all forms of collaboration is the commitment to developing and sustaining relationships. Through consistent (if limited) funding, DEIC has been able to support those relationships with a number of countries, but far more could have been nurtured if more resources (financial and staff) could have been dedicated to the effort.

Arguably the greatest challenge to the execution of the DEIC program has been the timeliness of its funding. For a number of years, the federal budget has been subjected to continuing resolutions, meaning that funding even for existing programs is available only incrementally. In many years, the first increment of DEIC funding was not available to the CCMDs until December at the earliest. In some instances, some of the CCMDs did not receive any funding until March but still had to execute their program by the end of the fiscal year.³ In the past several years, OSD has addressed this challenge by sending at least some portion of funding from the first tranche to each of the CCMDs, thereby allowing them to begin planning their approved projects. OSD did not, however, adopt another recommendation IDA had made: to provide full funding to DEIC at the beginning of the fiscal

³ Susan L. Clark-Sestak, *Review of the Fiscal Year 2014 (FY14) Defense Environmental International Cooperation (DEIC) Program*, IDA Document D-5413 (Alexandria, VA: Institute for Defense Analyses, May 2015), 2.

year out of the office's overall available budget.⁴ IDA argued that because DEIC's budget was so small relative to other programs within the office's portfolio, other programs would be less seriously impacted by a delay of \$1 million in funding than DEIC.

D. The DEIC Program's Impact

The DEIC program has focused its efforts on activities that help support the warfighter, build strategic partnerships, enhance national and regional capabilities and capacity, and sustain mission resilience. Many of its initiatives can be linked to support of specific U.S. interests. While by no means exhaustive, the following examples illustrate the breadth and depth of DEIC's reach:

- The U.S. Africa Command (AFRICOM) has used DEIC engagements to support U.S. strategy for combating wildlife trafficking and its destabilizing effects.
- The U.S. Central Command (CENTCOM) leadership attributed its ability to initially use facilities in Central Asia to support operations in Afghanistan to the relations that were established during DEIC workshops with those nations.
- The U.S. European Command's (EUCOM) DEIC events in the mid-2010s contributed to the reopening of a key training area in Italy by developing a common understanding of the impacts of training on the environment.
- The U.S. Northern Command (NORTHCOM) has leveraged DEIC resources to work with partner nations to establish baselines for Arctic defense missions.
- The U.S. Pacific Command (PACOM) leadership has viewed its DEIC-supported Pacific Environmental Security Forum as a prime security cooperation engagement tool with nations throughout its area of responsibility (AOR).
- The U.S. Southern Command (SOUTHCOM) has leveraged DEIC assets to foster partner nation environmental and energy capability and capacity as a means of establishing long-lasting relationships with influential leaders.
- Finally, as an example of cross-command impact, the U.S.-South African *Guidebook on Environmental Considerations in Operations* led to the creation of a series of products developed through U.S.-Finland-Sweden collaboration: *Environmental Guidebook for Military Operations, Environmental Toolbox for Deploying Forces: An Awareness Training Supplement to the Environmental Guidebook for Military Operations, and Environmental Tools for Military Activities.⁵*

⁴ Ibid, 24.

⁵ For additional information about this trilateral cooperation, see Susan L. Clark-Sestak, *Environmental Tools for Use during Military Activities*, IDA Document D-10504 (Alexandria, VA: Institute for Defense Analyses, February 2019).

In short, the DEIC program's impact seems to have exceeded the financial support that it has been able to provide. Since its creation, DEIC activities have affected thousands of people in 73% of all the countries in the world. Approximately 90 nations have hosted at least one DEIC-funded event, and more than 50 other countries have participated in a multilateral or regionally focused DEIC-funded activities. It would be challenging to identify another program that has had such a far-reaching effect for a total of a \$25 million investment over almost two decades.

2. Overview of the FY2018 DEIC Program Execution and the DEIC Program Processes

In previous assessments of the DEIC program, research staff at IDA described the purposes of DEIC and the types of activities that it has funded.¹ This chapter focuses on the execution of the FY2018 program, identifies several larger benefits derived from DEIC activities, and offers several ways to measure the impact of this program.

A. Overview of the FY2018 DEIC Program

The DEIC program, which resides within what is now called Office of the Deputy Assistant Secretary of Defense for Environment in the Office of the Assistant Secretary of Defense for Sustainment,² was originally funded in FY2018 at \$960,000. Of this amount, \$958,000 was distributed to the CCMDs for execution of DEIC projects.

Of the funds distributed, as of January 2019, approximately \$70,000 had been or was in the process of being returned to OSD by the CCMDs, with this figure still subject to minor modification.

Table 1 lists the amounts of and reasons for the returns. Except for \$17,000 of CENTCOM's unused funds, the DEIC program managers (PMs) at the CCMDs retained these funds until the end of the fiscal year. For small amounts of leftover funds, the PMs needed to ensure that all expenses incurred through the end of the fiscal year had been paid out. However, the larger amounts that were not returned earlier ostensibly could have been applied to other DEIC efforts in FY2018 if they had been returned to OSD earlier, when it was known that specific projects were cancelled or had been scaled back. Ultimately, the actual budget for DEIC projects using FY2018 funds was reduced to less than \$900,000.

¹ Susan L. Clark-Sestak and Ashley Neese Bybee, *Review of the Fiscal Year 2013 (FY13) Defense Environmental International Cooperation Program*, IDA Document D-5129 (Alexandria, VA: Institute for Defense Analyses, February 2014).

² Until the reorganization of Acquisition, Technology & Logistics, DEIC resided in the Office of the Environment, Safety and Occupational Health (ESOH) Office of the Assistant Secretary of Defense for Energy, Installations and Environment (ASD(EI&E)).

CCMD	Amount Returned	Reason
African Command	\$1,788.16	Difference between project estimates and actual costs.
Central Command	\$17,332.00	One project was cancelled, and the remainder was due to dif- ference between project estimate and actual costs.
Northern Command	\$7,433.71	Planning meetings cancelled due to leadership guidance.
Pacific Command	\$326.00	Difference between project estimates and actual costs.
Southern Command	\$44,282.40	One event with Chile was cancelled, and another event was significantly scaled back.

Table 1. DEIC Program Funding Returned by CCMD and Reasons for Return

B. The DEIC Submission and Approval Process

ASD(EI&E) released the FY2018 Call for Proposals and Meeting Participation memorandum on March 1, 2017 (see Appendix A), which provided guidance on the DEIC program's priorities. The project proposals submitted for the DEIC Advisory Group's consideration totaled \$2,129,000. The Advisory Group found all but one of the 46 proposals to be appropriate for DEIC funding.³ ASD(EI&E) announced the FY2018 DEIC approved program in an October 16, 2017, memorandum (see Appendix B, which contains the memorandum and the approved spreadsheet). The size of the requested amount for valid activities is evidence that the CCMDs continue to have requirements and interests in DEIC activities well in excess of the available budget.

The Advisory Group divided the projects into three categories: projects that should have the highest priority (their funding is listed in the "Approved" column); projects that should be considered next for funding, subject to the availability of funds (listed in the "App pending funds" column); and projects that were also deemed valid but with lower priority (listed in the "Also valid" column). Of the projects initially proposed by the CCMDs, those that had no funding listed in any of the three columns were deemed not appropriate for DEIC funding by the Advisory Group. Only one proposal of all those submitted fell into this category. As noted in previous assessments of the DEIC program, in addition to the guidance provided in the call for proposals memorandum (see Appendix A), a number of factors were considered during the Advisory Group meeting when determining a project's funding category, but these factors are not specifically prioritized since their applicability and prominence can vary by topic, country, and region. These criteria are routinely addressed during the Advisory Group's discussions with each of the CCMDs and include (but are not limited to) the following:

³ The two proposals not found to be valid for DEIC funding totaled \$73,000, or 3% of the total of all submitted proposals.

- The project's ability to support the warfighter or contribute to interoperability and/or mission sustainment;
- The extent to which the engagement opens opportunities for a new or expanded relationship with a country (or, on the contrary, whether so many activities are already ongoing in the country that this effort would have little perceptible impact);
- The project's ability to build or enhance the partner nation's capacity and capabilities in the proposed topic area;
- The involvement of host-nation defense personnel in the project (while the involvement of additional agencies is welcomed—indeed, desirable—the participation of defense personnel (uniformed or civilian) is a necessity);
- The exposure of participants to the concept of interagency cooperation (whole-ofgovernment approaches), thereby enhancing their understanding of each other's roles and responsibilities;
- The potential for the project to contribute to the host-nation's ability to serve a regional leadership role or to otherwise promote regional stability;
- The level of "interest" that the CCMD (or OSD) has in engaging with the given country, which draws on the CCMD's Theater Security Cooperation (TSC) plans and other relevant DOD and national-level documents;
- Where the project ranks in the CCMD's own prioritization of its proposals (each CCMD must rank order all proposals that it has submitted);
- The perceived ability of the CCMD and host-nation to execute the project as proposed; and
- The balance of projects and funding across the CCMDs, taking many of the previous factors into consideration.

In contrast to previous years, the Advisory Group's recommended funding for 23 projects in the "Approved" column in attachment 1 of the approval memorandum (see Appendix B) totaled all but \$2,000 of the original budget because, in contrast to previous years, no decrements to the budget were expected. Still, if one of the approved projects could not be executed for any reason, the Advisory Group had a range of projects in the "App pending funds" column from which to choose, thereby providing the flexibility to decide which projects were most likely to be executable within the remainder of the fiscal year. Indeed, a number of projects had to be rescheduled or relocated often because of host-nation considerations or because the delay in the CCMDs receiving DEIC funds necessitated postponing the event. Figure 2 illustrates the allocation of funding by AOR as disbursed by OSD.⁴ Chapter 3 of this document provides a list of the individual projects that were implemented by each CCMD and the total amount of any other sources of funding that these CCMDs used to execute them. The DEIC PMs are then responsible for uploading the after action reports (AARs), agendas, participant lists, and available presentations for each project onto the DEIC working group page of the All Partners Access Network (APAN) website.⁵

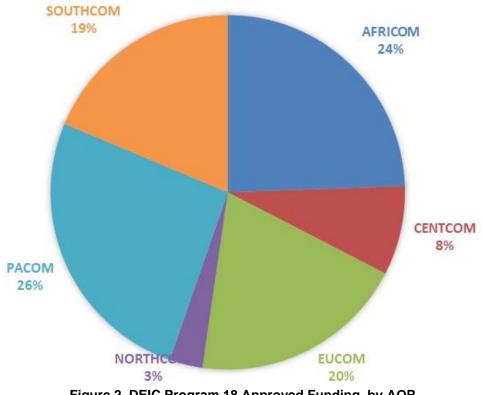


Figure 2. DEIC Program 18 Approved Funding, by AOR

The projects in the following chapter are listed in the order in which they appear on the final FY2018 spreadsheet (see Appendix C). In a number of cases, the spreadsheets in Appendix B and Appendix C differ. As noted previously, Appendix B reflects the approved DEIC program at the start of the fiscal year. Appendix C, on the other hand, captures the program as it was actually executed. In a number of cases, locations or sometimes topics needed to change. In some cases, emerging requirements resulted in the development of a new project, which was submitted to the Advisory Group and, when funds were available, was approved during the year. (Appendix C does not, however, capture all of the funds being returned to OSD as described in Table 1 because, as of January 2019, the process for

⁴ This differs from actual spending due to the cancellation of several projects.

⁵ The DEIC portion of the website is password protected and accessible to members of the DEIC community.

returning the funds had not been completed.) This spreadsheet lists only the executed projects, the DEIC funds requested, and the funding levels as actually executed ("Actual" column). In many cases, the funding sent to the CCMDs for these projects was supplemented by other funding sources, and the spreadsheet also lists the amount of any such additional funding that was leveraged. Across all the CCMDs, another \$540,000 in funding was used to help execute the approved DEIC projects. Of the 25 DEIC projects representing FY2018 activities, 13 (or 52%) used other sources of funding to supplement DEIC funds. This funding came from a wide variety of sources, including the following:

- Traditional Commander's Activity (TCA),
- Title 10—Armed Forces, U.S. Code,
- National Guard's State Partnership Program (SPP),
- U.S. Department of State,
- U.S. Army Europe (USAREUR),
- U.S. Army Corps of Engineers (USACE),
- U.S. Geological Survey (USGS),
- Asia Pacific Regional Initiative (APRI) program,
- Florida International University, and
- South Africa's Council for Scientific and Industrial Research (CSIR).

In addition, any number of U.S. government and non-U.S. institutions provided the labor of their subject matter experts (SMEs) at no cost to the DEIC projects, a contribution that is not entirely captured in the \$540,000 noted previously. The ability and willingness to secure additional funding sources and to provide manpower are further indications of the value that the CCMDs and other organizations attach to DEIC activities.

This chapter identifies the final amount of funding provided by ASD(EI&E) for DEIC projects in each of their AORs. It also indicates the amount (if any) of additional sources of funding secured for these projects. As noted in Table 1, some of the funds provided by ASD(EI&E) were in the process of being returned at the end of FY2018; however, since final amounts are still pending, those returned funds are not reflected in this chapter. Each section in this chapter then lists the titles of the projects by CCMD that were either executed in FY2018 or plan to be executed in early FY2019, for which initial preparations were made in FY2018.

A. AFRICOM

Final funding from ASD(EI&E) for projects in the AFRICOM AOR totaled \$234,000. AFRICOM leveraged these DEIC funds with another \$172,000 from a variety of other U.S. and international funding sources to execute the following six projects:

- Anti-Poaching/Wildlife Trafficking (Angola),
- Contingency Basing Sustainability Water Resources (Eswatini),
- Horn of Africa: Water Security Symposium (Malawi),
- Coast Guard Fisheries Enforcement Assessment (Tunisia),
- Integrated Training Area Management and Defense Committee (South Africa), and
- Water Security Workshop (Burkina Faso).

B. CENTCOM

Final funding from ASD(EI&E) for one project in the CENTCOM AOR totaled \$61,000 (no other source of funds were leveraged):¹

• Spill Response Exercise (Gulf Cooperation Council (GCC)).

¹ Because the funding for the other approved project for CENTCOM was returned with several months remaining in the fiscal year, the amount shown is that which CENTCOM retained rather than the original amount that OSD disbursed to it.

C. EUCOM

Final funding from ASD(EI&E) for projects in the EUCOM AOR totaled \$189,000. EUCOM leveraged these DEIC funds with another \$61,000 in TCA funds to execute the following six projects:

- Natura 2000 Military Collaboration Workshop (Germany),
- Sustainable Range Management Events (Slovenia and Macedonia),
- Environmental Collaboration among Enhanced Forward Presence (EFP) Nations (Lithuania),
- Environmental Exercise Planning Products (Finland and Sweden),
- Interagency Collaboration through Oil Spill Response (Azerbaijan), and
- Balkans Environmental Considerations in Military Operations Regional Workshop (Montenegro).

D. NORTHCOM

Final funding from ASD(EI&E) for one project in the NORTHCOM AOR totaled \$29,000 (but \$7,000 of that amount was returned to OSD). NORTHCOM leveraged these DEIC funds with another \$25,000 from other U.S. funding sources to execute the following project:

• Arctic Mission Analysis.

E. PACOM

Final funding from ASD(EI&E) for projects in the PACOM AOR totaled \$249,000. PACOM leveraged these DEIC funds with another \$230,000 from a variety of other U.S. funding sources to execute the following four projects:²

- FY2018 Regional Environmental Security Forum (RESF) (Mongolia),
- Visible Infrared Imaging Radiometer Suite (VIIRS) Boat Detection (Indo-Pacific),
- Ship Salvage Phase 1 (Fiji), and
- FY2018 South Asia Maritime Environmental Security Workshop (MESW #1) (Malaysia).

² Of note, of all the projects submitted by the CCMDs, the ship salvage project was the one proposed project that the Advisory Group determined did not qualify for DEIC funding. As shown in Chapter 4, however, the ship salvage project contributed to six of the seven desired qualitative impacts for DEIC projects.

F. SOUTHCOM

Final funding from ASD(EI&E) for projects in the SOUTHCOM AOR totaled \$179,000.³ SOUTHCOM leveraged these DEIC funds with another \$52,000 from other U.S. funding sources to execute the following seven projects:

- National System for Prevention and Control of Forest Fires (Honduras),
- Environmental Waste Management after a Disaster (Peru),
- Coastal Hydrology and Oil Spill Management and Recovery (Trinidad and Tobago),
- Energy and Water Assessment (Belize),
- Historical Structures Preservation (Honduras),
- Western Hemisphere Institute for Security Cooperation (WHINSEC), and
- Net Zero Energy SMEE (Argentina, Brazil, and Peru).

³ Of note, of the \$179,000, more than \$44,000 was returned to OSD after the end of the fiscal year and so was not used for DEIC purposes.

A. FY2018 Accomplishments

The DEIC program, throughout its existence, served as a successful engagement tool with other nations on environmental issues. It was a valuable mechanism to help develop and strengthen military-to-military relationships and interagency contacts not only between the United States and the partner nation(s), but also within and among those partner nations. Importantly, it also contributed to U.S. mission sustainment objectives and, in a number of cases, supported the warfighter and saved U.S. resources.

B. Qualitative Impacts

The impact of the FY2018 DEIC program can be assessed in a number of ways. Table 2 lists each of the 24 projects executed by the CCMDs and the types of qualitative impacts that each project has had in support of broader DOD objectives. These impacts, in turn, are some of the criteria that the Advisory Group has used in making its recommendations about which projects DEIC should fund, as described in Chapter 1. At least two categories are applicable to every project.

Projects by CCMD	Support the (U.S.) Warfighter	Contribute to Interoperability and/or Mission Sustainment	Build/Enhance Partner Capacity and Capability	Create/Strengthen Relationships with Other Countries	Promote Interagency Cooperation	Contribute to Others' Regional Leadership Capacity or to Regional Stability	Save U.S. Resources
AFRICOM							i
Anti-Poaching/Wildlife Trafficking (Angola)				\checkmark	\checkmark	\checkmark	
Contingency Basing Sustainability – Water Resources (Eswatini)			\checkmark	\checkmark	\checkmark	\checkmark	
Horn of Africa: Water Security Symposium (Malawi)			\checkmark	\checkmark	\checkmark	\checkmark	
Coast Guard Fisheries Enforcement Assessment (Tunisia)			\checkmark	\checkmark	\checkmark	\checkmark	
Integrated Training Area Management and Defense Committee (South Africa)			\checkmark	\checkmark	\checkmark	\checkmark	
Water Security Workshop (Burkina Faso)			\checkmark	\checkmark	\checkmark	\checkmark	
CENTCOM							
Spill Response Exercise (Gulf Cooperation Council (GCC))			\checkmark	\checkmark	\checkmark		

Table 2. Impacts of DEIC Engagement Activities as Executed by the Geographic CCMDs

Projects by CCMD	Support the (U.S.) Warfighter	Contribute to Interoperability and/or Mission Sustainment	Build/Enhance Partner Capacity and Capability	Create/Strengthen Relationships with Other Countries	Promote Interagency Cooperation	Contribute to Others' Regional Leadership Capacity or to Regional Stability	Save U.S. Resources
Natura 2000 Military Collaboration Workshop	,	I	1	1			
(Germany)	\checkmark	\checkmark	\checkmark	\checkmark			
Sustainable Range Management Events (Slovenia and Macedonia)	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark	
Environmental Collaboration among Enhanced Forward Presence (EFP) Nations (Lithuania)	\checkmark	\checkmark	\checkmark	\checkmark			
Environmental Exercise Planning Products (Finland and Sweden)		\checkmark	\checkmark	\checkmark			
Interagency Collaboration through Oil Spill Response (Azerbaijan)			\checkmark		\checkmark		
Balkans Environmental Considerations in Mili- tary Operations Regional Workshop (Montenegro)		\checkmark	\checkmark	\checkmark		\checkmark	
NORTHCOM				•			
Arctic Mission Analysis	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
РАСОМ							
FY2018 Regional Environmental Security Forum (RESF) (Mongolia)		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
Visible Infrared Imaging Radiometer Suite (VIIRS) Boat Detection (Indo-Pacific)		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
Ship Salvage Phase 1 (Fiji)	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
FY2018 South Asia Maritime Environmental Security Workshop (MESW #1) (Malaysia)		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
SOUTHCOM							
National System for Prevention and Control of Forest Fires (Honduras)		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Environmental Waste Management after a Disaster (Peru)		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Coastal Hydrology and Oil Spill Management and Recovery (Trinidad and Tobago)		\checkmark	\checkmark	\checkmark			\checkmark
Energy and Water Assessment (Belize)			\checkmark	\checkmark			
Historical Structures Preservation (Honduras)	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
Western Hemisphere Institute for Security Cooperation (WHINSEC)		\checkmark	\checkmark	\checkmark		\checkmark	
Net Zero Energy SMEE (Argentina, Brazil, and Peru)		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark

C. Quantitative Metrics

In addition to these identifiable impacts, some quantitative assessments can also be applied to DEIC activities. Table 3 provides such quantifiable metrics and their results (to the extent they are available) for all 24 FY2018 DEIC projects.

Table 5. Quantinable metrics for the DEIC Program and F12016 Results					
Type of Metric	FY2018 Results				
Related to quantity of foreign engagements					
 Percentage of DEIC projects involving interac- tion with other nations 	100% (25 of 25)				
Ratio of the number of engagements with other	25: \$958K,				
nations to DEIC funding	or \$38.3K average cost ¹				
Number of foreign nationals engaged	700				
Number of foreign nations engaged	67				
Related to leveraging funding from other sources					
 Percentage of all DEIC projects that leveraged other funding 	52% (13 of 25)				
 Percentage of total spending on DEIC projects that was from other funding sources 	36% (\$540K of \$1,498K)				
Number of CCMDs that leveraged other funding	5 (of 6)				

 Table 3. Quantifiable Metrics for the DEIC Program and FY2018 Results

D. Comparison of Metrics across Fiscal Years

IDA's qualitative and quantitative metrics have now been applied to four consecutive years of DEIC. A comparison of these metrics for the FY2015, FY2016, FY2017, and FY2018 programs, captured in Table 4, shows that the program consistently engaged a large number of representatives from countries throughout the world at a low cost per project. In fact, the average project for FY2018 was about 40% less than projects in FY2015.

Consistent with trends since the DEIC program's inception, all 4 years also show a much greater demand signal from the CCMDs than the DEIC budget can support, and additional resources from other U.S. government and non-government sources have been brought to bear for a number of projects to help ensure as great an impact as possible.

¹ A more accurate cost per project would use the actual budget figure (after funds were returned to OSD) of approximately \$888,626 for an average of \$35.5K, but, for consistency of comparison across years (when the amounts returned were not as great), the budget figure used is the amount originally disbursed to the CCMDs.

	Type of Metric	FY2015 Results	FY2016 Results	FY2017 Results	FY2018 Results
Related to quantity of foreign engagements					
•	Percentage of DEIC projects involving interaction with other nations	95% (20 of 21)	100% (36 of 36)	100% (35 of 35)	100% (25 of 25)
•	Ratio of the number of engage- ments with other nations to DEIC funding	20: \$1.346M, or \$67K average cost	36: \$1.581M, or \$44K average cost	35: \$1.521M, or \$43K average cost	25: \$958K, or \$38.3K aver- age cost
•	Number of foreign nationals engaged	1,000+	1,100+	1,400+	700
•	Number of foreign nations engaged	61	79	119	67
	ted to leveraging funding from r sources				
•	Percentage of all DEIC projects that leveraged other funding	62% (13 of 21)	41.7% (15 of 36)	60% (21 of 35)	52% (13 of 25)
•	Percentage of total spending on DEIC projects that was from other funding sources	35.3% (\$733K of \$2.079M)	37.4% (\$945K of \$2.526M)	41% (\$1.063M of \$2.584M)	36% (\$540K of \$1,498K)
•	Number of CCMDs that leveraged other funding	4 (of 5)	3 (of 6)	5 (of 6)	5 (of 6)

Table 4. Comparisons of Metrics for FY2015, FY2016, FY2017, and FY2018

E. Conclusions

For almost two decades, the DEIC program provided a valuable tool for OSD and the CCMDs to use in addressing environmental issues. The process that OSD established for reviewing and approving the CCMDs' project proposals ensured a globally balanced approach that coincided with overall DOD security cooperation objectives. Although it is impossible to measure the value of relationships, good will, or the improved environmental performance of the participating militaries, it seems evident that DEIC contributed in these ways. Equally, it has protected and helped provide access to training, testing, and basing opportunities that are vital to U.S. defense interests. Despite DEIC's small budget, it leaves behind a legacy of having touched thousands of people from more than 140 countries throughout the world.

Appendix A. Defense Environmental International Cooperation (DEIC) Fiscal Year (FY) 2018 Call for Proposals



ASSISTANT SECRETARY OF DEFENSE 3400 DEFENSE PENTAGON WASHINGTON, DC 20301-3400

MAR - 1 2017

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (STRATEGY, PLANS AND CAPABILITIES) DIRECTOR, JOINT STAFF CHIEF OF STAFF, UNITED STATES AFRICA COMMAND CHIEF OF STAFF, UNITED STATES CENTRAL COMMAND CHIEF OF STAFF, UNITED STATES EUROPEAN COMMAND CHIEF OF STAFF, UNITED STATES NORTHERN COMMAND CHIEF OF STAFF, UNITED STATES PACIFIC COMMAND CHIEF OF STAFF, UNITED STATES SOUTHERN COMMAND

SUBJECT: Defense Environmental International Cooperation Program – Fiscal Year 2018 Call for Proposals

This memorandum provides the guidance and schedule for submitting proposals for consideration in the Defense Environmental International Cooperation (DEIC) Program allocation of Fiscal Year (FY) 2018 resources. The DEIC Program provides expertise and funding to support security cooperation (e.g., support operations or the Warfighter, sustain mission resilience, build partnership capability or capacity, develop and enhance relationships, or address environmental or operational energy risk management).

Eligible DEIC Program proposals must include engaging with foreign defense ministries on environmental or operational energy topics that have implications for military installations, training, or operations. I encourage you to submit proposals that leverage other sources of funding.

The planned milestones for the DEIC FY 2018 proposal submission process are:

- No later than July 14, 2017 Please submit FY 2018 DEIC Program proposals based on the guidance provided in Attachment 1.
- August 23-24, 2017 The Advisory Group will meet to evaluate the proposals, as outlined in Attachment 2.
- Early October 2017 I anticipate announcing the approved FY 2018 DEIC Program.

My point of contact is Lt Col Travis Leighton, at travis.k.leighton.mil@mail.mil or 571-372-6889.

eter/Potochney Acting

Attachments: As stated

Figure A-1. Peter J. Potochney, "Defense Environmental International Cooperation Program Fiscal Year 2018 Call for Proposals" (memorandum, Washington, DC: Acting Assistant Secretary of Defense (Energy, Installations, and Environment), March 1, 2017)

Attachment 1

Defense Environmental International Cooperation (DEIC) Program Fiscal Year (FY) 2018 Proposal Guidance

Geographic Combatant Commands (CCMDs) should consolidate their proposals and submit them by July 14, 2017, to the Office of the Assistant Secretary of Defense (Energy, Installations, and Environment) (OASD(EI&E)) for FY 2018 resource consideration. A cover memorandum signed out at the GFO/SES level is appropriate. The proposal submission with cover memorandum should be emailed to Ms. Susan Clark-Sestak, at sclark@ida.org, with a copy to Lt Col Travis Leighton, OASD(EI&E) at travis.k.leighton.mil@mail.mil.

All proposals must include engagement with foreign defense representatives on environmental or operational energy topics (note that installation energy is not part of the DEIC portfolio and should therefore not be the sole focus of a proposal). The expected results of the engagement should fall into one of the following categories:

- · Supporting operations or supporting the Warfighter
- Sustaining mission resilience
- · Building partner capability
- Expanding partner capacity
- · Developing or strengthening relationships
- · Addressing environmental or operational energy risk management

DEIC's budget remains relatively small. To maximize its impact, and to demonstrate the CCMD's support for the DEIC Program, proposals that leverage other sources of funding (such as Traditional Commander Activities) will generally be given a higher priority than those that do not. Each CCMD's prior year's performance in execution and timely reporting (of monthly obligation reports and after action reports) will also be taken into consideration when the Advisory Group makes its recommendations of projects to be funded. In addition, projects that include other U.S. government agencies, international organizations, and/or non-profit organizations are encouraged. To further assist the Advisory Group in its deliberations, each CCMD is strongly encouraged to include a map highlighting the countries of proposed FY 2018 activities, similar to the one submitted by USAFRICOM in its FY 2017 package. (This is available on the DEIC page of the All Partners Area Network (APAN).)

The format of the proposals should be as follows:

- 1. Title of the proposal.
- Organization originating request, including Department of Defense (DoD) action officer, email address, and commercial and DSN phone number.
- Description Explain why this proposal and the country(ies) to be engaged are important and what the desired outcomes are:
 - a. General description of who, what, where, when, and how.

Figure A-1. Peter J. Potochney, Memorandum (2 of 4)

- b. Why? How will this project have an impact? What are its expected results? (Refer to the bulletized list above.) Also cite support to specific objectives of the Guidance for the Employment of the Force and your CCMD Theater Campaign Plan. A template for capturing this information is available in the FY 2017 DEIC package USEUCOM submitted (see section 4c of each USEUCOM proposal on DEIC's page of APAN). The more context that is provided, the more competitive the proposal is likely to be. If it is necessary to make this section of the proposal classified, submit it in a separate classified document to susan@ida.pentagon.smil.mil and travis.k.leighton.mil@mail.smil.mil.
- 4. Documentation deliverables: For example, report, handbook, workshop, proceedings, etc.
- Planned schedule for execution (include key planning meetings and events). Please consider the "80/20" rule – 80 percent obligation by end of July is mandatory. No more than 20 percent of funding may remain unobligated after that date.
- 6. Resource requirements: Provide a detailed excel spreadsheet that identifies:
 - a. The amount of funds requested from the DEIC Program.
 - b. How funds will be spent (e.g., number of U.S. travelers, transportation cost, per diem, publication costs, contractor support). The DEIC Program is Operation and Maintenance (O&M) funded, and subject to all restrictions of that appropriation.
 - c. Other resources that have been requested (e.g., Traditional Commander Activities, Title 10, other government agencies, international organizations, non-governmental organizations, manpower, etc.). While it is not unconditionally required that other resources be leveraged for all proposals, it is an important indicator of the value that others place on the proposal.
- Additional Comments: Include any clarifying information that will aid the Advisory Group's understanding in evaluating your proposals. This information should be clear, succinct, and proposal-specific.
- 8. Priority: CCMDs must prioritize their proposals if submitting more than one.

Note that compliance with O&M funding guidelines as well as all current guidance governing travel and conferences (if applicable) is required.

Once the approved FY 2018 DEIC Program is announced, CCMDs should be prepared to provide additional information about the amount of funding needed in the first several months of the Fiscal Year, in the event that not all DEIC funds are available immediately at the start of the year.

Figure A-1. Peter J. Potochney, Memorandum (3 of 4)

Attachment 2

Defense Environmental International Cooperation (DEIC) Program Fiscal Year (FY) 2018 Advisory Group Meeting

The purpose of the DEIC Program's Advisory Group is to review, prioritize, and recommend DEIC projects to the Assistant Secretary of Defense (Energy, Installations, and Environment) (ASD(EI&E)) for the Fiscal Year (FY) 2018 funding. The Advisory Group consists of assigned voting representatives, however decision-making authority for the DEIC Program lies solely with ASD(EI&E).

The Advisory Group will meet on Wednesday, August 23, 2017, from 0900 to 1600 at the Institute for Defense Analyses, with the participation of the Geographic Combatant Command (CCMD) DEIC Program Managers to review the FY 2018 proposals. The following outlines the form of this participation:

- At a minimum, the DEIC Program Manager from each Geographic CCMD is expected to participate; additional CCMD participants are also welcome to attend the meeting.
- There will be a 30-45 minute window designated for each CCMD during which Advisory Group questions about the CCMD's proposals will be addressed.
- · For each person attending the meeting, the following must be done by July 28, 2017:
 - ✓ Provide the name and contact information (email and phone number) of the representative(s) you are planning to send to Ms. Susan Clark-Sestak, at sclark@ida.org, with a copy to Ms. Markell Miller, at mmiller@ida.org.
 - ✓ Visit requests must be faxed to IDA Visitor Control, 703-845-2588 (phone: 703-845-6900) or sent via JPAS (IDA's SMO code is 7A2934). Please do so by July 28, 2017.
- No formal briefing presentation will be expected or accommodated.
- If any classified supporting documentation is required, that must be sent to Ms. Clark-Sestak, at susan@ida.pentagon.smil.mil, when proposals are submitted (by July 14, 2017).

The Advisory Group will meet in executive session on Thursday, August 24, 2017, from 0900 to 1200 at the Institute for Defense Analyses to prioritize the FY 2018 proposals from the Geographic CCMDs.

Taking under advisement the Advisory Group's recommendations, the ASD(EI&E) will subsequently issue a memorandum announcing the officially approved program, pending receipt of FY 2018 funds.

If you have any questions or need assistance, please contact Lt Col Travis Leighton, at 571-372-6889, travis.k.leighton.mil@mail.mil. For questions related to IDA, please contact Ms. Susan Clark-Sestak, at 703-845-2166, sclark@ida.org.

Figure A-1. Peter J. Potochney, Memorandum (4 of 4)

Appendix B. Defense Environmental International Cooperation (DEIC) Fiscal Year (FY) 2018 Approved Program



ASSISTANT SECRETARY OF DEFENSE 3400 DEFENSE PENTAGON WASHINGTON, DC 20301-3400

OCT 1 6 2017

MEMORANDUM FOR CHIEF OF STAFF, UNITED STATES AFRICA COMMAND CHIEF OF STAFF, UNITED STATES CENTRAL COMMAND CHIEF OF STAFF, UNITED STATES EUROPEAN COMMAND CHIEF OF STAFF, UNITED STATES NORTHERN COMMAND CHIEF OF STAFF, UNITED STATES PACIFIC COMMAND CHIEF OF STAFF, UNITED STATES SOUTHERN COMMAND

SUBJECT: Defense Environmental International Cooperation Fiscal Year 2018 Approved Program

This memorandum announces the approved Fiscal Year (FY) 2018 Defense Environmental International Cooperation (DEIC) Program, to be funded by the Office of the Assistant Secretary of Defense for Energy, Installations, and Environment, subject to the availability of funds. This was done in accordance with the guidance provided in this office's memorandum dated March 1, 2017. Implementation shall comply with the Department of Defense guidance pertaining to travel, meetings and security cooperation.

The attached table lists all the proposals received and funding levels for approved projects. My office is ready to work with your staff on the details for execution of proposals in the "Approved" column. The "Approved Pending Funds" and the "Also Valid" column reflects proposals that will be eligible for funding if additional money becomes available. My DEIC program manager will inform your DEIC program manager if and when this occurs. In addition, your program manager should consult with mine prior to any significant change to approved projects such as modification of topic or host nation that may be necessary due to execution challenges.

Your staff is encouraged to contact my DEIC program manager, Col Travis Leighton, at 571-372-6889 or travis.k.leighton.mil@mail.mil, with any questions about execution of the FY 2018 DEIC Program.

Attachments: As stated

cc: Director, Joint Staff Deputy Assistant Secretary of Defense (Security Cooperation)

Figure B-1. Lucian Niemeyer, "Defense Environmental International Cooperation Fiscal Year 2018 Approved Program" (memorandum, Washington, DC: Assistant Secretary of Defense (Energy, Installations and Environment), October 16, 2017)

Table B-1. DEIC FY2018 Requested and Approved Projects

		Requested FY18 projects	Approved	App pending funds	Also Valid
	DEIC Program Funding Level (thousands)		\$960	\$288	
	Summary Totals (thousands)		\$958	\$353	\$865
#	TITLE				
AFFY18006	Anti-Poaching/Wildlife Trafficking (Cameroon)	57	57	0	0
AFFY18007	Contingency Basing Sustainability -Water Resources (Chad Basin)	51	51	0	0
AFFY18008	Environmental Officer Training (Nigeria)	57	42	15	0
AFFY18009	FY18 Horn of Africa Water Security Symposium (Tanzania)	60	46	14	0
AFFY18010	Coast Guard and Fisheries Enforcement Assessment (Sao Tome & Principe)	38	38	38	0
AFFY18011	Interagency Wildlife Crime Unit (Mozambique)	67	0	30	37
AFFY18012	US-South Africa Defense Committee (South Africa)	31	0	0	31
AFFY18013	Counter Illicit Trafficking (Gabon)	38	0	0	38
AFFY18014	Water Security Symposium (Gabon)	57	0	0	57
AFFY18015	Air Quality Monitoring Program (Nigeria)	57	0	0	57
AFFY18016	Counter Illicit Trafficking (Tanzania)	66	0	0	66
AFFY18017	Disaster Risk Management (Madagascar)	38	0	0	38
AFFY18018	Building Partnership Capacity thru Civil-Mili Coop (RSA, Bots, Moz, Zim)	38	0	0	38
	AFRICOM Total:	\$655	\$234	\$97	\$362
Carlos Const					
CEFY18106	Spill Response Exercise (GCC)	61	61	0	0
CEFY18107	Biodiesel Technology Workshop (Afghanistan)	17	17	0	-
CEFY18108	Security-Related Disaster Management and Response (Oman)	156		0	
	CENTCOM Total:	\$234	\$78	\$0	\$156

EUFY18206	Natura 2000 Military Collaboration Workshop (Germany)	36	36	0	0
EUFY18207	Sustainable Range Management Bilateral Events (various)	74	60	14	0
EUFY18208	Environmental Collaboration among Enhanced Forward Presence (EFP) Nations	23	23	0	0
EUFY18209	Smart Defense - Water Workshop (Czech Republic)	20	20	0	0
EUFY18210	Environmental Exercise Planning Products (FIN-SWE-US)	29	29	0	0
EUFY18211	Interagency Collaboration through Oil Spill Response (HRV, AZE)	34	0	0	34
EUFY18212	Balkans Environmental Considerations in MilOps Regional Wksp (Montenegro)	21	21	21	0
EUFY18213	EU Defense Environmental Network (DEFNET)	5	0	0	5
	EUCOM Total:	\$242	\$189	\$35	\$39
NOFY18306	Arctic Mission Analysis	79	29	0	0
	NORTHCOM Total:		\$29	\$0	\$0
and the state of the state of the					
PAFY18406	Regional Environmental Security Forum (RESF) (Mongolia)	179	154	0	0
PAFY18407	VIIRS Boat Detection (Indo-Asia Pacific)	90	60	90	0
	Rep of Fiji Military Force (RFMF) Environmental Assistance (Fiji)	15	0	15	0
	Ship Salvage Phase 1 (Fiji)	20	0	0	0
	South Asia Maritime Environmental Secy Workshop (MESW #1)	35	35	0	0
PAFY18411	Southeast Asia Maritime Environmental Secy Workshop (MESW #3)	45	0	0	45
	Wildlife Protection/Trafficking (Laos)	80	0	0	80
	Ministry of Environment Water Quality Testing (Cambodia)	56	0	0	56
	PACOM Total:		\$249	\$105	\$181

Table B-1. DEIC FY2018 Requested and Approved Projects (Continued)

SOFY18506	US-Chile Defense Consultative Commission (DCC) WG on Aquiles (Chile)	40	0	40	0
SOFY18507	Energy and Environmental SME Exchange (Chile)	35	35	0	0
SOFY18508	US-Chile DCC Energy and Environmental Subcommittee WG (Chile)	15	15	0	0
SOFY18509	Environmental Considerations in Rural Construction (Chile)	53	0	53	0
SOFY18510	National System for Prevention and Control of Forest Fires (Honduras)	31	31	0	0
SOFY18511	Environmental Waste Management after a Disaster (Peru)	48	48	0	0
SOFY18513	Coastal Hydrology and Oil Spill Management and Recovery (Trin & Tobago)	23	23	23	0
SOFY18514	Energy and Environmental SME Exchange (Colombia)	35	0	0	35
SOFY18515	Energy and Water Assessment (Belize)	13	0	0	13
SOFY18516	Historical Structures Preservation (Guatemala)	27	27	0	0
SOFY18517	Drought Resilience SMEE (Honduras)	29	0	0	29
SOFY18518	Drought Resilience SMEE (Nicaragua)	28	0	0	28
SOFY18519	Coastal Hydrology and Oil Spill Management and Recovery (Guyana)	22	0	0	22
	SOUTHCOM Total:	\$399	\$179	\$116	\$127
				H REAL PROPERTY.	

 Table B-1. DEIC FY2018 Requested and Approved Projects (Continued)

Appendix C. Defense Environmental International Cooperation (DEIC) Fiscal Year(FY) 2018 Spreadsheet

As described in Chapter 1, this spreadsheet (see Table C-1) presents the list of projects actually executed using (DEIC) funding in FY2018. The spreadsheet indicates the amount of funds requested for each project and the amount actually expended for each project. The third column lists the amount of funding from other sources, where applicable.

Table C-1. DEIC Executed 18 Projects

	Requested FY2018		Leveraged
· · · · · · · · · · · · · · · · · · ·	Projects	Actual	Funds
DEIC Program Funding Level (Thousands)	\$960		
Summary Totals (Thousands)	\$2,129	\$890	\$540
Title			
Anti-Poaching/Wildlife Trafficking (Angola)	57	57	0
Contingency Basing Sustainability -Water Resources (Eswatini)	51	51	100
Horn of Africa Water Security Symposium (Malawi)	60	46	27.2
Coast Guard and Fisheries Enforcement Assessment (Tunisia)	38	38	5
Integrated Training Area Management and Defense Committee (South			
Africa)	31	12	3
Water Security Workshop (Burkina Faso)	57	30	37
AFRICOM Total:	\$655	\$234	\$172
Spill Response Exercise (Gulf Cooperation Council (GCC))	61	61	0
CENTCOM Total:	\$234	\$61	\$0
Natura 2000 Military Collaboration Workshop (Germany)	36	41	0
Sustainable Range Management Events (Slovenia, Macedonia)	74	60	19
Environmental Collaboration among Enhanced Forward Presence			
(EFP) Nations (Lithuania)	23	20	12
Environmental Exercise Planning Products (Finland and Sweden)	29	22	0
Interagency Collaboration through Oil Spill Response (Azerbaijan)	34	25	0
Balkans Environmental Considerations in Military Operations Regional			
Workshop (Montenegro)	21	21	30
EUCOM Total:	\$242	\$189	\$61

Arctic Mission Analysis	79	22	25
NORTHCOM Total:	\$79	\$22	\$25
FY2018 Regional Environmental Security Forum (RESF) (Mongolia)	179	154	230
Visible Infrared Imaging Radiometer Suite (VIIRS) Boat Detection (Indo-			
Pacific)	90	40	0
Ship Salvage Phase 1 (Fiji)	20	20	0
FY2018 South Asia Maritime Environmental Security Workshop			
(MESW #1) (Malaysia)	35	35	0
PACOM Total:	\$520	\$249	\$230
National System for Prevention and Control of Forest Fires (Honduras)	31	13	0
Environmental Waste Management after a Disaster (Peru)	48	58	10
Coastal Hydrology and Oil Spill Management and Recovery (Trinidad			
and Tobago)	23	28	0
Energy and Water Assessment (Belize)	13	13	0
Historical Structures Preservation (Honduras)	27	16	2
Western Hemisphere Institute for Security Cooperation (WHINSEC)	0	6	0
Net Zero Energy SMEE (Argentina, Brazil, and Peru)	0	1	40
SOUTHCOM Total:	\$399	\$135	\$52

Table C-1. DEIC Executed FY2018 Projects (Continued)

Appendix D. Illustrations

Figures

Figure 1. Annual DEIC Program Budget and Funding Requested
Figure 2. DEIC Program FY2018 Approved Funding, by AOR10
Figure A-1. Peter J. Potochney, "Defense Environmental International Cooperation Program Fiscal Year 2018 Call for Proposals" (memorandum, Washington, DC: Acting Assistant Secretary of Defense (Energy, Installations, and Environment), March 1, 2017)
Figure B-1. Lucian Niemeyer, "Defense Environmental International Cooperation Fiscal Year 2018 Approved Program" (memorandum, Washington, DC: Assistant Secretary of Defense (Energy, Installations and Environment), October 16, 2017)B-1

Tables

Table 1. DEIC Program Funding Returned by CCMD and Reasons for Return	8
Table 2. Impacts of DEIC Engagement Activities as Executed by the Geographic	
CCMDs	17
Table 3. Quantifiable Metrics for the DEIC Program and FY2018 Results	19
Table 4. Comparisons of Metrics for FY2015, FY2016, FY2017, and FY2018	20
Table B-1. DEIC FY2018 Requested and Approved Projects	B-3
Table C-1. DEIC Executed FY2018 Projects	C-3

Appendix E. References

- Camerer, Brigadier General Mark D., USAF. "U.S. Africa Command FY18 Defense Environmental International Cooperation (DEIC) Program Proposal." Memorandum. U.S. Africa Command, June 22, 2017.
- Clark-Sestak, Susan L. *Environmental Tools for Use during Military Activities*. IDA Document D-10504. Alexandria, VA: Institute for Defense Analyses, February 2019.
- ——. Review of the Fiscal Year 2017 Defense Environmental International Cooperation Program. IDA Document D-8957. Alexandria, VA: Institute for Defense Analyses, March 2018.
- ——. Review of the Fiscal Year 2016 Defense Environmental International Cooperation Program. IDA Document D-8182. Alexandria, VA: Institute for Defense Analyses, February 2017.
- ——. Review of the FY15 Defense Environmental International Cooperation (DEIC) Program. IDA Document D-5704. Alexandria, VA: Institute for Defense Analyses, March 2016.
- ——. Review of the Fiscal Year 2014 (FY14) Defense Environmental International Cooperation (DEIC) Program. IDA Document D-5413. Alexandria, VA: Institute for Defense Analyses, May 2015.
- ——. Review of the Fiscal Year 2012 (FY12) Defense Environmental International Cooperation (DEIC) Program: Unclassified Version. IDA Document D-4957. Alexandria, VA: Institute for Defense Analyses, June 2013.
- ——. Review of the Fiscal Year 2011 (FY11) Defense Environmental International Cooperation (DEIC) Program. IDA Document D-4528. Alexandria, VA: Institute for Defense Analyses, February 2012.
- ——. Assessment of the FY10 Defense Environmental International Cooperation Program. IDA Document D-4287. Alexandria, VA: Institute for Defense Analyses, June 2011.
- Clark-Sestak, Susan L., and Ashley Neese Bybee. Review of the Fiscal Year 2013 (FY13) Defense Environmental International Cooperation Program. IDA Document D-5129. Alexandria, VA: Institute for Defense Analyses, February 2014.
- Moore, Captain Rodney M., USN. "U.S. Pacific Command FY16 [*sic*] Defense Environmental International Cooperation (DEIC) Program Proposals." Memorandum. U.S. Pacific Command, n.d.
- Niemeyer, Lucian. "Defense Environmental International Cooperation Fiscal Year 2018 Approved Program." Memorandum. Washington, DC: Office of the Assistant Secretary of Defense for Energy, Installations and Environment, October 16, 2017.

- Petersen, Colonel Scott A., USA. "FY18 Defense Environmental International Cooperation (DEIC) Program Call for Proposals." Memorandum. U.S. Central Command, July 7, 2017.
- Potochney, Peter. "Defense Environmental International Cooperation Program Fiscal Year 2018 Call for Proposals." Memorandum. Washington, DC: Office of the Assistant Secretary of Defense for Energy, Installations and Environment, March 1, 2017.
- Sheley, Brigadier General Stan A., USAF. "USNORTHCOM FY18 Defense Environmental International Cooperation (DEIC) Proposal." Memorandum. U.S. Northern Command, July 19, 2017.
- Truax, Colonel William J., USMC. "United States Southern Command (USSOUTHCOM) Defense Environmental International Cooperation (DEIC) Program FY18 Proposals." Memorandum. U.S. Southern Command, July 14, 2017.
- Verrastro, Rear Admiral P. J., USN. "FY18 Defense Environmental International Cooperation (DEIC) Program Proposals." Memorandum. U.S. European Command, July 14, 2017.

Appendix F. Abbreviations

AAR	after action report
AFRICOM	U.S. Africa Command
AMEC	Arctic Military Environmental Cooperation
AOR	area of responsibility
APAN	All Partners Access Network
APRI	Asia Pacific Regional Initiative
ASD(EI&E)	Assistant Secretary of Defense for Energy, Installations and
	Environment
CCMD	combatant command
CCMS	Committee on the Challenges of Modern Society
CENTCOM	U.S. Central Command
CSIR	Council for Scientific and Industrial Research
DASD	Deputy Assistant Secretary of Defense
DCC	Defense Consultative Commission
DEFNET	Defense Environmental Network
DEIC	Defense Environmental International Cooperation
DOD	Department of Defense
EFP	enhanced forward presence
ERS	Environmental Readiness and Safety
ESOH	Environment, Safety and Occupational Health (Office of)
EUCOM	U.S. European Command
FY	fiscal year
GCC	Gulf Cooperation Council
GFO	General/Flag Officer
IDA	Institute for Defense Analyses
J4	Logistics Directorate (Joint Staff)
K	thousand in U.S. dollars
М	million in U.S. dollars
MESW	Maritime Environmental Security Workshop
NATO	North Atlantic Treaty Organization
NORTHCOM	U.S. Northern Command
O&M	operations and maintenance
OASD(EI&E)	Office of the Assistant Secretary of Defense (Energy, Installations,
	and Environment)
OSD	Office of the Secretary of Defense
PACOM	U.S. Pacific Command
PM	program manager
RESF	Regional Environmental Security Forum
RFMF	Rep of Fiji Military Force
SES	Senior Executive Service

SME SMEE SMO	subject matter expert subject matter expert exchange Security Management Office
SOUTHCOM	U.S. Southern Command
SPP	State Partnership Program
TCA	Traditional Commander's Activity
TSC	Theater Security Cooperation
U.S.	United States
USACE	U.S. Army Corps of Engineers
USAF	United States Air Force
USMC	United States Marine Corps
USN	United States Navy
USAREUR	U.S. Army Europe
USGS	U.S. Geological Survey
VIIRS	Visible Infrared Imaging Radiometer Suite
WHINSEC	Western Hemisphere Institute for Security Cooperation

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188				
	sources, gathering aspect of this colle Operations and Re provision of law, n	and maintaining the da ction of information, inclue eports (0704-0188), 12	ata needed, and com uding suggestions fo 15 Jefferson Davis H ect to any penalty fo	pleting and reviewing this r reducing this burden to D lighway, Suite 1204, Arlin r failing to comply with a	collection of information. Department of Defense, Wagton, VA 22202-4302. Re	the time for reviewing instructions, searching existing data Send comments regarding this burden estimate or any other ashington Headquarters Services, Directorate for Information spondents should be aware that notwithstanding any other f it does not display a currently valid OMB control number.		
1.	REPORT DA	TE (DD-MM-YY)	2. RI	PORT TYPE		3. DATES COVERED (From - To)		
	xx-04-2019		Fi	nal				
4.	TITLE AND S	UBTITLE				5a. CONTRACT NO.		
	A History of the Defense Environmental International Cooperation Program			ll Cooperation Program	n	HQ0034-14-D-0001		
	5				-	5b. GRANT NO.		
					5c. PROGRAM ELEMENT NO(S).			
6.	AUTHOR(S)					5d. PROJECT NO.		
	Susan L. Clark-	-Sestak, Project Leade	er					
		- ,				5e. TASK NO.		
					-	AM-6-2557		
7	DEDEODMIN	G ORGANIZATION				5f. WORK UNIT NO. 8. PERFORMING ORGANIZATION REPORT		
' .		efense Analyses				NO.		
	4850 Mark Cer					IDA Document D-10600 Log: H 19-000182		
_	Alexandria, VA					0		
9.	SPONSORIN	G / MONITORING	AGENCY NAME	(S) AND ADDRESS((ES)	10. SPONSOR'S / MONITOR'S ACRONYM(S)		
	ODASD Envir	conment			-	ODASD		
Room 5C646, The Pentagon				11. SPONSOR'S / MONITOR'S REPORT NO(S).				
12		ON / AVAILABILIT	TY STATEMENT					
		public release; distribu						
	11 1							
13	. SUPPLEMEI	NTARY NOTES						
14	ABSTRACT							
		vironmental Internati	ional Cooperation	(DEIC) program has	been a tool for the O	ffice of the Secretary of Defense and the geographic		
C	Combatant Com	mands (CCMDs) to u	use as part of thei	r security cooperation	engagement activities v	vith other nations. The projects DEIC has supported		
						n sustainment, innovative approaches to environment,		
						erships. The author has provided programmatic and DEIC funding was FY18. This document reviews the		
				ncluding its final year of		Shie funding was 1 110. This document reviews the		
15	. SUBJECT T	FRMS						
	Environmental	l cooperation; interna	00			peration engagement activities; Defense Environmental		
	International C	looperation (DEIC);	environment, safe	ty and occupational hea	, <i>,</i>			
16	. SECURITY	CLASSIFICATION	OF:	17. LIMITATION OF	18. NO. OF PAGES	19a.NAME OF RESPONSIBLE PERSON Lt Col Chad Gemeinhardt		
	REPORT	b. ABSTRACT			50	19b. TELEPHONE NUMBER (Include Area		
	U	U	U	U	52	Code) (571) 372-6889		