

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.
PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

1. REPORT DATE (DD-MM-YYYY) 27-04-2016	2. REPORT TYPE master's thesis	3. DATES COVERED (From - To) SEP 2015 - APR 2016
--	--	--

4. TITLE AND SUBTITLE Maritime Prepositioning Force (MPF) Humanitarian Assistance Disaster Relief (HADR) Operations in Support of Expeditionary Force – 21: The Technical Assistance and Advisory Team (TAAT) perspective during OPERATION UNIFIED RESPONSE	5a. CONTRACT NUMBER N/A
	5b. GRANT NUMBER N/A
	5c. PROGRAM ELEMENT NUMBER N/A

6. AUTHOR(S) Draper, John, D, Major, USMC	5d. PROJECT NUMBER N/A
	5e. TASK NUMBER N/A
	5f. WORK UNIT NUMBER N/A

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) USMC Command and Staff College Marine Corps University 2076 South Street Quantico, VA 22134-5068	8. PERFORMING ORGANIZATION REPORT NUMBER N/A
--	--

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Dr. Donald F. Bittner	10. SPONSOR/MONITOR'S ACRONYM(S) N/A
	11. SPONSOR/MONITOR'S REPORT NUMBER(S) N/A

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited.

13. SUPPLEMENTARY NOTES
Prepared in cooperation with USMC Command and Staff College, Marine Corps University.

14. ABSTRACT
Since the mid-1980's, the United States Marine Corps (USMC) has prepositioned assets globally to support mission requirements for U.S. National Security. The USMC should utilize repositioned equipment and supplies for future Humanitarian Assistance Disaster Relief (HADR) operations by exploiting Crisis Response Force Packages (CRFP) in order to increase geographic combatant commanders' flexibility with a scalable response based on specific mission requirements. Maritime Prepositioning Force (MPF) operations are complex, and one doctrinal entity within the complex structure that supports the Marine forces is the Technical Assistance and Advisory Team (TAAT). Very few Marines know

15. SUBJECT TERMS
Haiti; Operation Unified Response; Technical Assistance and Advisory Team, TAAT; Maritime Prepositioning Force, MPF; Maritime Prepositioning Ship, MPS; Crisis Response Force Packages, CRFP

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			USMC Command and Staff College
Unclass	Unclass	Unclass	UU	44	19b. TELEPHONE NUMBER (Include area code) (703) 784-3330 (Admin Office)

INSTRUCTIONS FOR COMPLETING SF 298

1. REPORT DATE. Full publication date, including day, month, if available. Must cite at least the year and be Year 2000 compliant, e.g. 30-06-1998; xx-06-1998; xx-xx-1998.

2. REPORT TYPE. State the type of report, such as final, technical, interim, memorandum, master's thesis, progress, quarterly, research, special, group study, etc.

3. DATE COVERED. Indicate the time during which the work was performed and the report was written, e.g., Jun 1997 - Jun 1998; 1-10 Jun 1996; May - Nov 1998; Nov 1998.

4. TITLE. Enter title and subtitle with volume number and part number, if applicable. On classified documents, enter the title classification in parentheses.

5a. CONTRACT NUMBER. Enter all contract numbers as they appear in the report, e.g. F33315-86-C-5169.

5b. GRANT NUMBER. Enter all grant numbers as they appear in the report. e.g. AFOSR-82-1234.

5c. PROGRAM ELEMENT NUMBER. Enter all program element numbers as they appear in the report, e.g. 61101A.

5e. TASK NUMBER. Enter all task numbers as they appear in the report, e.g. 05; RF0330201; T4112.

5f. WORK UNIT NUMBER. Enter all work unit numbers as they appear in the report, e.g. 001; AFAPL30480105.

6. AUTHOR(S). Enter name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. The form of entry is the last name, first name, middle initial, and additional qualifiers separated by commas, e.g. Smith, Richard, J, Jr.

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES). Self-explanatory.

8. PERFORMING ORGANIZATION REPORT NUMBER. Enter all unique alphanumeric report numbers assigned by the performing organization, e.g. BRL-1234; AFWL-TR-85-4017-Vol-21-PT-2.

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES). Enter the name and address of the organization(s) financially responsible for and monitoring the work.

10. SPONSOR/MONITOR'S ACRONYM(S). Enter, if available, e.g. BRL, ARDEC, NADC.

11. SPONSOR/MONITOR'S REPORT NUMBER(S). Enter report number as assigned by the sponsoring/monitoring agency, if available, e.g. BRL-TR-829; -215.

12. DISTRIBUTION/AVAILABILITY STATEMENT. Use agency-mandated availability statements to indicate the public availability or distribution limitations of the report. If additional limitations/ restrictions or special markings are indicated, follow agency authorization procedures, e.g. RD/FRD, PROPIN, ITAR, etc. Include copyright information.

13. SUPPLEMENTARY NOTES. Enter information not included elsewhere such as: prepared in cooperation with; translation of; report supersedes; old edition number, etc.

14. ABSTRACT. A brief (approximately 200 words) factual summary of the most significant information.

15. SUBJECT TERMS. Key words or phrases identifying major concepts in the report.

16. SECURITY CLASSIFICATION. Enter security classification in accordance with security classification regulations, e.g. U, C, S, etc. If this form contains classified information, stamp classification level on the top and bottom of this page.

17. LIMITATION OF ABSTRACT. This block must be completed to assign a distribution limitation to the abstract. Enter UU (Unclassified Unlimited) or SAR (Same as Report). An entry in this block is necessary if the abstract is to be limited.

*United States Marine Corps
Command and Staff College
Marine Corps University
2076 South Street
Marine Corps Combat Development Command
Quantico, Virginia 22134-5068*

MASTER OF MILITARY STUDIES

**Maritime Prepositioning Force (MPF) Humanitarian Assistance Disaster Relief (HADR)
Operations in Support of Expeditionary Force – 21: The Technical Assistance and
Advisory Team (TAAT) perspective during OPERATION UNIFIED RESPONSE**

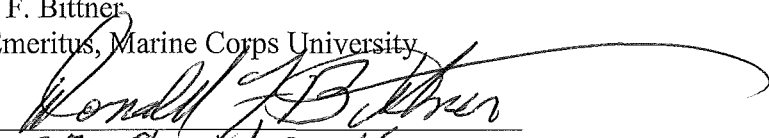
SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF MILITARY STUDIES

AUTHOR: MAJOR JOHN D. DRAPER, USMC

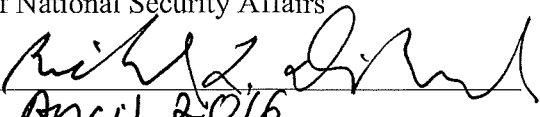
AY 2015-16

Mentor and Oral Defense Committee Member:

Dr. Donald F. Bittner
Professor Emeritus, Marine Corps University

Approved: 
Date: 27 April 2016

Dr. Richard DiNardo
Professor of National Security Affairs

Approved: 
Date: 27 April 2016

DISCLAIMER

THE OPINIONS AND CONCLUSIONS EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE MARINE CORPS COMMAND AND STAFF COLLEGE OR ANY OTHER GOVERNMENTAL AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

QUOTATION FROM, ABSTRACTION FROM, OR REPRODUCTION OF ALL OR ANY PART OF THIS DOCUMENT IS PERMITTED PROVIDED PROPER ACKNOWLEDGEMENT IS MADE.

Executive Summary

Title: Maritime Prepositioning Force (MPF) Humanitarian Assistance Disaster Relief (HADR) Operations in Support of Expeditionary Force – 21: The Technical Assistance and Advisory Team (TAAT) perspective during OPERATION UNIFIED RESPONSE

Author: Major John Draper, United States Marine Corps

Thesis: The United States Marine Corps (USMC) should utilize prepositioned equipment and supplies for future HADR operations by exploiting Crisis Response Force Packages (CRFP) in order to increase geographic combatant commanders' flexibility with a scalable response based on specific mission requirements.

Discussion: The USMC Maritime Prepositioning Force (MPF) concept and capability has been in existence for over 30 years with a consistent evolution to meet emerging requirements. The successful utilization of the prepositioning programs capability has been demonstrated within the range of military operations (ROMO) to include major combat operations such as OPERATION DESERT STORM/SHIELD, OPERATION ENDURING FREEDOM, OPERATION IRAQI FREEDOM, and major Humanitarian Assistance Disaster Response (HADR) operations such as OPERATION RESTORE HOPE and OPERATION UNIFIED RESPONSE.

In 2010, a 7.0 earthquake devastated Haiti and the United States military response, OPERATION UNIFIED RESPONSE, included two Maritime Prepositioned Ships (MPS) in support of two composited Marine Expeditionary Units (MEUs). HADR supplies and equipment were loaded on the USNS LUMMUS MPS and directly influenced a successful operation. The turnover of relief supplies and utilization of MPF assets was enabled by the Technical Assistance and Advisory Team (TAAT).

Very few Marines know what a TAAT is and what role it plays in an MPF operation. OPERATION UNIFIED RESPONSE summarized and then presented through the lens of the TAAT enables Marines to understand the larger logistical effort occurring during a major HADR. Prepositioned assets has support from all levels of United States leadership and the vision and concepts of how to utilize prepositioned assets with Crisis Response Force Packages (CRFP) in the regional combatant command areas of the world will only increase the flexibility and timeliness for crisis responses in the future.

Conclusion: Only 6.3% of MPF operations have been in support of HADR in the last three decades. The USMC has all the support it needs to utilize prepositioned equipment and supplies for future HADR operations. The new MPF Crisis Response Force Packages (CRFP) that are coming into existence should be exploited whenever necessary to increase regional geographic combatant commanders' flexibility and agility with a scalable response based on specific mission requirements.

Table of Contents

	Page
LIST OF ILLUSTRATIONS.....	iv
LIST OF TABLES.....	iv
PREFACE	v
INTRODUCTION	1
MARITIME PREPOSITIONING FORCE (MPF) HISTORY.....	3
MPF REAL WORLD OPERATIONS AND EXERCISES HISTORY	5
Humanitarian Assistance Disaster Relief (HADR) Analysis.....	7
OPERATION UNIFIED RESPONSE (HAITI): SUMMARY.....	7
TECHNICAL ASSISTANCE ADVISORY TEAM (TAAT) PERSPECTIVE	10
Situation and Joint Task Force Purpose.....	11
Planning and Executing Operations	12
MPF Doctrine Elements Followed and Not Followed.....	13
Arrival, Command and Control, and Port Operations	14
Offload and Backload Operations.....	17
Offload Summary.....	19
Backload Summary	21
ANALYSIS OF UTILIZING PREPOSITIONED ASSETS FOR FUTURE HADR	23
UNITED STATES AND DOD SUPPORT FOR PREPOSITIONED ASSETS	26
CONCLUSION.....	29
ENDNOTES	31
APPENDIX A: MPF SHIPS DETAILS AND CHARACTERISTICS	33
APPENDIX B: ACRONYMS	38
BIBLIOGRAPHY.....	41

Illustrations

	Page
Figure 1. Maritime Prepositioning Operations Historical Usage 1985-2015	5
Figure 2. Map of Haiti Earthquake of 2010.....	8
Figure 3. View of Port Upon Arrival.....	15
Figure 4. Marines Unloading Medical Supplies	15
Figure 5. 0900 Port Operations Meeting.....	17
Figure 6. Causeway Ferry 2 nd Load to Port	18
Figure 7. Roll-on/Roll-off Discharge Facility (RRDF)	18
Figure 8. Joint Task Force-Haiti Timeline with USNS LUMMUS and WILLIAMS	19
Figure 9. USMC Kalmar Assisting in Reopening Docking Facilities	20
Figure 10. Concept of Operations for 22 nd MEU Backload.....	21
Figure 11. Fresh Water Wash Down on RRDF	21
Figure 12. World’s 15 Deadliest Natural Disasters Since 1900	23
Figure 13. USMC MPF Ship Laydown and Response Times	24

Tables

	Page
Table 1. Maritime Prepositioning HADR Operations Historical Usage Data 1985-2015.....	6

Preface

The topic of this paper is Maritime Prepositioning Force (MPF) humanitarian assistance disaster relief (HADR) operations in support of *Expeditionary Force – 21* (EF-21). During my 20 years in the United States Marine Corps (USMC), I have participated in four HADR operations. In two of them this was indirect as an aide-de-camp for then BGen Frank Panter in Pakistan and Indonesia. I was directly involved with the other two, the most deadly disaster relief efforts in the last 40 years: The 2004 Indonesian Tsunami, 280,000 dead, and the 2010 Haiti earthquake, 316,000 dead. In addition to this, I was also fortunate enough to be stationed at Blount Island Command (BIC), formally Marine Corps Support Facility Blount Island, from 2007-2010 as the Maintenance Management Officer (MMO) for USMC Prepositioning Programs. During these years I participated in various Maritime Prepositioning Ship (MPS) exercises and served as the Technical Assistance & Advisory Team, Officer in Charge (TAAT OIC) during OPERATION UNIFIED RESPONSE after the 2010 Haiti earthquake. Many colleagues of mine have very limited knowledge of MPF operations and zero understanding of the TAAT roles and responsibilities. So, I'm interested in how the USMC has employed the MPF in the past and how it will continue to do so in the future. The subject is important because the vision of "Seabasing" and utilizing the sea as maneuver space to mitigate threats and operate within the Range Of Military Operations (ROMO). This is essential to the *EF-21* concepts.

My approach is to begin by providing a background on MPF and briefly analyze the history of MPF real world operations and exercises. There follows a personal case study on OPERATION UNIFIED RESPONSE through the lens of a TAAT OIC in regards to MPS assets and organic capabilities, time/space/logistics involved, and Command and Control (C2) within the joint environment during the HADR. Next, I'll do a high level analysis on utilizing

prepositioned assets for future HADR efforts. The final part of my approach will be to summarize the support from US and Department of Defense (DoD) leadership and the *EF-21* vision and concepts in relation to MPF and HADR crisis response, and determine if it is realistic to utilize prepositioned assets for HADR or if the MPF should solely be focused on major kinetic combat operations.

I will not address the detailed historical data of every HADR operation conducted. Many authors have provided detailed data and analysis of historical HADR's, including Haiti, and USMC MPF operations. There is an unsurmountable volume of literature written on the subject through many different perspectives. This paper is not intended to be a summary of all that has been written on the subject. The primary sources used are actual BIC Situational Reports (SITREPs) and After Action Reviews (AARs) from OPERATION UNIFIED RESPONSE, Prepositioning historical data from BIC, USMC and Department of the Navy (DoN) doctrine, and current strategic policy documents. All source data and information is current as of the spring of 2016.

I want to thank everyone that has helped me. Especially, Dr. Donald F. Bittner for everything he has done as an exceptional mentor and for his flexibility on timeline requirements. Also, Conference Group One (CG1) peers that helped to push me when needed, and my faculty advisors, LtCol Douglas Lemmott and Dr. Frank Marlo, for all their understanding, guidance, and support. Most of all, I want to thank my wife, Nikki. Without her loving support I would not have completed this effort. With two young children, Jada (6) and, Jace (3), and our newly arrived baby, Nye, it has been a challenge to balance family with work. Nikki, words cannot express my heart felt gratitude for everything you have done for our family and me during this time in our lives.

INTRODUCTION

Purpose of PREPO Ships. PREPO ships carry forward-positioned materiel for use by geographic combatant commanders (GCCs) to respond to a full spectrum of global contingencies, as appropriately authorized by higher authority. They provide the combatant commander greater flexibility by reducing early lift requirements and increased global responsiveness.¹

~ US Department of Defense, Logistics Planning Guidance for Global Pre-Positioning Materiel Capabilities

The primary purpose of the MPF program is to enable the rapid deployment and engagement of a fully capable Marine Air-Ground Task Force (MAGTF) anywhere in the world in support of our National Defense Strategy. This strategic capability combines the capacity and endurance of sealift with the speed of airlift. The MPF is inherently flexible to respond to a full spectrum of contingencies with effective power projection.²

~ HQMC Prepositioning Programs Handbook

Natural disasters can occur at any time with little to no warning. Cyclones, hurricanes, typhoons, and floods have a certain level of predictability once weather patterns develop; potentially giving a geographical region some notice of the disaster. Tsunami's generated by earthquakes in the sea have a small level of predictability, depending on where the earthquake occurs. Earthquakes on land, specifically large earthquakes, are next to impossible to predict the exact time and location that they will occur. Regardless, all natural disasters have one thing in common: they result in the loss of human life and cause destruction to the manmade infrastructure.

Natural disasters and the resulting death and destruction aftermath falls within the '*full spectrum of contingencies*' for which the United States (US) Department of Defense (DoD) geographic combatant commanders have to plan and fall within the range of military operations (ROMO). One of the military operations addressed in Joint Publication 3-0, *Joint Operations*, is Foreign Humanitarian Assistance (FHA).³ Joint Publication 3-29, *Foreign Humanitarian Assistance*, addresses the specific details of executing this type of military operation. Due to the uncertainty of the location or timing of any natural disaster, prepositioned equipment and

supplies provide the *'flexibility'* that a geographic combatant commander may want to exploit depending on the circumstances. The United States Marine Corps (USMC) has had prepositioning programs for over 30 years in support of the Maritime Prepositioned Force (MPF) concept⁴ and successfully utilized the capability within the ROMO to include major combat operations such as OPERATION DESERT STORM/SHIELD, OPERATION ENDURING FREEDOM, OPERATION IRAQI FREEDOM, and major Humanitarian Assistance Disaster Response (HADR) operations, e.g., OPERATION RESTORE HOPE and OPERATION UNIFIED RESPONSE. However, all the combined combat and foreign humanitarian assistance military operations conducted by the USMC make up less than 10% of the MPF operations/exercises conducted over the last three decades. With a growing need to provide a *crisis response* package that suits the operational requirement, should the USMC be utilizing the prepositioned equipment and supplies in support of HADR more often?

Understanding the role of prepositioned assets and supplies in support of the USMC mission is significant because there *will* be major combat operations and/or major foreign humanitarian assistance (or HADR) operations conducted in the future. The US and DoD leadership understands this fact and has maintained support for the capabilities required for effective power projection and global responsiveness. As stated in *Expeditionary Force 21*, "To Marines, being expeditionary... acknowledges the necessity to deploy rapidly, arrive quickly, and begin operating immediately...to accomplish diverse missions across the range of military operations (ROMO). Our expeditionary culture can be summarized simply: **fast, austere, and lethal.**"⁵ The Marines equip and train to be lethal during major combat operations in support of our national security, which is what the American public expect from Marines. However, when Marines are not engaged in major combat or limited contingency operations, they have to engage

in other diverse operations. One of the diverse missions in the ROMO is to conduct HADR missions, and in these instances Marines need to be **fast, austere, and helpful.*** The USMC should utilize prepositioned equipment and supplies for future HADR operations by exploiting Crisis Response Force Packages (CRFP) in order to increase geographic combatant commanders' flexibility with a scalable response based on specific mission requirements.

This paper will briefly address the background and history of USMC MPF, then analyze the real world operational and exercise historical data over the last three decades with a focus on HADR operations. Next, will come an overarching summary of OPERATION UNIFIED RESPONSE, this will be followed by an assessment of the operation through the lens of the Technical Assistance and Advisory Team (TAAT) perspective in order to gain an understanding of the TAAT role as a key enabler in assisting a seamless MPF operation in support of the Marine forces. Finally, a high level analysis will conclude it on the feasibility of utilizing prepositioned equipment and supplies for future HADR operations and a summary of recent documentation that supports the vision and concepts related to prepositioned assets.

MARITIME PREPOSITIONING FORCE (MPF) HISTORY

Maritime prepositioning has been in existence for 39 years. In 1977, Presidential Review Directive 18 created the Rapid Deployment Joint Task Force (RDJTF) to fill a gap in the Persian Gulf. By 1980, seven Military Sealift Command (MSC) chartered vessels were loaded with equipment and supplies in support of the Near Term Prepositioning Force (NTPF), which became fully operational in 1981. Then, six more ships, BOBO Class T-AK, were added and the 13 ships were organized into three squadrons strategically placed globally. This made the USMC MPF operational between 1984 and 1986. From 1999 to 2004, each squadron added an

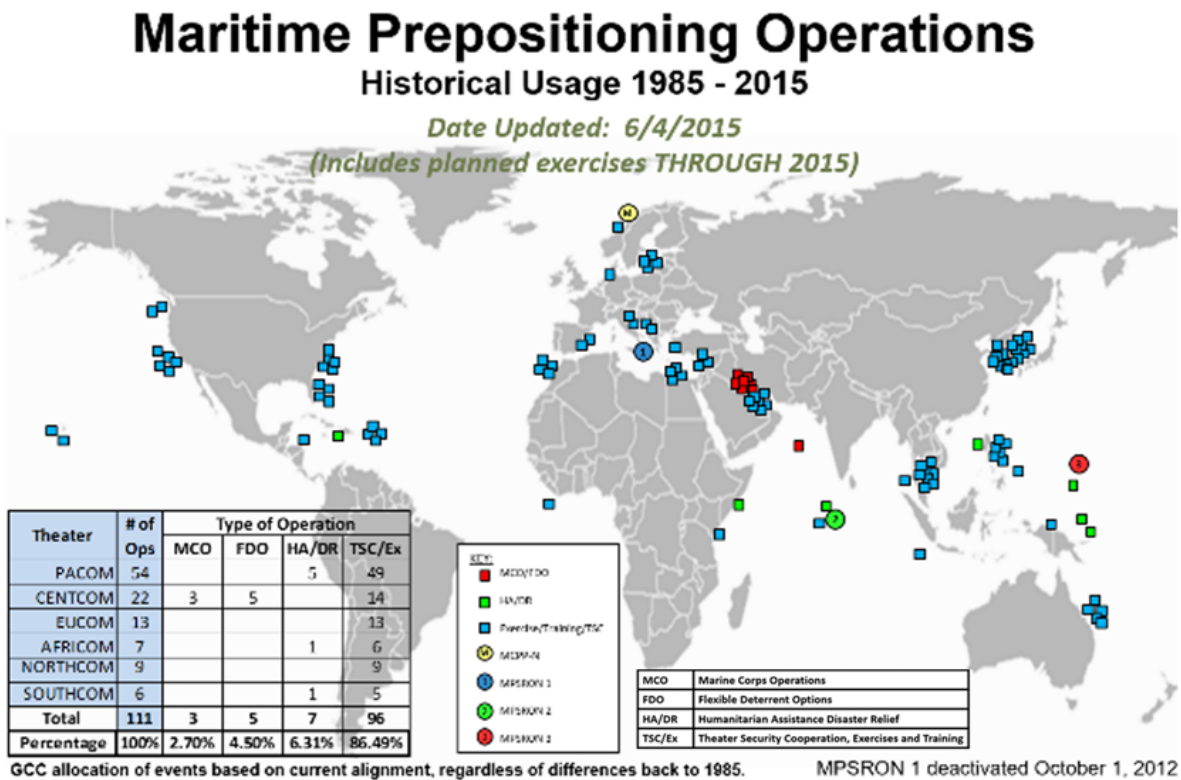
* One word change to *EF-21*. Hostile environment equals **lethal**. HADR permissive environment equals **helpful**.

Enhancement Ship (E-Ship) which provided space for a Navy medical and engineering capabilities and an Expeditionary Airfield (EAF) to each Maritime Prepositioning Ships Squadron (MPSRON).⁶ From 2008 to 2013 the USMC added to the MPF fleet four Large Medium Speed Roll-on / Roll-off (LMSR) ships, WATSON Class and BOB HOPE Class T-AKR. In addition, in the 2012 and 2013 timeframe the LEWIS AND CLARK Class T-AKE added two more ships to the MPF capability set. MPSRON 1 deactivated in 2012 due to the acquisition of new ship capability from 2008 to 2012. Finally, in 2015 and 2016 the MPF added two Mobile Landing Platform (MLP) ships.⁷ “The MPF program currently has 14 prepositioning ships that include six T-AKs, four T-AKRs, and two T-AKEs. Two MLPs are the latest additions to the MPF Program (2015).”⁸ See Appendix A or reference Headquarters Marine Corps, *Prepositioning Programs Handbook 3rd Edition* for details and characteristics on all MPF ships.

In the last 30 years the USMC Maritime Prepositioning Programs have grown and evolved to support the MPF capabilities needed to address new and emerging requirements over time. The basic doctrinal approach remains, “An MPF operation may consist of one ship interacting with a forward-deployed Marine expeditionary unit (MEU) or a maritime prepositioning ships squadron (MPSRON) and a Marine expeditionary brigade (MEB) fly-in echelon (FIE). An MPF operation may also consist of a Marine expeditionary force (MEF) interacting with [both] MPSRONS.”⁹ The next section of the paper will examine the history of MPF real world operations and exercises, with a focus on the HADR operations.

MPF REAL WORLD OPERATIONS AND EXERCISES HISTORY

Since the mid-1980's, the USMC has prepositioned assets globally to support mission requirements in support of U.S. National Security. Historical utilization of prepositioned equipment and supplies that has taken place from 1985 to 2015 can be divided into four categories: Marine Corps Operations (MCO), Flexible Deterrent Options (FDO), Humanitarian Assistance Disaster Relief (HADR), Theater Security Cooperation (TSC), and Exercises and Training. As depicted in Figure 1 below, in these 30 years the capability to conduct TSC or exercises/training has not been an *unachievable* challenge. This category makes up 86.5% of



Source: Graphic received from Blount Island Command, Operations, 29 January 2016.

Figure 1: Maritime Prepositioning Operations Historical Usage 1985-2015

all operations conducted globally with an emphasis on the eastern hemisphere of the world. The MCO's and FDO's categories TSC combined make up only 7.2% of all operations executed

exclusively in the Middle East region of the world. Of note, MPF assets were utilized in 100% of MCO events in support of combat operations. The HADR category makes up only 6.3% of all operations predominately executed in the Pacific region of the world. The one HADR operation that occurred in the western hemisphere was in support of OPERATION UNIFIED RESPONSE.

Focusing in on the 6.3% HADR category, two stand out based on the data in Table 1 below: 1) OPERATION RESTORE HOPE, Somalia, Dec 1992-Apr 1993, utilizing six MPS ships, operating both pierside and instream, delivering 2033 Principle End Items (PEIs), and 759 Twenty foot Equivalent (TEUs); and 2) OPERATION UNIFIED RESPONSE, Haiti, Jan-Mar 2010, utilizing two MPS ships, operating instream only, delivering 91 PEIs, and three TEUs.

Data for seven Maritime Prepositioning HADR Operations from 1985-2015 referenced in Figure 1

Operation Name	Dates Month(s) /Year	Location	Ships (by name)	Type Offload Pierside, Instream	PEIs* / Containers / Fuel / Water Offloaded
OPERATION FIERY VIGIL	JUL 91	PHILLIPINES	LUMMUS	PIERSIDE	ENG SPT EQUIPMENT
OPERATION WATER PICTURE	MAY 92	CHUUK ISLAND, MICRONESIA	LUMMUS	PIERSIDE	WATER
OPERATION TENT MAKER	AUG - SEP 92	GUAM	LUMMUS	PIERSIDE	ENG SPT EQUIPMENT
OPERATION RESTORE HOPE	DEC 92 - APR 93	SOMALIA	BONNYMAN HAUGE PHILLIPS BAUGH ANDERSON LUMMUS	PIERSIDE INSTREAM	2033 PEI 759 TEU**
OPERATION UNIFIED ASSISTANCE	JAN - FEB 05	THAILAND MALDIVES	LUMMUS BONNYMAN	PIERSIDE INSTREAM	Medical supplies 20 tons Food 100K gals water
Solomon Islands HA/DR 07	APR 07	SOLOMON ISLANDS	STOCKHAM	PIERSIDE	HELO OPS
OPERATION UNIFIED RESPONSE	20 JAN - 6 FEB 10 20 FEB - 1 MAR 10	HAITI	LUMMUS WILLIAMS	INSTREAM	60 USMC PEI's 3 TEU 31 NMCB*** PEI's

* (PEIs) Principle End Items ** (TEU) Twenty foot Equivalents *** (NMCB) Naval Mobile Construction Battalion
 Source: Data received from Blount Island Command, Operations, 29 January 2016.

Table 1: Maritime Prepositioning HADR Operations Historical Usage Data 1985-2015

The third significant recorded effort was OPERATION UNIFIED ASSISTANCE, Thailand/Maldives, Jan-Feb 2005, while the remaining four operations used only one MPS ship pierside with limited data as to the amount of equipment or supplies utilized.

Humanitarian Assistance Disaster Relief (HADR) Analysis

An analysis of the two largest efforts, OPERATION RESTORE HOPE (Somalia) and OPERATION UNIFIED RESPONSE (Haiti), would show this data to be misleading. OPERATION RESTORE HOPE was a planned humanitarian assistance effort with minimal support from the local populace. It transformed into a security mission, which led to combat in Mogadishu. So, to say that all the PEIs and TEUs that offloaded there can be categorized as HADR is questionable. The situation in OPERATION UNIFIED RESPONSE was very different because the sole focus was on HADR and the local populace supported the U.S. and international efforts. The data provided does not account for the “pallets of USAID relief supplies, four cargo trucks for the Department of Health & Human Services, two commercial backhoes donated to the Food for the Poor program, one cement block maker for Heart to Heart International, three Army quad cons with port opening equipment, and pallets of Nortel Networks Cooperation (NORTEL) communications equipment.”¹⁰ Therefore, OPERATION UNIFIED RESPONSE in Haiti can be considered the largest HADR MPF operation the USMC has ever executed.

OPERATION UNIFIED RESPONSE (HAITI): SUMMARY

OPERATION UNIFIED RESPONSE provided U.S. DoD support to one of the deadliest and devastating natural disasters in the last century. As documented by U.S. Joint Forces Command, “On 12 January 2010 at 4:53 PM, a magnitude 7.0 earthquake, centered under the capital city of Port au Prince, hit the small Caribbean country of Haiti,”¹¹ and the most recent

United States Geological Survey,

“According to official estimates, 316,000 people killed, 300,000 injured, 1.3 million displaced, 97,294 houses destroyed and 188,383 damaged in the Port-au-Prince area and in much of southern Haiti.”¹²

The literature available on the 2010 Haiti Earthquake or OPERATION UNIFIED

RESPONSE is seemingly endless. The views and historical documentation published on the operation is somewhat different, depending on the author(s) position, perspective, and experience. One of the best is the Joint Center for Operational Analysis report dated 24 June 2010, “*USSOUTHCOM and JTF-Haiti... Some Challenges and Considerations in Forming a Joint Task Force*” and it directly connected to the scope of this paper.

Haiti’s largest earthquake in over 200 years produced a severe impact on the government and many other organizations assisting the nation. There were immediate casualties sustained by senior representatives from the United Nations, United Nations Stabilization Mission in Haiti (MINUSTAH) and the Government of Haiti (GoH). Fourteen of 16 GoH ministry buildings were destroyed and over 700,000 people displaced within Port au Prince alone.

This disaster started an extremely challenging situation where the people and government of Haiti were at a loss as what to do. The global response was immediate and involved over 140 nations ~1000 non-governmental organizations (NGOs), charities, and private organizations.¹³

The U.S. senior leadership had to formulate the proper response:

The US Agency for International Development (USAID) was designated the Lead Federal Agency to coordinate US government actions in helping the Haitian government



Source: Britannica website accessed, 24 February 2016, <http://www.britannica.com/event/Haiti-earthquake-of-2010>

Figure 2: Map of Haiti Earthquake of 2010

respond and recover. The Chairman of the Joint Chiefs of Staff (CJCS) issued an executive order (EXORD 2236) on 13 January authorizing US military humanitarian assistance and disaster relief (HADR) operations for Haiti. On 14 January SOUTHCOM obtained Secretary of Defense approval and stood up Joint Task Force Haiti (JTF-H) to lead the DOD mission within Haiti.¹⁴

Although the specific details of OPERATION UNIFIED RESPONSE is outside the scope of this paper, a summary of the end results is necessary.

A key source found that articulates the operation at a higher level and summarizes the DoD accomplishments, from an army perspective encompassing the whole-of-government approach, is the RAND report dated 2013 is, "*The U.S. Military Response to the 2010 Haiti Earthquake Considerations for Army Leaders.*" Although the resulting numbers from the USSOUTHCOM report and this one do not exactly match, they are close. Combining the results as seen from immediately after 2010 to three years later in 2013 questions the validity of the numbers utilized. The RAND report references the U.S. Joint Forces Command, 2010, which positively correlates the two documents on data report timing. However, the numbers were higher in most categories in the RAND report. Detailed analysis was outside the scope of this paper. The RAND Corporation report provides a high level summary:

The response to the 2010 Haiti earthquake was the U.S. military's largest international humanitarian effort in history. This was one of the most catastrophic natural disasters ever to befall a state in the Western Hemisphere. The suffering it created prompted countries and organizations from all over the world to render assistance to the GoH and Haiti's citizens. The United States was only one participant in this enormous effort, and DoD was but one element in Washington's whole-of-government response. That said, the U.S. military was the single largest contributor in terms of personnel and other capabilities.¹⁵

Briefly, a summary of significant figures shows that: 16,412 U.S. citizens evacuated, 343 patients evacuated, delivered ~2.6 million liters (687 thousand gallons) of water, 17 million pounds of food, more than 1,000 surgeries, treated 9,000 patients, emergency sheltered 1.7 million, 75 tons of medical supplies delivered, cleared rubble (77 blocks or 12,274 cubic yards),

engineering assessments between ~2,048-25,000 conducted, reopened airport delivering 36 tons of relief supplies, assisted in reopening the port and docking enabling delivery of ~8,000 shipping containers, and provided military planning support to USAID, IGO, and NGO efforts. On the world stage, the United States displayed its ability to lead and deliver as needed in a much disoriented environment in a historically unlikely location.

Major natural disasters are next to impossible to predict; therefore, enabling a regional Combatant Commander (CCMD) to exploit the flexibility of U.S. Naval and USMC assets to react to a crisis is essential in saving lives and reducing human suffering as expediently as possible. United States Southern Command (SOUTHCOM) did exactly that immediately after the 2010 Haiti earthquake that decimated that nation's capital of Port-au-Prince and its major port facility. One very small doctrinal element was a key enabler to USMC MPF operations success in Haiti.

TECHNICAL ASSISTANCE ADVISORY TEAM (TAAT) PERSPECTIVE

Maritime Prepositioned Force (MPF) operations are complex. The USMC doctrinal publication, MCWP 3-32/NTTP 3-02.3M *Maritime Prepositioning Force Operations*, is 430 pages of guidance for a multitude of USMC commands, Navy commands, Military Sealift Command (MSC) under U.S. Transportation Command (TRANSCOM), and many more. To add to the complexity, authorization to use MPF assets rests with the President of the United States depending on the nature and severity of the operation.¹⁶

One entity within the complex structure that supports the Marine forces in an MPF operation is the Technical Assistance and Advisory Team (TAAT). OPERATION UNIFIED RESPONSE is a great case study to showcase the importance of the TAAT. By definition, what is a TAAT? It is a “technical assistance and advisory team—A team provided by Commander,

Marine Corps Logistics Command to provide assistance during the offload and regeneration of the maritime prepositioning ship. Also called TAAT. (NTRP 1-02)”¹⁷ MCWP 3-32, *Maritime*

Prepositioning Force Operations, defines the role of the TAAT:

The TAAT is a task-organized group of 6 to 12 Marines and civilians from BICmd provided to the MAGTF commander upon request. The mission of the TAAT is to advise and assist the MAGTF staff with determining the configuration of Maritime Prepositioned Equipment and Supplies (MPE/S) that best satisfies his desired capabilities aboard each MPS and to provide throughput planning to include issuing the MPE/S during ship offload operations. The TAAT also acts as a facilitator to maintain accountability and ensure complete documentation during offload and arrival and assembly operations. A TAAT can perform the same functions during retrograde, onload, and reconstitution operations.¹⁸

No one could predict the earthquake that occurred on 12 January 2010 in Haiti or fully understand the death and devastation that ensued. Therefore, the *doctrinal* planning, marshalling and movement, and arrival and assembly operations ended up occurring simultaneously and in parallel with one another over a very short time frame. The result was some doctrinal requirements never materialized and only the absolute necessary requirements did, thus complicating an already complex environment. The following sections of the paper will summarize the operation through the lens of the TAAT OIC in order to educate Marines on the TAAT’s role; it specifically addresses Command & Control (C2), MPS assets and organic capabilities, and time/space/logistics involved for future MPF operations.

Situation and Joint Task Force Purpose

After the disaster there was an immediate international reaction to try and assist the Haitian people. The after action report generated by the TAAT summarizes a portion of the U.S. efforts:

The United States established a Joint Task Force (JTF-Haiti) to assist the earthquake stricken country and provide humanitarian assistance and disaster relief to those affected. The utilization of MPS assets was authorized when the USNS LUMMUS was conducting the standard Maintenance Management Cycle (MMC) offload. The USNS LUMMUS

finished the offload and was then deemed opportune lift since Jacksonville, FL was so close to Haiti. HQMC, MARFORSOUTH, II MEF decided to put together a tailored MPS load out of Humanitarian Assistance Disaster Relief (HADR) assets, which included Naval Mobile Construction Battalion load of assets, pallets of USAID relief supplies, four cargo trucks for the Department of Health & Human Services, two commercial backhoes donated to the Food for the Poor program, one cement block maker for Heart to Heart International, three Army quad cons with port opening equipment, and pallets of NORTEL communications equipment, to send to Haiti ISO II MEF HADR operations.¹⁹

Three days after the earthquake, Friday, 15 January 2010, the TAAT OIC from Blount Island Command (BIC) received a verbal ‘Be Prepared To’ mission from the command leadership. The mission was to prepare a TAAT for deployment aboard the USNS LUMMUS, loaded with a tailored package from BIC to support HADR operations in Haiti. The mission order received was simply ‘get on the ship with the assets and go to Haiti.’²⁰ The whole focus during this timeframe was to load the ship and get underway as quickly as possible with whatever assets the USMC thought were necessary.

The timing of the MMC cycle, logistics involved, and distance/proximity from Jacksonville, FL to Haiti were all key decision factors in authorizing the use of MPF assets on such short notice. Immediately after the authorization was given, “The JTF, MARFORSOUTH, and II MEF concept of operations...was to utilize (the) quick response tailored MPS load out of assets aboard the USNS LUMMUS for the 22nd Marine Expeditionary Unit and Naval Mobile Construction Battalion Seven to employ IVO Port-au-Prince to relieve the human suffering in Haiti.”²¹ In retrospect, the U.S. crisis response plan exploited the MPF assets and capabilities effectively within the time it had to respond.

Planning and Executing Operations

Thus, no deliberate detailed planning process existed, and the marshalling and movement plan was fairly simple insofar as any service or agency that wanted to utilize the opportune lift

had to get the relief supplies to BIC prior to the ship's departure. (i.e., USAID, Heart to Heart, Food for the Poor, Army, Etc.) Five days later on 20 January, the USNS LUMMUS was underway for Haiti. The TAAT wasn't able to get an accurate listing of what was on board until the ship left the pier, to include an accurate roster of all the Marines that came from 2nd MLG, Camp Lejeune, to be the Offload Preparation Party (OPP). By the next day the TAAT had solid accountability of everything that was on the ship. However, it did not have adequate communication capabilities. This remained the biggest friction variable throughout the operation. No detailed planning occurred while underway to Haiti; the TAAT also had zero communications with the 22nd MEU.

According to literature on the operation, command and control at the operational level was a challenge and detailing those higher level issues is outside the scope of this paper. From the TAAT perspective, the command relationships were simple; it assisted and advised the 2nd MLG OPP OIC in order to facilitate a successful transfer of MPF assets to the 22nd MEU. The challenge was ensuring that all the key stakeholders knew what the TAAT's mission was and what the command relationships were between the USMC, Navy, and Military Sealift Command (MSC) and then have the capability to physically communicate as needed.

MPF Doctrine Elements Followed and Not Followed

With all things considered, the Arrival and Assembly phase of the operation ended up being successful and executed as efficiently as possible. However, it is important to understand how and why it was successful in spite of the fact that certain key doctrinal elements were non-existent during the operation. The intent of this section of the paper is not to focus on elements as a negative, but to draw from the experience and understand the realities that occur in a very

complex and fluid environment with very limited communications in order to be better prepared for future HADR MPF operations.

MCWP 3-32/NTTP 3-02.3M *Maritime Prepositioning Force Operations* defines the Arrival and Assembly as the “*crucial phase of an MPF operation.*”²² Elements specifically addressed as the responsibility of the MAGTF Commander include: Arrival and Assembly Plan (Tab A, Appendix 14, Annex C, OPORD), Survey, Liaison, and Reconnaissance Party (SLRP), MAGTF Offload Liaison Team (MOLT), Technical Assistance and Advisory Team (TAAT), Offload Preparation Party (OPP), Arrival and Assembly Operations Group (AAOG), and the Landing Force Support Party (LFSP).²³

During OPERATION UNIFIED RESPONSE, from a TAAT perspective, the following elements did not exist or the TAAT was not aware of their existence: Arrival and Assembly Plan (Tab A, Appendix 14, Annex C, OPORD) and a MAGTF Offload Liaison Team (MOLT). All of the other doctrinal elements did, at some time, exist during OPERATION UNIFIED RESPONSE. The timing within the environment did not fully allow proper communication, coordination, and collaboration between all the key stakeholders in the MPF operation. However, despite this, the personnel involved adapted and overcame the timing issues to ensure mission success. The OPP and TAAT collectively absorbed the roles and responsibilities of the non-existent MOLT. Within the fluid environment all key stakeholders adjusted the arrival and assembly plans and planning hourly and daily as needed.

Arrival, Command and Control, and Port Operations

On 22 January, the USNS LUMMUS arrived in the vicinity of Port-Au-Prince, and offloading began immediately. The TAAT OIC Comments at the end of Situation Report

(SITREP) #3 submitted daily to BIC and all other key stakeholders that needed to know the status of the USNS LUMMUS Offload summarizes the situation on that day:

TAAT OIC Comments: All assets on LUMMUS are ready to offload. Offload priorities received from JTF J4. Port/Beach offload site has extremely limited capability. LUMMUS team plans to go ashore to coordinate future ops with 832nd and other port elements present. Need to ensure the USAID relief supplies have somewhere to go prior to offloading. Undefined BMU, LFSP, AAOG composition, HNS has limited MHE, but should be able to support offload if coordinated correctly. 22nd MEU is not requesting the Kalamars, but anticipate the Army requesting them, TBD. To my knowledge no one has operators for the Kalamar's. Communications increased with BB's coming online, but ship account situation remains the same. [One email took over an hour to send] Productive day in all regards, the Marines from the OPP were excited to get involved and deliver the medical relief supplies. (picture below) LUMMUS stands ready to deliver, my biggest concern is that the port area will not be able to support the throughput and marshalling needed.²⁴



Source: TAAT OIC photograph

Figure 3: View of Port Upon Arrival



Source: TAAT OIC photograph in SITREP #3

Figure 4: Marines Unloading Medical Supplies

The two most significant events in the SITREP on day one were, 1) JTF J4 priorities briefed to LUMMUS team: medical supplies, USAID relief supplies, Class IV (construction materiel) if possible, USMC assets, and then SeaBee assets, and 2) LUMMUS plans to offload to these priorities. The priorities should not affect the 22nd MEU requested timeline to receive their assets.²⁵ The LUMMUS could support the JTF priorities and still achieve the mission for the USMC.

In analyzing the TAAT OIC comments above, it is interesting how many organizations were involved and communicating with the LUMMUS and its personnel that day in spite of the fact there were very limited communications assets available. The majority of communication was face to face or through the LUMMUS radio capabilities. The key stakeholder list includes JTF-Haiti J4, Military Sealift Command (MSC), 22nd MEU S4, 832nd Transportation Command (Army), United States Agency for International Development (USAID), and Naval Support Elements (NSE). It was truly a joint operation with multi-services and interagency involvement, and the level of involvement grew from that point on.

The LUMMUS organic capabilities were instrumental upon arrival. The Utility Boat (U-Boat) and the LCM-8 were immediately offloaded and then used to provide lift for both communication requirements and delivery of relief supplies. Although the LUMMUS anchored approximately three miles from the port, the U-Boat could make a one way trip in 10 minutes while the LCM-8 or Navy Lighterage only took an hour for a one way trip. From a time/space/logistics view, the ship was in a good location to deliver relief supplies and equipment.

The port in Port-Au-Prince was in ruins and numerous international services and agencies had representatives in the area all wanting to coordinate and collaborate on how to assist, and more importantly, how to help facilitate the throughput of relief supplies from the sea to land based operations. Elements of the TAAT made a trip to the port every morning to gain situational awareness of what was occurring, ascertain offload priorities, and make contact with key stakeholders that had assets on board the LUMMUS. The senior leadership of the U.S. established a daily 09:00 meeting for all key stakeholders to attend in order to communicate what the situation was, coordinate port operations, and collaborate on future efforts and planning. Due

to the lack of international cross-communications, if a stakeholder was not at this meeting they would not know what was going to happen in the next 24 hours. It was essential to be at this meeting and the TAAT OIC was able to coordinate offloading of all non-USMC/USN assets in the first few days of the operation. The meeting was crucial for the



Source: TAAT OIC photograph

Figure 5: 0900 Port Operations Meeting

TAAT and OPP to know when the LUMMUS could offload both 22nd MEU and NMCB-7 assets. As documented in the after action report, not all the support required was present, “There was no AAOG/LFSP present when the TAAT arrived.” Due to the lack of communication capability, “the [TAAT] made initial link up with the 22nd MEU S4 at the port, by randomly running into each other.” Once this occurred, the 22nd MEU brought all the necessary Marines ashore to establish all the required support needed at the port. From that point on, “The TAAT provided technical assistance and advice to the 2nd MLG OPP, 22nd MEU, and NMCB-7 during the equipment offload, issue, throughput, and partial backload of assets to/from the commercial port in Port-au-Prince.”²⁶ The presence of the MPS assets, 22nd MEU, and NMCB-7 had a tremendous impact on assisting in opening the port and establishing throughput areas for relief supplies.

Offload and Backload Operations

OPERATION UNIFIED RESPONSE utilized two MPS ships, USNS LUMMUS and the USNS WILLIAMS for offload and backload operations. Doctrinally, the USMC and USN employed these ships as intended:

Each MPSRON has the ability to independently offload its rolling stock and containers in-stream without the use of a port facility. Each MPSRON deploys with a 240 X 72 foot

roll-on/roll-off discharge facility (RRDF) that provides a docking and ramp module to transfer primarily rolling stock ashore by connecting with either causeway ferry assemblies or other surface connectors. Rolling stock and twenty foot equivalent unit (TEU) containers are transferred ashore via the Causeway Ferry (CF).²⁷

The LUMMUS provided the opportune lift of a tailored HADR package to Haiti and causeway ferries to bring relief supplies ashore. The WILLIAMS had the essential assets needed



Source: TAAT OIC photograph

Figure 6: Causeway Ferry 2nd Load to Port

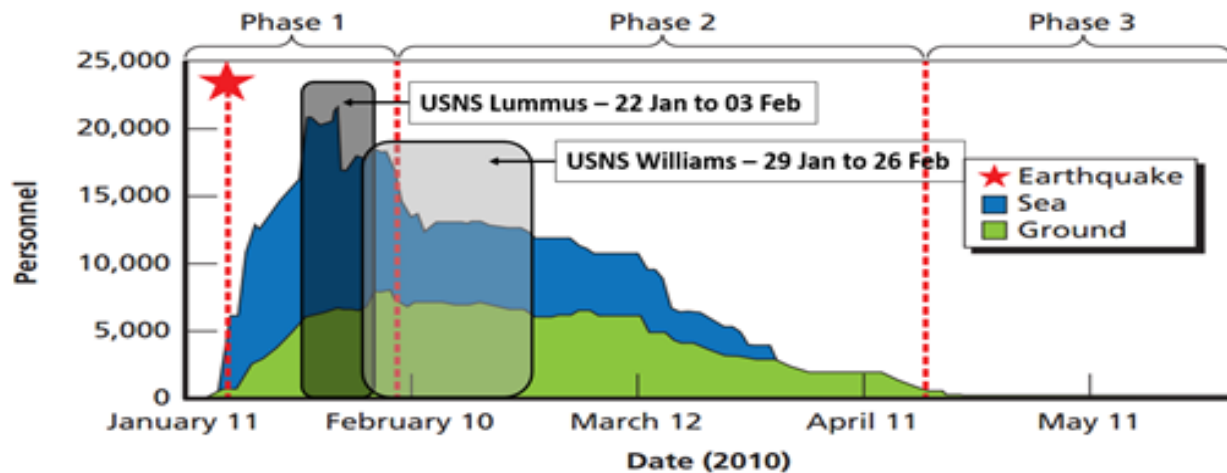


Source: TAAT OIC photograph

Figure 7: Roll-on/Roll-off Discharge Facility (RRDF)

to construct the RRDF in order to complete the offload and facilitate an expedient backload of assets. The use of the MPS assets supported operations in the most efficient means possible and impacted the total personnel strength in Phase 1 and 2 of the operation. In figure 8 depicted below, the USNS LUMMUS and USNS WILLIAMS time in the port are overlaid onto the RAND report on personnel strength. This visually demonstrates the MPS planned efficiency during the operation with very little overlap time when both ships were present.

Joint Task Force–Haiti Personnel Strength over Time



SOURCES: Multiple sources provided by JTF-Haiti and SOUTHCOM.
 NOTE: U.S. Marine Corps personnel are included in ground strength.
 RAND RR304-3.4

Source: Rand Corporation, *The US Military Response to the 2010 Haiti Earthquake*, 2013.

Figure 8: Joint Task Force-Haiti Timeline with USNS LUMMUS and WILLIAMS Overlay

There were unique circumstances that led to the successful use of USMC MPF assets in support of OPERATION UNIFIED RESPONSE. The LUMMUS was deemed opportune lift, since it was almost completely offloaded at Blount Island Command for the Maintenance Management Cycle (MMC) in Jacksonville, FL. This provided the leadership with a means they normally do not have and enabled the MPS ship to provide relief supplies in an unorthodox manner. The flexibility of the U.S. and CCMD to adapt and respond to the Haiti crisis was very evident. As the 2013 RAND report concluded, “significant numbers of U.S. military forces were involved during the first three weeks of OPERATION UNIFIED RESPONSE because they were already present in the area or flowed into the Haiti area of operation very quickly.”²⁸

Offload Summary

The LUMMUS arrived on 22 January 2010 and the TAAT helped to facilitate the offload with execution based on JTF-Haiti priorities: 1) all medical supplies, 2) USAID relief supplies,

and 3) USMC and SeaBee assets. The medical relief supplies went ashore within hour's arrival. By the next day, 23 January, the Improved Navy Lighterage System (INLS) was operational and all the USAID supplies went ashore as required. On 24 January, the 22nd MEU was present at the port and USMC assets started to be offloaded from the LUMMUS. One of the first pieces off

was a Kalmar*, it was signed over to the 22nd MEU via Equipment Custody Record (ECR) card and proved to be a huge asset at the port for port

opening, military operations, and support for all other agencies as needed.²⁹ There is no doubt that the 22nd MEU's use of the Kalmar played an integral role as a key contribution as documented by U.S. Joint Forces Command in 2010 and within the RAND report from 2013, "assisted in reopening



Source: TAAT OIC photograph

Figure 9: USMC Kalmar Assisting in Reopening Docking Facilities

docking facilities... enabling the delivery of more than 8,000 shipping containers."³⁰ In the next two days, 25-26 January, all the remaining relief supplies and all the USMC and NMCB-7 assets were offloaded, delivered ashore, and signed for by acquiring units. By 27 January, the offload was essentially complete and the 22nd MEU had left the port area, which was now a semi-functional port with a constant throughput of relief supplies from many different international supporters. The WILLIAMS had the essential NSE assets needed to finalize the construction of the Roll On/Roll Off Discharge Facility (RRDF), and on 1 February the offload was completed when the four Department of Health and Human Services trucks and two Food For the Poor program commercial backhoes offloaded to the port. The WILLIAMS offloaded the remaining

* ROUGH TERRAIN CONTAINER HANDLER (RTCH), KALMAR TAMCN: B0392. Description: The RTCH-RT 240 is designed to lift, move, stack, or unstack 20 to 40 ft (6.10 to 12.19 m) by 8 ft (2.44 m) wide ISO containers. The RTCH-RT 240 has a lift capacity of 53,000 lb (24,040 kg) and operates on hard and/ or unimproved surfaces, including beach operations.

NMCB-7 assets on 2 February which completed the offload to 100% and, the LUMMUS was underway for the U.S. on 3 February. From 2 to 20 February both the USMC and NMCB-7 utilized the MPF assets in support of the HADR mission.

Backload Summary

The backload operations planning completed on 20 February with plans to have everything loaded onto the WILLIAMS for movement back to the U.S. The JTF staff directed the effort, “JLOTS (Joint Logistics Over-The-Shore) priorities were the driving factor, and determined what crafts could be utilized at certain locations. Time/space/logistic issues was the biggest issue in COA planning



Source: TAAT SIREP #18

Figure 10: Concept of Operations for 22nd MEU Backload

and development.”³¹ The plans included utilizing both Navy INLS causeways and Army LCU’s to conduct the backload. The execution was flawless and truly a joint effort.

On 21 February the Marines from the OPP arrived on the WILLIAMS and the backload began. All assets received a fresh water wash down on the RRDF and a full maintenance



Source: TAAT SIREP #19

Figure 11: Fresh Water Wash Down on RRDF

inspection was completed prior to being loaded onto the ship. The next day, 22 February, the backload was completed. After the maintenance inspections were completed the “Initial assessment [was] that 18% (19 out of the 104) major end items [had] visually identifiable maintenance defects.”³² All the

required maintenance documentation was the priority for the TAAT and close coordination with

the 22nd MEU and NMCB-7 occurred. This resulted in a documented turnover of assets back to USMC BIC TAAT at the embassy in Haiti. The Navy still had to deconstruct, wash, and load all the INLS and RRDF assets onto the WILLIAMS. They completed everything and all the back loading operations from 23 to 25 February. After a final completion of maintenance inspections, “26 out of the 104, 25% of the major end items, had visually identifiable maintenance defects.”³³ All the necessary maintenance was to be completed at BIC and the costs would fall under the JTF costs. The WILLIAMS was underway back to BIC on 26 February.

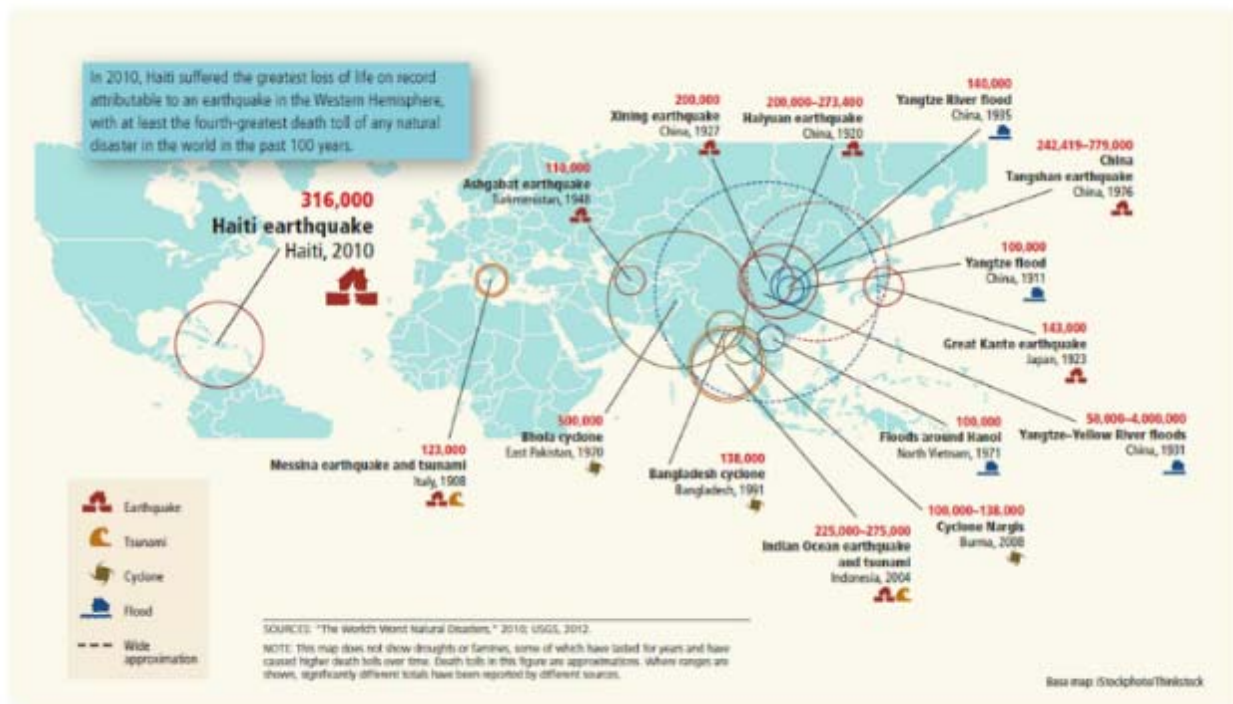
The TAAT perspective of OPERATION UNIFIED RESPONSE summarized above can provide Marines with an understanding of what the TAAT is and how the advisory and assistance expertise can be utilized to ensure a seamless and successful turnover of MPS assets to Marine forces for future operations. Most Marines are very *unfamiliar* with and/or do not fully understand the TAAT roles and responsibilities. Marines generally understand that there are prepositioned assets on MPS ships around the world and they understand the tactical execution of a LFSP and AAOG at a beach or port to receive those assets. It is important to understand that the TAAT can be a critical enabler to connect the operational level of execution in support of the tactical level execution by the Marines.

OPERATION UNIFIED RESPONSE was a display of tremendous international support and the US definitely played an integral role in relieving human suffering for the Haitian people. Despite all the challenges, the DoD accomplished the mission within the doctrinal limits and executed a scalable crisis response package to the situational requirements in the most effective ways possible. Is the US ready to execute a similar mission elsewhere in the world? Next, will be a high level analysis of the feasibility of utilizing USMC prepositioned equipment and supplies for future HADR operations.

ANALYSIS OF UTILIZING PREPOSITIONED ASSETS FOR FUTURE HADR

Historically, the most devastating natural disasters, measured in loss of lives, have been located in the eastern hemisphere of the world. Again, the RAND report dated 2013, “*The U.S. Military Response to the 2010 Haiti Earthquake Considerations for Army Leaders*,” did a great job synthesizing the deadliest natural disaster data over the last century. Figure 12 below, clearly demonstrates that the earthquake in Haiti was in fact a one of a kind or unique natural disaster in the last 115 years. The US response in support of OPERATION UNIFIED RESPONSE

The World's 15 Deadliest Natural Disasters Since 1900



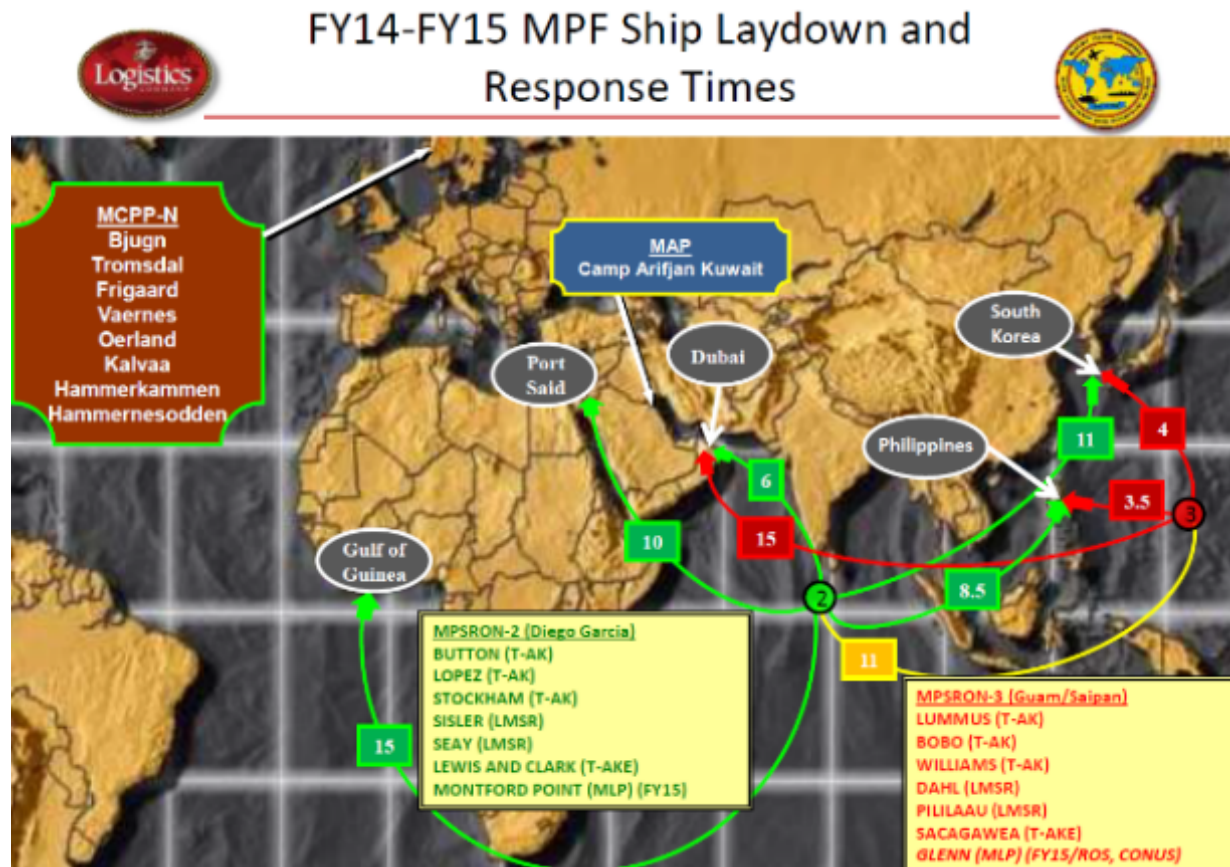
RAND RR304-1.1

Source: RAND report, “*The U.S. Military Response to the 2010 Haiti Earthquake Considerations for Army Leaders*,” 2013.

Figure 12: World's 15 Deadliest Natural Disasters Since 1900

occurred rapidly due to the proximity and the presence that the US leadership already had on the ground supporting other US government initiatives. If a similar natural disaster occurred in the Caribbean region or South American continent the US response would most likely deploy military forces from the Continental United States (CONUS), and as required.

The US leadership understands that the most likely region of the world that would sustain a large scale natural disaster is somewhere in the eastern hemisphere of the world, specifically, the Southeast Asian and Pacific region. The USMC has prepositioned most of its assets in this region as depicted in Figure 13.



Source: Blount Island Command Brief, Operations, 29 January 2016.

Figure 13: USMC MPF Ship Laydown and Response Times

Comparing the historical data in Figure 12 to the USMC prepositioned force laydown in Figure 13 demonstrates a very high correlation between areas that will most likely sustain a major natural disaster in the future to where the USMC has prepositioned its equipment and supplies. It is important to remember, that the MPF equipment and supplies are in support of all contingencies within the full spectrum of the ROMO. Referring back to Figure 1, the geographic combatant commanders of Pacific Command (PACOM) over the last 30 years have executed

48.6% of *all* the MPF operations completed, with Central Command (CENTCOM) coming in second at 19.8%, and European Command (EUCOM) in third at only 11.7%. So, there is a high correlation between *all* categories of MPF usage and the USMC prepositioned force laydown in this region.

Support for utilizing prepositioned assets for future HADR is clearly documented in the HQMC, *Prepositioning Programs Handbook* 3rd ed. As it notes, “MPF provides a tailored employment option for low spectrum operations while retaining high end deployment capability, allowing MPF to be scalable across the full ROMO.”³⁴ The future application of MPF, as analyzed by HQMC, includes tailoring individual ships to support the use of Crisis Response Force Packages (CRFPs). The new CRFPs will enable both a light and medium capability set that can be utilized below the MEB level.³⁵ Something somewhat similar to the two MPS ship support for the 22nd MEU during OPERATION UNIFIED RESPONSE. CRFP Light - 1, CRFP Light – 2, and CRFP Medium sets all specifically list HADR in the mission set capabilities. CRFP Heavy simply lists “Full ROMO”, so HADR would also be included.³⁶ From the analysis above and the recent changes to crisis response options available from the MPF assets, it is clear that the USMC has postured itself to be ready to utilized prepositioned assets in support of future HADR operations.

The USMC prepositioning programs have been evolving since their creation in the early 1980’s.³⁷ New threats, wars, policy, strategy, technological advancements, emerging requirements, and many more variables have played a role in the evolution of MPF. Marines have always maintained their amphibious nature, and so the evolving MPF capability to support the future missions that Americans expect Marines to accomplish is no surprise. Due to a

continued proven record of success, all levels of senior leadership in the country have supported the USMC initiatives and evolution of MPF in the interest of US national security.

UNITED STATES AND DOD SUPPORT FOR PREPOSITIONED ASSETS

The United States support for prepositioned assets remains strong in the interest of national security and the Department of the Navy (DoN) and the United States Marine Corps (USMC) continue their cooperation to ensure that USMC prepositioned are ready to employ across the full spectrum of contingencies in the ROMO.

The president of the United States elaborates on the support, specifically addressing HADR, in the *U.S. National Security Strategy* (2015): “Our military is postured globally to protect our citizens and interests, preserve regional stability, render humanitarian assistance and disaster relief, and build the capacity of our partners to join with us in meeting security challenges.”³⁸ In conjunction with the global posturing, the *U.S. National Military Strategy* supports the conduct of HADR³⁹ and addresses the global agility: “The ability to quickly aggregate and disaggregate forces anywhere in the world is the essence of global agility. We are striving to increase our agility by... sustaining a resilient global posture, and implementing dynamic force management processes that adjust presence in anticipation of events...”⁴⁰ Our military leadership understands that events can happen anytime and the nation has to have flexibility built into its global posturing and overarching strategy. Also, in spite of current fiscal constraints, support is maintained within the *Quadrennial Defense Review* (2014): by “Sustaining superior power projection forces – enabled by mobility capabilities including airlift, aerial refueling, surface lift, sealift, and prepositioning – will remain a top priority for force planning and development, even in an austere fiscal environment.”⁴¹ The support for prepositioning assets from the US senior civilian and military leadership is the key enabler that

directs and allows the Navy and Marine Corps to shape and acquire the assets needed to accomplish the mission of maintaining and sustaining US national security.

Expeditionary Force – 21 (EF-21), March 2014, is the latest USMC capstone document that maintains most of the vision and concepts that were also in the previous capstone document published in 2008, *Marine Corps Vision and Strategy 2025*. In the forward of *EF-21* General James Amos, then Commandant of the Marine Corps, lists the advantages of a forward presence and specifically addresses the need for HADR: “The American people will surely continue to expect – and the world will count on – Marines to be the leading edge of humanitarian relief and disaster recovery operations,”⁴² General Amos continues to support the concepts with a realistic approach: “*Expeditionary Force 21* is our vision for designing and developing the force that will continue to fulfill these responsibilities. But it is more than a vision – it is also an actionable plan...”⁴³ For USMC prepositioned assets the plan has been in place for years and *EF-21* gives the overarching plan the needed support to become and remain a real functional capability.

In a thorough analysis of *EF-21*, over 17 direct references to prepositioned assets and MPF are included that provide background and future plans in support of future US crisis response. The Concept of Deployment and Employment section (p.23, VIII.) of *EF-21* addresses the fact that the environment has an increased requirement for security operations and crisis response and specifically uses OPERATION UNIFIED RESPONSE as an example, “[A] composited Marine Expeditionary Brigade (MEB) will most likely comprise some combination of forward-deployed forces, rapidly deploying forces, and land or maritime prepositioning forces... We have demonstrated the ability to composite forward forces in the past... during relief operations in Haiti during 2010, where two ARG/MEUs composited.”⁴⁴ The 22nd MEU and 24th MEU did composite and utilized assets from two MPS ships, USNS LUMMUS and USNS

WILLIAMS, which is a great example of what the USMC envisions for future concept of deployment and employment.

EF-21's third line of effort (LOE) Increasing Naval Integration (p.18, section VII.) addresses alternative ship options, and specifically describes ships that are already fully operational capable and in use: "Alternative platforms for potential exploration and experimentation include... Maritime Prepositioning Squadron ships in combinations of T-AKE *Lewis and Clark*-class dry cargo ships or a Large Medium-speed Roll-on/Roll-off Ship (LMSR) with an Mobile Landing Platform (MLP)."⁴⁵ The second half of *EF-21* addresses the 'Implementation Plans' and has specific 'Focus Areas', one of the focus areas is Seabasing. In the seabasing summary it notes, "...the capabilities of the JHSV, T-AKE, LMSR, and MLP...with the addition of a single amphibious ship (LPD or LSD) to act as the mother ship... these platforms together could provide crisis response MAGTFs... to meet a wide range of combatant commander missions..."⁴⁶ The USMC already has most of the assets it needs to make this concept a full reality, and it also has the full support of the navy.

The Department of the Navy's, *A Cooperative Strategy for 21st Century Seapower*, March 2015, aligns the US maritime forces, Navy, Marine Corps, and Coast Guard, strategies and provides guidance on future efforts. "We will employ amphibious ships and other platforms, including Littoral Combat Ships, Joint High Speed Vessels, Afloat Forward Staging Bases, hospital ships, other Military Sealift Command ships, and Coast Guard platforms, to conduct humanitarian assistance and disaster response missions."⁴⁷ The document discusses the importance of power projection and uses OPERATION UNIFIED RESPONSE as an example: "Power projection also depends upon our ability to sea-base capabilities and leverage Military Sealift Command's strategic sealift and logistics support... Naval power projection capabilities

also facilitate other elements of “smart power” missions in the form of humanitarian assistance and disaster response, as demonstrated in the 2010 earthquake in Haiti...”⁴⁸ The maritime overarching efforts are covered and supports the USMC vision and implementation plans, “The following implementation principles, along with Service-specific documents such as the Marine Corps’ *Expeditionary Force 21*... will guide our efforts to ensure we remain a capable and combat-ready naval force.”⁴⁹ Hence, the DoN and USMC are in accordance with one another and moving forward with implementation plans to be postured for global agility in support of HADR requirements.

With all of the above mentioned support, the HQMC, *Prepositioning Programs Handbook 3rd* ed, December 2015, is the guide the USMC will use to plan for and execute future missions. In the recent *CMC FRAGO*, January 2016, the new USMC commandant, General Robert Neller, stated, “We will continue our efforts to determine the best use of alternate maritime platforms and look at different maritime force packaging options to better meet Combatant Command (CCMD) requirements.”⁵⁰ Therefore, Marines should stand ready to employ and utilize Crisis Response Force Packages (CRFPs) in future operations.

CONCLUSION

The USMC MPF assets have been in existence for over 30 years and the prepositioning programs have evolved over that timeframe to support real world operations and exercises. MPF assets have provided high end deployment capability within the ROMO while retaining a tailored employment option for low spectrum operations. Only 6.3% of MPF operations have been in support of HADR in the last three decades. Of these, OPERATION UNIFIED RESPONSE in Haiti has been the largest HADR MPF operation the USMC has ever executed. The SOUTHCOM combatant commander had the flexibility and agility needed to utilize two MPS

ships in support of two MEUs compositing to execute a successful operation. The tailored crisis response package at the time was a foreshadowing event as to where the USMC wanted to go with the MPF capability.

The Technical Assistance and Advisory Team (TAAT) is one of the key enablers to ensuring a successful MPF operation. However, most Marines have no idea what it is. This paper focusing on the TAAT experience and perspective of OPERATION UNIFIED RESPONSE was intended to shed a different light on MPF operations in order to provide Marines with a better understanding of the logistical operations supporting the overarching HADR operation. Most importantly, the experience in Haiti demonstrated the critical nature of command and control, both the structure and architecture. It is critical to the effectiveness of the mission to be able to communicate both face-to-face as well as by voice and data through electronic means.

The USMC has all the support it needs to utilize prepositioned equipment and supplies for future HADR operations. The new MPF Crisis Response Force Packages (CRFP) that are coming into existence should be exploited whenever necessary to increase geographic combatant commanders' flexibility and agility with a scalable response based on specific mission requirements. The US and DoD leadership continues to support the prepositioned capabilities and has postured the assets to be ready for use in the regions of the world where HADR requirements will arise. The US has been and will continue to be the leader in providing HADR support for major natural disasters around the world. In closing, General James N. Mattis popularized the motto 'no better friend, no worse enemy', and in times of need the world can count on the USMC to be 'no better friend'.

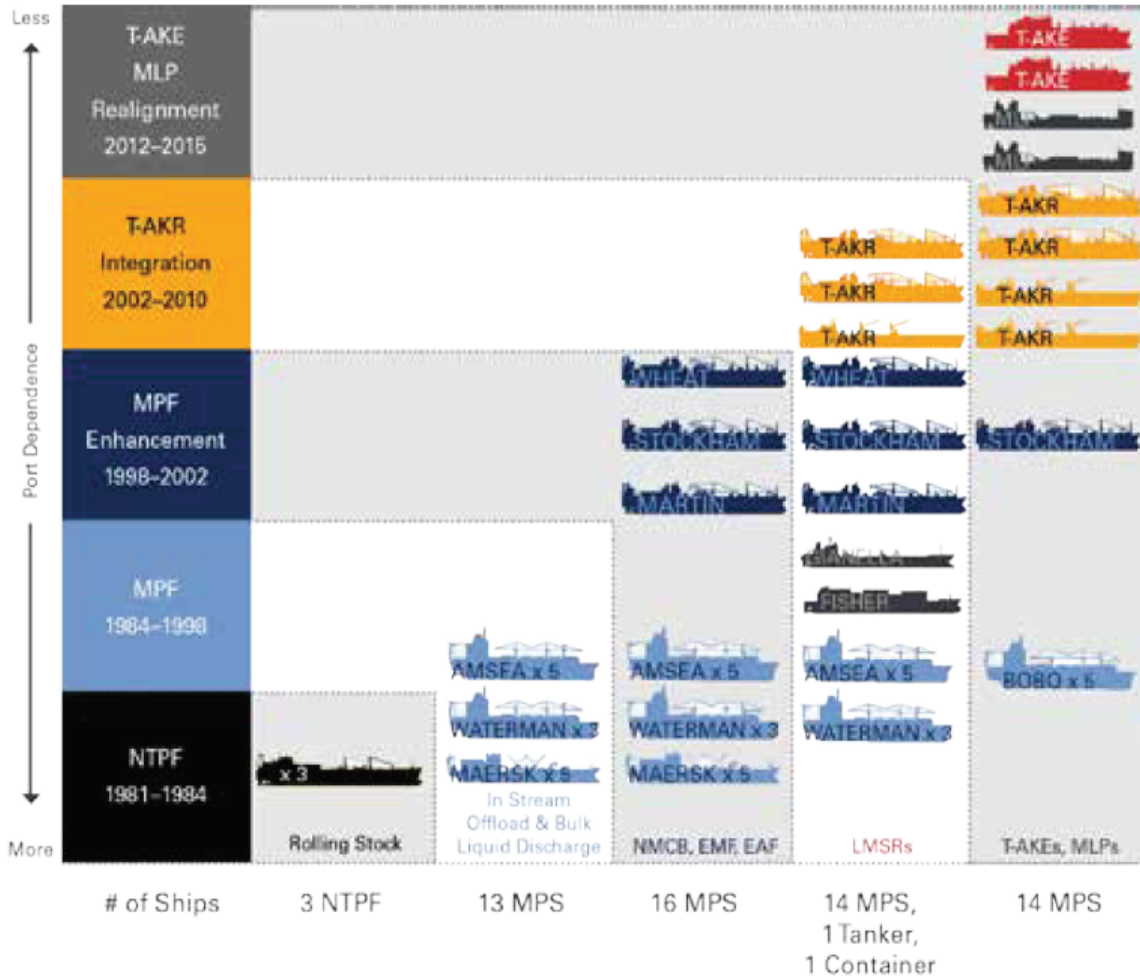
-
- ¹ US Department of Defense, *Logistics Planning Guidance for Global Pre-Positioning Materiel Capabilities*, Instruction CJCSI 4310.01C, August 13, 2012, A-1, http://www.dtic.mil/cjcs_directives/cdata/unlimit/4310_01.pdf
- ² Headquarters Marine Corps, *Prepositioning Programs Handbook 3rd Edition* (Washington, DC: Headquarters Marine Corps, 2015), 2, http://www.iandl.marines.mil/Portals/85/Docs/Division%20LP%20Documents/PrepositioningProgramsHandbook_3dEdition_2015.pdf
- ³ Joint Chiefs of Staff, *Joint Operations*, Joint Publication 3-0 (Washington, DC: Joint Chiefs of Staff, August 11, 2011), 1-15 http://www.dtic.mil/doctrine/new_pubs/jp3_0.pdf
- ⁴ HQMC, *Prepositioning Programs Handbook 3rd Edition*, 2.
- ⁵ Headquarters Marine Corps, *Expeditionary Force 21 (EF 21)*, (Washington, DC: March 2014), 5. http://www.mccdc.marines.mil/Portals/172/Docs/MCCDC/EF21/EF21_USMC_Capstone_Concept.pdf
- ⁶ Headquarters US Marine Corps, *Prepositioning Programs Handbook 2nd Edition* (Washington, DC: Headquarters Marine Corps, 2015), 1-4, <http://www.marines.mil/Portals/59/Publications/Prepositioning%20Programs%20Handbook%202d%20Edition.pdf>
- ⁷ Christopher Ellis, “Blount Island Command,” (Command PowerPoint presentation, Blount Island Command, Jacksonville, FL, 10 February 2016).
- ⁸ HQMC, *Prepositioning Programs Handbook 3rd Edition*, 16.
- ⁹ Headquarters US Marine Corps, *Maritime Prepositioning Force Operations*, MCWP 3-32/NTTP 3-02.3M (Washington, DC: Headquarters Marine Corps, 2011), 1-1, <http://www.marines.mil/Portals/59/Publications/MCWP3-32.pdf>
- ¹⁰ “*JTF HAITI – OPERATION UNIFIED RESPONSE OFFLOAD AFTER ACTION REPORT*,” 2010, United States Marine Corps, Operations After Action Report, Blount Island Command, Jacksonville, FL, 1.
- ¹¹ US Joint Forces Command, *USSOUTHCOM and JTF-Haiti... Some Challenges and Considerations in Forming a Joint Task Force*, Joint Center for Operational Analysis (Norfolk, VA: US Joint Forces Command, 2010), Prologue, [https://www.pksoi.org/document_repository/doc_lib/HER_case_study_U_\(24-Jun-10\).pdf](https://www.pksoi.org/document_repository/doc_lib/HER_case_study_U_(24-Jun-10).pdf)
- ¹² “Earthquake Hazards Program”, United States Geological Survey, accessed February 24, 2016, <http://earthquake.usgs.gov/earthquakes/eqarchives/year/2010/>
- ¹³ US Joint Forces Command, *USSOUTHCOM and JTF-Haiti... Some Challenges and Considerations in Forming a Joint Task Force*, Prologue.
- ¹⁴ US Joint Forces Command, *USSOUTHCOM and JTF-Haiti... Some Challenges and Considerations in Forming a Joint Task Force*, Prologue.
- ¹⁵ Gary Cecchine, et al., *The US Military Response to the 2010 Haiti Earthquake: Considerations for Army Leaders* (Washington, DC: RAND, 2013), 31, http://www.rand.org/content/dam/rand/pubs/research_reports/RR300/RR304/RAND_RR304.pdf
- ¹⁶ Headquarters US Marine Corps, *Maritime Prepositioning Force Operations*, 1-430.
- ¹⁷ Headquarters US Marine Corps, *Maritime Prepositioning Force Operations*, Glossary-13.
- ¹⁸ Headquarters US Marine Corps, *Maritime Prepositioning Force Operations*, 7-2.
- ¹⁹ Blount Island Command, *JTF HAITI – OPERATION UNIFIED RESPONSE OFFLOAD AFTER ACTION REPORT*, 1.
- ²⁰ Captain John Draper interview with Scott Kemp, Jacksonville, FL, 17 March, 2010, 4.
- ²¹ Blount Island Command, *JTF HAITI – OPERATION UNIFIED RESPONSE OFFLOAD AFTER ACTION REPORT*, 2.
- ²² HQMC, *Maritime Prepositioning Force Operations*, 7-1.
- ²³ HQMC, *Maritime Prepositioning Force Operations*, 7-1 to 7-5.
- ²⁴ “*Technical Assistance and Advisory Team (TAAT) Situation Report (SITREP) #3*,” 2010, United States Marine Corps, Operations Division, Blount Island Command (BIC), Jacksonville, FL, 3-4.
- ²⁵ BIC, *TAAT SITREP #3*, 2.
- ²⁶ Blount Island Command, *JTF HAITI – OPERATION UNIFIED RESPONSE OFFLOAD AFTER ACTION REPORT*, 2.
- ²⁷ HQMC, *Prepositioning Programs Handbook 3rd Edition*, 21.
- ²⁸ Cecchine, et al., *The US Military Response to the 2010 Haiti Earthquake: Considerations for Army Leaders*, 41.
- ²⁹ “*Technical Assistance and Advisory Team (TAAT) Situation Report (SITREP) #5*,” 2010, United States Marine Corps, Operations Division, Blount Island Command (BIC), Jacksonville, FL, 3.
- ³⁰ Cecchine, et al., *The US Military Response to the 2010 Haiti Earthquake: Considerations for Army Leaders*, 58.

-
- ³¹ “*Technical Assistance and Advisory Team (TAAT) Situation Report (SITREP) #18*,” 2010, United States Marine Corps, Operations Division, Blount Island Command (BIC), Jacksonville, FL, 3-4.
- ³² “*Technical Assistance and Advisory Team (TAAT) Situation Report (SITREP) #21*,” 2010, United States Marine Corps, Operations Division, Blount Island Command (BIC), Jacksonville, FL, 2.
- ³³ “*Technical Assistance and Advisory Team (TAAT) Situation Report (SITREP) #24*,” 2010, United States Marine Corps, Operations Division, Blount Island Command (BIC), Jacksonville, FL, 2.
- ³⁴ HQMC, *Prepositioning Programs Handbook 3rd Edition*, 3.
- ³⁵ HQMC, *Prepositioning Programs Handbook 3rd Edition*, 5.
- ³⁶ HQMC, *Prepositioning Programs Handbook 3rd Edition*, 7-8.
- ³⁷ HQMC, *Prepositioning Programs Handbook 3rd Edition*, A-5.
- ³⁸ The White House. *The National Security Strategy of the United States of America* (Washington, DC, 2015), 7. https://www.whitehouse.gov/sites/default/files/docs/2015_national_security_strategy.pdf.
- ³⁹ Joint Chiefs of Staff, *The National Military Strategy of the United States of America* (Washington, DC, 2015), 13. http://www.jcs.mil/Portals/36/Documents/Publications/2015_National_Military_Strategy.pdf.
- ⁴⁰ Joint Chiefs of Staff, *National Military Strategy*, 15.
- ⁴¹ US Department of Defense, *2014 Quadrennial Defense Review* (Washington, DC, March 4, 2014), 36. http://archive.defense.gov/pubs/2014_Quadrennial_Defense_Review.pdf.
- ⁴² HQMC, *EF 21*, 2.
- ⁴³ HQMC, *EF 21*, 2.
- ⁴⁴ HQMC, *EF 21*, 23-24.
- ⁴⁵ HQMC, *EF 21*, 20.
- ⁴⁶ HQMC, *EF 21*, 44.
- ⁴⁷ Department of the Navy, *Cooperative Strategy for 21st Century Seapower*, (Washington, DC: Department of the Navy, March 2015), 18.
- ⁴⁸ DoN, *Cooperative Strategy for 21st Century Seapower*, 24-26.
- ⁴⁹ DoN, *Cooperative Strategy for 21st Century Seapower*, 27.
- ⁵⁰ United States Marine Corps, *FRAGO 01/2016: Advance to Contact* (Washington, DC: 37th Commandant of the Marine Corps, 2016), 10, <http://www.hqmc.marines.mil/Portals/142/Docs/CMC%20FRAGO%2001%2019JAN16.pdf>

APPENDIX A



MPF SHIPS DETAILS AND CHARACTERISTICS

MPF Ship Evolution





Source: Headquarters Marine Corps, *Prepositioning Programs Handbook 3rd Edition*, A-5.

Figure 3 | Crisis Response Force Packages (CRFP)

	CRFP Light -1	CRFP Light - 2
Ships	 <p>T-AKE T-AKR ESD</p>	 <p>T-AKE T-AK</p>
FIE Force	~ 3,900 Pax	~ 3,000 Pax
Overview	<p><i>Force</i></p> <p>GCE: InfBn (rein) w/ LAVs, Tanks, Arty, AAVs LCE: DS CLB (Task-organized) ACE: R/W on-call CE: Force Recon ANGLICO</p> <p><i>Sustainment</i></p> <p>Force deploys with 3 DOS DOS/DOA dependent on mission and MPS inventory</p> <p><i>Mobility</i></p> <p>2 Rifle Co (AAVs) 1 Rifle Co (MT) On-call ACE</p> <p><i>Capability Sets</i></p> <p>AAFS, TAFDS, Sec, HERS, GERS, Elec Water, Food, Hab, Med</p> <p><i>Navy Capability</i></p> <p>3 CF, NSE, NCE</p> <p><i>Missions</i></p> <p>Security, HADR, DSCA, NEO, Defense</p>	<p>GCE: Inf Bn (rein) w/ LAVs, Tanks, Arty, AAVs LCE: DS CLB (Task - organized) ACE: R/W on-call CE: CAG</p> <p>Force deploys with 3 DOS DOS/DOA dependent on mission and MPS inventory</p> <p>2 Rifle Co (MT) 1 Rife Co (AAVs) On-call ACE</p> <p>AAFS, TAFDS, Sec, HERS, GERS, Elec, Water, Food, Hab, Med</p> <p>3 CF, 1 ABLTS, NSE</p> <p>Security, HADR, DSCA, NEO, Defense</p>




Source: Headquarters Marine Corps, *Prepositioning Programs Handbook 3rd Edition*, 7.

Figure 3 | Crisis Response Force Packages (CRFP)

	CRFP Medium	CRFP Heavy (Full MPSRON)
Ships		
FIE Force	~ 7,500 Pax	~ 15,000 - 18,000 Pax
Overview	<p><i>Force</i></p> <p>GCE: (2) Inf Bn (Rein) w/ LAVs, Tanks, Arty, AAV LCE: DS CLB ACE: R/W On-call CE: Force Recon ANGLICO, CAG</p>	<p>MEB-sized force centered around Infantry Regiment</p>
	<p><i>Sustainment</i></p> <p>Force deploys with 3 DOS DOS/DOA dependent on mission and MPS inventory</p>	<p>MPSRON deploys with up to 30 DOS (with FIE)</p>
	<p><i>Mobility</i></p> <p>2 Rifle Co (AAV) 4 Rifle Co (MT) On-call ACE</p>	<p>1 Bn (AAV) 1 Bn (MT) 1 Bn (Air)</p>
	<p><i>Capability Sets</i></p> <p>AAFS, TAFDS, Sec, HERS, ERS, Elec, Water, Food, Hab, EMF</p>	<p>All</p>
	<p><i>Navy Capability</i></p> <p>8 CF, 1 ABLTS, NCE, NSE</p>	<p>11 CF, 2 ABLTS, NCE, NSE, RRDF</p>
	<p><i>Missions</i></p> <p>Security, HADR, DSCA, NEO, Defense</p>	<p>Full ROMO</p>

Source: Headquarters Marine Corps, *Prepositioning Programs Handbook 3rd Edition*, 8.




Figure 7 | MPS Select Ships' Characteristics

MPF Ships/ Capabilities	BOBO Class	Modified SHUGHART Class	LEWIS & CLARK Class
Type Number	T-AK 3008/09/10/11/12	T-AK 3017	TAKE 1, 2
			
	Length Overall: 673 ft Beam: 105 ft 6 in Displ: 40,846 tons	Length Overall: 849 ft Beam: 105 ft 7 in Displ: 59,468 tons	Length Overall: 689 ft Beam: 105 ft 7 in Displ: 42,416 tons
Ship Names	USNS's BOBO, BUT- TON, LOPEZ, LUM- MUS, WILLIAMS	USNS STOCKHAM	USNS LEWIS & CLARK USNS SACAGAWEA
Speed (Ec/Max)	12/17.7 kts	18/24 kts	14/20 kts
Bbl Per Day	340	100 DFM/500 IFO	400
Draft	32 ft	36 ft	29.8 ft
Medical	Sick-Call	Sick-Call	Sick-Call
Potable Water	98,990 gal; 36K/day*	160,320 gal; 19K/day	53,000 gal; 30K/day*
Flight Deck	1 Spot (LVL II, CL 3) 3012 – MV-22: Lvl II, CL4	1 Spot, H53 (LVL II, CL 2/4)	1 Spot, H53 (LVL I, CL 1) MV-22: Lvl I, CL 2/4
Aircraft Parking (Han- gar, etc.)	N/A	2 MH-60s Hangar	2 MH-60S, Hangar: 2,486 ft2, Crane 4K
Elevators (Cargo)	N/A	N/A	(4) 8 ST (4) 6 ST
Ramp (Capacities are pier side, and are reduced if operat- ing with RRDF)	Stern (Semi-Slewing) 110'Lx24'W 67.98 ST	Stern (Slewing) 138'11"L x 24'W 79.52 ST Side-port capable	N/A
Square Feet (Gross) (unless occupied by TEUs)	154,000 ft2	258,006 ft2	N/A
Cargo Cube (TEU)	560 TEU	545 TEU	953,700 ft3
Lift On/Lift Off Crane	(5) Cranes: 46.68 ST ea; Twin 87.36 ST; Triple 131.04 ST	1) Twin 126.56 ST Aft (1) Single 63.84 ST Fwd	(4) Cranes 11 ST
Cargo Fuel (JP-5)	1,250,000 gal	40,000 gal	1,160,000 gal

* Planners should consider production quantities include water for ships' systems and crews

Source: Headquarters Marine Corps, *Prepositioning Programs Handbook 3rd Edition*, 17.

Figure 7 | MPS Select Ships' Characteristics

MPF Ships/ Capabilities	BOB HOPE Class	WATSON Class	Monford Point Class
Type Number	T-AKR 304, 302	T-AKR 311, 312	ESD 1,2
			
	Length Overall: 884 ft Beam: 105ft 10 in Displ: 62,833 lton	Length Overall: 905 ft Beam: 105 ft 9 in Displ: 61,790 ltons	Length Overall: 785 ft Beam: 164 ft in Displ: 98,320 ltons
Ship Names	USNS PILILAAU USNS SEAY	USNS SISLER USNS DAHL	USNS MONTFORD POINT USNS JOHN GLENN
Speed (Ec/Max)	18/24 kts	16/24 kts	13/17 kts
Bbl Per Day	425	775	475
Draft	35 ft	33.6 ft	39 ft
Medical	Sick-Call	Sick-Call	N/A
Potable Water	55,014 gal; 20.5K/day	70,646 gal; 16.5K/day	100,000 gal; 25K/day
Flight Deck	1 Spot H53 (LVL 2, CL 3/4) 302 – MV-22: Lvl II, CL 4	1 Spot H53 (LVL 3, CL 3/4) MV-22: Lvl II, CL 4	1 Spot (USCG) – MOD Emergency Only
Aircraft Parking (Hangar, etc.)	N/A	N/A	N/A
Elevators (Cargo)	N/A	N/A	N/A
Ramp (Capacities are pier side, and are reduced if operating with RRDF)	Stern 79.52 ST (Slewing: L135'xW24')	Stern 79.52 ST (Slewing: L135'xW24')	1 Vehicle Transfer Ramp (VTR) (T-AKR side-port ramp, 79.52 ST)
Square Feet (Gross) (unless occupied by TEUs)	315,000 ft ²	353,000 ft ²	25,000 ft ²
Cargo Cube (TEU)	598 TEU	586 TEU	20 TEU
Lift On/Lift Off Cranes	(2) Sets (Single 63 ST ea) (Twin – 126.56 ST)	(2) Sets - Sideport, Stern (Single 63 ST ea) (Twin – 126.56 ST)	(1) 10 LT, (2) 5 LT
Cargo Fuel (JP-5)	N/A	N/A	380,000 gal

* Planners should consider production quantities include water for ships' systems and crews

Source: Headquarters Marine Corps, *Prepositioning Programs Handbook 3rd Edition*, 18.

APPENDIX B

ACRONYMS

AAOG	Arrival & Assembly Operations Group
AAR	After-Action Review
AFRICOM	Africa Command
BIC	Blount Island Command
BMU	Beach Master Unit
C2	Command and Control
CCMD	Combatant Command
CENTCOM	Central Command
CG1	Conference Group 1
CJCS	Chairman Joint Chiefs of Staff
CMC	Commandant Marine Corps
COA	Course of Action
CONUS	Continental United States
CRFP	Crisis Response Force Package
DoD	Department of Defense
DoN	Department of the Navy
EAF	Expeditionary Airfield
ECR	Equipment Custody Receipt
EF-21	Expeditionary Force - 21
E-SHIP	Enhanced Ship
ESD	Expeditionary Transfer Dock
EUCOM	Europe Command
EXORD	Executive Order
FDO	Flexible Detterant Option
FHA	Foreign Humanitarian Assistance
FIE	Fly In Echelon
GCC	Geographic Combatant Commander
GoH	Government of Haiti
HADR	Humanitarian Assistance Disaster Relief
HNS	Host Nation Support
HQMC	Headquarters Marine Corps
IGO	International Government Organization
INLS	Improved Navy Lighterage System
ISO	International Standardization Organization
IVO	in vicinity of

JHSV	Joint High Speed Vehicle
JLOTS	Joint Logistics Over-the-Shore
JTF-H	Joint Task Force - Haiti
LCM-8	Landing Craft Mechanized - "Mike Boat"
LCU	Landing Craft Unit
LFSP	Landing Force Support Party
LMSR	Large Medium Speed Roll-on/Roll-off
LOE	Line of Effort
LPD	Landing Platform Dock
LSD	Landing Ship Dock
MAGTF	Marine Air Ground Task Force
MCO	Marine Corps Order
MCPP-N	Marine Corps Prepositioned Program - Norway
MCWP	Marine Corps Warfighting Publication
MEB	Marine Expeditionary Brigade
MEF	Marine Expeditionary Force
MEU	Marine Expeditionary Unit
MHE	Materiel Handling Equipment
MINUSTAH	United Nations Stabilization Mission in Haiti
MLG	Marine Logistics Group
MLP	Mobile Landing Platform
MMC	Maintenance Management Cycle
MMO	Maintenance Management Officer
MOLT	MAGTF Offload Liason Team
MPE/S	Maritime Prepositioned Equipment / Supplies
MPF	Maritime Prepositioning Force
MPS	Maritime Prepositioning Ship
MPSRON	Maritime Prepositioning Ship Squadron
MSC	Military Sealift Command
NGO	Non-Governmental Organization
NMCB	Naval Mobile Construction Battalion
NORTEL	Nortel Networks Corporation
NORTHCOM	Northern Command
NSE	Naval Support Element
NTPF	Near
NTTP	Navy Tactics Techniques Procedures
OIC	Officer in Charge
OPORD	Operation Order
OPP	Offload Preparation Party
PACOM	Pacific Command

PEI	Principle End Item
PREPO	Prepositioning Objective
RAND	RAND Corporation
RDJTF	Rapid Deployment Joint Task Force
ROMO	Range of Military Operations
RRDF	Roll-on/Roll-off Discharge Facility
SITREP	Situation Report
SLRP	Survey Liaison and Reconnaissance Party
SOUTHCOM	Southern Command
TAAT	Technical Assistance and Advisory Team
TEU	Twenty Foot Equivalent
TRANSCOM	Transportation Command
TSC	Theater Security Cooperation
U-Boat	Utility Boat
US	United States United States Agency for International Development
USAID	
USMC	United States Marine Corps
USNS	United States Naval Ship

BIBLIOGRAPHY

The literature review on OPERATION UNIFIED RESPONSE proved to be challenging as there is essentially an unlimited source of documents that cover it. The collective data within the sources is similar but different depending on the audience. The purpose of this paper was to inform Marines and Navy personnel, and members of other services, which will support a JTF HADR effort with MPF assets involved.

The focus of this paper was on the Technical Assistance and Advisory Team (TAAT) operation in support of OPERATION UNIFIED RESPONSE and the primary sources utilized were directly involved with USMC MPF operations. The actual After Action Reviews and SITREPs from the TAAT provided the majority of the data for this paper. All the TAAT documents are maintained at Blount Island Command and were received on a CD in the mail and in the author's possession.

Blount Island Command, United States Marine Corps. "*Technical Assistance and Advisory Team (TAAT) Situation Report (SITREP) #3.*" Operations Division. Blount Island Command, Jacksonville, FL, 2010.

Blount Island Command, United States Marine Corps. "*Technical Assistance and Advisory Team (TAAT) Situation Report (SITREP) #5.*" Operations Division. Blount Island Command, Jacksonville, FL, 2010.

Blount Island Command, United States Marine Corps. "*Technical Assistance and Advisory Team (TAAT) Situation Report (SITREP) #18.*" Operations Division. Blount Island Command, Jacksonville, FL, 2010.

Blount Island Command, United States Marine Corps. "*Technical Assistance and Advisory Team (TAAT) Situation Report (SITREP) #21.*" Operations Division. Blount Island Command, Jacksonville, FL, 2010.

Blount Island Command, United States Marine Corps. “*Technical Assistance and Advisory Team (TAAT) Situation Report (SITREP) #24.*” Operations Division. Blount Island Command, Jacksonville, FL, 2010.

Button, Robert., and National Defense Research Institute (U.S.). *Maritime Prepositioning Force (future) Capability Assessment : Planned and Alternative Structures.* Rand Corporation monograph series; Rand Corporation monograph series, MG-943-OSD. Santa Monica, CA: RAND, 2010. <http://www.rand.org/pubs/monographs/MG943.html>

Cecchine, Gary, Forrest E. Morgan, Michael A. Wermuth, Timothy Jackson, and Agnes Gereben Schaefer. *The US Military Response to the 2010 Haiti Earthquake: Considerations for Army Leaders.* Washington, DC: Rand, 2013.
http://www.rand.org/content/dam/rand/pubs/research_reports/RR300/RR304/RAND_RR304.pdf

Department of the Navy. *Cooperative Strategy for 21st Century Seapower.* Washington, DC: Department of the Navy, March 2015.

DiOrio, David. R. *Operation Unified Response—Haiti earthquake 2010* (ver.1). Norfolk, VA: Joint Force Staff College, November 2011.
http://jfsc.ndu.edu/Portals/72/Documents/JC2IOS/Additional_Reading/4A_Haiti_HADR_Case_Study_revNov10.pdf

Draper, Captain, John D., United States Marine Corps, interview with Scott Kemp, Blount Island Command, Jacksonville, FL, 17 March 2010, Marine Corps Center for Lessons Learned.

Ellis, Christopher. “Blount Island Command.” Command PowerPoint presentation. Blount Island Command, Jacksonville, FL, 10 February 2016.

Gastrock, Jared R., and Juan J. Iturriaga. "Analysis of United States Marine Corps operations in support of humanitarian assistance and disaster relief." PhD diss., Monterey, California: Naval Postgraduate School, 2013.
http://calhoun.nps.edu/bitstream/handle/10945/38954/13Dec_Iturriaga_Gastrock.pdf?sequence=3&isAllowed=y

Goss, Glenn L. “Strategic Purpose of U.S. Military Foreign Humanitarian Assistance Operations.” Master's Thesis, Joint Advanced Warfighting School, Norfolk, VA, 2013.

Greenfield, C. M., & Ingram. “An analysis of US Navy humanitarian assistance and disaster relief operations.” Master’s thesis, Naval Postgraduate School, Monterey, CA, 2011.
<http://www.acquisitionresearch.net/files/FY2011/NPS-LM-11-009.pdf>

Gunzinger, Mark. *Shaping America’s future military Toward A new force planning construct.* Center for Strategic and Budgetary Assessments, Washington, DC, 2013.

Headquarters Marine Corps. *Maritime Prepositioning Force Operations*. MCWP 3-32/NTTP 3-02.3M. Washington, DC: Headquarters Marine Corps, 2011.

<http://www.marines.mil/Portals/59/Publications/MCWP3-32.pdf>

Headquarters Marine Corps. *Prepositioning Programs Handbook 2nd Edition*. Washington, DC: Headquarters Marine Corps, 2015.

<http://www.marines.mil/Portals/59/Publications/Prepositioning%20Programs%20Handbook%202d%20Edition.pdf>

Headquarters Marine Corps. *Prepositioning Programs Handbook 3rd Edition*. Washington, DC: Headquarters Marine Corps, 2015.

http://www.iandl.marines.mil/Portals/85/Docs/Division%20LP%20Documents/PrepositioningProgramsHandbook_3dEdition_2015.pdf

Headquarters Marine Corps. *Ship To Shore Movement*. MCWP 3-31.5. Washington, DC: Headquarters Marine Corps, May 2007.

Joint Chiefs of Staff. *Foreign Humanitarian Assistance*. Joint Publication 3-29. Washington, DC: Joint Chiefs of Staff, January 03, 2014.

http://www.dtic.mil/doctrine/new_pubs/jp3_29.pdf

Joint Chiefs of Staff. *Joint Operations*. Joint Publication 3-0. Washington, DC: Joint Chiefs of Staff, August 11, 2011.

http://www.dtic.mil/doctrine/new_pubs/jp3_0.pdf

Joint Chiefs of Staff. *Joint Operational Access Concept*. (JOAC). Washington, DC: Joint Chiefs of Staff, January 17, 2012.

http://www.defense.gov/Portals/1/Documents/pubs/JOAC_Jan%202012_Signed.pdf

Joint Chiefs of Staff. *The National Military Strategy of the United States of America*. Washington, DC: Joint Chiefs of Staff, June 2015.

http://www.jcs.mil/Portals/36/Documents/Publications/2015_National_Military_Strategy.pdf.

Krenson, John G. "On strategy: Integration of DIME in the twenty-first century." Strategy Research Project, U.S. Army War College, 2012.

Margesson, Rhoda, and Maureen Taft-Morales. *Haiti Earthquake: Crisis and Response Haiti*. CRS Report for Congress R41023. Washington, DC: Congressional Research Service, February 2, 2010.

<https://www.fas.org/sgp/crs/row/R41023.pdf>

President of the United States. *The National Security Strategy of the United States of America*. Washington, DC: The White House, 2015.

https://www.whitehouse.gov/sites/default/files/docs/2015_national_security_strategy.pdf.

U.S. Congress. Senate. *Military Humanitarian Operations Act of 2012*. S.3176. 112th Cong., (14 May 2012): S.3176.

US Department of Defense. *Foreign Disaster Relief (FDR)*. Directive 5100.46, July 6, 2012.

US Department of Defense. *Logistics Planning Guidance for Global Pre-Positioning Materiel Capabilities*. Instruction CJCSI 4310.01C, August 13, 2012.
http://www.dtic.mil/cjcs_directives/cdata/unlimit/4310_01.pdf

US Department of Defense. *2014 Quadrennial Defense Review*. Washington, DC, March 4, 2014. http://archive.defense.gov/pubs/2014_Quadrennial_Defense_Review.pdf.

US Joint Forces Command. *USSOUTHCOM and JTF-Haiti... Some Challenges and Considerations in Forming a Joint Task Force*. Joint Center for Operational Analysis. Norfolk, VA: US Joint Forces Command, 2010.
[https://www.pksoi.org/document_repository/doc_lib/HER_case_study_U_\(24-Jun-10\).pdf](https://www.pksoi.org/document_repository/doc_lib/HER_case_study_U_(24-Jun-10).pdf)

United States Agency for International Development. "Haiti – Earthquake Fact Sheet #58." Bureau for Democracy, Conflict, and Humanitarian Assistance (DCHA) and Office of U.S. Foreign Disaster Assistance (OFDA), June 11, 2010.
http://pdf.usaid.gov/pdf_docs/PA00J27V.pdf

United States Marine Corps, Blount Island Command. "*JTF HAITI – OPERATION UNIFIED RESPONSE OFFLOAD AFTER ACTION REPORT*." Operations After Action Report. Jacksonville, FL: Blount Island Command, 2010.

United States Marine Corps, Blount Island Command. "*JTF HAITI – OPERATION UNIFIED RESPONSE BACKLOAD AFTER ACTION REPORT*." Operations After Action Report. Jacksonville, FL: Blount Island Command, 2010.

United States Marine Corps. *Expeditionary Force 21 (EF 21)*. Washington, DC: Headquarters Marine Corps, March 2014.
http://www.mccdc.marines.mil/Portals/172/Docs/MCCDC/EF21/EF21_USMC_Capstone_Concept.pdf

United States Marine Corps. *FRAGO 01/2016: Advance to Contact*. Washington, DC: 37th Commandant of the Marine Corps, 2016.
<http://www.hqmc.marines.mil/Portals/142/Docs/CMC%20FRAGO%2001%2019JAN16.pdf>

Webster, K. L. "Lessons from a military humanitarian in Port-au-Prince, Haiti." *Small Wars Journal*, 2010. <http://smallwarsjournal.com/blog/journal/docs-temp/401-webster.pdf>