Navy Helicopters in the Humanitarian Assistance / Disaster Relief (HA/DR) Mission

LCDR Dennis Monagle, USN
Introduction

• OCS graduate
• 2001 – 2007: HM-14 / AWSTS
• 2007 – 2009: USS THEODORE ROOSEVELT
• 2009 – 2011: Maintenance Officer / OIC HM-14
• 2011 – 2014: NAVAIR (PMA-261)
Agenda

• Viewpoint of brief
• What is HA/DR and why is the Navy involved?
• US Navy Helicopters (Helos)
• Recent cases of HA/DR and USN Helo participation
• The Maintenance Leadership role in the mission
HA/DR

• ROMO – Range of Military Operations.
• MOOTW principles are an extension of US warfighting doctrine.
• MOOTW focus on deterring war, resolving conflict, promoting peace, and supporting civil authorities in response to domestic crises.
• DSCA – Defense Support of Civil Authorities.
  – Non DoD entities requesting mil support in time of national disaster. Requests all vetted through NORTHCOM.
## RANGE OF MILITARY OPERATIONS

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What exactly is HA?

• Humanitarian Assistance (HA) operations relieve or reduce the results of natural or manmade disasters or other endemic conditions such as human pain, disease, hunger, or privation in countries or regions outside the United States.

• The US military can respond rapidly to emergencies or disasters and achieve order in austere locations. US forces can provide logistics; command, control, communications, and computers; and the planning required to initiate and sustain HA operations.
Some Definitions

- **Foreign Disaster** — An *act of nature* (such as a flood, drought, fire, hurricane, earthquake, volcanic eruption, or epidemic), or an *act of man* (such as a riot, violence, civil strife, explosion, fire, or epidemic), which is or threatens to be of sufficient severity and magnitude to warrant United States foreign disaster relief to a foreign country, foreign persons, or to an intergovernmental organization.
• **Foreign Disaster Relief** — Prompt aid that can be used to alleviate the suffering of foreign disaster victims. Normally it includes humanitarian services and transportation; the provision of food, clothing, medicine, beds, and bedding; temporary shelter and housing; the furnishing of medical materiel and medical and technical personnel; and making repairs to essential services.
• **Foreign Humanitarian Assistance** — Department of Defense activities, normally in support of the United States Agency for International Development or Department of State, conducted outside the United States, its territories, and possessions to **relieve or reduce** human suffering, disease, hunger, or **privation**. (privation = Lack of the basic necessities or comforts of life)
HUMANITARIAN ASSISTANCE

☑️ To relieve or reduce the results of natural or manmade disasters or other endemic conditions

☑️ Limited in scope and duration

☑️ Supplements or complements efforts of host nation

☑️ May cover a broad range of missions

TYPES OF HUMANITARIAN ASSISTANCE OPERATIONS

- Coordinated by the UN
- US acts in concert with other multinational forces
- US responds unilaterally
Why is the US Navy involved in HA/DR?
• **Leading Efforts to Address Humanitarian Crises:** Together with the American people and the international community, we will continue to respond to humanitarian crises to ensure that those in need have the assistance they need. In such circumstances, we are also placing a greater emphasis on fostering long-term recovery. Haiti’s devastating earthquake is only the most recent reminder of the human and material consequences of natural disasters, and a changing climate portends a future in which the United States must be better prepared and resourced to exercise robust leadership to help meet critical humanitarian needs.
Humanitarian assistance and disaster relief activities employ the Joint Force to address partner needs and sometimes provide opportunities to build confidence and trust between erstwhile adversaries. They also help us gain and maintain access and relationships that support our broader national interests.
USN Maritime Strategy

- Humanitarian Assistance and Disaster Response. Building on relationships forged in times of calm, we will continue to mitigate human suffering as the vanguard of interagency and multinational efforts, both in a deliberate, proactive fashion and in response to crises. Human suffering moves us to act, and the expeditionary character of maritime forces uniquely positions them to provide assistance. Our ability to conduct rapid and sustained non-combatant evacuation operations is critical to relieving the plight of our citizens and others when their safety is in jeopardy.
How it’s tasked (nutshell version)

DOS  DOD  COCOM
Why Helos?
USN Helo Core Capabilities

- Access to remote landing zones (unprepared)
- No Runway requirement
- Cargo (internal / external) capability
- Passenger transfer capability
- Medical patient transfer capable
- SAR capability (actual or OSC)
- US and Multi-national shipboard capability
- FLIR / Damage assessment capability
- NVG flying
- Versatile / Rapid transport to mission area – ship or aircraft
The US Navy’s Two Types of Helicopters
H-60 T/M/S

- 13,000 Max Density Altitude
- 180 Max Airspeed
- ~130 Cruise speed
- Endurance
  - With aux tank: 3+00
  - Without aux tank: 2+00
- Aircraft Operating Weight
  - with Aux empty: 18,293 lbs
  - with Aux full: 19,593 lbs
Limits

• ~ 22,500 lbs Max Gross Weight
• ~ 23,500 lbs Max GW with External Loads
• Internal Cargo Limits
  – 5,500 lbs max internal cargo
  – 4,733 lbs max palletized cargo
  – 3,000 lbs max single pallet (40” x 48”)
• ~ 8,000 lbs cargo hook limit
• 600 lbs hoisting limit
Limits Cont.

• Passengers
  – 12 max without internal Aux Tank
  – 8 max with Aux Tank installed

• Litters
  – 4 max without Aux Tank Installed
  – 3 max with Aux Tank installed
MH-53E

- 10,000 Max Altitude (3710.70 limit)
  - Up to 12,000 for 1 hour when mission essential
- 150KIAS Max Airspeed
- ~ 120 Cruise speed
- ~ 22K of fuel
- ~ 4K lbs/hour fuel burn
- Endurance
  - ~ 5+30
  - ~ Unlimited with In-flight refueling
- Aircraft Operating Weight
  - ~39,000 lbs
Limits

• 69,750 lbs Max Gross Weight
• Mix of approx 30,000lbs of fuel and cargo
• Internal Cargo Limits
  – 300 lbs per square inch
  – 2200 lbs on ramp
  – Up to 88 inch wide and 84 inch tall cargo
• Single Point external load 25,000 lbs
• 600 lbs hoisting limit
• Palletized cargo can be loaded by forklift with rotors engaged
Limits Cont.

• Passengers
  – 50 max (minus crew) with center line seats (up to 55 without crash attenuating seats)
  – 30 (minus crew) seats with no center line

• 24 pole type litters
  – Stacked 4 high three set along each side (no pax)
    – Note Litter configuration is for Standard Navy MEDEVAC Litter.

• Pax and litters may be mixed
Notable HA/DR Missions

- Indian Ocean Tsunami 2004
- Katrina (DSCA) 2005
- Kashmir Earthquake 2005
- Haiti Earthquake 2010
- Pakistan Floods 2010
- Japanese Tsunami 2011
Indian Ocean Tsunami

- December 26, 2004
- 9.2 magnitude earthquake caused tsunami
- 157,577 people killed, 26,763 missing, and 1,075,350 displaced (USGS estimate)
- USN part of JTF 536 – Operation UNIFIED ASSISTANCE
- Abraham Lincoln CSG & BHR ESG
- Coastal road was eliminated – had to supply from sea
• “Admiral Thomas Fargo, commander of PACOM, emphasized the value of “helicopter vertical lift” to the success of the U.S. Navy’s humanitarian mission in Indonesia.”

• “During UNIFIED ASSISTANCE, sea basing proved to be a culturally sensitive and politically flexible response to a natural disaster in a region dominated by Muslims and the scene of an active domestic insurgency. “Hard power” assets, like the aircraft carrier and support ships provided by the U.S. Navy, in conjunction with air support and personnel from the Army, Marine Corps, and Air Force, provided tremendous “soft power” effects. This operation produced enormous goodwill, in particular when compared to the experience of other powers in the region—like China—that could not send similar forces.”
Hurricane Katrina

- August 29, 2005 – landfall as a strong CAT 3 hurricane.
- DSCA
- USN part of JTF Katrina
- Massive amount of wind damage / flooding to Gulf Coast area of US.
- US Navy sends USS HARRY TRUMAN, USS IWO JIMA, and USS BATAAN along with several other gator ships.
- At the height of operations, the various elements of the Department of Defense had more than 350 helicopters and over 70 fixed wing aircraft involved in Katrina relief efforts.
Kashmir Earthquake

- October 2005
- 7.6 magnitude
- 75,000 + killed
- USN Navy helos responded as part of ESG 1 DAC Pakistan.
- Part of a Joint Services effort to move cargo, medical and disaster relief supplies into very remote mountain areas.
Haiti Earthquake

- January 12, 2010
- 7.0 magnitude quake
- 3 million people affected
- USN part of JTF Haiti and Operation UNIFIED RESPONSE
- CHSCWL helos moved 3.4M lbs of cargo
- CHSCWL helos moved over 13,000 passengers
## CHSCWL Haiti Force Summary

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<tr>
<th>Unit</th>
<th>Forces</th>
<th>Ashore/Afloat Locations</th>
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<tr>
<td>HM-14</td>
<td>5 x MH-53E</td>
<td>• USS CARL VINSON (CVN 70)</td>
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<tr>
<td>HM-15</td>
<td>3 x MH-53E</td>
<td>• USS BATAAN (LHD 5)</td>
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<tr>
<td>HSC-2</td>
<td>2 x MH-60S</td>
<td>• USS WASP (LHD 1)</td>
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<tr>
<td>HSC-22</td>
<td>3 x MH-60S</td>
<td>• USS NASSAU (LHA 4)</td>
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<td>HSC-26</td>
<td>2 x MH-60S</td>
<td>• USNS LEWIS &amp; CLARK (T-AKE 1)</td>
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<tr>
<td>HSC-28</td>
<td>4 x MH-60S</td>
<td>• USNS SACAGAWEA (T-AKE 2)</td>
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<tr>
<td>HSC-9</td>
<td>2 x MH-60S</td>
<td>• USNS COMFORT (T-AH 20)</td>
</tr>
<tr>
<td>HS-11</td>
<td>2 x HH-60H, 2 x SH-60F</td>
<td>• Naval Station Guantanamo Bay, Cuba</td>
</tr>
<tr>
<td>HS-15</td>
<td>1 x HH-60H, 4 x SH-60F</td>
<td>• Port au Prince, Haiti</td>
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<tr>
<td>9 Squadrons</td>
<td>30 Helicopters</td>
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JTF Haiti Support

- Support of Humanitarian Assistance and Disaster Relief
- Number of military personnel (peak level): 22,268
- Number of U.S. Navy ships: 23
- Number of U.S. Coast Guard ships: 10
- Number of fixed-wing aircraft: 264
- Number of helicopters: 57
- Liters of water distributed: 2,600,000
- Humanitarian rations packages distributed: 2,900,000
- Bulk food delivered (pounds): 17,000,000
- Number of Meals-Ready-to-Eat delivered: 2,700,000
- Number of emergency radios distributed: 73,300
- Hours of emergency radio broadcasts: 660
- Supported distribution of emergency shelter to 1,170,000 people
- Supported 16 World Food Program distribution points.
- Supported development of two transitional camps and improvements in nine camps
Pakistan Floods of 2010

- July 2010 – Heavy monsoon rains cause flooding in the Indus River valley
- Over 2000 killed and more than 20 million affected. Floods damage crops and economy.
- U.S. helicopters operated in Pakistan from August 5 – November 30 and delivered 20,123,378 pounds of relief supplies
How in the world do these pilots and aircrew do it?
You’re welcome, Mav.
The Role of Aircraft Maintenance Leadership
• All Levels of Maintenance are required to operate in coordination to make this happen. O-Level execution and FRC / Afloat AIMD support is critical.

• The SUCCESSFUL HA/DR evolution is completely dependent on a SOLID Aircraft Maintenance Program.

• NAMP / Maintenance publication compliance is a must!

• Scheduled Maintenance MUST be managed!

• The Maintainer WILL get it done.

• The Maintainer requires top-down support and leadership
  • To ensure job done quality
  • Safely completed
  • without unnecessary delay.
Why Maintenance Leadership is ESSENTIAL to the Mission

• Experience
  – Tacit Knowledge
• Compliance
• Perspective
• Planning
• Leadership
• Execution
Conclusion