Boundless solutions for a complex world.

Humanitarian Mine Action and Adapting to the IED Threat (Implementer Perspective)

15 August 2018
Overview

- Introduction
- Current Projects
- Outcomes
- Case Study (Ramadi Medical Center)
- HMA and Hazards in Stabilization Operations
- Challenges and Best Practices
- Looking Forward

For Discussion:

1) IEDD is a necessary capability to enable stabilization.

2) Requirement for rapid hazards identification capability deployable at regional level

3) Hazard release/ clearance standards discussion is necessary
Projects Funded by US DoS PM/WRA:
Rapidly and safely remove the threat of unexploded ordnance (UXO) and abandoned ordnance (AXO), to include Improvised Explosive Devices (IEDs) from liberated areas, with a focus on its infrastructure, in cooperation with local and national authorities, so that displaced citizens can leave their places of refuge and return to their homes.

Libya: Since Late 2017: 7 teams trained and equipped; Mentoring Operations

Iraq: Since 2016 – 13 Teams Directly Implementing

Regional Office (Tunis, Tripoli, Benghazi)
Operations Hub (Misrata)
Forecasted Operations Hub (Sirte)

Regional Headquarters (Erbil, Baghdad)
Operations Hub (Q West, Ameriyah)
Forecasted Operations Hub (Al Asaad)
Hazard Identification and Mitigation and HMA contributing to Stabilization

- Security
  - Frees critical assets for the fight
  - Controlling/Eliminating Weapon Materials
- Foreign Humanitarian Assistance
  - In line with political LOEs
  - Humanitarian – no political agenda
- Economic Stabilization and Infrastructure
  - Livelihood and critical infrastructure repair
  - Victims Assistance, returning land to use
- Rule of Law
  - Counter Proliferation; forensics
  - National Mine Action Centers; Civil Authorities
- Governance and Participation
  - Election Support, Key Service provision
  - Long Term Capacity
  - Advancing underrepresented demographics

Illustrative Outcomes from Stabilization Enabling Clearance

GOVERNANCE

• More than 1 million IDPs returned to Anbar/ Ramadi since clearance commenced in April 2016, according to Ramadi’s Mayor.

• Regional Water Treatment Plant and 40 Generator Sites Cleared, providing more than 10 megawatts of power for Ramadi’s critical infrastructure and potable water for 350,000 people. Waste treatment plant will serve 500k people.

• Low cost, community housing clearance has supported repopulation – “Special City” In Ramadi will house 1,000 families.

• Water pipeline will serve thousands in KRG when repaired after IED clearance.

• Anbar University: Clearance allowed classes to resume October 16 for 10,000 students; Mosul University: clearance allowed reopening of dormitories, classroom space, labs and allow for 11,000 students to safely traverse campus.

LIVELIHOODS

Hamam Al Alil Cement Factory – 570 Employees, 1500 ton/day of concrete produced

Anbar Ceramics Factory – 700 Employees, Projected 5m USD monthly generated, 50m USD in international investment

Mosul Supergrid – Power to 664,000 people

SECURITY

• Clearance efforts removed and disposed of more than 52,000kg of explosive material, ensuring it cannot be repurposed into weapons or IEDs.

• Clearance teams searched and cleared multiple IED production facilities including Uparmored VBIED assembling facility in Ninewa.

• Device information, samples, and employment trends have been shared with CFLCC and IA counterparts to enhance security and safety for final ISIS confrontations and clearance.
Case Study: Ramadi Medical Center
## Initial and Transformation Phase Implementer Challenges

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<th>Challenge</th>
<th>Best Practice</th>
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| 1) Low Risk Acceptance but resource constrained                           | Low Tech/ Cost Innovations (disruptor, COTs)  
Using time/daylight to advantage  
Integrate with traditional HMA assets when able                             |
| 2) Complete Area Clearance and Rubble                                     | Share/discuss lexicon with kinetic units  
Uparmored Heavy Equipment                                                  |
| 3) Lack of Universally Recognized Standards for implementers              | Skills validation for all operators  
Contribution to NATO, UN, National Standards  
Mentoring on incidents                                                     |
| 4) Site Security (on operations and while unattended)                      | Utilize local authorities for outer cordon  
Training with security on scene protocols  
Low tech ground disturbance detection; UAVs                                 |
| 5) CBR and TIC/TIM Hazards                                               | Integrating CBR survey, emergency decon capability  
Human Remains protocols                                                    |
| 6) Structural Clearance and Confined Spaces/ Tunnels                      | Structural Assessments/engineers  
SbT Technologies/TTPs                                                       |
| 7) Tasking flow                                                           | Integrate early with Stabilization Planners  
Use beneficiary demographics to avoid playing politics  
Media and messaging                                                         |
| 8) Mission Creep                                                          | Tie in with stability planners  
Include ‘hazards’ language in agreements                                    |
Explosive Hazards

Complex design

Anti-Lift in main charge

Crush wire switch

Variety of Sizes

Pre-Packaged with Instructions

Indiscriminate (Vacuum w/anti-lift)
Placement and Complexity

KEY – RAM_123 IED IN SITU
A 30Kg GAS CANISTER MAIN CHARGE
B VOIED DETONATOR LEADS
C 300mm COPPER ANTENNA (Ae)
D ANTI-LIFT SWITCH (BENEATH ROCK)
E CRUSH WIRE BEAD
F VOIED CABLE CONNECTORS
Placement and Complexity

- **9V Battery**
- **Anti-lift Switch** (containing 9V battery)
- **Copper Antenna** (length 300mm)
- **Cable Connector**
- **Crush Wire Switch** (length 2700mm)
- **Radio Controlled Receiver** (containing 2x 9V battery's)
- **Double Detonator Configuration**
Looking Forward

- Standards (DDESB, UN, NATO, IATGs)
- CBR Hazard mapping, security, mitigation
- Technical Exploitation Capacity Building (for IEDD)
- Advanced UAV/Robotics and life cycle support
- Tunnels/ SbT (Airport, etc)
- HN Capacity/ Civil Authorities
- PSSM

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Questions/ Contact info:
Jordan Wilhelm
Jordan.Wilhelm@janusgo.com
202 317 0128