



# International

BIOLOGICAL THREAT REDUCTION

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# Ground Rules

- The scenarios are completely fictional
- Open and honest communication is encouraged
  - Not the forum to criticize or assign blame
- Allow colleagues to share their views and experiences
- Focus on how the system and response would function in reality, day to day



# Scenario Objectives

- Identify key questions that need to be addressed and responsible authorities to contact during a disease outbreak event, including civilian authorities
- Differentiate roles and responsibilities for military and civilian authorities
- Match potential indicators of presence of biological threat agents to corresponding scenario elements
- Identify stakeholders to categorize intelligence indicators as either health or security
- Select avenue for military engagement of other government stakeholders with expertise in the collection, handling, storage, and characterization of infectious disease agents and toxins
- Address the complimentary role that the military, public health, and law enforcement communities may play in response to an incident
- Identify state of a deliberate biological release
- Determine appropriate entities to address discovery of potential deliberate biological release



# Scenario A-Preparedness

- The Director of Military Medical Services is invited to participate in a WHO-EMRO conference.
- After review of disease outbreak plan, the director believes it may be incomplete.
  - Delivery of health services to those infected in the military isn't addressed
  - Coordination with Ministry of Public Health and Population department?
- To alleviate his concerns, the director believes the next step is to conduct a coordinated exercise to test the Military Medical Services' readiness to respond to a disease outbreak.



# Scenario A-Questions

- Assign exercise responsibilities to stakeholders at the local level
  - Who will be in charge of the exercise?
    - What will this person's or organization's responsibilities be?
  - Which stakeholders should be involved in the exercise at:
    - The local level?
    - The governorate level?
    - The national level?





# Scenario A-Questions

- Assign exercise responsibilities to stakeholders at the governorate level
- Assign exercise responsibilities to stakeholders at the national level
- How do civilian exercises differ from military exercises? Where may they overlap?



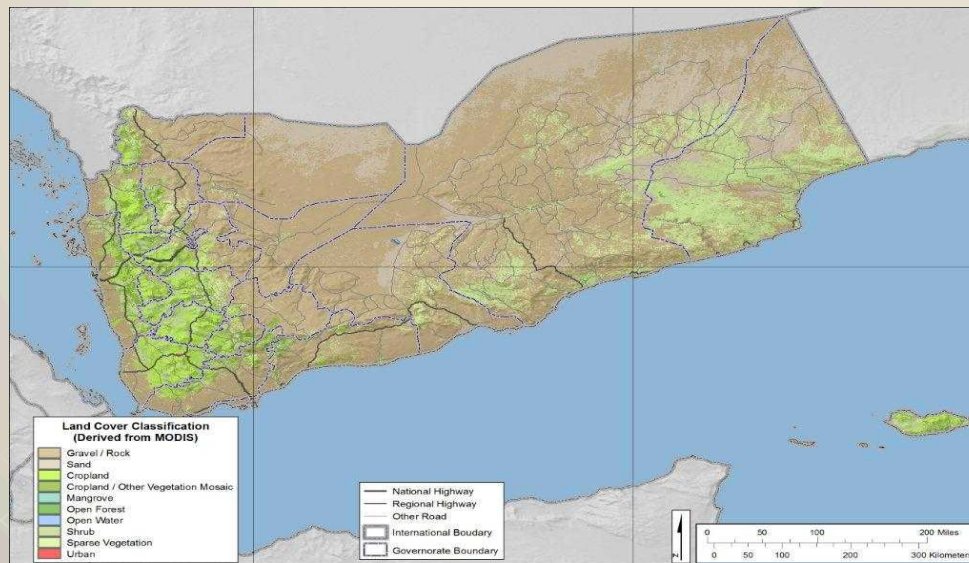
# Scenario A: Activity

- In your groups, write a three or four sentence fictional scenario that would satisfy the requirements of the preparedness exercise
- Address:
  - Military Medical Services' readiness to respond to a disease outbreak
  - Coordination with Ministry of Public Health and Population department
  - Delivery of health services to those infected in the military
  - Delivery of health services to those infected in the general public



# Scenario B-Initial Event Detection and Notification

- The Yemeni Army is conducting a combat training event
  - 20 soldiers
  - Multi day event with a series of long hikes
- After Day 1, the troops set up camp along a flood plain for access to water





# Scenario B-Initial Event Detection and Notification

- 40 free ranging sheep are along the plain and around the camp
- Despite the large area, many of the sheep aren't walking around
- A few curious sheep and precocious lambs approach the troops
- The animal's eyes are yellow tinged
- Many foul smelling piles of red and mucous covered tissues



# Scenario B-Initial Event Detection and Notification

- On day two, soldiers continue to hike along the flood plain to ensure a water source for camp each night
- By day three, six of the soldiers are suffering from headaches and flu like symptoms
  - Fever, nausea, joint pain
- The commanding officer believes these are just minor illnesses probably caused by mild cases of food poisoning
- He reminds the troops to properly sterilize their equipment and to boil their water



# Scenario B-Questions

- Are military personnel informed about common infectious diseases that can infect livestock? Infect humans?
  - Could enlisted personnel identify signs and symptoms and recognize a potential infectious disease threat?



# Scenario B-Evaluating a biological threat

- From the information given within the scenario, what potential indicators of the presence of biological threat agents are present?
- List supporting patterns that indicate the potential presence of a biological threat agent.
- Based on the information in the scenario, list various possibilities describing what could be taking place.





# Scenario B-Questions

- Based on the information in the scenario, can you determine if there is a risk to the health of unit personnel?
- Are personnel trained on what actions to take if they suspect an infectious agent is present in their environment?
- Would the observations made by the unit be communicated to anyone outside the unit at this point? If so, which units/organizations would be contacted, and why?





# Scenario B-Questions

- To which clinic or hospital would sick soldiers report in this situation?
- What preventative measures are taken to prevent the introduction or spread of an infectious disease or biological threat agent within the military?
  - What precautions are taken by medical/hospital personnel in this situation?
  - Who issues these commands within MoD, and how are they communicated through the MoD?
  - What type(s) of equipment and supplies are necessary? Are they available?
    - Who is responsible for distributing this materiel, and how?
  - Are personnel trained to execute these measures effectively? What additional training is required?



# Scenario C-External Communication and Risk Assessment

- After continuing the exercise into days three and four, even more soldiers have become ill
- Of the six soldiers that initially complained of discomfort and headaches, the condition of four has worsened
  - Vomiting blood, passing bloody stools, purple discoloration on parts of the skin



# Scenario C-External Communication and Risk Assessment

- Due to their worsening condition, the commanding officer requests a medical evacuation for the four severely ill soldiers
- Before day four is complete, eight more soldiers are complaining of headaches and flu like symptoms
- Believing that conditions are deteriorating and the health of his soldiers compromised, the commanding officer alerts the base of operations for the need for assistance



# Scenario C-Questions

- What military authorities collect surveillance data on infectious/zoonotic disease? What information is collected? Clinical signs, geographic location, origin, related cases in proximity. Is information about infectious/zoonotic diseases shared with other ministries or international organizations?
- The military hospital physician cannot recall seeing a similar case in the past, but suspects the soldiers may be suffering from Rift Valley Fever (RVF). Tests for more common viral infections are negative. He suggests notifying the Ministry of Health, and recommends that clinical samples be sent to the national central public health laboratory for more specialized testing.
  - Who is responsible for contacting the MoH in this situation?
- Are protocols for the sharing of samples between MoD and MoH already established? If so, are personnel trained on the protocols?





# Scenario C- Communication

- Are protocols for the sharing of patient-related or situation-related information between MoD and MoH already established? If not, what information may be sensitive and require special handling?
- Is there a mechanism for communication between infectious disease epidemiologists in MoH and medical personnel in MoD?





# Scenario C-Sample transport

- Who is responsible for transporting the samples to NCPHL? How will samples be secured for transport? Is there a process to ensure chain of custody?
- Will environmental samples be collected from the area where the unit encountered the situation?
  - If so, what types of environmental samples will be collected?
  - Who will collect the samples?
  - What precautions will be taken by the collection personnel?
  - How will samples be secured for transport?
  - Will MoD facilities perform any analysis of environmental samples? How will results be shared?



# Scenario C-Diagnosis and Response

- NCPHL testing reveals that the soldiers are infected with RVF. In addition to the test results, the NCPHL provides information on the agent to the MoD (develop RVF fact sheet and translate)
  - Are the characteristic indicators of RVF consistent with field observations?
  - Are clinical signs exhibited by the soldiers consistent with RVF infection?
- What is the mode of transmission? Is there a potential for further spread?
- Who else may be infected, or become infected, as a result of this outbreak?
- What options exist for prophylaxis and treatment?
- Based on the additional information in this scenario, review the list of possibilities and cross out the ones that are no longer relevant.
  - Is there any additional evidence to indicate whether this is a naturally occurring or deliberate event?
  - In your opinion, what is most likely occurring here?



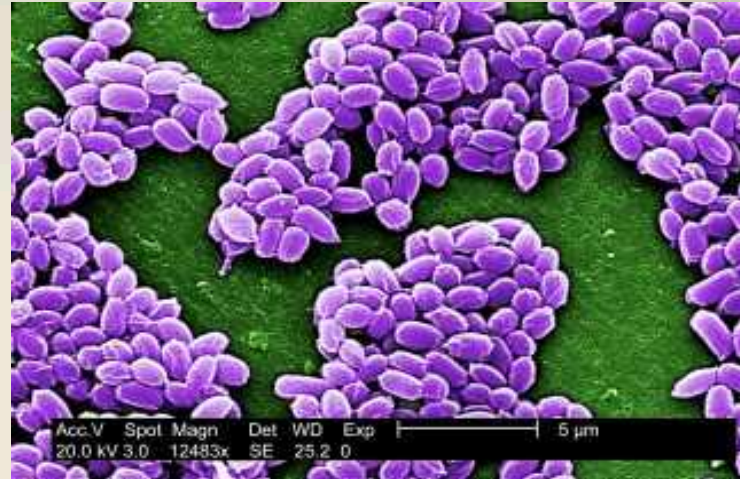
# Scenario D-Public Claim of Responsibility by Non-State Actor

- A known terrorist organization releases a video message to the Associated Press, BBC, and Reuters news organizations.
- In the video, a regional commander for the organization mourns the death of a member of their leadership during a raid on a training facility.
- He states the organization has taken retaliatory action against the Yemeni armed forces for the death.



# Scenario D-Public Claim of Responsibility by Non-State Actor

- The commander states that another large scale coordinated attack in country with the release of anthrax slurry from large aerosol spraying devices disguised in trucks.
- He hopes that this attack will be ongoing and spreads to all the citizens of Yemen.





# Scenario D-Questions

- Is the action claimed by the actor a violation of Yemeni law? If so, which law(s)?
- Which organization in Yemen has responsibility for assessing domestic threats?
- How will domestic threat information be shared between local, provincial and national agencies?
- Which organization in Yemen would lead an investigation of and response to a terrorism-related event where MoD personnel are affected?





# Scenario D-Questions

- Are protocols for the sharing of patient-related or situation-related information between MoD and other security and law enforcement agencies already established? If not, what information may be sensitive and require special handling?
- Will forensic analysis of clinical or environmental samples be required?
- If so, are protocols in place to perform forensic analysis? Do these protocols differ between military and civilian organizations?
- Who is responsible for performing this analysis?
- Who would be responsible for coordinating public communication?
  - What initial messages would be issued to the public? To the MoD?

