



IED-TM Module

# IED-TM Fundamentals





# Terminal Learning Objectives

Each student will understand  
and discuss IED-TM  
fundamentals and cycle.



# Overview

3.1 Introduce the 5Cs that tactical forces can use

3.2 Review local cultures and influences in ERW/IED laden environment

3.3 Understand safe response to UXO from indirect fire or legacy events



# Overview

3.4 Understand tactical response to IED/mine strike and notional requirements from higher headquarters

3.5 Understand vulnerable/checkpoints and the notional requirements from higher headquarters needed to support tactical force movements

3.6 Issuing a threat assessment to tactical force



## 3.1 Introduce the 5Cs Tactical Forces Can Use

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# Enabling Learning Objectives

State the 5Cs and explain how they may be employed by tactical forces.



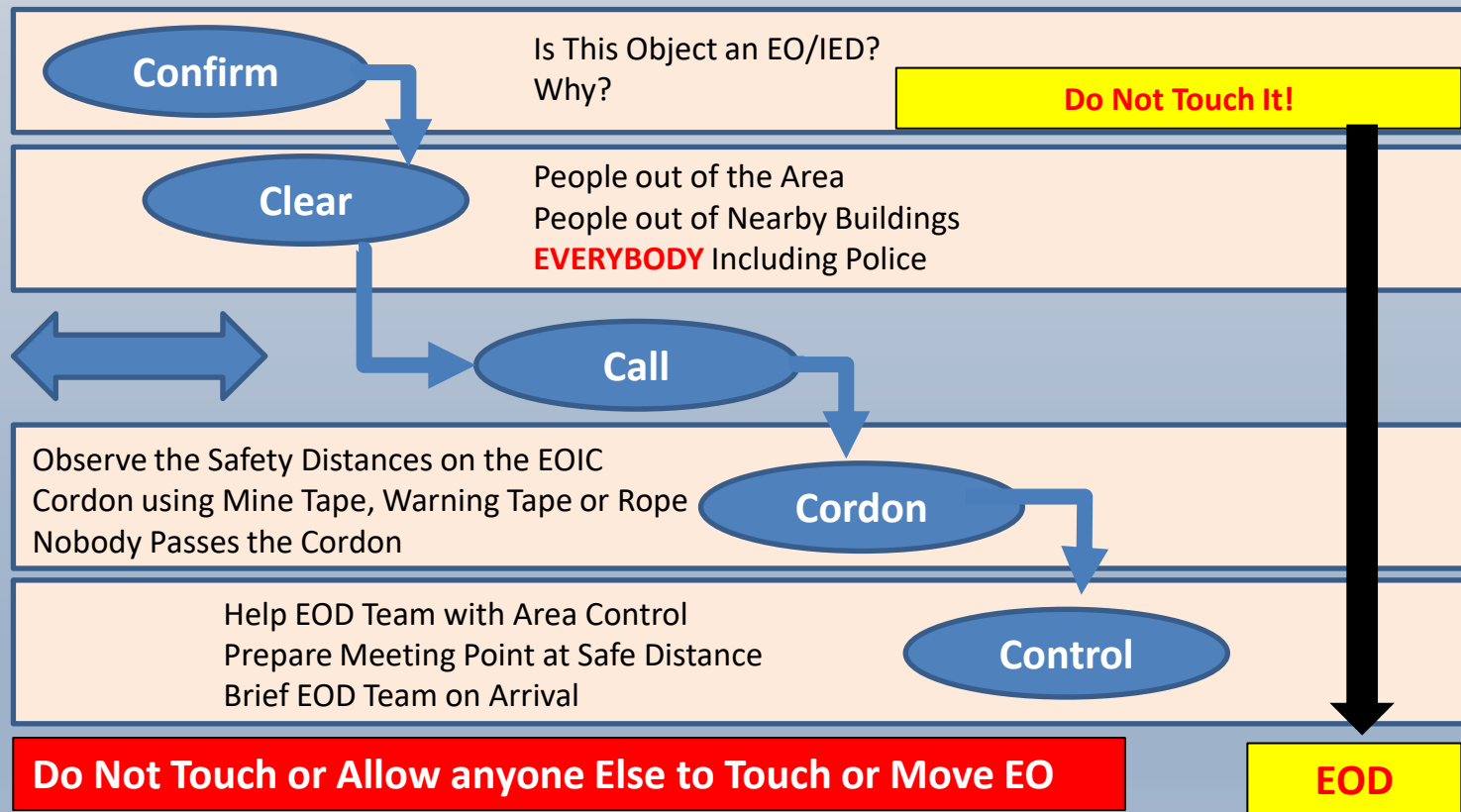
## The 5Cs

- 1 - Confirm
- 2 - Clear
- 3 - Call
- 4 - Cordon
- 5 - Control



# The 5Cs

## First Response to an EO/IED Call Out







# Actions On Scene

Confirm:

- Visual
- Tasking
- Distances
- Secondaries
- Minimum numbers
- If unsure?
- Reporting














# Actions On Scene



**UNMAS**

## Evacuation Distance Guide

Threats	Explosive Weights Kg/lbs	Min Evacuation Distance M/Ft	Suggested Evacuation Distance M/Ft
Pipe Bomb	 2.3kg/5lbs	130m/430ft	375m/1200ft
Suicide Bomber	 9kg/20lbs	150m/500ft	525m/1700ft
Briefcase/Backpack	 23kg/50lbs	190m/600ft	575m/1900ft
Compact Car	 230kg/500lbs	270m/870ft	600m/2100ft
Full Size Car	 460kg/1000lbs	300m/1000ft	725m/2400ft
Van/SUV	 1800kg/4000lbs	375m/1275ft	1160m/3800ft
Small Truck/Moving Van	 4600kg/10000lbs	440m/1450ft	1560m/5100ft
Water Tanker	 13600kg/30000lbs	525m/1725ft	2410m/7900ft
Semi Trailer	 27200kg/60000lbs	575m/1875ft	2840m/9300ft

**CALL EOD AS SOON AS POSSIBLE**



# Actions On Scene

## Cordon:

- Robust
- Safety
- Think forensics
- Manpower
- Routes
- Patrols
- Reinforcements





# Action On Scene

Control:

- Incident Control Point (ICP)





# Actions On Scene

ICP criteria:

- ICP should have line of site to the incident
- ICP should have cover and hard protection if possible
- ICP should be of sufficient size:
  - EOD
  - Additional troops, witnesses
  - Police
  - Medical



# Action On Scene

## Control:

- ICP
- Cordon control
- Traffic
- Agencies
- Communications







# Action On Scene

## Check:

- Enduring
- Checks
- Communications





# Questions?





# Quiz

1. What are the 5Cs?
  - *Confirm, Clear, Call, Cordon, Control.*
  
2. The Incident Control Point should be large enough to accommodate \_\_\_\_\_.
  - *EOD, additional response assets, witnesses, security, medics.*
  
3. A \_\_\_\_\_ should be performed on all witnesses.
  - *Search.*



## 3.2 Review Local Cultures and Influences in ERW/IED Laden Environments

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# Enabling Learning Objectives

Analyze generic local cultures and their potential influences within an ERW/IED laden environment.



# Behaviour

Local behaviour can give a lot of clues about minefields, UXO-contaminated areas or possible IED attacks.



# Environment





# Threat Actors

## Introduction:

An open mind and close eye on intelligence reports in your area of operation is needed to ensure safe accomplishment of mission goals.





# Threat Actors

## Perpetrators:

- State Sponsored
- Non-State Groups





# Threat Actors

## Threat Actor – Causes:

- Intimidation
- International attention
- Local/Internal social standing
- Cultural tolerance of violence
- Perceived illegitimacy of state
- Religious beliefs
- Nationalism
- Mental health
- Financial support for family







# Threat Actors

Resourcing

Obtain Funding

Develop Operations

Gather and Provide  
(Material/Personnel)

Improve Concept of  
Operations, Tactics and Devices

Plan Attack

Observe and Evaluate

Egress/Evade Capture

Disseminate Information  
and Propaganda

Feedback and Iteration



## Operating Environment (OE)

- Mission Commanders must understand OE
- OE impacts all mission aspects
- Consider long-term implications to locals
- Determine acceptable level of risk



# Questions?



# Quiz

1. Is there a time when IEDs should not be a concern?

- *An IED attack or an ambush cannot be excluded, at any time.*

2. What are two reasons why a group or individual may choose to employ IEDs?

- *Intimidation, International Attention, Local/Internal Social Standing, Cultural Tolerance of Violence, Perceived Illegitimacy of State, Religious Beliefs, Nationalism, Mental Health, Financial Support for Family.*



## Quiz

### 3. What is the definition of operating environment?

- *The operating environment is a composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander.*



### 3.4 Understand Tactical Response to IED/Mine Strike (Mounted and Dismounted) and Notional Requirements From Higher Headquarters

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# Enabling Learning Objectives

Describe IED/Mine Strike incident response procedures and notional requirements from higher headquarters.



# Mission Variables

- Planned v. emergency response
- Each mission has different considerations







# Mission Variables

Mission variable determine:

- Type of tools required
- Actions on scene
- Support needed to accomplish the mission



# Response Considerations

- Type of EOD Support required
- Response times
- Dedicated EOD team security
- EOD support to Route Clearance Teams
- Mounted v. Dismounted Operations
- Counter-RCIED and robotics
- EOD robotics



# IED Response Requirements

In addition to the 5Cs:

- ICP should have own cordon in place
- Unknown persons escorted
- ID checked and possible search
- All witnesses should be searched
- Check baggage and equipment outside of ICP
- Procedures apply to mounted and dismounted responses



# Minestrike Response Requirements



Dismounted:

- **M** Stop all Movement
- **I** Inform others
- **N** Note the area
- **E** Evaluate
- **D** Do not move, wait for help



# Mine Strike Response

## Mounted:

- **M** Movement stops Immediately
- **I** Inform others
- **N** Note the area
- **E** Evaluate
- **D** Do not move





# Notional HQ Support

- Establish policy and distribution of IED-TM assets
- Monitor workloads and priorities
- Act as POC for intelligence coordination
- Establish communication guidelines for all assets
- Coordinate supporting activities



# Questions?



# Quiz

1. How can IEDD team response times be reduced?

- *Provide them with a dedicated security element.*

2. Where should bags found during an incident response be inspected?

- *Away from the ICP.*

3. Should vehicles move to the side of the road after a mine strike?

- *No.*





### 3.5 Understand Vulnerable/Check Points and the Notional Requirements from Higher Headquarters Needed to Support Tactical Force Movements

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# Enabling Learning Objectives

Explain vulnerable / checkpoints and notional requirements from higher headquarters needed to support tactical force movement.



# Vulnerable / Check Point Requirements

## ACTION FOR PEACEKEEPING





# Operational Level Support

- Understanding
- Pursuing
- Preventing





# Tactical Level Support

- Protecting
- Preparing

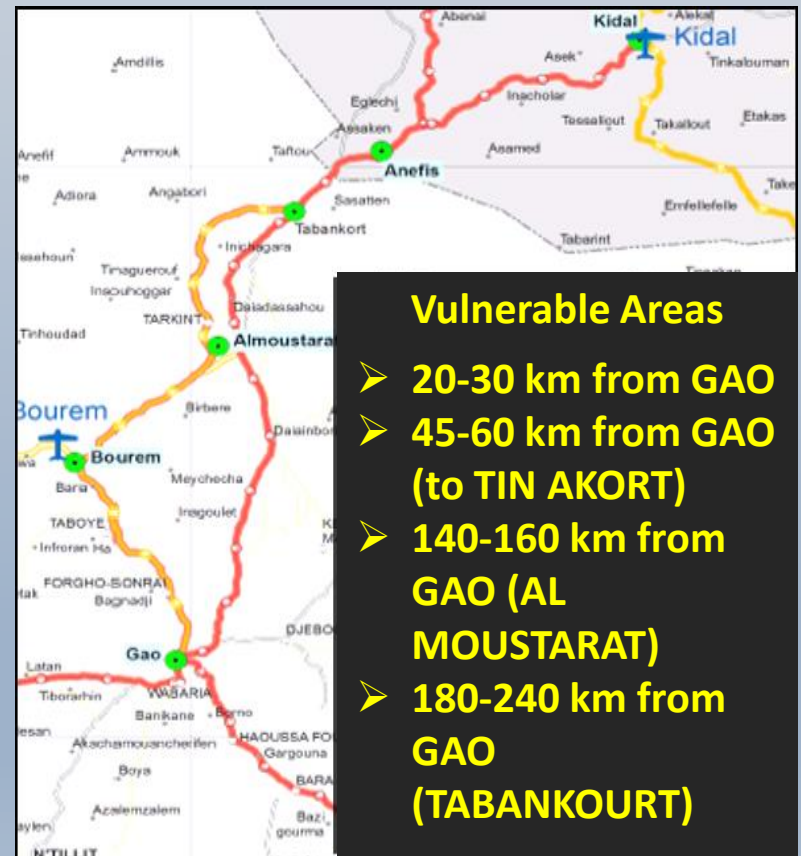






# Mission Planning

- Check previous routes used
- Map reconnaissance
- Include the time to check
- Include extra time
- Remember to vary your timings





# IED Indicators

## CAGE (C.A.G.E)

- Channelling
- Aiming Markers
- Ground
- Environment





# Vulnerable Points



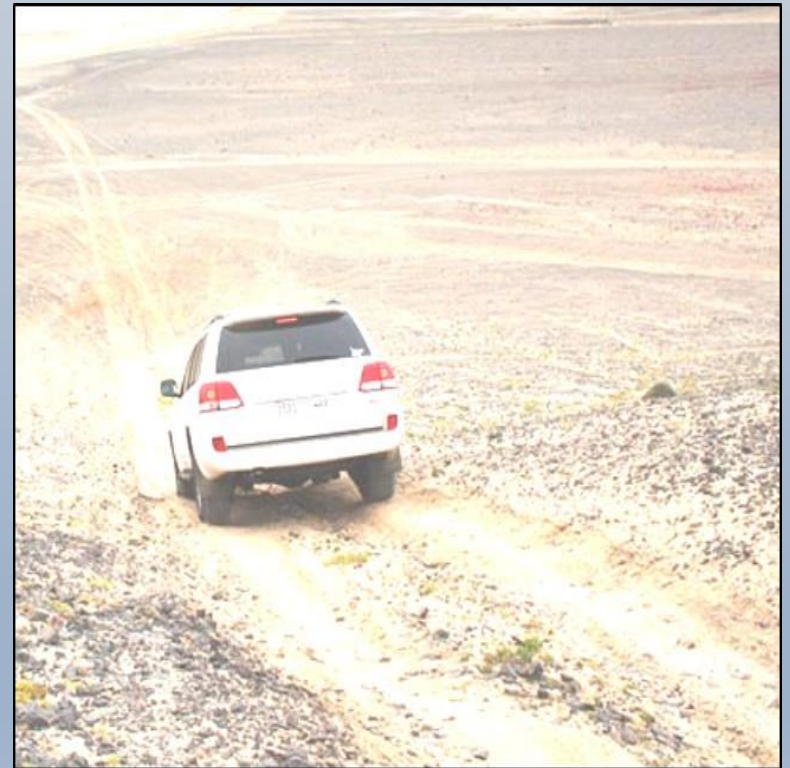
- We are vulnerable when we are forced to use a predictable route
- We are vulnerable when we are forced to slow down making us an easier target for command devices
- We are vulnerable in areas of previous attacks





# Vulnerable Points

- Uphill / Downhill Slopes
- Corners





# Vulnerable Points

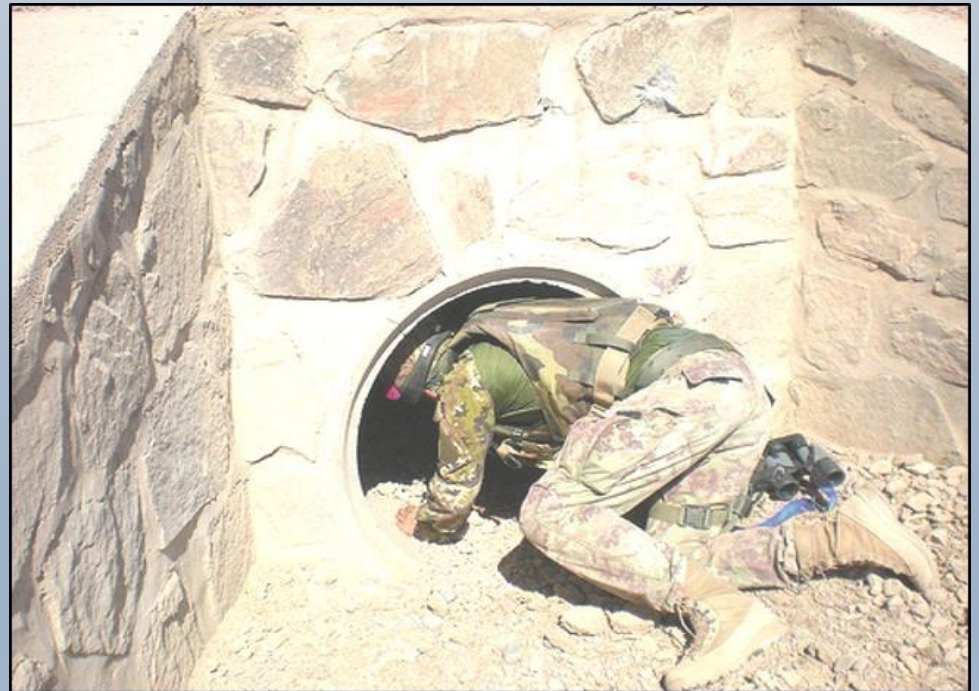
## Bridges





# Vulnerable Points

## Culverts





# Vulnerable Points

## Road Junctions







# Vulnerable Points

Soft ground





# Vulnerable Points

Linear features





# Vulnerable Points

Previous attack areas





# Basic Principles



- Plan the route in advance using all available information:
  - Maps
  - Imagery
  - Previous patrol reports
  - Previous incident Reports
- If possible identify VPs in advance and plan accordingly





# Basic Principles

Units must vary:

- Their timings
- Routes/Destinations
- Information security
- Record routes of mission





# Basic Principles

## Dispersal:

- Ensure there is space between vehicles to react to incidents (Approx 25m)
- Ensure any specialist equipment (mine detectors etc) is dispersed among the convoy
- Do not overload vehicles





# Basic Principles

- Ensure all equipment is fitted securely inside and outside of vehicle
- Use Personal Protective Equipment (including seat belts)
- Ensure crew served weapons are manned
- Check communications before deployment
- Understand emergency procedures





# Questions?



# Quiz

1. What forms of information should be used when planning a route?

- *Maps, Imagery, Previous patrol reports, Previous incident Reports.*

2. If possible, how much distance should be between vehicles in a convoy?

- *25 meters.*



# Quiz

3. Special equipment should be \_\_\_\_\_ in a convoy.
- *Dispersed.*



## 3.6 Issuing a Threat Assessment to Tactical Force

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# Enabling Learning Objectives

Discuss considerations for issuing a threat assessment to tactical force.





# Introduction





# IED Threat Assessment

Achieved through a Combination of Tasks at:

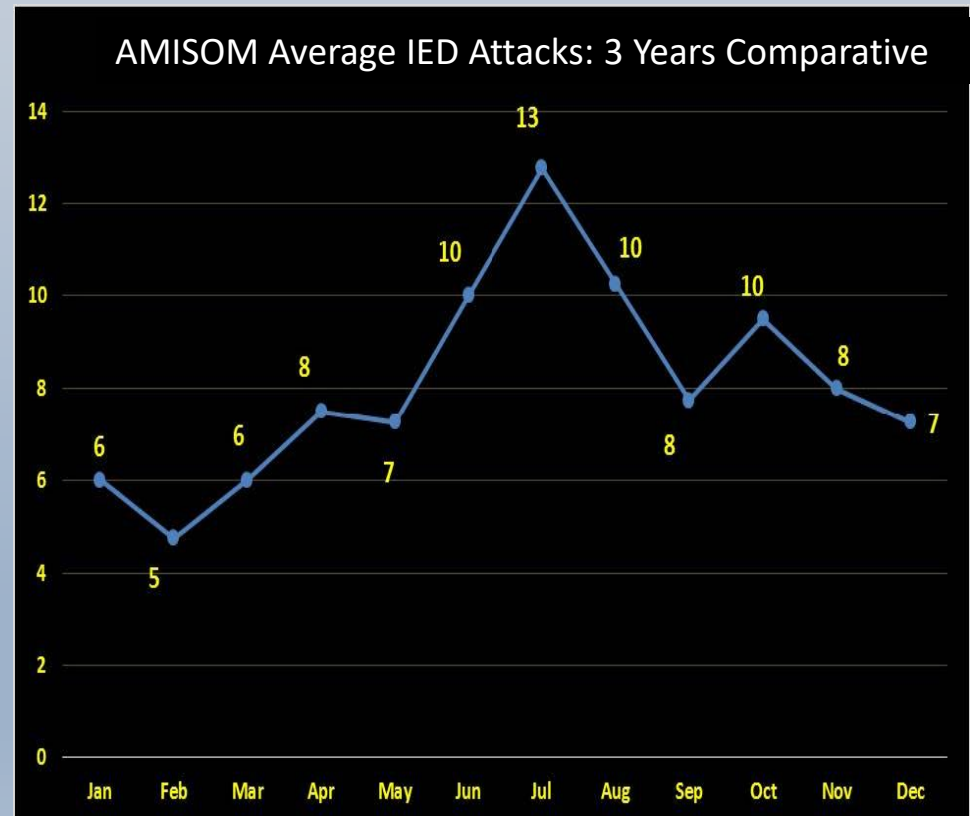
- Strategic level
- Operational level
- Tactical level





# Pre-Deployment Threat Analysis

- Performed before and during reconnaissance visits
- Information on existing threat and threat mitigation measures





# Information Sharing & Coordination



- Enhances situational awareness
- Supports IED-TM campaign
- Built on trust and mutual respect





# Uniformed Capabilities

- Capabilities will vary between missions
- Identify specific resources available
- Plan & budget for IED mitigation requirements





# Force Headquarters (FHQ) Responsibility

FHQ is required to carry out detailed assessment of the IED threat in the mission area through intelligence collection effort and identification of uniformed capability requirements for undertaking the IED mitigation effort.



# Staff Functions and Tasks

## Key Tasks:

- Designate IED advisor
- Establish IED-TM cells
- Employ IED-TM units
- Standardize reporting
- Issue operating guidelines





# IED Advisor

- Advise and assist military/police commander on all C-IED matters
- Advise on IED training to units
- Update the IED and explosives hazard information
- Assist commanders of other headquarters in the mission area in IED threat mitigation planning on as required basis
- Advise on force protection electronic counter measure (FPECM) matters





# Establishment of IED-TM Cells



- Intelligence
- Operations
- Civil Military Cooperation (CIMIC) & Information Management
- Training & Evaluation
- Liaison Officers
- Embedded Staff



# IED-TM Units

- Search teams
- EOD teams





# IED-TM Unit Tasks

- Route clearance
- Urban area clearance
- Area clearance
- Entry Point Search
- Disposal of explosive ordnance finds





## Standardize d Monitoring & Reporting

### **Develops Overall Picture of:**

- Threat/hazard Situation
- Location of IEDs / EO
- IEDs found during mission
- EO type, quantity and incident site
- Residual risk
- IED intelligence
- Force workload
- Archival information



# Operating Guidelines

## Considerations:

- Preventative actions
- Render Safe Procedures (RSP)





# Questions?



# Quiz

1. What are the recommended cell that should be established to support IED-TM?

- *Intelligence, Operations, CIMIC & Information Management, Training & Evaluation.*

2. What are the aspirations information sharing and coordination?

- *Enhanced Situational Awareness, Supports IED-TM Campaign, Builds on Trust and Mutual Respect.*



# Quiz

3. What does standardized monitoring and reporting develop an overall picture of?

- *(Threat / Hazard Situation), (Location of IEDs / EO), (IEDs found during Missions), (EO type, quantity and incident site), (Residual Risk), (IED Intelligence), (Force Workload), (Archival Information).*



# Module 3: IED-TM Fundamentals – Wrap up





# Module 3 – Conclusions

- TLO: Each student will understand and discuss IED-TM Fundamentals and Cycle.
- ELO 1: State the 5Cs and explain how they may be employed by tactical forces.
- ELO 2: Analyze generic local cultures and their potential influences within an ERW/IED laden environment.
- ELO 3: Describe and understand Unexploded Ordnance (UXO) response protocol from indirect fire or legacy events.



# Module 3 – Conclusions

- ELO 4: Describe IED/Mine Strike incident response procedures and notional requirements from higher headquarters.
- ELO 5: Explain vulnerable / checkpoints and notional requirements from Higher Headquarters needed to support tactical force movement.
- ELO 6: Discuss considerations for issuing a threat assessment to tactical force.



# Terminal Learning Objectives

The student will understand and discuss IED Threat Mitigation (IED-TM) principles, and how to utilize IED information to enhance the IED-TM process.



# Overview

4.1 Understand the Fundamentals of IED–TM

4.2 Understand the IED-TM Cycle

4.3 Understand Technical Exploitation Process and Importance of Evidence Collection



# Overview

4.4 Explain and Analyze  
Historical IED SIGACTs

4.5 Threats & Trends

4.6 Explain and Analyze  
Enemy TTPs

4.7 Coordinate Intelligence,  
Surveillance, and  
Reconnaissance



# Overview

4.8 Coordinate Research  
and Development

4.9 Conduct Route Analysis

4.10 Coordinate Convoy  
Procedures



4.4 Explain and analyze  
historical IED SIGACTs

4.5 Threats & trends

4.6 Explain and analyze Enemy  
TTPs





# Enabling Learning Objectives

Understand event analysis, enemy tactics, techniques, and procedures (TTPs) and threats and trends based on historical significant activities (SIGACTS) and enemy TTPs.



# IED Event Analysis

## Event Analysis

- Recording
- Reporting
- Evidence collection
- Evidence ownership





# Enemy TTP Analysis

## TTP Analysis

- Enemy capability, intent, and ground use determine both enemy's TTPs and Force Protection (FP) vulnerabilities.
- Enemy TTP analysis
- Develop strategies to limit the damage of IEDs.



# Threats & Trends

## Threats & Trends

- IED threat is an evolutionary threat.
- Retains relevance through ingenuity in manufacturing and deployment methods.
- Easy access to IED making methods (mainly online), low tech IEDs can transcend into high-tech.



# Questions?



# Quiz

1. What will event analysis help us to understand?
  - *Event analysis will help to determine aggressors' TTPs and to track the migration of these TTPs across areas of concern.*
2. What is the benefit of understanding enemy TTPs?
  - *By properly analyzing the enemies TTPs, UN forces can work to develop strategies to limit the damage of IEDs.*
3. Why is the IED threat so much of a concern?
  - *The IED threat is an evolutionary threat.*



## 4.7 Coordinate Intelligence, Surveillance, and Reconnaissance - IED fusion feedback loop



# Enabling Learning Objectives

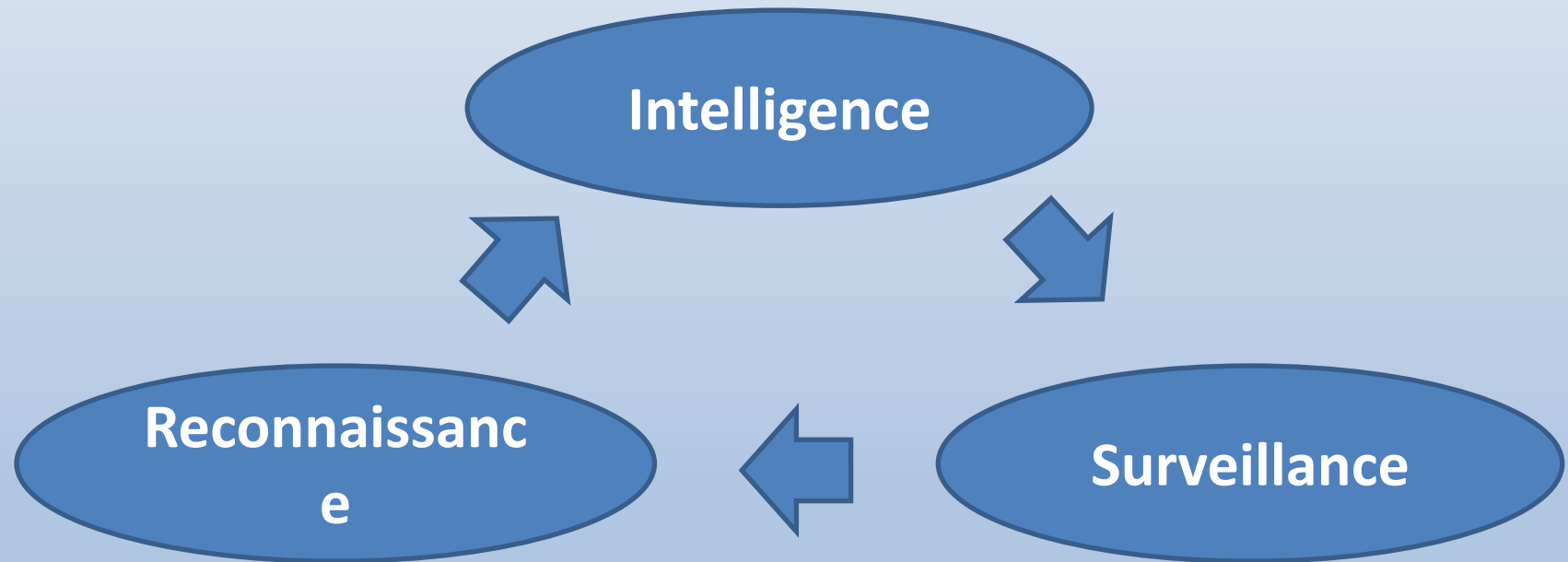
Understand the responsibilities of intelligence fusion.





# IED Fusion

All Sources Information Fusion Unit (ASIFU)





# Questions?



# Quiz

1. What are some examples of an IED network's activities and patterns of behavior?

– *Financing, Recruiting, Training, IED Construction.*

2. What are some examples of an IED network's lines of communication?

– *IED material supply sources, Supply routes, Communication networks, Facilities.*



## Quiz

3. Which asset links intelligence detection assets and other intelligence sources to IED related Priority Intelligence Requirements and decision points?

– *All Sources Information Fusion Unit (ASIFU).*



## 4.8 Coordinate Research and Development



# Enabling Learning Objectives

Understand how to coordinate Research and Development to mitigate IED threats.



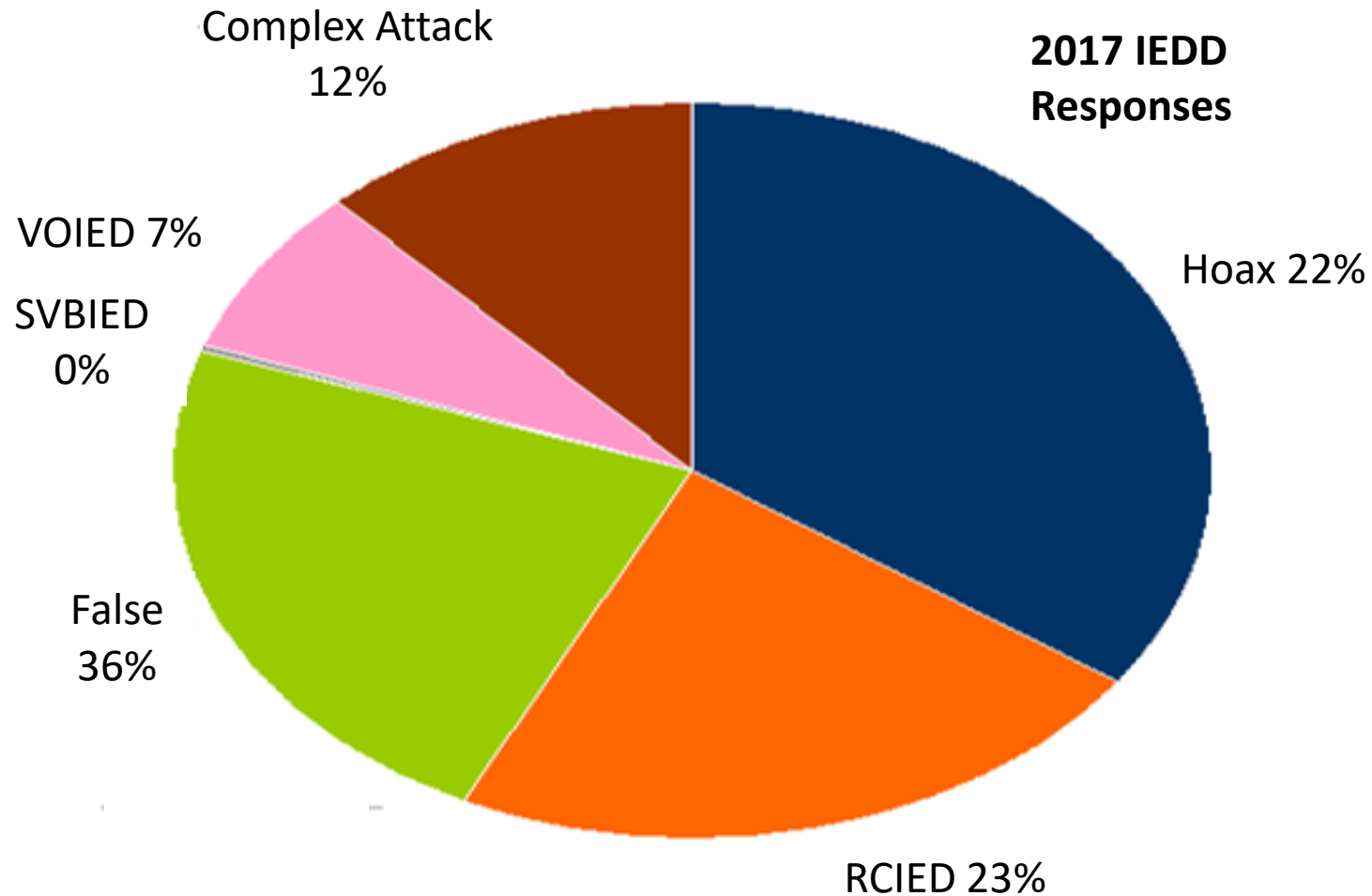
## Stages of Research & Development

- IED Trends
- Coordinate Resources
- Develop and Test Countermeasures
- Disseminate to Friendly Forces
- Monitor Effectiveness
- Re-Evaluate Needs



# IED Trends

## 2017 IEDD Responses







# Coordinate Resources

- Establish scope of needs
- Determine available resources and funding
- Set for production





# Develop and Test Countermeasures

- Idea generation and screening
- Market research
- Feasibility study
- Process development (small & large scale)
- Prototype development and testing
- Deliver



# Disseminate to Friendly Forces

Share useful information with other friendly forces.





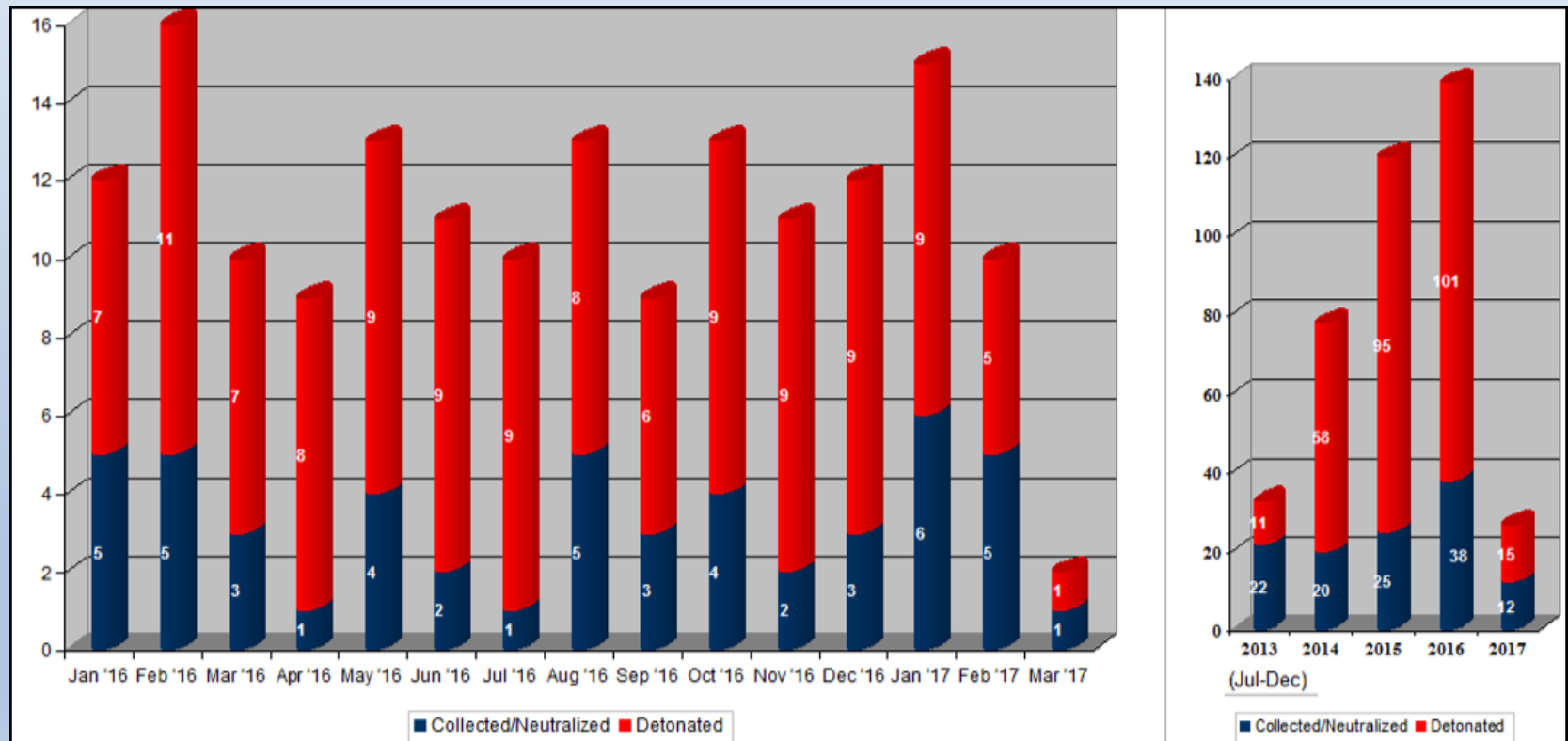
# Monitor Effectiveness

- Does product meet the initial demand?
- What works well?
- What needs improvement?
- What missing?





# Re-Evaluate Needs





# Questions?



# Quiz

1. What are the stages of R&D?

- *IED Trends, Coordinate Resources, Develop and Test Countermeasures, Disseminate to Friendly Forces, Monitor Effectiveness, Re-Evaluate Needs.*

2. If the product is determined to be useful, what is the next step?

- *Disseminate to other friendly forces.*



## Quiz

3. What should be considered when developing production goals?

- *Product specifications, amount, delivery timeline, training, sustainment.*





## 4.9 Conduct Route Analysis & 4.10 Coordinate Convoy Procedures



# Enabling Learning Objectives

- Understand route analysis for IED affected areas.
- Understand how to develop convoy procedures to mitigate the effects of IEDs.



# Route analysis

Travel and route planning:

- IED incidents generally require reconnaissance and preparation of an often-used route.
- Effective means to engage peacekeeping personnel and property.



# Mission Planning

- Check previous routes used
- Map reconnaissance
- Include the time to check vulnerable points (VPs)
- Include extra time
- Remember to vary your timings



# Probable IED Locations

IEDs may be placed anywhere. Common areas of IED emplacement include, but are not limited to:

- Road shoulders
- Culverts
- Potholes





# Probable IED Locations

- Unpaved roads
- In areas with restrictive terrain
- Piles of debris
- Abandoned vehicles
- Dead animals and human carcasses



# Probable IED Locations

- Rock piles, sand/ dirt piles, etc.
- Areas that slow, stop, or canalize vehicles
- Ambush sites
- Abandoned huts



# IED Indicators

## CAGE:

- Channelling
- Aiming markers
- Ground
- Environment





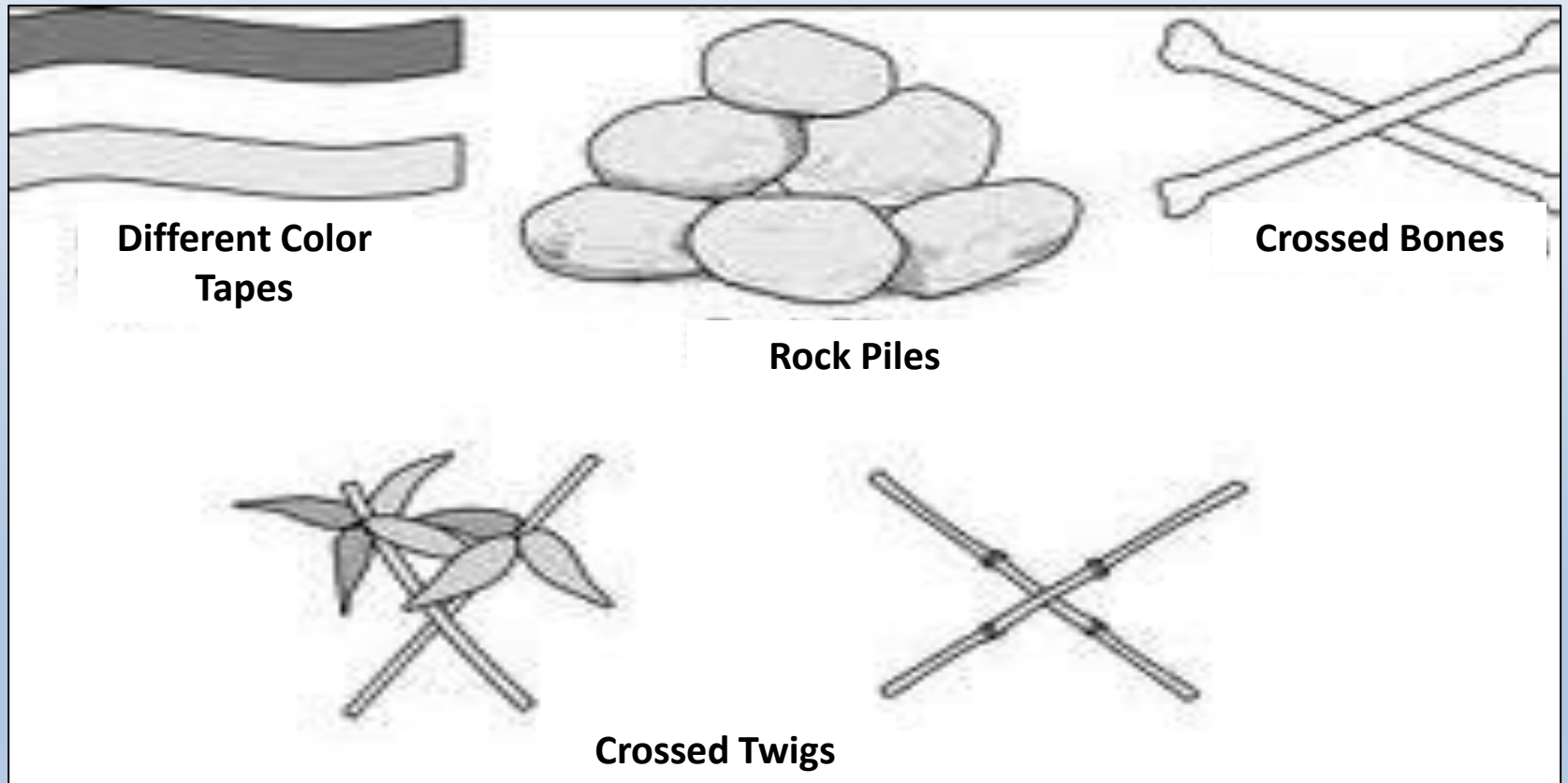


# Characteristics of IED Attack Site (Roadside)

- Regular patterns set by military and police forces during move.
- Channelization effect.
- Slow go terrain / check points.
- Site where IED can be easily placed and hidden.
- Aiming marker / clear line of sight.
- Key terrain that supports follow-on ambush.



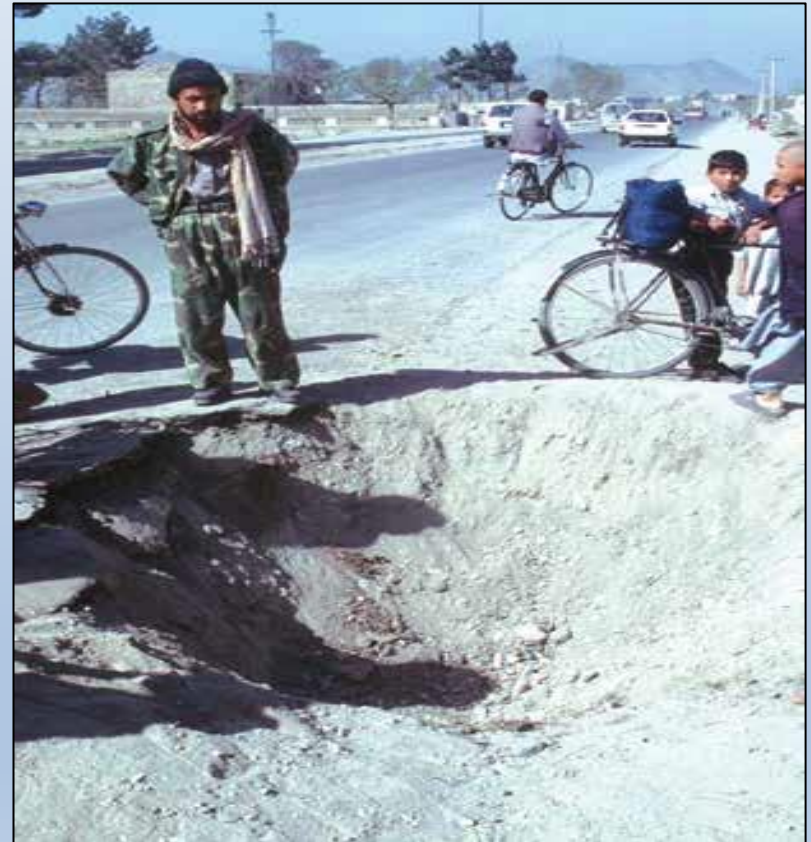
# Roadside IED Indicators





# Other IED Indicators

- Wires
- Freshly dug holes or pavement patching
- Obstacles and craters
- Signals as a convoy approaches





# Environmental Factors



- Other traffic
- Maintenance of your vehicle
- Condition of road



# Environmental Factors

- Weather
- Pedestrians
- Time of day
- Visibility





# Environmental Factors



- Animals
- Battle debris
- UXO

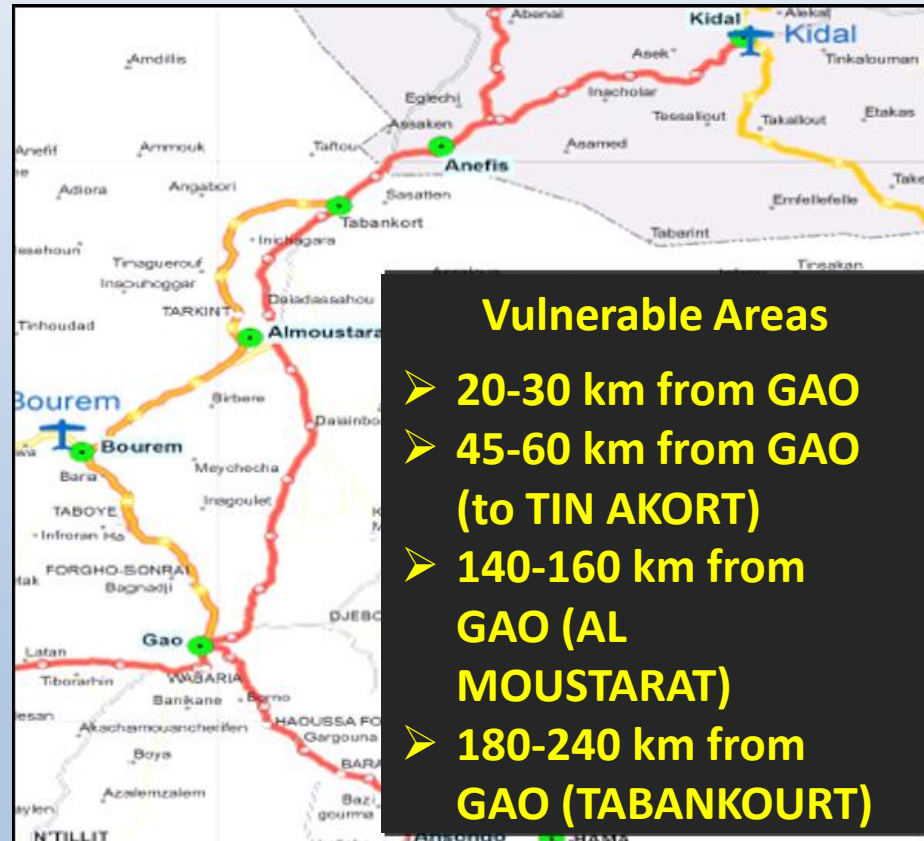




# Route Analysis Criteria

## Considerations:

- Safe havens
- Check points
- Phase lines
- Danger zones





# Route Analysis Criteria

## Safe Havens:

- Police stations
- Hospitals
- Government buildings
- Airports
- Military posts







# Route Analysis Criteria



## Choke Points:

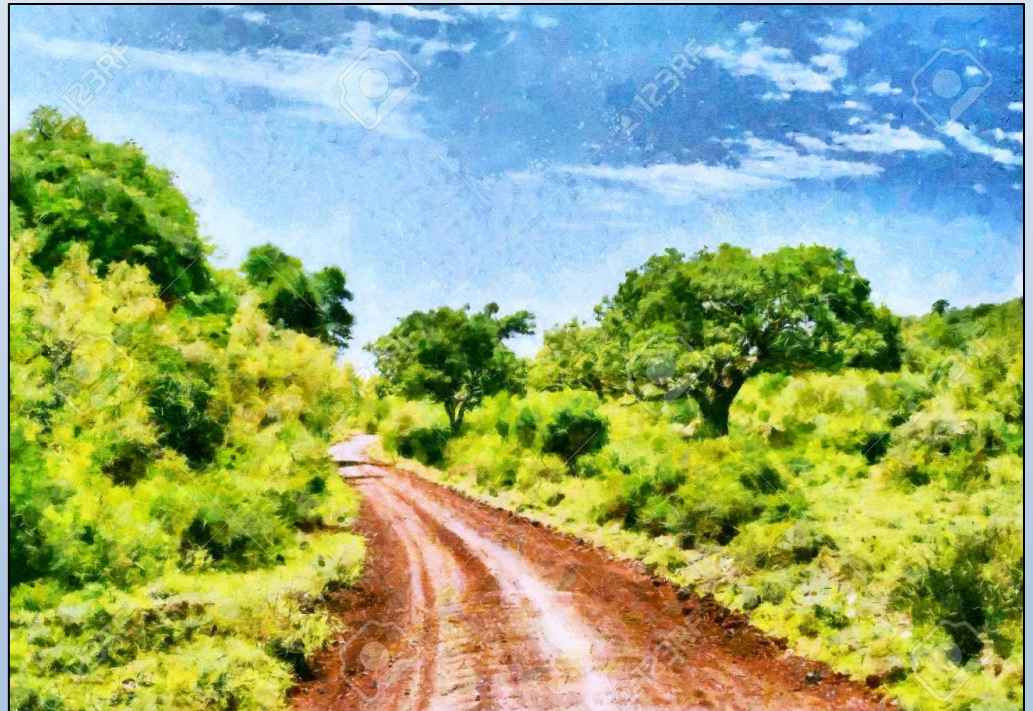
- Overpasses
- Bridges
- Congested traffic areas
- Intersections
- Sharp turns in road



# Route Analysis Criteria

## Danger Zones:

- Parks
- Forests
- Roads without an escape route





# Route Analysis Criteria

## Phase Lines:

- Major intersections
- Over/under passes
- Factories
- Any major landmark





# Questions?



## Training

Route Analysis Training in a UN peacekeeping context is focused on:

- Use of good information
- IED pattern recognition
- Identification of high risk routes
- Minimizing the risk to personnel
- Updating intelligence regularly
- Varying routes and timing



# Preventative Actions

During the conduct of operations, UN forces (military and police) can mitigate the IED threat by applying the following preventive actions:

- Avoid routine behaviour
- Vary routes and timing
- Maintain a high level of alertness



# Preventative Actions

- Plan check posts and patrols
- Conduct training on response procedures
- Maintain a quick response capability





# Preventative Actions

- Maintain vigilance
- Report any suspicious activity
- Assume follow-on attacks
- Vehicle spacing







# Preventative Actions

- Adjust convoy  
Speed/spacing
- Be aware of terrain
- Modify vehicles
- Maintain an offensive  
posture





# TTP Development

Effective TTP development should include:

Convoy reactions to:

- IED events
- Ambush
- Medical emergencies





# TTP Development

- Plan routes
- Establish pre-mission procedures
- Assess risks during pre-operation planning
- Manage risks



# Questions?



# Quiz

1. What does the acronym CAGE stand for?
  - *Channelling, **A**iming Markers, **G**round, **E**nvironment.*
  
2. What are some consideration during convoy mission planning?
  - *Previous routes used, Map reconnaissance, VP Checks, Timing.*



# Quiz

3. What is an example of a phase line?

- *Major Intersections, Over/Under Passes, Factories, any Major Landmark.*



# IED TM Module 4: Wrap Up







# Module Conclusions

- TLO: The student will understand and discuss IED Threat Mitigation (IED-TM) principles, and how to utilize IED information to enhance the IED-TM process.





# Module Conclusions

- ELO 1: Understand the Fundamentals of IED – Threat Mitigation.
- ELO 2: Understand the IED-TM cycle.
- ELO 3: Understand technical exploitation process and importance of evidence collection.
- ELO 4 : Understand event analysis, enemy TTPs and threats and trends ,based on historical SIGACTS and Enemy TTPs.



# Module Conclusions

- ELO 5: Understand the responsibilities of intelligence fusion.
- ELO 6: Understand how to coordinate Research and Development to mitigate IED threats.
- ELO 7: Understand route analysis for IED affected areas.
- ELO 8: Understand how to develop convoy procedures to mitigate the effects of IEDs.