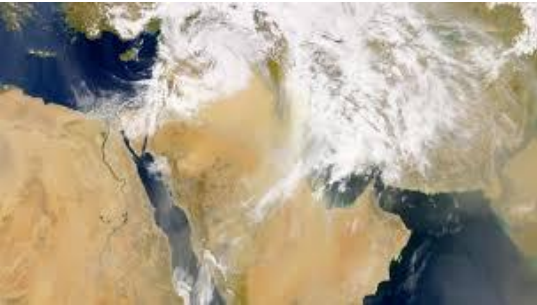


# 25 Years of Disaster Medicine in the Middle East:

## *Lessons Learned and the Way Forward in a changing world*

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**Consultant, Emergency Medicine, EMS and Disaster Medicine**  
**President, International Federation for Emergency Medicine**



**Note:** The insights shared are based on personal professional experience over 25 years in the MENA region and may not be generalizable to all countries or contexts.



## Daily routine....



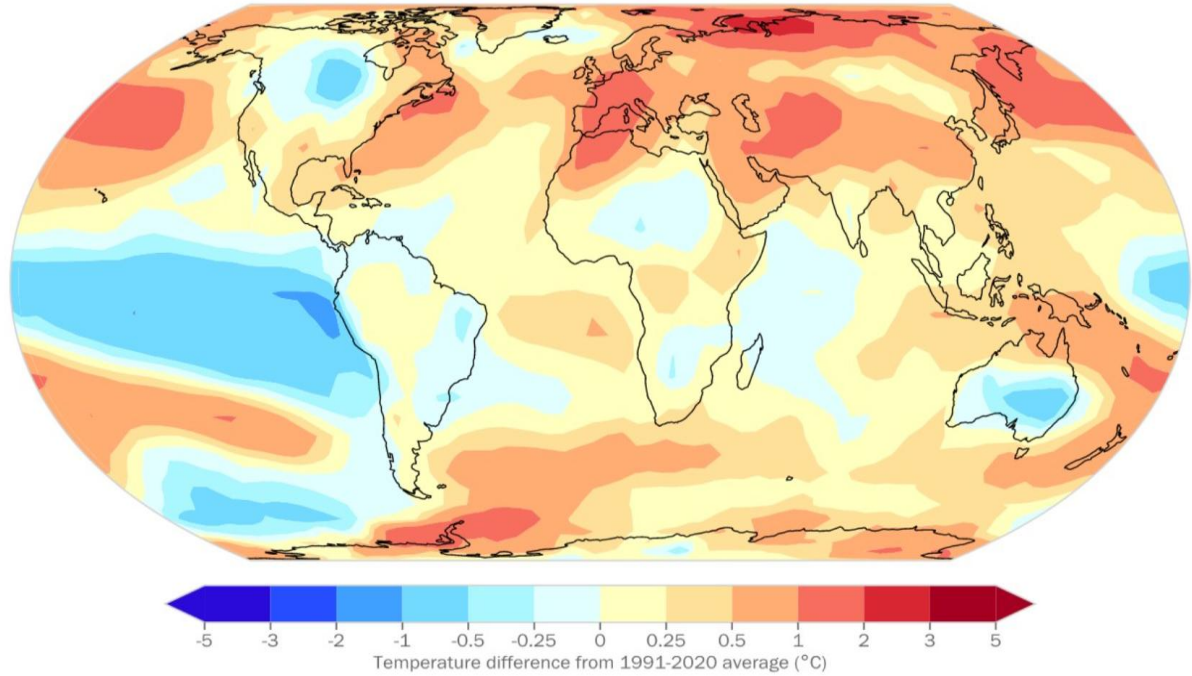
But ....







Annual Temperature Anomalies 2022



In 2022, the planet was  $1.15 \pm 0.13$  °C warmer than the pre-industrial (1850-1900) average, making the **last 8 years the warmest on record.**

# Roadmap today:

---

1

Context: Why MENA is Different

2

Challenges: Common Problems Across the Region

3

Success Stories: What We've Learned Works

4

The Way Forward: From Lessons to Action





TÜRKİYE

AFGHANISTAN

MOROCCO

TUNISIA

LEBANON

SYRIA

PALESTINIAN TERRITORIES  
ISRAEL

JORDAN

IRAQ

IRAN

PAKISTAN<sup>2</sup>

ALGERIA

LIBYA

EGYPT<sup>1</sup>

KUWAIT

BAHRAIN

QATAR

UNITED ARAB  
EMIRATES<sup>1</sup>

SAUDI ARABIA

OMAN

YEMEN

SUDAN

DJIBOUTI

SOMALIA



**North American  
Model**







**British Model**

# Why MENA Matters Now

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## Field Validation Zone

Real-world testing ground for **refining** disaster medicine principles.



## Complexity and Urgency

**Immediate action** is needed to address unique, evolving challenges.



## Global Relevance

Lessons learned **directly influence** worldwide practices and policies.

**Driving Innovation in Global Disaster Medicine.**

# Disasters in the MENA Region

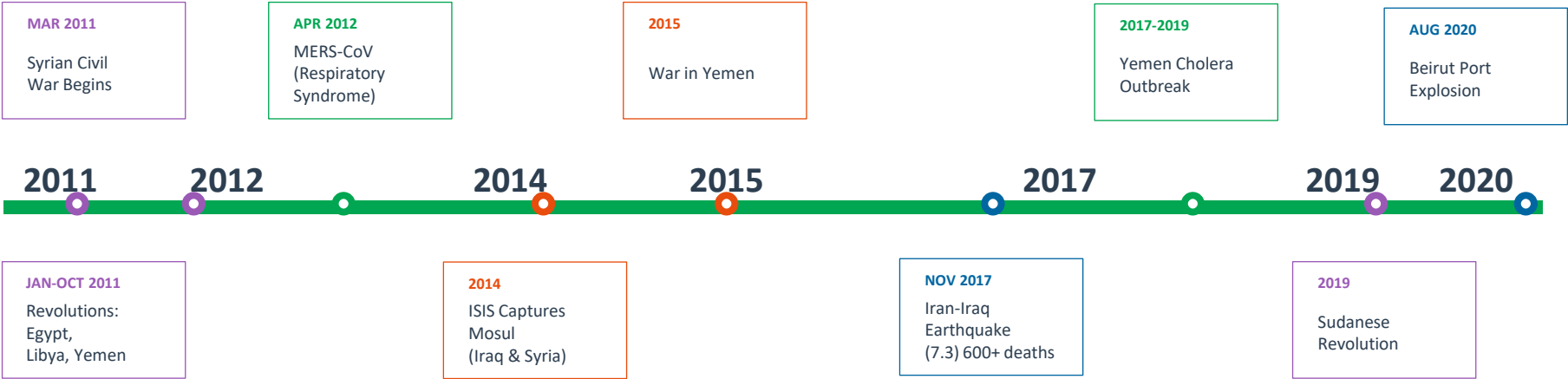
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# Disasters in the MENA Region

2011-2020



# Disasters in the MENA Region

2021-2025



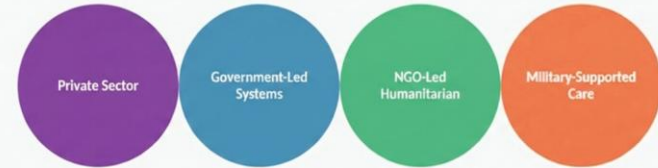
# Why MENA is Different?



## One Region, Many Realities



## Healthcare Models in MENA



## The Fragmented Patient Journey



⚡ Disconnected Models = Lost Continuity in Mass Casualty Events ⚡



## Cultural Nuances



Family Presence at Bedside



Gender Considerations in Care



"Informal First Responders"



Community-Based Response

# MENA in numbers



## Population Growth Trends

380M

2000

501M

2023

1.71%

Growth Rate

Global  
Average

1.1%

MENA  
2024-25

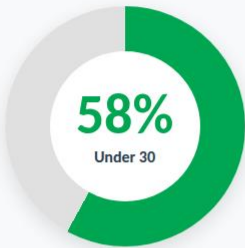
1.71%

MENA  
Peak 1980

3.0%



## Youth Demographics



2nd Youngest Region Globally  
After sub-Saharan Africa



Youth Bulge (15-29 years)  
~30% of population (110M people)



Under-30 Population  
55-60% vs 36% OECD average



## Urbanization Rates



1980s  
48%



2000  
60%



2025  
70%



### Megacity Status

Current: Cairo (10M+)

Projected: Baghdad, Riyadh, Tehran approaching  
megacity status



# The Disaster Burden

## NATURAL HAZARDS

**48** Major Events  
2001-2025

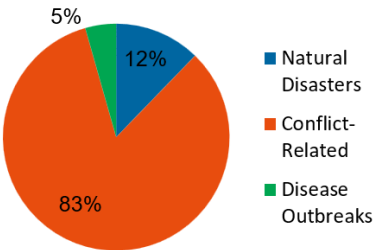
- Earthquakes: 18 events
- Floods: 15 events
- Droughts: 8 events
- Other (storms, fires): 7 events

## CONFLICT-RELATED

**32** Major Crises  
2001-2025

- Active conflicts: 12
- Insurgencies/Civil wars: 11
- Mass displacement events: 9

Estimated Deaths by Disaster Type



Data sources: EM-DAT, UNOCHA, UNHCR, WHO | Timeframe: 2001-2025

## KEY STATISTICS

Total Deaths	~1.02M
(83% conflict-related)	
People Affected	180M+
(floods, earthquakes, droughts)	
Displaced Persons	40M+
(current displacement 2025)	
Disease Outbreaks	15
(MERS, COVID-19, cholera, etc.)	
Active Conflicts	8
(ongoing as of 2025)	
Economic Losses	\$500B+
(estimated total damage)	

# Personal Journey Timeline



2001

Post-9/11 Reaction & Response



2003

Bam Earthquake Response (Iran)



2008

Fog Mass Casualty Event (UAE)



2009

H1N1 "Swine Flu" Pandemic Response



2010-2011

Medical Support Tunisia & Libya



2012

MERS-CoV Response (Middle East Respiratory Syndrome)



2015-2019

Medical Operations During Yemen War



2017-2019

Yemen Cholera Outbreak Response



2020-2024

Abu Dhabi Medical Emergencies (incl. COVID-19)



FEB 2023

Turkey-Syria Earthquakes (7.8 magnitude)



APR 2023

Herat Earthquakes Response (Afghanistan)



OCT 2023

Gaza Medical Evacuations & Emirates Humanitarian City



APR 2024

UAE Record Floods Response



Conflict/War



Natural Disasters



Disease Outbreaks



Medical Operations

**What are the key challenges I observed?**

# Challenge 1 - Disconnection across Borders

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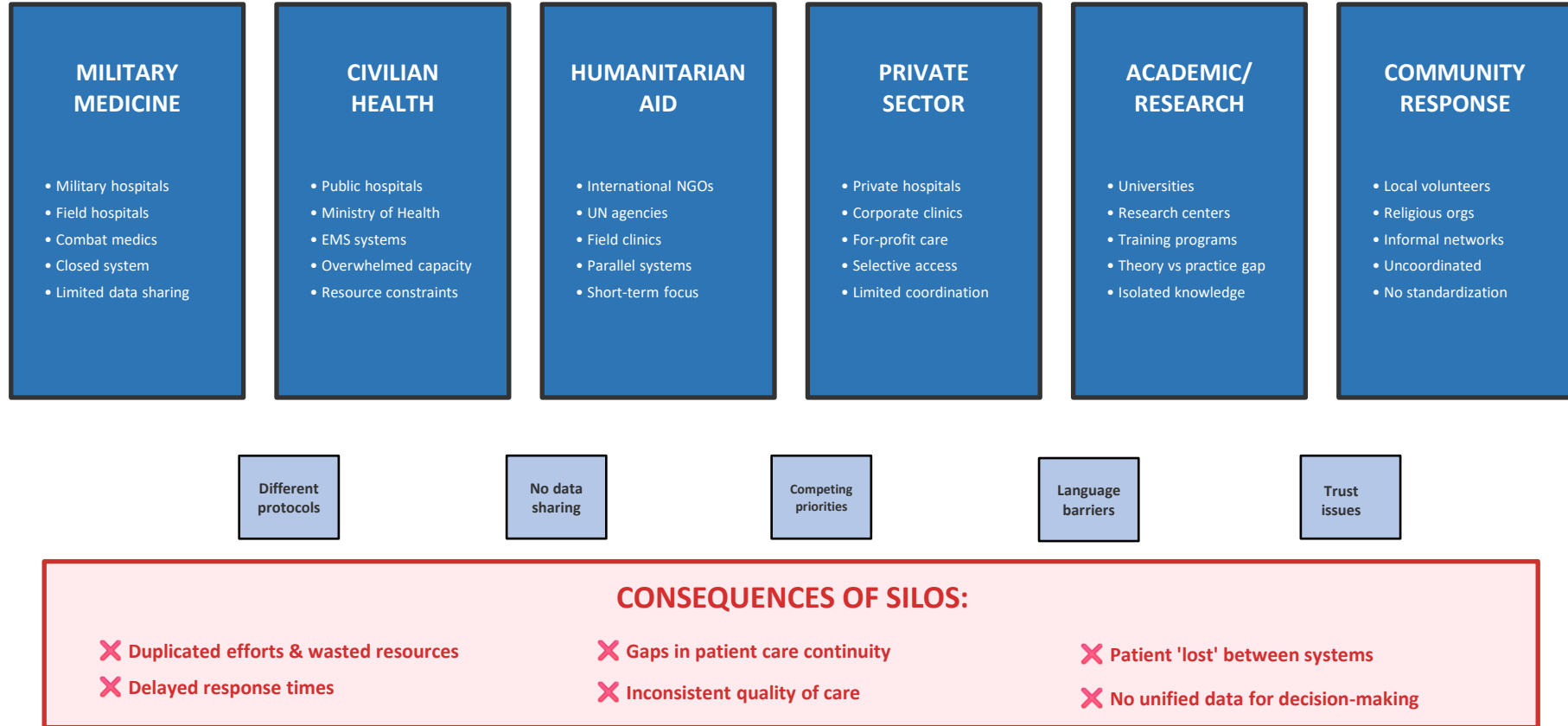




# Challenge 1 - Disconnection across Borders

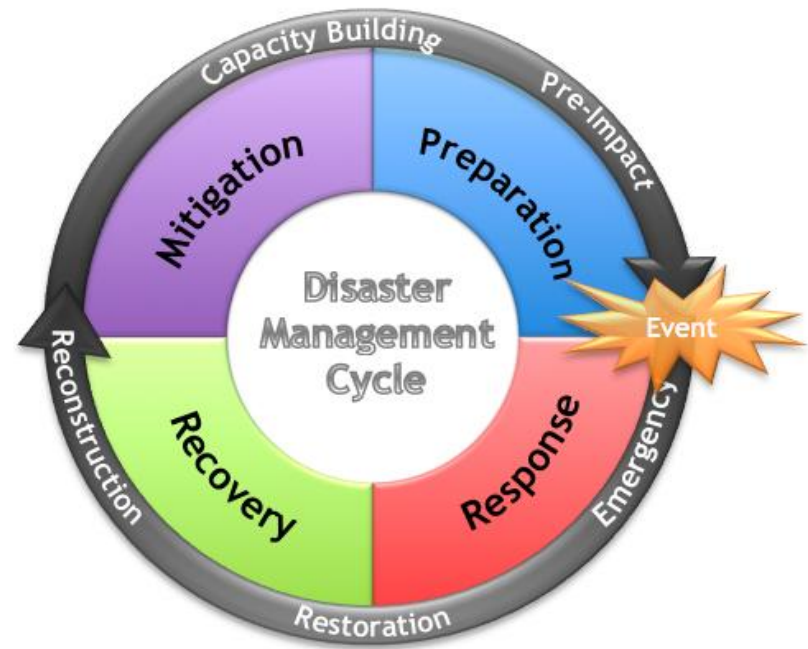


# Challenge 2 - The Silo Effect



# Challenge 3 - The Response Trap

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# Challenge 4 – The Data

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## WHY THE DATA GAP EXISTS

### Security & Access

- Conflict zones unsafe for data collection
- Restricted access to affected areas
- Security classifications limit sharing

### No Standardization

- Different collection methods per org
- No common terminology/definitions
- Incompatible data formats

### Infrastructure Gaps

- Paper-based systems in many facilities
- No EMR/EHR in many hospitals
- Destroyed infrastructure in conflicts

### Institutional Issues

- No data sharing between organizations
- No data-sharing agreements
- Political sensitivities prevent transparency

### Human Resources

- Lack of trained data officers
- Overwhelmed staff = no documentation
- High turnover in crisis zones

### Funding Priorities

- Response prioritized over data
- No budget for surveillance systems
- Short-term project funding only

*You can't manage what you don't measure*

# Challenge 5 - Untapped Potentials

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## Civilian-Military

The Military has the logistics; Civilians have the clinical volume



## PPP

Private sector holds infrastructure, technology, specialized skills



# Additional Critical Challenges

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- Brain drain: Losing our best-trained experts when we need them most
- Funding and sustainability
- Education/training gaps
- Leadership continuity during crises
- Mental health
- Community trust



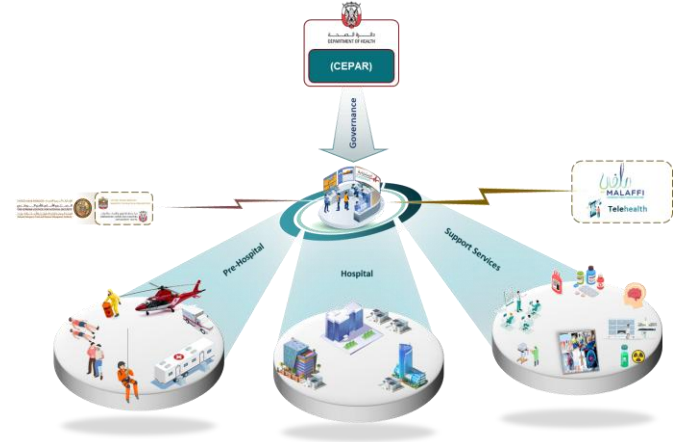
**But not everything has failed**

# Success Story

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# Success Story



# Emerging Best Practices

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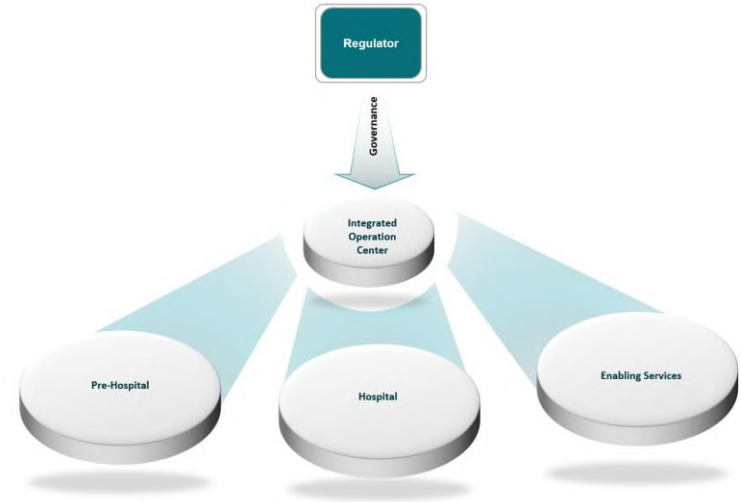


Now we know the problems. The question is  
how we move forward?



# Priority 1 – System Approach

- Clear integration across: Governance, operation centers, Prehospital, Hospital and enabling services
- Move from ad-hoc to structured frameworks
- Use data to drive DM
- From Individual to Institutional
- Defined roles, not overlapping mandates



**NEEDED: Integrated Command Structure • Shared Data Systems • Unified Protocols • Cross-sector Training**



# Priority 3 - Team-Based Regional Collaboration

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- Multidisciplinary approach
- Cross-country learning
- Joint exercises and training
- Trust and relationships before disasters



# Priority 4 – Sustain WADEM MENA Chapter

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- Platform for alignment and knowledge exchange
- Advocacy for regional priorities
- Standardizing training



# Priority 5 - Strategic Partnerships

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- Working with WHO-EMRO, IFEM, regional governments
- Public-Private Partnerships aligned to public interest
- Support disaster laws and policies



Don't reinvent the wheel

# Additional Way Forward Elements

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- Regional DM curriculum standardization
- Simulation and training centers network
- Community-based activities
- Mental health and psychosocial support
- Technology and digital solutions





# What success looks like in 10-25 years?

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- MENA as a global contributor in DM
- A regional network where no country faces disaster alone



# Key Takeaways

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- MENA is complex, diverse, and resilient
- Experience exists but must be systematized
- Collaboration is the accelerator

**Thank you**

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