



*European Centre  
for Disaster Medicine*



# *“European Centre for Disaster Medicine Efforts in the Field of Medical CBRN and Public Health”*

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# CEMIEC

The EUR-OPA Agreement on Major Hazards is the Council of Europe's collaborative platform for natural and technological emergency response.

It focuses on disaster risk reduction, threat assessment, forecasting, prevention, crisis management, and post-crisis analysis, with specialized centres aimed at strengthening state resilience against major hazards.



# CEMIEC

Founded in 1987, the European Centre for Disaster Medicine is the primary reference institute under the agreement, focusing on disaster study, research, and training.

It leads international projects, engages in planning, education, and networking, and actively participates in field operations.



# Disasters and Emergencies

The various natural, accidental, and deliberate emergencies spanning European territories and worldwide, underscores the necessity for a comprehensive, multidisciplinary, and balanced approach to disaster and catastrophe prevention and management.





# Disasters and Emergencies

High connectivity, trade, population density, climate change, and migration have increased vulnerability to catastrophic epidemics of natural origin.

Emerging technologies further amplify this risk by enabling accidental release of microorganisms and genetically modified viruses from biological research labs.



# Disasters and Emergencies

Technological disasters arise from safety failures, equipment breakdowns, or natural events, causing hazardous agents to be released with serious impacts.

Globally, the risk of accidental harm is rising with advancements in technology and ongoing changes in the production, transport, and disposal of hazardous materials.





# Disasters and Emergencies

Intentional events, particularly terrorism, have escalated in recent decades, posing an unprecedented threat to global development, peace, and security.

Rising concerns also surround the potential use of unconventional weapons.



# Advancements in Disaster Medicine

Looking ahead, the global move toward better risk management, especially in emerging economies, will require greater focus on strengthening threat governance, fostering technical cooperation, sharing information, and building capabilities, knowledge, and skills.





# Advancements in Disaster Medicine: Keywords

The future of disaster medicine is going to face more and more challenges and complexities. In particular, key areas of concern in this evolving landscape include:

**Climate Change:** With climate change intensifying natural disasters such as hurricanes, wildfires, and floods, disaster medicine must adapt to more frequent and severe events. This requires improving preparedness and response protocols to minimize health impacts.

# Advancements in Disaster Medicine: Keywords

**Migrations:** The increase in forced migrations due to conflicts, environmental disasters, and socioeconomic factors forces healthcare systems to meet the unique health needs of displaced populations. Disaster medicine must be flexible and able to provide assistance in diverse settings.

**Conflicts:** Armed conflicts create complex humanitarian crises, often straining healthcare resources. Disaster medicine professionals must be prepared to work in conflict zones and provide essential medical services while navigating security challenges.

# Advancements in Disaster Medicine: Keywords

**CBRNe Risks:** As the threat of Chemical, Biological, Radiological, Nuclear, and explosive incidents become visible, disaster medicine experts must be well-prepared in responding to these highly specialized emergencies. This includes effective triage, decontamination, and treatment of casualties in the aftermath of such events.

**Agro-Crime, Agro-Terrorism and Protection of Food Supply Chains:** The growing threats of agro-crime and agro-terrorism demand innovative strategies to safeguard our food supply chain. Disaster medicine must be prepared to address intentional acts targeting agricultural and food production, requiring specialized training and resources.



# Advancements in Disaster Medicine: Keywords

**Vulnerable Populations:** Special attention should be given to vulnerable populations such as the elderly, children, people with disabilities, and those in low-resource settings. Tailored disaster medical plans are essential to meet their unique needs.

**Ethical and Legal Considerations:** Addressing ethical dilemmas and legal issues in disaster medicine, such as resource allocation and medical liability, is vital for a just and effective response.

# Advancements in Disaster Medicine: Keywords

**Global Health Security:** With the increasing interconnection of the world, global health security is a concern. Preparedness for pandemics, infectious disease outbreaks, and international cooperation in disaster response are vital components of future disaster medicine.

**Infrastructure Resilience:** Ensuring the resilience of critical infrastructure, such as hospitals and emergency response systems, is crucial. Infrastructure should be designed to withstand disasters and maintain functionality.

# Advancements in Disaster Medicine: Keywords

In addition to the key concerns mentioned earlier, there are several other important considerations in the future of disaster medicine:

**Technological Advances:** As technology evolves, disaster medicine must keep pace. This includes harnessing advancements in telemedicine, artificial intelligence, and data analytics for better disaster preparedness, early warning systems, and healthcare delivery during emergencies.

**Disaster Forensic:** The integration of disaster medicine and forensics is crucial in comprehending and responding to catastrophic events, ensuring efficient healthcare delivery, and facilitating victim identification and post-disaster investigations for societal improvement.



# Advancements in Disaster Medicine: Keywords

**Psychological and Mental Health:** Disasters often have profound psychological impacts on affected individuals. Disaster medicine must include mental health support and counseling to address trauma, stress, and other psychological consequences.

**Community Engagement:** Disaster medicine must involve active engagement with local communities. Public education and community-based disaster preparedness initiatives are essential for a coordinated response.

**Public Health Intelligence:** Public health intelligence is of the highest importance for disaster medicine by providing data-driven insights and preparedness strategies for effective emergency response and healthcare delivery.

# CEMEC Today

Today, the Centre strategically focuses on disaster medicine through two main strategies: the "All Hazards Approach," addressing a broad spectrum of hazards including chemical and radiological risks beyond traditional healthcare, and the "One Health Approach," promoting integrated well-being for people, animals, and the environment by recognizing their interconnected health.



# CEMEC Today

For that, CEMEC focuses on a comprehensive approach to crisis prevention, management, and response, emphasizing public health, resilience, and protection of people and territory.

It actively engages in research, training, and developing strategies, methodologies, and innovative technologies, alongside efforts in promotion, testing, and standardization.



# Pillars

**RESEARCH  
STUDY, ANALYSIS**

**EDUCATION AND  
TRAINING**

**KWONWLEDGE SHARING**

**SCIENTIFIC AND  
TECHNICAL ASSISTANCE**





# *“Activities 2024”*



# *“Research & Projects”*

# Research and Projects

## "EUROMED PROTECT-NET - Euro-Mediterranean Forum for Disaster Risk Governance, Health Preparedness, and Networking Advancement"

Action aimed at improving disaster risk governance, with particular attention to health aspects, within the Euro-Mediterranean area.



# Research and Projects

Project ENSURE-PROTECT: Enhancing Safety and security for Civil defence Personnel by Protecting Rescuers with Training and Equipment”



Project aimed at providing effective protection measures for emergency teams operating in hostile environments through training and tools.

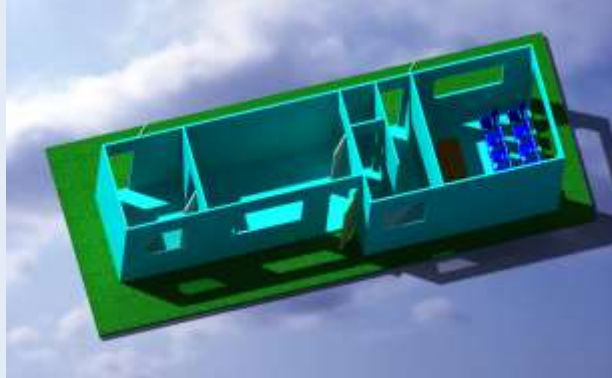
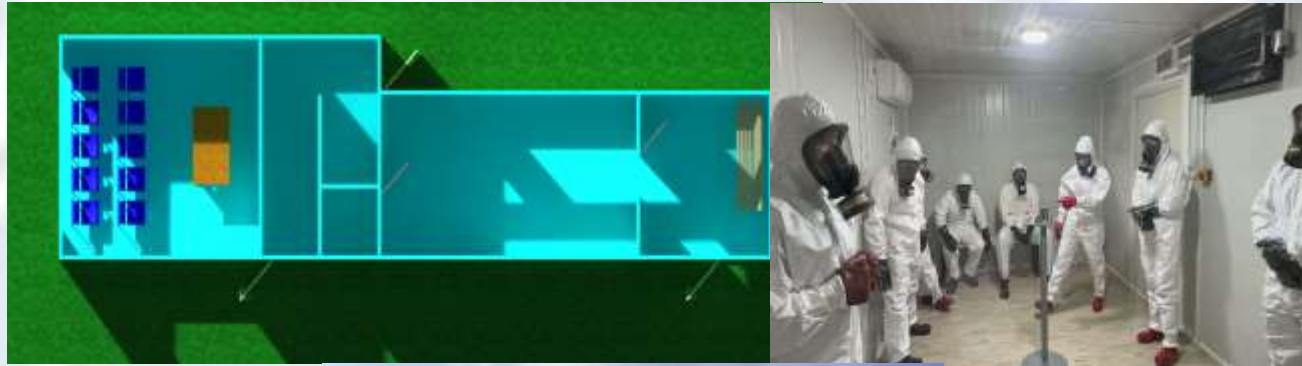




# Research and Projects

## "SHIELD-EXCEL: Advanced CBRN Protection and Training for Civil Defense and Emergency Responders"

Project aimed at enhancing safety and readiness through training and exercises in controlled environments, using a chamber to test CBRN gear and response protocols.





# *“Courses and Trainings”*

# Courses and Trainings

## Advanced Courses

*The curricula are delivered and certified, based on existing legal agreements, in partnership with the University of Rome 'Tor Vergata' - Department of Electronic Engineering (DIE), the University of San Marino - Center for Security Studies (CUFS), and the Observatory on Security and CBRNe Defence (OSDIFE) in Italy*



# CBRNe Courses and Trainings

## CBRNe Advanced Courses

- CBRNe Course: Basic - Intermediate - Advanced
- CBRNe Disaster & Incident Risk Management
- Biological Risk, Agrocrime, Agroterrorism and Threats to Food Supply Chains
- CBRNe Intelligence and Info Sharing - Basic - Intermediate - Advanced
- CBRNe Disaster & Incident Medical Management
- CBRNe Medical Open-Source Intelligence





# CBRNe Courses and Trainings

## CBRNe Advanced Courses

- CBRNe Incident and Civil Military Cooperation
- Developing Advanced Skills and Capabilities for CBRNe and WMD Knowledge Management
- Healthcare Professional and First Responders Safety in Conflict
- Medical Management of Chemical Disasters





*“Courses and Training  
On Demand Catalogue 2024”*

# Courses and Trainings Catalogue 2024



1. Trauma Management: On-Scene and Hospital-Based Care
2. Structuring Territorial Emergency Systems
3. Maxi-Emergency Level 1
4. Maxi-Emergency Level 2
5. Biological Risk
6. Clinical Toxicology
7. Toxicology in Emergency
8. Effective Communication in Healthcare
8. Facilitators BLS-D (medical and non-medical)
9. Medical CBRNe
10. Medical Urban Search and Rescue
11. Counter-Terrorism Medicine





*“Publications”*

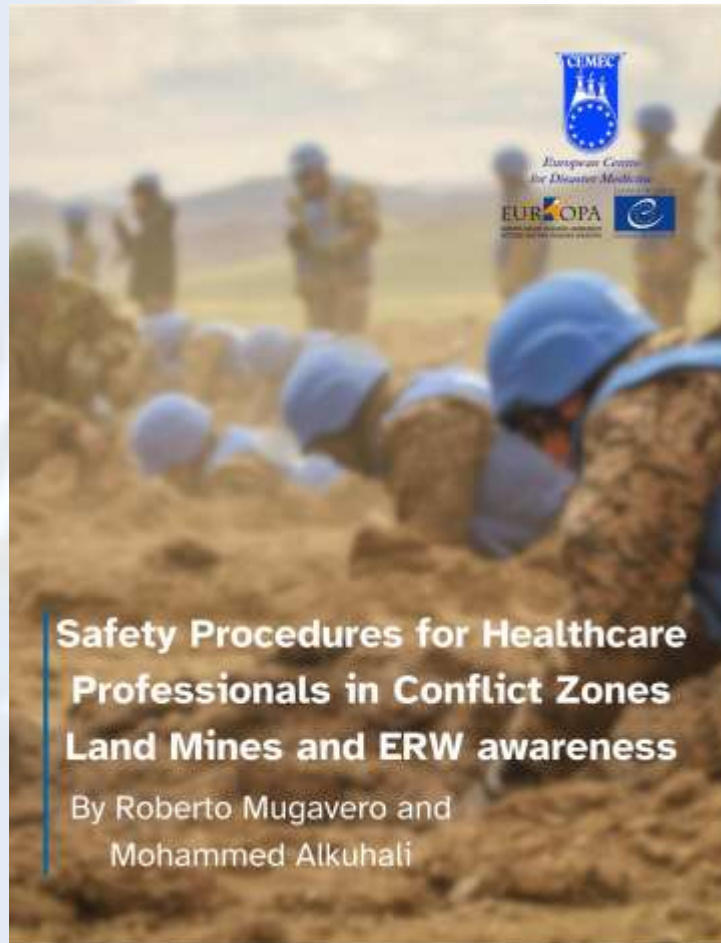


# Publications

R. Mugavero, M. Alkuhaly

## Safety Procedures for Healthcare Professionals in Conflict Zones

ISBN: 978-88-6086-246-4 AIEP Publisher, August 2024

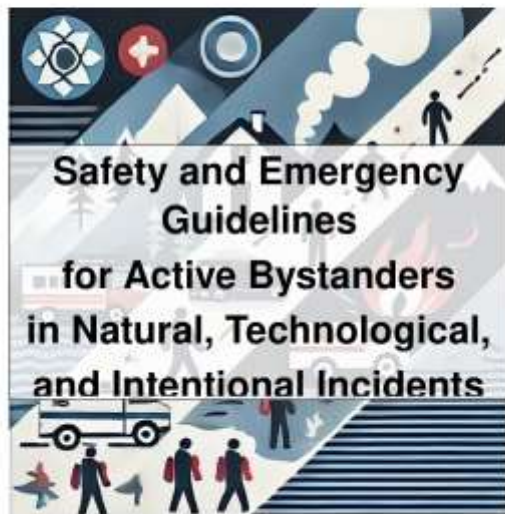


# Publications

R. Mugavero

## Safety and Emergency Guidelines for Active Bystanders in Natural, Technological, and Intentional Incidents

ISBN: 978-88-6086-250-1 AIEP Publisher, October 2024



**Safety and Emergency  
Guidelines  
for Active Bystanders  
in Natural, Technological,  
and Intentional Incidents**

# Publications

Mugavero, R., Marvelli E.

Governance of Big Data and Legal Aspects

ISBN: 978-88-6086-253-2 AIEP Publisher, October 2024



GOVERNANCE DEI BIG DATA E  
ASPETTI GIURIDICI

R. Mugavero, E. Marvelli



UNIVERSITÀ DEGLI STUDI DI  
PALERMO  
FACOLTÀ DI GIURISPRUDENZA  
CENTRO DI RICERCA E STUDI  
RISULTATI E PROSPETTIVE



European Centre  
for Disaster Medicine  
EUR-OPA  
AIEP PUBLISHER

# Publications

Mugavero, R., Fiorentini, D., Bellucci, L., Caruso, L.

## EUROMED PROTECT-NET: Euro-Mediterranean Forum for Disaster Risk Governance, Health Preparedness, and Networking Advancement - Proceedings

ISBN: 978-88-6086-251-8 AIEP Publisher, October 2024



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### EUROMED PROTECT-NET

*Euro-Mediterranean Forum for Disaster Risk  
Governance, Health Preparedness, and  
Networking Advancement*

**Proceedings**

### Forum EUROMED PROTECT-NET

**Euro-Mediterranean Forum for Disaster Risk  
Governance, Health Preparedness, and  
Networking Advancement**



2 - 3 May 2024 San Marino

**Statements**





*“Operational Activities”*

# Operational Activities

The European Centre for Disaster Medicine (CEMEC) is an official Civil Protection operational structure, following a recent Memorandum of Understanding.



This enables CEMEC to deploy rapidly in emergencies, offering advanced medical assistance, including first aid, patient stabilization, clinical evaluation, and urgent therapy.



**Civil Protection  
Operational  
Structure**



European Centre  
for Disaster Medicine



# Operational Activities

## “Multinational Medical Emergency Management Exercise”

UAE, January 2024  
(Organizer)





# Operational Activities

“ Mass Casualty Incident“

National Exercise

UAE, February 2024

(Organizer)



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# Operational Activities

“Cyber Threats and Enhancing Crisis Preparedness”  
International Exercise Ireland, March 2024  
(Organizer)



# Operational Activities

“CBRN IEDs and Forensic Investigation“

National Exercise  
Hungary, March 2024  
(Organizer)



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# Operational Activities

“Human and Animal Health in Emergencies“

National Exercise  
Italy, March 2024  
(Observer)



# Operational Activities

“EmergeRimini”

National Exercise

Italy, May 2024

(Partner)

