

Mastering Civil Defence in Times of Conflict

Collective Monograph

© 2023 AIEP Editore S.r.l.

Via Colombaia, 2 | 47890 Città | Repubblica di San Marino
Tel. 333 7839098
info@aiepeditore.com | www.aiepeditore.com

ISBN 978-88-6086-199-3

All rights reserved

Graphics: Aiep editore



UNIVERSITY OF THE REPUBLIC OF
SAN MARINO
Center for Security Studies



UNIVERSITY OF ROME
"Tor Vergata"
Department of Electronic Engineering



OSDIFE
Observatory on Security
and CBRNe Defence



*European Centre
for Disaster Medicine*



Mastering Civil Defence in Times of Conflict

Collective Monograph



NATIONAL UNIVERSITY OF CIVIL DEFENCE OF UKRAINE

Edited by Roberto Mugavero, Volodymyr Andronov, and Maksym Kustov

Kharkiv - Rome, 2023

Authors

Section 1

1. Head of the Department of Management and Organisation in the Field of Civil Protection, Faculty of Civil Protection, National University of Civil Defence of Ukraine, Professor, Doctor of Technical Sciences **Vadym TIUTIUNYK**
2. Deputy Head of the Department Management and Organisation of Activities in the Field of Civil Protection, Faculty of Civil Protection, National University of Civil Defence of Ukraine, Associate Professor, PhD of Economic Sciences **Oleksandr YASHCHENKO**
3. Associate Professor of the Department of Informatics and Computer Engineering, Semyon Kuznets National University of Economics, Associate Professor, PhD of Technical Sciences **Olga TIUTIUNYK**

Section 2

1. Head of the Department of Fire Tactics and Rescue Operations, Faculty of Operational and Rescue Forces, National University of Civil Defence of Ukraine, Associate Professor, PhD of Technical Sciences **Andrii LISNIAK**
2. Professor of the Department of Fire Tactics and Rescue Operations, Faculty of Operational and Rescue Forces, National University of Civil Defence of Ukraine, Professor, PhD of Technical Sciences **Yurii SENCHYKHIN**

Section 3

1. Head of the Department of Special Chemistry and Chemical Technology, Faculty of Operational and Rescue Forces, National University of Civil Defence of Ukraine, PhD of Technical Sciences **Yevhen SLEPUZHNIKOV**
2. Head of the Radiation, Chemical, Biological Protection of the Emergency and Rescue Unit of the Emergency and Rescue Unit Special Appointment of the Main Department of the State Emergency Service of Ukraine in the Cherkasy Region **Yevhen LYMAR**

Section 4

1. Deputy Head of the Department of Pyrotechnic and Special Training, Faculty of Civil Protection, National University of Civil Defence of Ukraine, PhD of Technical Sciences **Vasyl MATUKHNO**.

Section 5

1. Senior Researcher of the Scientific Department on Problems of Civil Protection and Technogenic and Ecological Safety of the Research Centre, National University of Civil Defence of Ukraine, Associate Professor, PhD of Technical Sciences **Oleg KULAKOV**

Section 6

1. Head of the Department of Engineering and Rescue Machinery, Faculty of Operational and Rescue Forces, National University of Civil Defence of Ukraine, Associate Professor, PhD of Technical Sciences **Andrii KALYNOVSKYI**

2. Associate Professor of the Department of Engineering and Rescue Machinery, Faculty of Operational and Rescue Forces, National University of Civil Defence of Ukraine, PhD of Technical Sciences **Roman KOVALENKO**

Section 7

1. Senior Researcher of the Department of Scientific Research and Patent Organisation Activities of the Research Centre, National University of Civil Defence of Ukraine, PhD of Technical Sciences **Yuliia MYKHAILOVSKA**

2. Associate Professor of the Department of Service and Training, Faculty of Operational and Rescue Forces, National University of Civil Defence of Ukraine, Professor, Doctor of Technical Sciences **Ruslan MELESHCHENKO**

Section 8

1. Leading Researcher of the Educational and Scientific Laboratory of Extreme and Crisis Psychology of the Research Centre, National Civil University of Defence of Ukraine, Senior Researcher, PhD of Psychological Sciences **Svitlana LEBEDEVA**

2. Senior Researcher of the Educational and Scientific Laboratory of Extreme and Crisis Psychology of the Research Centre, National University of Civil Defence of Ukraine, Senior Researcher, PhD of Psychological Sciences **Yanina OVSIANIKOVA**

3. Researcher of the Educational and Scientific Laboratory of Extreme and Crisis Psychology of the Research Centre, National University of Civil Defence of Ukraine **Vladyslav PLATONOV**

4. Leading Researcher of the Educational and Scientific Laboratory of Extreme and Crisis Psychology of Research Centre, National University of Civil Defence of Ukraine, Associate Professor, PhD of Psychological Sciences **Vitalii KHRYSTENKO**

Technical editor:

1. Senior Lecturer of the Department of Language Training, Social and Psychological Faculty, National University of Civil Defence of Ukraine **Larysa TOROPOVSKA**

Translation, layout, scientific and technical support:

1. Observatory on Security and CBRNe Defence: Dr. Elga Marvelli, Dr. Morine Ngumi
2. European Centre for Disaster Medicine: Ms. Loretta Bellucci, Ms. Daniela Fiorentini

Endorsed by:

1. European Centre for Disaster Medicine – CEMEC
2. Observatory on Security and CBRNe Defence – OSDIFE
3. University of Rome “Tor Vergata”, Department of Electronic Engineering
4. University of the Republic of San Marino, Centre for Security Studies