

INTERNATIONAL CBRNE MASTER COURSES SERIES

COLLANA DI SICUREZZA CHIMICA, BIOLOGICA, RADIOLOGICA E NUCLEARE

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Peace cannot be kept by force; it can only be achieved by understanding.

Albert EINSTEIN

The CBRNe Book Series was born as an initiative of the Directive Board and of the Scientific Committee of “International Master Courses in Protection Against CBRNe events” ([www.mastercbrn.com](http://www.mastercbrn.com)) at the University of Rome Tor Vergata. The evolution and increase in Security and Safety threats at an international level place remarkable focus on the improvement of the emergency systems to deal with crisis, including those connected to ordinary and non-conventional events (Chemical, Biological, Radiological, Nuclear, and explosives). In every industrial Country there are multiple entities with specialized teams in very specific fields, but the complexity of the events requires professionals that not only have specific know-how, but also expertise in the entire relevant areas. Given the global interest in these issues, the Department of Industrial Engineering and the Faculty of Medicine and Surgery of the Tor Vergata University organize the international Master Courses in “Protection against CBRNe events”: I Level Master Course in “Protection against CBRNe events” (120 ECTS) and II Level Master Course in “Protection against CBRNe events” (60 ECTS). These courses aim at providing attendees with comprehensive competences in the field of CBRNe Safety and Security, through teaching and training specifically focused on real needs. Both Master Courses are designed according to the spirit of the Bologna Process for Higher Education, the Italian law and educational system. The Master Courses are organized also in cooperation with the following Italian Public Entities:

- Presidenza del Consiglio dei Ministri (Prime Minister’s Office);
- Ministero della Difesa (Ministry of Defence);
- Ministero dell’Interno (Ministry of The Interior);
- Istituto Superiore di Sanità (National Health Institute);
- Istituto Nazionale di Geofisica e Vulcanologia (National Institute for Geophysics and Vulcanology);
- ENEA (Italian National Agency for New Technology, Energy and Sustainable Economic Development);

- University Consortia CRATI, MARIS and SCIRE;
- Comitato Parlamentare per l’Innovazione Tecnologica (Parliamentary Committee for Technological Innovation).

And together with the following International Entities:

- OPCW (Organization for the Prohibition of Chemical Weapons)
- NATO Joint Centre Of Excellence (Czech Republic);
- NATO SCHOOL of Oberammergau (Germany);
- HotZone Solutions Group (The Netherlands);
- VVU-026 Sternberk (Czech Republic);
- Seibersdorf Laboratories GmbH (Austria);
- Chernobyl Centre (Ukraine).

All the above-mentioned organizations have signed official cooperation agreements with the University of Rome Tor Vergata in the aim of Master course activities. The Master have also cooperation with OSCE, IAEA, ECDC, KEMEA in the aim of the didactical activities and we are working to formalize this collaboration with a formal cooperation agreement.

Both Master Courses have been officially granted the “NATO selected” status and have been included in the NATO Education and Training Opportunities Catalogue (ETOC) and also they are supported by OPCW.

The purpose of the CBRNe book series is to give a new perspective of the safety and security risks from both a civil and military point of view, touching all the aspects of the risks from the technological to the medical ones, talking about agents and effects, protection, decontamination, training, emergency management, didactic, investigation, communication and policy.

The authors will be experts of the sector coming from civil, military, academic/research and private realities. A special thanks for the realization of this series goes to Prof. Carlo Bellecci for his initial encouragement, continuous support and help.

Nel mese di Agosto 2016 il Ministero dell’Istruzione, dell’Università e della Ricerca (MIUR) ha inserito la collana nella lista di quelle ufficialmente riconosciute con i seguenti riferimenti:

- codice di classificazione: E237557;
- titolo: CBRNE BOOK SERIES.

During the month of August, 2016, the Italian Minister for Instruction, University and Research (MIUR) has officially added this book series in the list of the official publications recognized by the Minister itself with the following references:

- classification code: E237557;
- title: CBRNE BOOK SERIES.



AHMED GAMAL IBRAHIM

**SOCIAL MEDIA EMERGENCY  
COMMUNICATION  
AND CRISIS MANAGEMENT  
DURING RADIOLOGICAL  
AND NUCLEAR EMERGENCIES**



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## Abstract

The paper encompasses the major aspects of crisis management. It will briefly evaluate the factors that play a key role in formulating a strategy to overcome catastrophes. The detailed analysis of the structure and roles of different sections in the team emphasize the critical importance of communication.

The paper also provides a comprehensive investigation of several case studies encircling natural and man-made disasters. EPA and FANR have identified the significance of communication during Radiological Emergencies. Nuclear Emergency requires sensitive planning and efficient evacuation phase to minimize the damages and the research work includes the steps that make communication efficient during Nuclear Emergencies. Failure to equip to the responders with adequate communication skill training and equipment can add to the crisis.

Social Media is the latest platform to be included in the Communication Channel. People who receive specific instructions for appropriate actions following an emergency will be more likely to make effective and prompt decisions to maximize their safety. The underlying mission of this messaging document is to share as much relevant information as possible to maximize public health and safety either it is radiological major accident or following a nuclear detonation.

*Keywords: Communication, emergency, EPA, FANR, responders, Social Media, misinformation safety, Crisis Management.*



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## Thesis Objectives

The paper is comprised of the analysis of crisis management, structure, evolution, and communication that plays a key role in enhancing the productivity of the process. The main objective of the paper is to analytically evaluate communication in the procedure and provide recommendations in order to improve the system. The following points outline the path of the research work

— **How case studies help us to understand Management Crisis?**

From the cases studies, it is clear that emergency situations are different from each other, for instance, according to their causes and the dimension of their impacts. The communication level will be established, either within the respondent team or the decision-making team that can escalate to transnational diplomatic level.

— **What are the challenges in the Communication Phase?**

There are several challenges that are present in the system ranging from the lack of training to lack of equipment. The communication between the different department within the same organization leads to disastrous results. These are the challenges that need to be considered, and the circle of this paper will include some of the recent best practices in Crisis Communication.

— **How Communication affects the system?**

With the introduction of modern qualitative and quantitative analysis, we are able to understand the impacts of communication on an individual level. The victim does not only need evacuation within a limited time but also needs psychological support.

— **How Social Media is changing the perception of Communication during Emergencies?**

In right hands, the tool of social media becomes an advantage for the authorities to communicate with the families of the victim and sending out the instructions but in the wrong hands it can cause havoc because the medium has a huge following with no proper system of the fact checks and it can be used to spread fake news

— **What are the recommendations to improve communication during Emergencies?**

Responders and Decision Makers should be provided adequate equipment and training to improve the effectiveness of Radiological and Nuclear Emergencies Communication Training specifically within the United Arab of Emirates. Along with that improvement in the structure within the organization and confining the departments to do their own job instead of getting involved with others can improve the overall structure. The introduction of features like fact check and a safety check on social media can help to eradicate the disadvantages of Social Media