

Critical Infrastructure -

**selected issues
concerning
national
security**

Witold Mazurek



JAGIELLOŃSKI
INSTYTUT WYDAWNICZY



Wydawnictwa Akademickie

Critical Infrastructure - selected issues concerning national security

Critical Infrastructure -

**selected issues
concerning
national
security**

Witold Mazurek



Wydawnictwa Akademickie Jagiellońskiego Instytutu Wydawniczego

Col. res. dr **Witold Mazurek**, Prof. UIK, is a professor at Ignatianum University in Kraków, Poland, with a PhD in social sciences, specializing in security studies. A former officer in Poland's special services (ABW, SKW, SW), he brings deep expertise in national security, critical infrastructure and intelligence operations. He is the author of numerous academic publications on these topics and has supervised many doctoral theses in the field.

Reviewers:

prof. AJ dr hab. Grzegorz Górski, Akademia Jagiellońska w Toruniu
prof. AJ dr hab. Andrzej Potoczek, Akademia Jagiellońska w Toruniu

Polish-language Editor:

Beata Antczak-Sabala

Translation:

Joanna Przewięźlikowska

English-language Proofreader:

Richard Bolt

Graphic design of the series:

Beata Króliczak-Zajko

Cover design:

Beata Króliczak-Zajko

Typesetting:

Iwona Banasiak

Copyright by © Jagiellonian Institute of Publishing

Toruń 2025



Jagielloński Instytut Wydawniczy
ul. Kociewska 26f
87-100 Toruń
www.jiw.edu.pl



ISBN 978-83-67201-68-1



Table of contents

Introduction	9
Chapter I	
The place of critical infrastructure in the national security system	11
1.1. Citizens and critical infrastructure	19
1.2. Terrorism and critical infrastructure	21
Chapter II	
Basic terms related to critical infrastructure protection	23
Chapter III	
National Critical Infrastructure Protection Programme (NPOIK)	37
Chapter IV	
The ideas behind the Critical Infrastructure Protection Service (SOIK)	49
Chapter V	
A study of Polish citizens' assessment of their knowledge of critical infrastructure and the influence of its security level on their sense of personal safety	55
5.1. Purpose and scope of the research	55
5.2. Socio-demographic characteristics of the research population	57
5.3. Analysis and interpretation of the research results	58
5.3.1. Assessing the theoretical knowledge of critical infrastructure protection among residents of <i>Mazowieckie</i> , <i>Śląskie</i> and <i>Małopolskie</i> provinces: research findings	58
5.3.2. Public perceptions of CI security and its influence on personal safety: research findings	60
5.3.3. Improving CI protection – research findings on the public opinion of effective measures	61
5.4. Summary of research findings	61

Chapter VI

Problems and challenges related to critical infrastructure protection with particular emphasis on the current rule of law in Poland	71
6.1. Legal framework for critical infrastructure protection in Poland.....	72
6.2. International requirements	72
6.3. The role of the Government Security Centre	73
6.4. Sector-specific regulations and their impact.....	74
6.5. Issues in the current rule of law.....	74
6.5.1. Unclear criteria for identifying CI.....	74
6.5.2. Dispersed responsibilities and ineffective coordination	75
6.5.3. Insufficient integration of technological systems.....	75
6.5.4. Limited funding and human resources.....	76
6.5.5. Growing cyber threats	76
6.5.6. Non-compliance with international requirements	77
6.5.7. Insufficient education and public awareness.....	78

Chapter VII

Challenges in the context of a changing security environment.....	79
7.1. Hybrid and geopolitical threats	79
7.2. Public-private cooperation	79
7.3. Resilience building and crisis management.....	80
7.4. Increasing interdependence of critical infrastructure sectors	81

Chapter VIII

Proposed solutions.....	83
8.1. Precision of regulations and availability of criteria for the identification of CI assets.....	83
8.2. Strengthening coordination.....	83
8.3. Technological integration.....	86
8.4. Increasing funding	86
8.5. Strengthening cybersecurity.....	86
8.6. Adapting to new threats	87
8.7. Exercises and simulations	87
8.8. Public education	88
8.9. Conclusions.....	88

Chapter IX

Protecting critical satellite infrastructure and its importance for humanity 91

Conclusion..... 99

Appendix 1101

List of acronyms107

Bibliography.....109

Introduction

The functioning of any society depends on ensuring its safe, effective and efficient development. Eliminating potential threats resulting from environmental factors, thereby guaranteeing stability of life at an acceptable level of safety, are also highly valued. In addition to the basic resources necessary for existence, such as water, food production and distribution, shelter and electricity, increasing importance is attached to various aspects that improve the quality of life. This category includes telephone communication systems, the internet along with communications and transport systems. All of these contribute to the comfort of everyday life and are under various types of threat that cause disruptions in their functioning. Unfortunately, even minor disruptions of a single system can lead to an increased level of emergency, and the size and scope, as well as scale of such events does not only affect individuals, but also significantly impacts the functioning of society and the entire state.

The catalogue of emerging disruptions that could turn into threats is very broad, given the current political situation and the current level of technological and civilisational development. These include natural disasters, technological failures caused by malfunctioning equipment or unintentional human action, acts of terrorism, cyberterrorism, deliberate sabotage, social unrest and acts of war. Their presence means that human existence depends on the state which should ensure stability by using subsystems for identifying, counteracting and combating threats. These are interlinked and form a functional unity in a so-called national security system.

Critical infrastructure is one of the essential elements of the national security system. In order to ensure social stability, this system must maintain a balance between the activities of many specialised entities performing their statutory functions. The protection of critical infrastructure is therefore one of the overriding tasks of state authorities in their role as being responsible for the personal safety of citizens. In Poland, this responsibility rests with many entities, such as national and local government authorities and their administrations. Public institutions, organisations and associations also bear this responsibility. In part it is also borne by society as a whole; the citizens of Poland, functioning in various groups, communities, societies and institutions.

The book consists of nine chapters. Chapter I presents the place of critical infrastructure in the national security system, with particular emphasis on the citizen as the subject of the state's security policy. It also discusses issues related to terrorism as it poses a particular challenge to the protection of critical infrastructure. Chapter

II analyses the terminology related to critical infrastructure protection. Chapter III contains information on the National Critical Infrastructure Protection Programme (NPOIK). Chapter IV presents the idea behind the Critical Infrastructure Protection Service (SOIK), which it is evident should be established as soon as possible. Chapter V contains the writer's original research which in particular focuses on how Polish citizens view their knowledge of critical infrastructure and the impact of its security level on their personal safety. Chapter VI is devoted to considerations on the problems and challenges related to the protection of critical infrastructure in Poland, with particular emphasis on the current legal situation. The last chapter concerns the protection of critical satellite infrastructure and its importance for humanity.

This is an abridged version of the book *Oblicza bezpieczeństwa państwa. Bezpieczeństwo i ochrona infrastruktury krytycznej. Wybrane aspekty* [Facets of State Security – selected aspects of Security and the Protection of Critical Infrastructure]. Wydawnictwo Akademickie Jagielloński Instytut Wydawniczy, Toruń 2024 (ISBN 978-83-67201-46-9). It is intended for English-speaking readers, which is why the chapter "*Historyczne uwarunkowania ochrony infrastruktury krytycznej*" [Historical Conditions for the Protection of Critical Infrastructure], based on research conducted in the Archives of the Institute of National Remembrance, has been replaced with "Problems and challenges related to critical infrastructure protection with particular emphasis on the current rule of law in Poland". I am confident that this change will be well-received by readers.