

Table of Contents

Introduction	5
1. Logistic activities vs. security	7
1.1. Logistics – related security domains.....	7
1.2. The classification of hazards in the logistics system	10
1.3. Logistics in crisis situations	14
2. The logistic system	17
2.1. The essence of a logistic system.....	17
2.2. The models of logistic systems	20
2.3. Inter-organizational logistic systems	25
3. Security management in the logistic system	34
3.1. The essence and definition of security management in the logistic system	34
3.2. Phases of Crisis Management	36
3.3. Progressive Management	41
3.4. Conservative management	44
4. Tools facilitating logistic system management in macro and micro perspective	48
4.1. Computer-aided decision making in security planning.....	48
4.2. Business Intelligence as a decision-making support tool in crisis situations.....	50
4.3. The application of IT systems in decision making, within the field of security design	54
5. The security of logistic systems in international requirements and standards	55
5.1. ISO 28000: 2007 – Supply Chain Safety Management System	55
5.2. ISO 26000: 2010 – Guidance on social responsibility	56
5.3. ISO 22301: 2012 – Business Continuity Management System	57
5.4. SQAS (<i>Safety and Quality Assessment System</i>)	58
5.5. Container Security Initiative (CSI).....	59
5.6. C-TAPT – <i>Customs-Trade Partnership Against Terrorism</i>	60
5.7. TAPA Certificates (<i>Technology Asset Protection Association</i>)	61
5.8. ISPS <i>International Ship and Port Facility Security Code</i>	62
5.9. ACI Advanced Cargo Information	64
5.10. Food safety.....	65
5.11. Authorized Economic Operator AEO.....	67
5.12. ISO / IEC 27001 – Information Security Management Systems	68
6. Supply chain security	71
6.1. The supply chain as a logistic system	71
6.2. Threats to supply chain functioning.....	75
6.3. Business continuity management in the supply chain.....	76
7. Security considerations for external transport	82
7.1. Organization of transport of hazardous materials.....	82
7.2. Organization of oversized transport.....	89
7.3. Cargo security in land transport	97

8. Telematics in transportation processes	105
8.1. The nature and structure of Transport Telematics	105
8.2. Monitoring of truck transportation	107
8.3. Intelligent Transport Systems.....	110
9. Safety in internal transport and storage	113
9.1. General safety rules when handling internal transport equipment.....	113
9.2. Technical supervision during the operation	124
9.3. Requirements for the use of machinery by employees at work.....	127
Literature index	129

Introduction

Since the dawn of human existence, a human seeks, through thoughtful actions, to create the most favorable conditions for their existence. They tried to eliminate the hazards that would disrupt their living and functioning, by fighting them or simply accept them, as something beyond control and abilities.

However, a human would never give up actions that would allow them to gain independence from the unfriendly impact of the forces of nature, or to get away from the civilizational threats.

The detection of new security threats and the development of new tools and instruments for reduction and elimination of the negative consequences of crisis situations has become, among others, the mission of the universities, scientific institutions, various national and international institutions.

It is them that bring it home to the public that the knowledge the managers have, their theoretical and practical preparation, as well as the means and measures they have at their disposal are the fundament of efficient and effective functioning – also as regards the security of logistics systems, that are realized within global supply chains.

In recent years, the security-related issues related to logistics systems have grown in particular importance and have become the logistics primary goal. However, one needs to realize that the range of meaning of “security” is multi-layered and multi-faceted. The factors that would be of impact to the security of logistics systems are numerous. Some of them are repetitive and easy to identify, others surprise us as new and unprecedented.

The hereby presented monograph – “*Security in Logistics Systems*” is an attempt to provide an answer to the what is the threat to logistics systems, how to manage them to prevent interference, how to use the tools and instruments to minimize the losses that might occur or prevent them from happening.

The monograph contains nine chapters:

1. Logistic activities vs. security
2. The logistic system
3. Security management in the logistic system
4. Tools facilitating logistic system management in macro and micro perspective
5. The security of logistic systems in international requirements and standards
6. Supply chain security
7. Security considerations for external transport

8. Telematics in transportation process
9. Safety in internal transport and storage.

They are an attempt to solve problems regarding the provision of required security level of the processes carried out within logistic systems.

The monograph is addressed to the first-year logistics students, both in first and second cycle studies, extramural students and logistics managers of different management levels.

I would like to thank my reviewers for help and positive evaluation. These words I address to Professor Joahim Foltys PhD and Professor Andrzej Świdorski PhD.