

# Contents

<b>List of Abbreviations and Acronyms</b> .....	7
<b>Introduction</b> .....	15
<b>1. Maritime Force Logistic System in National and Multinational Operations</b> .....	19
1.1. The General Structure of Maritime Logistic System .....	19
1.2. The Maritime Force Logistic System in National Operations .....	23
1.3. The Maritime Force Logistic System in Multinational Operations .....	34
1.4. The Organizational Structure of MF Logistic System in Multinational Operations .....	41
1.5. The Modes of Multinational Logistic Support to Maritime Component .....	49
1.6. The Logistic Support for Polish Navy Ships within NATO Multinational Force .....	62
<b>2. Logistic Interoperability of Ships</b> .....	71
2.1. Ship Logistic Support as the Function of Logistic Interoperability .....	71
2.2. Interoperability Identification .....	72
2.3. The Maritime Force Interoperability .....	74
2.4. Ship Logistic Interoperability Determinants .....	76
2.4.1. <i>General Operational Standards Logistic Interoperability</i> .....	77
2.4.2. <i>Materiel Standards Interoperability</i> .....	79
2.4.3. <i>General Equipment Requirements Logistic Interoperability</i> .....	80
2.5. The Ship Logistic Interoperability Evaluation .....	82
<b>3. Ship Logistic Support</b> .....	93
3.1. Structure of the Ship Logistic Support System .....	93
3.2. The Shipboard Materiel Logistic Subsystem .....	102
3.2.1. <i>General Principles of Materiel Support to Ships</i> .....	102
3.2.2. <i>Feeding Ship Crews</i> .....	104
3.2.3. <i>Managing Uniform Supplies on board Ships</i> .....	111
3.2.4. <i>Supplying Ships with POL</i> .....	112

3.2.5. <i>The Role and Tasks of Maritime Services in Provision of Logistic for Ships</i> .....	115
3.2.6. <i>The Process of Supplying a Ship with Equipment and Materiel of Maritime Services</i> .....	117
3.3. The Functioning of the Shipboard Logistic Subsystem .....	123
3.4. The Functioning of Medical Subsystem on board a Ship .....	131
<b>4. Logistic Capability of the Ship an Her Environment</b> .....	<b>139</b>
4.1. The Notion of Ship Logistic Capability.....	139
4.2. The Structure of Ship Logistic Capacity.....	143
4.3. Ship Endurance .....	148
4.3.1. <i>The Notion and Significance of Endurance</i> .....	148
4.3.2. <i>Logistic Determinates of Ship Endurance</i> .....	150
4.4. Ship Environment Logistic Potential .....	162
4.5. Cooperation Relations of Ship Logistic System with Her Environment.....	167
<b>5. Replenishment at Sea</b> .....	<b>171</b>
5.1. Progress in Modern Replenishment at Sea Methods .....	172
5.2. Planning and Procedures for Replenishment at Sea .....	187
5.3. Methods of Cargo Transfer during Sea Transit .....	196
5.3.1. <i>Classification of Methods of Cargo Transfer during Sea Transit</i> .....	196
5.3.2. <i>Replenishment of Liquid Cargo at Sea</i> .....	198
5.3.3. <i>Solid Cargo Transfer – Horizontal Methods</i> .....	208
5.3.4. <i>Vertical Replenishment at Sea Methods</i> .....	219
5.4. Solid Cargo Handling Equipment .....	225
5.5. Transfer of Personnel .....	231
<b>6. Contemporary Naval Logistic Ships</b> .....	<b>235</b>
6.1. Classification of Naval Logistic Ships .....	235
6.2. Designations of the Basic Classes of Logistic Ships.....	238
6.3. Basic Standards for Logistic Support Ships .....	242
6.4. The Logistic Ships of NATO Countries.....	246
6.5. The Polish Navy Logistic Ships .....	248
<b>Annex 1. Classification of Combat Support and Logistic Support Ships</b> .....	<b>253</b>
<b>Annex 2. Logistic Support Ships of NATO Countries Excluding US Navy Ships</b> .....	<b>263</b>
<b>Annex 3. US Navy Logistic Support Ships</b> .....	<b>277</b>
<b>Annex 4. Symbols of Transfer Stations and Examples of Handling Equipment</b> .....	<b>281</b>

**Annex 5. Silhouettes and Location of Transfer Stations on Some Logistic Ships of NATO Countries.....283**

**Bibliography.....295**

**List of Figures.....301**

**List of Tables.....303**

**A** AERIAL DELIVERY

**AF** AIR FORCE

**AFS** AIR FORCE SUPPORT

**AIR/IN** AIR/INTEGRATION

**A/IN** AIR/INTEGRATION

**AM** AIRMAN

**AME** AIRMAN

**AMND** AIRMAN

**AO** AIRMAN

**AV** AIRMAN

**AVI** AIRMAN

**BIR** AIRMAN

**BPAT** AIRMAN

**CE** AIRMAN

**CGEVA** AIRMAN

**CFI** AIRMAN

**CMNT** AIRMAN

**COMI** AIRMAN

**CPMA** AIRMAN

**GED** AIRMAN

**GTI** AIRMAN

**CLA** AIRMAN

**CLG** AIRMAN

**CM** AIRMAN

**ARMED FORCE**

**ARMED FORCE IN THE AIR**

**OPERATIONS STAFF**

**ADVANCED LOGISTIC SUPPORT SITE**

**ANNULMENT**

**ARMAMENT AND MILITARY EQUIPMENT**

**ARMAMENT**

**ALLOWANCE OF FUEL**

**ARMAMENT STAFF**

**AUXILIARY VESSEL**

**ACCEPTABLE WORKLOAD**

**BATTLE DAMAGE REPAIR**

**BRANCH OF THE ARMY**

**COMANDANT CENTER**

**CAPACITY EVALUATION**

**COAST DEFENSE BATTALION**

**CONTAMINATION DAMAGE HAZARD TEAM**

**CONTAMINATION DETECTION AND REMEDIATION**

**CENTRAL EUROPE REGIONAL MANAGEMENT AGENCY**

**THE GUARD DETACHMENT**

**COMBINED JOINT TASK FORCE**

**CENTRAL LOGISTIC AUTHORITY**

**CONTRACTOR LOGISTIC SUPPORT**

**CURRENT MAINTENANCE**