AJP-3.1

ALLIED JOINT DOCTRINE FOR MARITIME OPERATIONS

EDITION A VERSION 1

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NATO STANDARD

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ALLIED JOINT DOCTRINE FOR MARITIME OPERATIONS

Edition A Version 1

DECEMBER 2016

NORTH ATLANTIC TREATY ORGANIZATION

ALLIED JOINT PUBLICATION

Published by the
NATO STANDARDIZATION OFFICE (NSO)

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NORTH ATLANTIC TREATY ORGANIZATION (NATO)

NATO STANDARDIZATION OFFICE (NSO)

NATO LETTER OF PROMULGATION

16 December 2016

1. The enclosed Allied Joint Publication, AJP-3.1, Edition A, Version 1, ALLIED JOINT DOCTRINE FOR MARITIME OPERATIONS, which has been approved by the nations in the Military Committee Joint Standardization Board (MCJSB), is promulgated herewith. The agreement of nations to use this publication is recorded in STANAG 1459.

2. AJP-3.1, Edition A, Version 1 is effective upon receipt and supersedes AJP-3.1, Version 1 which shall be destroyed in accordance with the local procedure for the destruction of documents.

4. This publication shall be handled in accordance with C-M(2002)60.

Edvardas MAŽEIKIS
Major General, LTUAF
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RECORD OF RESERVATIONS

CHAPTER	RECORD OF RESERVATIONS BY NATIONS
1	USA

NOTE

THE RESERVATIONS LISTED ON THIS PAGE INCLUDE ONLY THOSE THAT WERE RECORDED AT TIME OF PROMULGATION AND MAY NOT BE COMPLETE. REFER TO THE NATO STANDARDIZATION DOCUMENT DATABASE FOR THE COMPLETE LIST OF EXISTING RESERVATIONS.

RECORD OF RESERVATIONS

NATION	SPECIFIC RESERVATIONS
USA	The US does not agree with use of the term “global commons” in the AJP. “Global commons” is a long standing term with an internationally recognized legal meaning. The USA only recognizes use of the term in its limited and appropriate context. This reservation will be removed when the appropriate correction is made to para 1.7.

NOTE

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PREFACE

1. AJP-3.1 outlines the basic principles, doctrine, and practices of North Atlantic Treaty Organization (NATO) maritime forces in a joint environment. It is intended to influence thinking and provide guidance to NATO joint and maritime staffs about the application of maritime power in Allied joint operations. AJP-3.1 derives its authority from and complements AJP-3, *Allied Joint Doctrine for the Conduct of Operations*, which presents NATO doctrine for planning and conducting joint operations. AJP-3 provides overarching doctrine on Allied joint operations, while AJP-3.1 focuses on the unique characteristics and employment considerations for maritime forces in joint operations. It addresses the fundamental factors that influence the employment of maritime power and the key aspects of command and control from the command perspective.

2. Although intended primarily for NATO forces, AJP-3.1 also applies to operations within the framework of a combined joint task force in a multinational force of NATO and non-NATO nations.

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Chapter 1 — Fundamentals of joint maritime operations

Introduction

1.1 This chapter introduces the concept of maritime power and examines the role of the Allied military contribution to that power as indicated in the Alliance Maritime Strategy.[1]

Section 1 — Alliance maritime strategy

Alliance strategy and doctrine

1.2 Military strategy sets the manner in which military power should be developed and applied to meet the Alliance's objectives. Joint planning translates strategic objectives into tactical tasks and means-to-ends. Maritime power offers unique capabilities that should be integrated into the operation plan. This requires robust and informed representation within the joint operations planning group who, through experience and training, understand the capabilities and limitations of maritime forces and how they can best contribute to the joint operation. The maritime staffs must understand how planned maritime activities will integrate with, and contribute to the overall campaign. As most operations are "joint" by nature full consideration must be made by maritime staffs of all other component objectives, plans, and activity.

Maritime power

1.3 Maritime power is derived from the ability of a state or non-state actor to use the freedom of movement provided by the sea to exert diplomatic, economic, and military influence at a time and place of choice. Maritime power has traditionally been employed globally to maintain the freedom of navigation essential to the general economic welfare or survival of states. Conversely, it has been regularly used to disrupt an opponent's sea lines of communication (SLOC) as part of a wider Allied, joint, or combined operation.

1.4 Maritime forces have utility across the spectrum of warfighting at an early stage to deter and/or prepare the operating environment; throughout a joint operation to project power or force ashore through amphibious operations, carrier-based aircraft, and joint fires; and towards the end of an operation to withdraw forces.

The contemporary maritime security situation

1.5 The oceans connect nations through an interdependent network of economic, financial, social, and political relationships. The facts are compelling: most of the Earth is covered in water; most of the world's population lives close to the coast; most of the world's major cities and a majority of financial centers are near a coastline; and most of the world's international commerce is seaborne, and the majority of that trade passes through a few vulnerable canals and international straits. The maritime environment includes trade routes, choke points, ports, and other infrastructure such as pipelines, wind farms, oil and natural gas platforms, and

[1] The Alliance Maritime Strategy (NU_C-M(2011)0023-Annex1).

transoceanic telecommunications cables. In addition, the sea is increasingly exploited for its economic resources, be that on the high seas,[2] exclusive economic zones (EEZs),[3] or in territorial[4] waters.[5] Thus, the sea provides vital strategic access.

1.6 Global trade relies upon secure and low-cost international maritime transportation and distribution networks that are vulnerable to disruption, to the extent that even short interruptions could seriously impact international trade and national economies. Additionally, there are fisheries and other highly valuable resources that lie in, on, and beneath the ocean floor. Meanwhile, climatic changes may allow new and economically attractive sea routes, as well as improved access to resources. The maintenance of the freedom of navigation, sea-based trade routes, critical infrastructure, energy flow, protection of marine resources, and environmental safety are all in national security interests.

1.7 The impact of technology has resulted in vessels with ship's propulsion, navigation, and cargo handling systems routinely being automated. Navigation aids and port handling facilities are similarly automated, increasing the vulnerability to cyberspace threats. Cyberspace and space, as global commons, must be understood by the Allied maritime commander insomuch as both present challenges to the security of maritime operations.

The maritime contribution to alliance security

1.8 Allied maritime operations and activities provide vital contributions to Alliance security. Such contributions may include:

- deterrence and collective defence;
- crisis management;
- cooperative security: outreach through partnerships, dialogue, and cooperation; and
- maritime security.

The relative weight given to the Alliance's engagement in each of these roles will depend on circumstances and the resources available.

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[2] The term "high seas" means all parts of the sea that are not included in the EEZ, territorial sea, or in the internal waters of state or in the archipelagic waters of an archipelagic state. UN Convention of the High Seas 1982 Article 86.

[3] The exclusive economic zone is an area beyond and adjacent to the territorial sea (where) the coastal State has ... sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living. UNCLOS 1982 Part V Article 56.

[4] The sovereignty of a coastal State extends beyond its land territory and internal waters and, in the case of an archipelagic State, its archipelagic waters, to an adjacent belt of sea, described as the territorial sea. UNCLOS 1982 Part II Article 2.1. The term "archipelagic State" means a State constituted wholly by one or more archipelagos and may include other islands (UNCLOS 1982 Article 46(a)). UNCLOS 1982 is not ratified by all NATO nations.

[5] The littoral/coastal waters or littoral can neither have any effect nor any implication in terms of sovereign rights of states under international law.

Deterrence and collective defence

1.9 Deterrence and collective defence remain the essential political-military cornerstone of North Atlantic Treaty Organization's (NATO's) solidarity and mutual commitment. Deterrence relies upon proven capability, demonstrations of readiness, and clear communication within the diplomatic, informational, military, and economic channels. NATO's significant maritime capabilities, which offer speed, accuracy, lethality, reach, interoperability, modularity, and endurance, combined with the inherent flexibility and adaptability of maritime forces, are a key component to deter aggression.

1.10 The contribution of Alliance maritime forces to deterrence and collective defence will:

- contribute to nuclear deterrence in accordance with the Strategic Concept;

- provide a wide range of conventional rapid response options, including the ability to deliver decisive force rapidly against any opponent;

- maintain the ability to deploy, sustain, and support expeditionary forces through the control of SLOC, mine countermeasure capabilities, and the ability to force entry if necessary as well as to project power ashore;

- provide JISR assets to establish and maintain comprehensive maritime situational awareness (MSA) in support of strategic and operational objectives.

- provide precision engagement assets that integrate with other components of the joint force;

- provide a sea-based ballistic missile defence capability, offering strategic flexibility as a contribution to the protection of forward-deployed NATO forces (theater missile defence) and to the protection of NATO territory and populations against ballistic missile threats; and

- provide versatile military means of increasing political pressure as a crisis develops. Unimpeded access to the high seas allows a maritime force to directly deliver either support to allies and partners or military deterrence, coercion, and containment.

Crisis management

1.11 Alliance crisis management could include conflict prevention, demonstration of resolve, crisis response operations, peace enforcement, embargo operations, counterterrorism, mine clearance, and consequence management, often in austere operating conditions. Although the primary focus of crisis response operations is usually on land, maritime forces can play a critical enabling role in arms embargo and interdiction operations, maritime precision strike in support of ground operations, flexible deployment of amphibious forces for ground operations, logistic and relief support, surveillance and reconnaissance, as well as offering opportunities to minimize footprints ashore by exploiting possibilities to base operations and logistic support at sea. To this end, the maritime contribution to Alliance crisis management:

a. Provides rapid response joint forces to operate in environments with degraded communications. The maritime component must achieve sea control and denial, deliver interoperable maritime and amphibious strike, provide a base of operations at sea, and

exercise coherent Alliance command and control while operating with non-NATO navies and organizations to deliver decisive action on, under, above, and from the sea.

b. Leverages the inherent agility of its maritime forces to provide a flexible and graduated response in crisis or emerging crisis situations, ranging from simple presence through demonstrations of force (including raids) to specific tasks applying tailored forces, including peace enforcement, embargo, and no-fly zone enforcement, counterterrorism, non-combatant evacuation operation (NEO), and initial entry operations.

c. Contributes to the provision of urgent humanitarian assistance and disaster relief in humanitarian operations.

d. Provides essential logistical support for joint force operations in austere or hostile land environments and the deployment of joint command and logistical bases afloat (sea basing) if available.

Cooperative security: Outreach through partnerships, dialogue, and cooperation

1.12 Alliance maritime activities are integral to NATO's policy of outreach through partnerships, dialogue, and cooperation. They offer valuable opportunities to prevent conflicts by developing regional security and stability through dialogue, confidence-building, and increased visibility of issues affecting the Alliance. They contribute to building partner capacity, exchanging information, cooperative security, and interoperability, including where activities involving a significant or enduring footprint ashore might be unacceptable. These activities are complementary to what nations conduct on a national level and have the added value of demonstrating the Alliance's intention to support partners and of drawing on a wider set of assets and capabilities.

1.13 The Alliance's maritime component can:

- engage in diplomatic activities, including port visits as part of the routine activities of the Standing NATO Maritime Groups;

- contribute, where appropriate, to building partner capacity by improving the capabilities of our partners to address security threats in the maritime environment and to operate there effectively; and

- conduct combined training, seminars, and exercises with partners.

Maritime security

1.14 As part of broader efforts to address security threats arising in the maritime environment, whether on the high seas, coastal waters or inland, NATO maritime forces can contribute to the maintenance of a secure and safe maritime environment. Maritime security, including the enforcement of international agreements, is a suitable area for cooperation with partners.

1.15 Alliance maritime operations and activities in support of maritime security are conducted in accordance with MCM-0058-2010, Alliance Maritime Strategy, and MC 588, NATO Maritime Security Operations (MSO).

Section 2 — The maritime operating environment

Dimensions of the maritime environment

1.16 The oceans connect nations through an interdependent network of economic, financial, social, and political relationships. The maritime environment ranges from the high seas to the more confined and/or shallow waters within littoral and/or coastal regions, estuaries, and the air and water space above and below them. Most human maritime activity – shipping, fishing, oil exploration, etc. – is currently conducted within EEZs to which warships and submarines have unrestricted access and presence to conduct exercises and routine operations. This means that a substantial proportion of the world's economic and political activity is being conducted in a narrow strip of land and sea. The more confined the maritime environment becomes, the more likely it is to be a contested, congested, cluttered, and constrained operating environment.

1.17 There are seven dimensions that influence the maritime environment:

- physical dimension;
- economic dimension;
- political dimension;
- diplomatic dimension;
- legal dimension;
- military dimension; and
- cyberspace/information dimension.

1.18 These dimensions are intrinsically interrelated and no single dimension is any more important than another. That said, the physical dimension is the overarching context for all of the others – it articulates what is unique about the maritime environment and how it shapes those who use the sea.

Physical dimension

1.19 Oceans provide access to all parts of the globe. No state may validly subject any part of the high seas to its sovereignty. Maintaining freedom of navigation through maritime choke points, such as the Straits of Gibraltar and the Suez Canal, is of particular importance as the closure of these confined waters would seriously hamper vital trade flow with grave consequences for the global economy.

1.20 The maritime operating area ranges from the deep waters of the open oceans and airspace above to the more confined and often shallower waters of littoral regions, estuaries, and rivers. Geographic, meteorological, and oceanographic (METOC) conditions across these areas may create significant variations in air and sea temperature, sea state, salinity, and humidity that impact maritime forces. The weather affects the physical performance of individuals as well and influences military decisionmaking at both the tactical and operational levels. Adverse weather conditions can be used to friendly force advantage; for example, a submarine can use poor sonar conditions to minimize the risk of detection. Furthermore, the inherent mobility of maritime forces may allow them to reposition to a more favourable location within the operating area. An aircraft carrier can, for instance, seek out and exploit a local weather window in poor visibility to continue flying operations.

1.21 Whilst the ability of maritime forces to conduct operations can be severely affected by the physical dimension, training, skillful seamanship, sound tactics, and acquisition of equipment designed to operate in such a demanding environment can help to minimize its effects.

Economic dimension

1.22 Since the first cargos were moved by sea, maritime trade has been at the forefront of global development and is the principal means by which materials are transported between states. Since 1945 the world has seen a steady expansion of seaborne trade at around 4.8% per annum.[6] The containerization of general cargo since the 1960s has revolutionized the global economy and opened the floodgates for global commerce by moving goods relatively freely and easily worldwide.[7] The container has made domestic firms global. Cities that had been the center of maritime commerce for centuries, such as London and New York, have been replaced by massive new ports, such as Rotterdam (the largest container port in Europe), which now unload and reload a ship in hours with minimum human interaction.

1.23 Today, cargo moves between more than 3,000 major commercial ports dominated by three economic blocs: North America, Europe, and Asia. Together they own over 90% of the world's manufacturing industry and much of its technology. Consequently they also dominate sea trade. Any prolonged interruption of maritime transportation networks undermines both industrial production and most Allied governments' abilities to provide for the basic welfare of their populations. A key role for NATO maritime power is to support the international community by ensuring the just-in-time global economy is enabled by safe and secure international sea routes. Disruption of these routes inevitably results in supply chain shortages with follow-on economic consequences.

1.24 Trade and transport is one part of the economic dimension, whilst fish, fossil fuels, and minerals are the other key constituent. Approximately 1 billion people rely on fish as their main source of animal protein. The control of fishing and the management of fish stocks are problematic, with most fishing states deploying fleets to grounds within other states' EEZs. The scarcity of fish and overfishing has significantly increased the potential for dispute

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[6] Stopford M, Maritime Economics (3rd Edition), Routledge, page 38, 2009.
[7] Levinson M, The Box, Princeton University Press, page 2, 2006.

between states. Despite the obligation of all states to manage fish stocks in their EEZ in a sustainable way, some states may have little or no capacity to do so.[8]

1.25 Nothing has motivated coastal states to extend their jurisdiction over the seas more than the prospect of finding new sources of fossil fuels. This has led to tension, dispute, and even conflict. As easily accessible fossil fuels become scarcer, such tensions are likely to increase. Furthermore, the continental shelf is increasingly being exploited to develop low-emission wind and tidal energy as a sustainable alternative, creating further potential for conflict. Additionally, conflicting bids for control of Arctic sea areas and for the access of trade routes may create political tensions in the future. Climate change will result in a reduction of Arctic ice, enabling the exploitation of natural resources and the sea passages across the Arctic region which could cause future political tension or conflict.

Political dimension

1.26 The political dimension of the maritime environment took shape largely during the 1970s. Initially, the extension of national sovereignty out to sea was a political-military act with some economic consequences; more recently, it is frequently undertaken for objective, calculated economic benefit. Many states struggle to police their maritime zones and manage their increasingly important maritime resources effectively. The extension of coastal state jurisdiction has increased the likelihood of disputes between bordering states and between coastal states and flag states exercising freedom of navigation. Maritime power plays a vital role in resisting further restrictions on high seas freedoms.

Diplomatic dimension

1.27 States have used the seas as a point of interaction for millennia. Bilateral and multilateral engagements are a routine element of international affairs with long-term benefits. States use the freedom of manoeuvre provided by the oceans as a conduit for building relationships, strengthening ties, and providing assistance and reassurance to like-minded states. States also exploit the sea to exert influence upon those they wish to persuade, to deter and, if necessary, to compel.

Legal dimension

1.28 The 1982 UN Convention on the Law of the Sea (UNCLOS 1982) has transformed the maritime environment with legal rights and obligations for both coastal states and flag states. Although UNCLOS 1982 is not ratified by all NATO member states, there are provisions of the Convention that are regarded to reflect existing customary international law.

1.29 In the operations planning process, the joint and maritime force commander should be cognizant of national differences in interpretation of international law and the impact that may have on operations.

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[8] At present, the task of protecting fish stocks or policing fishery grounds is not a NATO task and is undertaken by individual members on a national or regional basis.

1.30 Criminals and terrorists often use the same waters that allow legitimate trade. Illicit activities can threaten member states' interests, both in their own countries and abroad. Criminal and terrorist organizations often rely on the sea for movement of people and materiel, including weapons of mass destruction. Criminal activity in the maritime environment includes piracy, human smuggling and trafficking of persons, and other forms of illegal commerce and contraband.

1.31 In regard to environmental legislation, UNCLOS has imposed specific environmental obligations on those nations that have ratified it. A growing awareness of environmental issues increases the emphasis upon environmental stewardship and a greater need for maritime forces to minimize the impact of their activities on the environment.

1.32 By understanding and adhering to these rights and obligations, maritime forces are able to leverage the sea as a medium to exercise maritime power projection in pursuit of NATO's objectives and in a manner consistent with the principles and provisions of international law.

1.33 States may make continental shelf claims to the limit of the continental margin, normally no greater than 200 nautical miles from the baseline. If a nation can establish that the continental margin extends further, it may claim a continental shelf greater than 200 nautical miles from baseline.

Military dimension

1.34 Developing nations are equipping their navies with warships, aircraft, and submarines, and have demonstrated nascent expeditionary capabilities. Relatively minor maritime powers and non-state actors can pose a significant threat, especially in the littoral where they can conduct sea-denial operations. Sea mines and waterborne improvised explosive devices are widely available, relatively inexpensive, and effective. State and non-state actors are using fast attack craft, shore-based aviation, or missiles.

1.35 The complexity of the underwater acoustic spectrum provides both opportunities and threats. The threats should be mitigated via emission control (EMCON) policy and acoustic signature management. The underwater acoustic spectrum can be used for a state's own benefit without disclosure to opponents.

Cyberspace/Information dimension

1.36 The cyberspace/information dimension links users through communication and information systems. State and non-state actors may attack NATO military communication and information systems to deny access and control the flow of vital information and, in extreme cases, the subsequent control or disablement of numerous military systems that rely on connected networks for their effective use. Without physical boundaries and with the inherent capability to provide instantaneous global reach, the cyberspace dimension is both a key asset and vital vulnerability for NATO.

1.37 The overly crowded nature of the electromagnetic spectrum (EMS) and ease at which the use of the EMS can be denied makes planning for use of the EMS a complex task.

1.38 Space assets use cyberspace to provide global communication; positioning, navigation, timing services; environmental monitoring; intelligence collection; and indications and warning services to nations, maritime commanders, services, and agencies.

Section 3 — The maritime contribution to joint operations

Introduction

1.39 Maritime forces are globally mobile and deployable. They are able to exploit freedom of navigation, transiting to and arriving in an operating area to provide a scalable, sustained military presence, and to demonstrate finely measured political intent. No single attribute is independent of another and all will apply to a greater or lesser extent at different stages of differing operations.

1.40 The attributes of maritime forces are:

a. Access – Freedom of movement assured by international law, military force, or granted by a host nation.

b. Mobility – It enables maritime forces to respond from over the horizon, to and within an operating area.

c. Lift capacity – The most practicable means of deploying large-scale joint force support materiel.

d. Posture – From the moment they commence transit, maritime forces can signal political resolve and act as a force for deterrence or coercion.

e. Versatility and availability – Ability to shift focus, reconfigure, and realign forces quickly.

f. Sustained reach – Self-reliance for extended periods at distance from base ports.

g. Resilience – Maritime forces can generally absorb significant damage before failing.

h. Leverage – Ability with which to influence events both at sea and ashore.

Maritime forces in the contemporary operating environment

1.41 The attributes of maritime forces position them for a leading role to achieve the joint force commander's (JFC's) objectives at and from the sea; in the air, space, cyberspace, and EMS; and in contributing to effective crisis response through diplomacy and deterrence.

1.42 When supporting a joint operation, maritime forces are particularly suited to provide the following capabilities:

- landing combat troops ashore as part of joint operations;

- naval fire support;
- protect, control, or defend the maritime operating area and SLOC;[9]
- ship-based aviation (including unmanned systems);
- command and control facilities afloat;
- communications and information systems;
- intelligence collection;
- logistics and medical support;
- force protection (including ballistic missile defence and harbour protection);
- miscellaneous capabilities (i.e., explosive ordnance disposal); and
- strike warfare.

Maritime operations

1.43 The maritime conflict and operation themes are likely to cover the following types of operations in the maritime environment:

a. Major combat operations. This includes high-end traditional and irregular warfare against a state or non-state adversary. This type of conflict will usually follow Article 5 – the collective defence clause of its founding treaty – being invoked.

b. Peace support. The military contribution to peace support includes conflict prevention, peacemaking, peace enforcement, peacekeeping, and peacebuilding. The challenges will be varied and center on whether there is a role “at sea” for peace support or whether maritime platforms are being used either at sea, at anchor, or alongside to support land forces. In the case of the latter, force protection and tempo will dictate how best to utilize the platforms, but in a large operation of significant duration, there is likely to be a mix of uses.

c. Peacetime military engagement. Should the situation dictate, the joint force can use maritime platforms to operate with minimal footprint ashore. This approach allows NATO to have a deterrence posture where needed without the need to commit sizeable assets in full view of a potential adversary. This can be of particular advantage when supporting an ally who may be threatened by another state or by an armed opposition within the same country.

[9] Protection of SLOC: To conduct deterrent or defensive/offensive operations in order to prevent interference with merchant shipping and to guarantee the free flow of cargo, military forces, and resupply shipping essential to the support of NATO nations and interests.

CHAPTER 2 — The roles and activities of alliance maritime forces

Section 1 — Roles of maritime power

Maritime roles and activities

2.1 The Alliance Maritime Strategy distinguishes roles for maritime forces as discussed in Chapter 1. They are by definition overlapping and, for practical military purposes, can be divided into three distinctive activities:

- warfare and combat;
- maritime security; and
- security cooperation.

2.2 These three roles fulfil the maritime contribution to security across all of the military tasks required of the North Atlantic Treaty Organization (NATO). In practice, most operations undertaken by maritime forces will incorporate aspects of each of these activities. They are interrelated and may be conducted concurrently or consecutively with little or no physical change to the force structure. For example, the difference between maritime security and warfare and combat may be extremely difficult to distinguish and will invariably involve international engagement as well. These broad utilities are one of the most valuable features of maritime forces; they offer options to decision makers for escalation or de-escalation simply by altering the maritime force posture.

2.3 The primary objective of maritime power is to support the political imperative of the time; invariably, at the strategic level it will be to promote stability, whilst at the operational level, may require conflict.

2.4 Traditional warfare considerations, planning, and structures apply to both state and non-state adversaries. Thus, not only apply for traditional, interstate warfare, but also apply, when and as appropriate, to all maritime operations.

Overview of maritime military activities

2.5 Maritime forces provide a broad, agile, and scalable capability which can operate within and across all domains regardless of operating conditions. They can also enable the delivery and integration of land forces, special operations forces, and air operations. They are capable of contributing to political, economic, and military objectives. The attributes of maritime forces have utility across a broad range of operations, which may occur in linear or non-linear operations. These operations are grouped under the three general activities of warfare and combat, maritime security, and security cooperation (see Figure 2.1), and can be conducted at a scale that ranges from individual units to large task groups (TGs).

Alliance Maritime Strategy ⟶ **Crisis Management** **Deterrence & Collective Defence** **Maritime Security** **Cooperative Security**		
Maritime Activities in the Application of Military Power		
Warfare and Combat	**Maritime Security**	**Security Cooperation**
Sea Control Sea Denial Power Projection via Antisubmarine Warfare Antiair Warfare Antisurface Warfare Naval Mine Warfare Electronic and Acoustic Warfare Strike Warfare Amphibious Operations Special Operations Riverine Operations	Support Maritime Situational Awareness Uphold Freedom of Navigation Conduct Maritime Interdiction Fight Proliferation of Weapons of Mass Destruction Protect Critical Infrastructure Support Maritime Counterterrorism Contribute to Maritime Security Capacity Building	Training and Exercises Forward Presence Security Sector Reform Stabilization and Reconstruction Humanitarian Assistance and Disaster Relief Operations Non-Combatant Evacuation Operations Civil-Military Cooperation

Figure 2.1 — Maritime activities in the application of military power

Section 2 — Warfare and combat

Warfare and combat — An introduction

2.6 Conducting warfare and combat enables the ability to deliver maritime security and security cooperation. Warfare may be used for a variety of reasons, but the physical protection of the Alliance's territorial integrity and security in a very literal sense is the irreducible minimum requirement.

2.7 The primary focus of NATO is the prevention of conflict through deterrence and to deal with the causes rather than the consequences of international tension by de-escalation. However, in the event that conflict cannot be prevented, military forces must have the ability to confront and defeat aggressors. Even if lethal combat power is not applied, the credible threat of a maritime force may form the basis of the maritime contribution to conflict prevention.

2.8 The conduct of warfare demands that commanders and subordinates should be endowed with an offensive (or aggressive) mentality: a determination to win, whatever the difficulties. But this attitude has nothing whatever to do with the actual method of warfare being employed and should never be confused with an offensive (vice defensive) course of action. Indeed, the offensive mentality is as necessary in defensive operations as it is when conducting an offensive; it is about seizing and maintaining the initiative.

2.9 The execution of maritime operations center upon the tenets of sea control and maritime manoeuvre which together enable the achievement of objectives at sea and from the sea. As with other aspects of maritime power, they are intimately interrelated and each relies upon the other for success.

2.10 Warfare at sea is conducted by missions in the following warfare areas: antisubmarine warfare (ASW); anti-air warfare (AAW), to include theater ballistic missile defence, antisurface warfare (ASUW), naval mine warfare (NMW); and electronic and acoustic warfare (EAW) which cover both offensive and defensive warfare. These are enabled by maintaining situational awareness and a common operational picture. Maritime projection or warfare from the sea is conducted by executing strike warfare (STW), amphibious operations, special operations, and riverine operations.

Application of maritime power

2.11 Maritime power can be applied in numerous and varied ways. The physical range of maritime platform-launched missiles now exceeds many hundreds of nautical miles for some Alliance members, and the array of warheads that accompany many weapons is equally varied. Historically, these missiles were often designed to be used against other vessels at sea, but recent decades have seen a growth of increasingly accurate and sophisticated long-range land-attack and antiair missiles able to be fired from naval vessels of all types.

2.12 Whilst maritime forces can conduct attacks to support other components, there are wide ranges of ways naval units can conduct attacks in the maritime environment. These include the use of torpedoes, mines, depth charges, antiship missiles, maritime unmanned systems (MUS) and their weapons, and demolition charges of various types.

2.13 Attacks can also be conducted by the use of non-lethal weapons and increased offensive use of the electromagnetic spectrum to deny the adversary command and control, communications, computers, intelligence, surveillance, target acquisition, and reconnaissance. Jammers, electronic decoys, and the use of cyberspace and information operations all form part of the Alliance's maritime offensive capability.

Sea control

2.14 Sea control is a temporary condition that exists when one has freedom of action within a maritime area for one's own purposes in the subsurface, surface, and above-water environments and, if necessary, deny its use to an opponent. At the lower end of the conflict spectrum, maritime forces may be used to ensure freedom of navigation (FON). They may also be directed to operate in a state's territorial waters in areas where illegal acts or constraints are being threatened or applied to merchant shipping when the necessary conditions are met in accordance with MC 0588.

2.15 In many other cases, when conducting operations in the littoral, such as the protection of ports and anchorages, amphibious operations, or providing support to the land battle, sea control must be achieved and maintained up to the shoreline, the port perimeter, or estuary. Control of the air and land space may then be required across the shoreline and some distance inshore.

2.16 The need for sea control is not dependent upon the existence of a substantial threat. Even if there is a small risk to freedom of action, the establishment sea control may be necessary and may require disproportionate effort.

2.17 Sea control can be achieved in essentially two ways: annihilation of the adversary or containment of the adversary's naval forces through blockade. Alternatively, adversaries can be contained through deterrence. The level of sea control required, and indeed achievable, will depend upon the threat, mission, size, and capabilities of the maritime force.

2.18 To exercise sea control, the maritime commander must have the means, the authority, and the determination to use his force accordingly. In the contemporary operating environment, the political will and, thus, a suitable set of rules of engagement are major factors which need to be addressed during the planning stage of any operation.

2.19 Sea control is generally achieved using maritime assets, including unmanned systems with multiple combat capabilities; NMW, in contrast, will mostly involve single mission, specialized mine countermeasure vessels, aircraft, or unmanned systems.

2.20 In many maritime or joint operations, sea control is a necessary condition to allow use of the sea for further purposes, including protection of the sea lines of communication (SLOC) and to enable maritime power projection. Gaining the necessary level of sea control will be a major component of any Alliance maritime or expeditionary operation. However, there can be no absolute guarantee of protection from attack at sea, and the level and degree of control required must be related to acceptable risk.

2.21 The geographical extent of sea control required by the commander may vary from local control of a strategic choke point or concentration of forces to domination of very large sea areas and may or may not be contested. Because of the complexity of the maritime environment, attaining sea control is a more complex task in littoral regions than it is in open ocean areas and demands battlespace dominance over all the environments, including the beach and the necessary inland areas.

2.22 All maritime commanders should take necessary measures to ensure that their activities do not conflict with those of other units and task groups that are passing through their areas and which may well be conducting their own sea control operations in the immediate vicinity. Careful coordination of command and control is required to integrate a mobile force, to deconflict operations, and to avoid mutual interference or fratricide.

2.23 Submarine contribution to sea control is generally focused on ASW, ASUW, and intelligence collection operations. Considerations to bear in mind when integrating submarines in sea control operations are: water space management, type of support (integrated, direct, or associated), the limited communications available, and liaison with submarine operating authority (SUBOPAUTH).

Sea denial

2.24 Sea denial is exercised when one party prevents an adversary from using a maritime area. Classic means of achieving sea denial are to lay a minefield or deploy submarines to threaten enemy surface and subsurface forces. Sea denial can be attained using direct or indirect methods:

a. Direct approach. Attacks the enemy centre of gravity (COG) or principal strength by applying combat power directly against it.

b. Indirect approach. Attacks the enemy's COG by applying combat power against a series of decisive points that lead to the defeat of the COG while avoiding enemy strength. At the operational level, the most common indirect method of defeating an adversary's COGs is to conduct a series of attacks against selected aspects of the adversary's combat power. For example, the maritime component commander (MCC) may sequence combat actions to force an adversary to divide its forces, destroy the adversary's reserves or elements of the adversary's base of operations, or prevent or hinder the deployment of the adversary's major forces or reinforcements into the operating area.

Relationship between sea control and sea denial

2.25 Sea denial and sea control operations are not mutually exclusive and may complement each other. The denial of the adversary's freedom of action is an outcome of effective sea control. Denial operations in one part of the maritime area of operations may be necessary to achieve sea control elsewhere. In a multithreat environment where maritime forces may be attacked by surface units, submarines, aircraft, land-launched weapons or sea mines, each principal warfare area must succeed if sea control is to be achieved.

2.26 Each principal warfare area has its own unique characteristics that may cause friction where different types of operation (and, thus, different aims and priorities) lead to conflicting

requirements that must be resolved by the MCC. Coordinated actions will create a considerable synergy that will increase the likelihood of a successful outcome. The essence of sea denial is that, in the absence of a necessary condition for sea control, the circumstances of a specific tactical situation may be sufficient for sea denial.

2.27 As part of power projection and sea control, operations can be directed against adversary forces involved in sea-denial operations. The indirect approach (such as attacking a mine depot) offers the possibility of bringing an offensive and proactive element to bear far beyond the limits of defensive and reactive operations.

Fleet-in-being

2.28 A state might choose, or be forced, to adopt a strategy of fleet-in-being. By avoiding confrontation with a superior adversary, a nation can hold back its own maritime forces while continuing to threaten those of the adversary. The risk of attack complicates the opposition's options and prevents them from taking the initiative elsewhere. The threat from a fleet-in-being can prevent superior opposing forces from establishing their desired level of sea control by diverting forces to other tasks, such as blockade or containment, and, as such, is a method of sea denial. A fleet-in-being can compel a superior force to concentrate their forces in a valuable area or around valuable units, or cause them to route their passage to their disadvantage or to amend their operation plans.

Cover

2.29 Cover is the provision of support provided to vulnerable units or detached elements of the force that are engaged in operations of their own that take advantage of the wider sea control that the main force has achieved. Examples of cover could be convoy operations and air defence for mine countermeasure units operating independently.

Concentration of forces

2.30 The attributes of maritime power may enable a weaker opponent to evade a superior's concentration of force; indeed the greater the concentration, the easier it may be to evade. Sometimes dispersion, or the pretense of dispersion, is a better way of luring a weaker opponent into battle. The more that a maritime power concentrates its resources, the greater is its potential to exert sea control in its area of operations. By concentrating a maritime force, it may not only deter a weaker opponent from seeking battle, but may also discourage them from attacking elsewhere.

Maritime power projection

2.31 As well as the central requirement to control events at sea, NATO maritime power must be able to influence events from the sea. Maritime power projection is a proactive operation that involves seizing the initiative by projecting power ashore. However, power projection is not necessarily offensive. The mission may be to withdraw forces from ashore or to evacuate civilians. The offensive is a course of action that forces the adversary to fight, if only to defend their own position; the defensive, in contrast, is a posture that forces the adversary to attack if the wish is to fight.

2.32 Maritime power projection is the threat, or use, of military power at range from the objective to influence events from the sea. It exploits sea control and maritime manoeuvre to achieve access in order to threaten or project force ashore. There are numerous ways in which maritime power projection can contribute to a joint operation:

a. Shape. The sea is, in most cases, a highway free from boundaries and frontiers that provides a valuable arena for joint force manoeuvre. In preparation for subsequent operations, maritime forces can, for example, be employed to gather intelligence and/or mount non-combatant evacuation operations, withdrawing civilians from a potential combat zone. Equally, they may be used to insert Special Operations Forces or to conduct amphibious operations.

b. Reassure. Before the buildup of friendly joint forces in theater, the presence of maritime forces can be used to reassure a friendly state. A state reassured by the presence of maritime forces is more likely to provide access, basing, and overflight.

c. Deter. Maritime forces can be used to deter an aggressor by deploying into a region at an early stage, at relatively low political risk and, if necessary, in considerable strength.

d. Coerce. As maritime forces build up in theater, they can demonstrate further resolve by launching discrete amounts of mixed land, air, or maritime power against key adversary targets to force an adversary away from one course of action or to compel him to take another. Importantly, they can do this while having some measure of control over escalation.

e. Disrupt. Prior to the main offensive, maritime forces can help to shift the emphasis from defensive to offensive operations by disrupting enemy activity through the use of amphibious raids into enemy territory.

f. Project. Land manoeuvre seeks a position of advantage with respect to the enemy from which force can be threatened or applied. An important role of maritime power projection forces, particularly amphibious forces, is to provide manoeuvre from the sea. Speed of manoeuvre at sea will often surprise opponents ashore; a maritime force can move up to 400 nautical miles in a day.

g. Support. During the execution of an operation, the maritime component's full range of capabilities, in particular its ability to engage in precision attack, can support friendly forces ashore or in the air. Additionally, the sea base may be used to flexibly and securely hold a reserve force or serve as a command platform; these functions have equal utility at both the start and the end of a conflict or crisis.

h. Limit. Alliance maritime forces can guard the maritime flanks of an operating area and by doing so, limit the freedom of manoeuvre of an enemy. This also has the added advantage of greatly reducing the need for land forces to guard vulnerable coastal areas that are being protected by these same forces at sea.

i. Recover. Finally, when it comes to withdrawal, the ability of maritime forces to transport large numbers of personnel and heavy items of equipment out of theater, and protect them in the process, has often been a vital function. Equally, the sea base may be used to recover and reconstitute land forces but remain in theater, acting as a strategic reserve.

Section 3 — Maritime security

Maritime security — An introduction

2.33 The safety and economic security of the Alliance and its partners depend in substantial part upon the secure use of the world's oceans. Maritime security operations (MSO) are conducted to establish the conditions for security and protection of sovereignty in the maritime domain and can occur across the spectrum of conflict. MSO are conducted in cooperation with national authorities and international organizations as appropriate, or by the Alliance alone when directed, to counter the threats, and mitigate the risks, of illegal or threatening activities, in order to help safeguard Allies' strategic interests, security, and stability by contributing to mitigating gaps in current national civilian and/or military law enforcement capacity. Tasks as identified in military committee policy identify, track, and neutralize these threats, and illicit activities are essential to protect national security and the global economy.

Maritime security operations tasks

2.34 Uphold Freedom of Navigation: Demonstrate international rights to navigate sea routes, which may include military operations in support of law enforcement efforts. Freedom of navigation includes: surveillance, patrol, special operations, maritime interdiction operations, deployment of Law Enforcement Detachments and, when authorized, the use of force.

2.35 Maritime Interdiction: Assets assigned for quick response actions should, where possible, be capable of undertaking the full range of interdiction missions. It may involve a number of essential interdiction competencies including the use of special operations forces (SOFs) and chemical, biological, radiological, and nuclear (CBRN) specialists to board vessels.

2.36 Fight weapons of mass destruction (WMDs) proliferation: Prevent the transport and deployment of WMDs and related materials, including the ability to locate, identify, and secure illicit CBRN material transiting at sea. This task will require an onboard basic detection and identification capability. However, an extended capability to immediately support identification and securing of such potential deadly material should be within reach of the operational command, including available national assets.

2.37 Protect critical infrastructure: Support to the protection of critical infrastructure will be at a NATO or non-NATO nation's request in accordance with the directions from the North Atlantic Council (NAC), and may encompass information operations, surveillance, and deterrence, including "area defence" of specific assets and nodes, and control of maritime checkpoints. Planning and conduct of actions and activities related to MSO to support the protection of critical infrastructure should comply with the principles and guidelines for NATO's role in energy security.

2.38 Support maritime counterterrorism: These actions conducted across a range of operations deter, defend, disrupt, and protect against terrorist activities in the maritime environment to deny access to designated areas and apply forceful containment of maritime based threats. Maritime counterterrorism will typically require the deployment of SOFs.

2.39 Contribute to maritime security capacity building: NATO maritime forces could support the development of maritime security capacities in order to improve the capabilities of partner nations to address security threats in the maritime environment and to operate there effectively. Capacity building will always be part of a comprehensive approach by the international community, involving both military and non-military organizations.

2.40 Support maritime situational awareness: Where possible, Alliance assets should share data and/or information aimed at enhancing the NATO-recognized maritime picture (RMP) with other Allies and civilian agencies as appropriate.

Maritime situational awareness

2.41 Maritime situational awareness (MSA) is an enabling capability which delivers information superiority in the maritime environment. To achieve a common understanding of the maritime situation in order to increase effectiveness in the planning and conduct of operations. It improves operational effectiveness and efficiency, is an enabler to trigger effective allied military action against specific and potential threats to the Alliance, promotes synergies between nations, and ensures a better use of national resources.

Naval cooperation and guidance for shipping

2.42 The general purpose of naval cooperation and guidance for shipping (NCAGS) is to support the military commander through effective interaction and cooperation with merchant shipping in order to enhance merchant ships safety and security and to de-conflict shipping and military operations. The primary purpose of NCAGS is to minimize disruption to military activities by making optimum use of cooperation between military and merchant shipping civil actors to support NATO and individual nations' aim of maintaining an uninterrupted flow of maritime commerce whilst ensuring that commercially sensitive information provided by the industry is handled as commercial in confidence. Merchant ships cooperate with NCAGS on a voluntary basis as guided either by their national shipping authorities (NSAs), owners, or operators. NCAGS operates through the full spectrum of operations from peacetime to conflict or war and is configured and coordinated with other disciplines as the situation demands. Therefore, NCAGS must be considered at an early stage in any operations planning in order to optimize its effective contribution to both the military and economic lines of development of the plan. The aim of NCAGS is to achieve the following objectives in order to support the operational commander's mission:

- contribute to a nation's economic well-being and international stability through enhanced safety and security of merchant ships;
- facilitate the free flow of maritime trade in an area of operations;
- increase merchant shipping's confidence in military operations;
- enhance the commander's decisionmaking process based on informed knowledge of merchant shipping considerations;

- contribute to the effective and efficient commitment and use of military assets; and

- enhance the commander's freedom of manoeuvre by minimizing merchant shipping interference with operations.

NCAGS is discussed on more detail in ATP-02, Volumes I and II.

Section 4 — Security cooperation

Introduction

2.43 Security cooperation encompasses those military activities involving other nations that are intended to shape the peacetime environment (for example, confidence-building measures including, where appropriate, the deployment of combat forces) to encourage local or regional stability. Routine activity, such as bilateral or multinational training and exercises, and the provision of advisors and specialist training teams may have both an immediate and a longer-term cumulative impact by reinforcing cooperation and promoting stability. Military effort may also be required, quite separately, to support humanitarian assistance and disaster relief and non-combatant evacuation operations focused on preserving the security of the civilian population.

2.44 When executed effectively, security cooperation promotes the development and maintenance of stable relationships between states and encourages cooperation and conciliation in the management of international affairs. It is a gradual and deliberate process that takes time, effort, and persistence. Relationships need to be nurtured and encouraged through regular dialogue and actions. Whilst this is often done at national level, there are occasions when a more comprehensive approach, to include the military, is required.

2.45 The versatility and mobility of maritime forces provides a means for diplomatic leverage in international relations due to its global reach and varied, scalable naval capabilities. Security cooperation across the maritime environment permits unobtrusive and cost-effective early engagement with other states. Bilateral agreements play a vital role in establishing the groundwork for international relationships in the maritime environment. Continuous maritime presence in regions of strategic interest enables, among other things, capacity building, capability development, diplomacy, and trade. In so doing, NATO is able to contribute to global stability and security and at the same time increase strategic situational awareness with a minimal requirement for support from other states.

2.46 Whilst Alliance member states will always require the ability to act unilaterally in support of their own national interests, international engagement builds the trust and understanding that underpins the success of coalitions and formal alliances. Mature international relationships, based on a common understanding of threats and their consequences for global stability, reinforced over time, encourage burden sharing and collective responsibility. Increasingly, the Alliance will use these relationships in support of its security requirements. Maritime forces, routinely deployed in regions of concern, will often be in the vanguard of any national contribution to a coalition or Alliance response.

2.47 Participation in exercises with a developing state's maritime forces, along with the diplomatic activity surrounding port visits, provide an overt signal of the Alliance's support for the state's government that has an impact both internally and internationally. Beyond this activity, more sustained support can be provided in the form of mentoring and training.

Presence

2.48 Maritime forces can provide a clear demonstration of commitment to an ally and, at the same time, deter or coerce an adversary. Critically, maritime forces offer choice as events unfold and, with minimal or no change to their personnel or equipment, can provide decision makers with options at the tactical, operational, or strategic levels.

2.49 Forward presence reflects a strategic decision to deploy forces into, or close to, theaters of interest or concern, to fulfil either standing commitments, or in response to a particular situation.

2.50 Such activities as foreign port visits to impress upon a nation's government and the local population the Alliance's interests and involvement in the region are also a form of forward presence. There is no underlying threat of force intended. The vessels and their ships' companies act as ambassadors, projecting influence, promoting Alliance values and trade, and supporting wider diplomatic activity. Visits by warships are routine activity, albeit normally conducted at a national level, and their purpose is widely recognized by governments; sending a ship to visit a country sends a clear message, as does stopping visits to a particular country.

2.51 In sum, the key tenet of forward presence is to shape and influence a situation to prevent conflict by projecting power; the presence alone of maritime forces provides a potent expression of commitment and resolve.

Security sector reform

2.52 If a country's capacity to facilitate and protect its own economic maritime activities is compromised, either through conflict or disaster, Alliance armed forces can be used to support re-establishing this capacity. Security sector reform may be employed to restructure a state's military force, instill democratic principles, and disband paramilitary organizations. Although most security sector reform is land-based, naval forces have a key part to play in this process, such as assisting a state set up or training a coast guard, navy, or an organization that can contribute to maritime situational awareness.

Maritime involvement in stabilization and reconstruction

2.53 Some circumstances will not allow the Alliance to follow a preventative strategy. In contrast to a preventative approach, intervention to stabilize a fragile or failed state with an insurgency at its heart requires significant NATO commitment over an extended timescale. Where the environment is uncertain or hostile, the main military task will be to create the conditions that allow development and governance measures to be implemented primarily by those actors originally responsible. In extremis, this may mean that maritime forces are

involved in stabilization and reconstruction efforts. Maritime stabilization has two key lines of development. First, building maritime capability in the subject state; second, providing the security to enable the development of maritime trade infrastructure that enables industry and business. Beyond this, it is the task of maritime forces to create the security conditions in the littoral that allows other government departments, non-governmental organizations, and the international industrial base to conduct the development that enables trade.

Humanitarian assistance and disaster relief operations

2.54 Governmental and non-governmental organizations conduct humanitarian assistance and disaster relief operations to relieve human suffering. Military activities may be delivered in conjunction, or be in support of, civilian humanitarian efforts conducted by specialized organizations. Maritime forces can provide a comprehensive logistics base and refuge offshore for humanitarian assistance, with maritime helicopters providing a valuable means of transport, particularly where land infrastructure is poor. The flexibility of maritime forces makes them particularly effective in disaster relief, especially in the early stages, when they may well be the only means available to provide emergency assistance. A maritime force can provide a wide range of assistance such as fresh water, food, medical assistance, temporary shelter, fuel, and electric power, while other agencies and non-governmental organizations mobilize more long-term assistance (see ATP-3.4.1.2).

2.55 Non-combatant evacuation operations. The greatest challenge in non-combatant evacuation operations will often be a lack of time and the growing unpredictability and uncertain environment encountered ashore. Non-combatant evacuation operations focus on land operations, but in certain situations can best be achieved by maritime forces. This unusual situation increases the vulnerability of those maritime elements untrained to conduct operations ashore. Force protection must be balanced with the need to act swiftly in the interests of safeguarding entitled personnel who require evacuation. The key will often be good liaison with other allies operating in the same joint operations area (JOA), along with local expertise from both personnel in the country or region affected in addition to subject matter experts in distant headquarters.

2.56 Civil-military cooperation. Navies traditionally deal with numerous civilian entities in conducting missions, which have increased in number and diversity. Furthermore, they are not necessarily understood as civil-military cooperation (CIMIC), but as integral to respective functions. Consequently, the lack of especially dedicated and adequately trained CIMIC personnel likely affects a coherent interaction with civilian entities, but also impedes a comprehensive situational awareness on the civil environment. Commanders are advised to consider these impediments and alleviate impacts by procedural conjunction of functions concerned with CIMIC issues (e.g., implementation of a matrix organization).

CHAPTER 3 — Maritime command and the maritime component commander

Section 1 — The nature of command

Introduction

3.1 The command and control of maritime forces brings with it a number of unique and difficult challenges that, whilst often attributed to the nature of the environment, are often exacerbated in coalitions by differences in language, equipment, and national entrenched approaches to the subject that can all be referred to as interoperability issues. Whilst Allied doctrine addresses the need for common tactics and procedures, it cannot mitigate all the differences among individual maritime units that inevitably constitute a larger Allied maritime force. The key to command and control success will be the early and clear direction from higher authority on task organization, commander's intent, and close multinational liaison at all levels, as well as the continuous maximum effort to address and reduce interoperability problems.

3.2 Unlike in the other physical domains, the maritime force will often be constantly mobile with numerous units joining and leaving a core group. These, in turn, could be dispersed over a wide area and be required to operate with many different nationally imposed limitations. To complicate the task further, there will be units, such as submarines, that, by their operational nature, have extremely limited communication facilities, both in time and bandwidth, thereby removing a commander's ability to reissue further instructions or operational direction over protracted periods of time. Additionally, the issue of whether commanders are "supported" or "supporting" may change as an operation develops. This is particularly important in the undertaking of amphibious operations. Finally, any Allied maritime force is likely to have to share the same operating area with neutral parties, both civilian and military, who will not be constrained by any Allied imposed limitations and who are likely to use the full weight of international law to continue their own activities, be they counterproductive or not to the efforts of the maritime component commander (MCC) and North Atlantic Treaty Organization (NATO) forces.

3.3 The joint force commander (JFC) may designate an MCC to exploit the full maritime capabilities available to the joint force. The MCC plans, coordinates, allocates, tasks, executes, and assesses maritime operations to accomplish JFC objectives.

3.4 Maritime forces are organized functionally into a task organization consisting of four levels: task forces (TFs), task groups (TGs), task units (TUs), and task elements. The use of these levels is flexible, and they bear no direct relationship to levels of command or levels of planning.

Command authority, responsibility, and accountability

3.5 Command embraces authority, responsibility, and accountability. It has a legal status and is vested in a commander by a superior commander. Authority enables an individual to influence events and to order subordinates to implement decisions and take specific actions. While commanders can delegate specific authority, they retain overall responsibility for their commands; responsibility is thus fundamental to command. Accountability involves a liability and obligation to answer for the proper use of delegated authority and resources; it includes the duty to act. Thus, the authority granted to a subordinate should be commensurate with the task given; the subordinate, meanwhile, remains accountable to his/her superior for its execution.

Section 2 — Specific maritime command considerations

National caveats

3.6 When allocating forces to NATO, nations may specify restrictions on their employment. This may include rules of engagement (ROE)-related issues, instructions to maintain national TG integrity, or restrictions generated by the interpretation of international law. Such restrictions may have an impact upon the MCC's flexibility of employment.

Command during task force operations

3.7 Potential threats to freedom of the seas and/or operations executed in the littorals may dictate the use of a TF instead of a single TG. For example, operations to project power ashore against a significant threat may require multiple aircraft carriers and amphibious TFs acting in concert.

3.8 The officer in tactical command (OTC) is the senior officer present in a group (TF or TG) who is eligible to assume command or the officer to whom tactical command (TACOM) is delegated. When a task organization is established, the OTC shall be named in the establishing directive. If the OTC is unable to exercise command, the next senior officer present in the task organization will assume and retain command unless otherwise ordered. When a task organization has not been established and the higher authority has not selected the OTC, the senior officer present eligible to command will act as OTC. The OTC will normally be under the operational control (OPCON) of the MCC. The MCC will provide direction that specifies the mission, tasking, and forces assigned to the OTC and will also delegate tactical command and control (C2) of those forces to the OTC. The MCC may self-designate as the OTC of the constituted force(s) or group(s) or the TF/TG commander or another command as appropriate. Subject to the scope of the maritime operation, multiple OTCs may be assigned by the MCC for discrete groups tasked with separate missions. The OTC must design the C2 organization to accomplish the assigned mission and effectively defend the force. Some functions arising from direction, coordination, or control may be delegated to subordinates.

Command of maritime air operations

3.9 Maritime air assets are an integral part of the maritime component and are used to support the joint operation. In a joint operation, the MCC will ensure the air component commander (ACC) is provided with an air tasking order (ATO) feeder, which includes MCC priorities and objectives for maritime air operations. Excess maritime air sorties are offered to the ACC for tasking. The MCC retains OPCON of maritime air assets and delegates TACOM/tactical control (TACON) as appropriate.

3.10 Air assets supporting geographically limited operations, e.g., antisubmarine warfare (ASW)-helicopter conducting screening operations or tactical air lift assets inside an amphibious objective area, operate under the tactical control of the respective OTC. Such air movements will be scheduled via the appropriate messages (e.g., operation task (OPTASK) AIR) and, if applicable, should be mirrored in the respective ATO.

Command in submarine operations

3.11 Submarine operations require a centralized command system to prevent mutual interference and to coordinate with surface and air forces. Submarine operations may be conducted independent of aircraft and surface ships. Improvements in submarine communication capabilities, along with refocusing of maritime objectives, have brought about closer cooperation and interoperability of submarines and other maritime forces. In all types of operations, submarines remain under the OPCON of the submarine operating authority (SUBOPAUTH). TACOM, in cases of integrated operations, and TACON, for direct support, can be delegated as appropriate to the mission. ATP-18, *Allied Manual of Submarine Operations*, provides extensive elaboration on submarine command and control and the various methods by which submarine support operations are conducted.

Section 3 — Command during support operations

Support situations

3.12 Occasions may arise when one force provides support to another force. The establishing authority will specify the degree, manner, and duration of support which forces provide each other. The supported commander should provide the supporting commander with the necessary information concerning the situation and the mission of the supported force in sufficient time to plan for the support that is needed. The commander ordering the support will indicate which of the following relationships apply. (See Table 3-1.)

a. Situation Alpha. The supporting force is to join and integrate with the other force. The senior officer present, or the officer to whom TACOM is delegated, is to become the OTC of the force.

b. Situation Bravo. The supporting force does not integrate. Unless otherwise ordered, the senior OTC of the two forces is to coordinate the tactical operations of all forces.

Table 3.1 — Considerations for support situation selection

Support Operations Situation (SUPSIT)	ADVANTAGES	DISADVANTAGES
ALPHA Two or more forces join into one force.	- Unity of command, effort, and focus - Integrated planning and synchronized execution - Massed forces for mission execution - Less duplication of effort, better conservation of assets - Enhanced coordination of asset appointment - Better resolution of competing tasks and priorities assigned to multimission platforms	- Requires merger of two separate organizations - Increased level of effort/C2 requirements for the OTC and staff - Potential loss of focus/tempo of operations while transitioning to the new command structure
BRAVO Two or more forces remain separate: Single officer in tactical command directs actions of all forces.	- Coordinated tactical operations between non-joined forces - Centralized planning, decentralized execution	- Increased level of effort/C2 requirements for the OTC and staff - Harder to coordinate to prevent mutual interference or eliminate redundant efforts than SUPSIT Alpha - More difficult to develop shared situational awareness between strike groups than SUPSIT Alpha - Potential slower decision-making processes than SUPSIT Alpha
CHARLIE Two or more OTCs coordinate actions.	- No change in command structure or C2 required - OTCs continue to focus on their respective mission(s)/task(s).	- Harder to coordinate to prevent mutual interference or eliminate redundant efforts than SUPSIT Alpha or Bravo

c. Situation Charlie. The supporting force commander has discretion how best to provide support. This situation may be ordered when, for example:

(1) There is requirement for a force to provide simultaneous support to more than one force or to provide support to any number of forces entering a designated area.

(2) When the majority of ships or aircraft are under the OPCON or TACOM of the supporting commander.

Support operations — Situation Alpha

3.13 The following considerations are applicable under SUPSIT Alpha:

a. Delegation of tactical command. The OTC of the overall force may delegate TACOM or TACON of designated forces to subordinate commanders for the execution of assigned tasks.

b. Tasking of forces. The OTC of the overall force will issue tasking directives, specify reporting requirements, establish tactical communication circuits, order overall force dispositions, and issue other direction as required by the situation.

Support operations — Situation Bravo

3.14 Under the conditions of Situation Bravo, the coordination between forces will depend upon the following considerations:

- distance between forces;
- whether the supporting force is providing craft for overall force defence;
- whether only surface support is afforded;
- communications requirements and capabilities;
- threat;
- meteorological and oceanographic (METOC);
- sensor capabilities and limitations; and
- cover and deception plans.

Support operations — Situation Charlie

3.15 The following considerations are applicable under SUPSIT Charlie:

a. General support. SUPSIT Charlie differs from SUPSIT Alpha and Bravo in that the missions of the respective forces may be different. Under SUPSIT Charlie, the supporting

force commander will decide what support can be provided as dictated by the constraints of the assigned mission. Coordination between respective OTCs is required to eliminate mutual interference and enhance conservation of resources.

b. Location of operations. When the supporting force commander is ordered to support a particular force under the conditions of SUPSIT Charlie, the commander should decide whether:

(1) To operate in a central location and, thus, be better placed to meet any expected commitments, or

(2) To move close to the supported force.

(3) The supporting force commander may be ordered to provide support in a designated area through which a number of forces may be passing.

c. Duration of support. The duration of the support is to be provided in the establishing directive. Extensions of this time must be requested from the establishing authority.

Other support operations

3.16 Other support may be in one of four forms. Individual units may be assigned to provide support to forces at sea:

a. Area operations. Area operations are normally conducted in a geographic area not related to the protection of a specific force. Areas may be related to the protection of maritime forces scheduled to enter the area or to provide defence in depth to distant forces. TACOM of units conducting area operations remains with the establishing authority.

b. Associated support. A unit assigned in associated support operates independent of the supported force, but may be tasked to provide contact information to and receive intelligence from the OTC who is being supported. The designated unit operates under the TACON of the establishing authority who coordinates the tasking and movement of the supporting unit in response to the supported OTC's requirements.

c. Direct support. The support provided by a unit or formation not attached or under command of the supported unit or formation, but required to give priority to the support required by that unit or formation. A unit assigned in direct support will operate under the TACON of the supported OTC. OPCON and TACOM remain with the establishing authority. The direct support unit will report to the designated controlling authority for employment.

d. Integrated operations (submarines only). Upon receiving TACOM, the OTC assumes the responsibility for all operations and safety of assigned submarines, including local waterspace management and prevention of mutual interference for their designated area. (See ATP-18, *Allied Manual of Submarine Operations*, for more information.)

Section 4 — Tactical command at sea

Introduction

3.17 General. The OTC is responsible to the MCC or other superior commander as applicable for accomplishing the assigned mission or task. The OTC may assign a composite warfare commander (CWC) for the overall direction and control of defence of the force (see section 3.21). The OTC/CWC may delegate authority for principal warfare areas to designated warfare commanders.

a. The three principal warfare commanders (PWCs) are: anti-air warfare commander (AAWC), antisurface warfare commander (ASUWC), and antisubmarine warfare commander (ASWC). The PWCs collect and disseminate information and, in some situations, are delegated authority to respond to threats with assigned assets.

b. Coordinators are asset and resource managers. They conduct air coordination, electronic and acoustic warfare coordination, surveillance, and mine warfare coordination. They carry out the policies of the OTC/CWC and respond to specific tasking of the warfare commanders. Coordinators may also exercise control of specified assets.

3.18 Development of command structure. In the development of a command structure at sea, the OTC must identify the activities that will be required by the assigned mission or task and determine who will be accountable for their execution. For the purposes of this publication, the following conventions have been adopted for describing the activities in the OTC's chain of command.

a. Responsibility. The obligation placed upon an individual for correct and timely execution of a task assigned by a superior that cannot be delegated. Responsibility also entails accountability for the exercise of the authority delegated when tasking was assigned. Responsibility cannot be delegated and, thus, accountability cannot be shifted. When a duty is assigned, the fact that some tasking can be delegated further down the chain will not lessen the obligation of the holder of the intermediate authority to a superior. The term responsibility is also used to describe an activity that is specific to a duty and cannot be delegated further.

b. Duty. An identified block of related functions within a larger command structure assigned to a single subordinate. Assignment automatically delegates the requisite authority for the command and control required to fulfil the tasking. With the delegation of authority comes the inherent responsibility of the subordinate to the establishing authority for execution of the task in accordance with known orders and procedures.

c. Function. A defined activity that may be delegated to subordinates through specific assignment or as part of a duty within the force command structure. When any function is delegated, it is assumed that the necessary authority for command, control, direction, or coordination required for the execution of that function has also been delegated.

Command of large forces

3.19 A fundamental component of command effectiveness is the ability of the commander and commanded units to communicate with each other. If there are inadequacies in the communications capabilities of individual units that may be spread over large areas or dispersed forces, they must be identified and assessed before plans are promulgated. There will be occasions when the communications capability of a force will impact the OTC's concept of operations. This is increasingly notable with the widespread use of a multitude of communication and information systems (CIS) within NATO and individual nations that cannot necessarily communicate efficiently with one another. The problem is exacerbated when coalition or non-aligned units are working alongside a NATO TG when use of the unclassified Internet and reversionary methods to exercise effective C2 must be employed. Critical to the commander is the employment and placement of liaison officers to ensure that the two-way flow of information is maintained.

Delegation of command functions

3.20 A centralized command is the most direct way of allowing a commander to make use of his experience and ability. However, circumstances and command facilities can make delegation necessary. Some factors are:

- mission;
- threat;
- need for quick action or reaction;
- necessity to carry out many actions in different places at the same time;
- practical inability of the commander to exercise all functions because of excessive workload or the requirements of some actions for specific knowledge of facilities;
- lack of appropriate display and communications facilities;
- force size and composition; and
- area of operations (open ocean, littoral).

Command and control options

3.21 The OTC formulates and promulgates policy and orders; however, other functions, including warfare functions, may be delegated to subordinates within the constraints of stated policy and the ROE in force. The OTC has the following options for the principal warfare areas:

a. The OTC retains command in the principal warfare areas by retaining all the warfare functions. Considerations: The OTC's staff must be of adequate size and expertise to fulfil all the requirements.

b. The OTC delegates to one subordinate commander one or more warfare functions. Considerations: This enables an OTC's staff to concentrate on planning and integrating maritime operations with those of other joint force components; however, subordinate commander's plans need to be cross-checked against the other commander's plans for coherency and availability of assets. Planning needs to be completed earlier to deconflict and rationalize plans.

c. The OTC delegates to more than one subordinate commander several warfare functions. Considerations: as in subparagraph b. above, this enables an OTC's staff to concentrate their effort on the N5 staff function rather than N3; however, subordinate commander direction needs to be cross-checked against the other commander's plans for coherency and availability of assets. Good communications is critical to enable timely receipt and dissemination of orders.

d. The OTC delegates to subordinates within geographic areas (or sectors) warfare functions relevant to that area, but may retain any part of the overall function for himself. A PWC can use this form of delegation as well. This substantially increases the amount of signal traffic. Boundaries have to be clearly understood and all units need to be aware of who the local commanders are and which instructions are in force. This can lead to increasingly complex battlespace management issues and will place a significant burden upon the OTC's staff to ensure that all units, especially those transiting from one commander's area to another, are in receipt of all the appropriate information. Efficient and reliable communications are essential and the capability of individual units to cope with the additional burden must be considered.

e. A special form of delegation as described in item b. is that the OTC of a large force may allocate all warfare functions for the defence of a force to a CWC while retaining overall responsibility for the mission. The CWC may, in turn, delegate some or all warfare functions as described above. The use of the CWC function should be carefully considered. Ideally, it should only be used when either the OTC staff is too small to take on the warfare commander roles or is too dislocated from the area of operations. In the first instance, the ideal solution is to augment the OTC staff with a CWC staff to ensure that total transparency and coordination is achieved. In the latter case, the CWC's staff may be elements of the OTC's staff deployed to the threat area or an entirely different staff. In either event, considerable delegation is required to ensure that the CWC's staff can operate effectively without the additional layers of bureaucracy impacting upon the CWC and individual units ability to operate effectively and reactively. Subject to the circumstances, where the CWC's staff is an entirely different staff to the OTC's staff, consideration should be given to making the CWC the OTC.

Officer in tactical command responsibilities

3.22 Responsibilities. The OTC defends the force and executes the assigned mission. The OTC's policy and procedure for succession of command authority, as well as designation of the standby OTC, should be specified by orders in advance of the operation. The chain of command between the OTC and, when designated, the CWC, PWC, coordinators, supporting commanders, and the forces under their TACOM/TACON, shall be specified by the OTC. This may be done by task number designation or by stipulating which TGs, units, or elements are designated for each commander. The OTC's responsibilities cannot be delegated.

3.23 Principal warfare area responsibilities

a. In exercising command, the OTC must consider both the threat to the force and the units that are available to counter the threat. However, no single threat may be considered in isolation; consequently, no tactic to counter a specific threat may be employed without considering its effect on the security of the force from other threats which may subsequently materialize. A detailed list of the OTC's functions are found in ATP-1 Volume I, and are divided into two categories:

(1) Those functions of the OTC that may be delegated to a CWC.

(2) Those functions which may be delegated to warfare commanders, coordinators, or others to control assets and take action necessary to execute the promulgated policy.

b. Warfare commanders will maintain continuous liaison with each other to ensure timely flow of mutually supporting information and avoid mutual interference.

c. Some warships have weapons systems with effective ranges that extend beyond their own operating area which may cause situations in which one commander has TACON of a ship and another has control of that ship's force weapons systems. Coordination between the appropriate warfare commanders is vital in prosecuting the threat. A temporary shift of TACON might be required, but C2 should remain clear. The OTC (or CWC if designated) should resolve disagreement between the warfare commanders.

3.24 Coordinator responsibilities. Coordinators are asset and resource managers. They carry out the policies of the OTC and respond to the specific tasking of the warfare commanders. Coordinators may also exercise control of specified assets.

3.25 Air coordination. Subject to and within the authority delegated by the MCC, the OTC coordinates all friendly air movement within the force air coordination area (FACA). To facilitate coordination, deconfliction, and to prevent fratricide, maritime air missions should be published on the airspace control authority issued ATO and/or the OPTASK AIR. The OTC is to ensure that airspace requirements such as FACA, missile engagement zone, entry gates, etc., are coordinated with the airspace control authority which, in a joint operation, is normally the ACC, and that airspace control means and/or airspace control orders, issued by the airspace control authority, are adhered to. These coordination functions may be delegated to an air coordinator.

a. The air coordinator. The air coordinator exercises coordination within the FACA. This duty may be collocated with the antiair warfare commander, air resource element coordinator (AREC), helicopter element coordinator (HEC), or anti-submarine warfare commander.

b. The air resource element coordinator.[1] The AREC is a resource manager. The AREC may, under certain circumstances, exercise TACON of particular aircraft (e.g., for aircraft projecting power ashore), but the AREC's primary role remains that of asset allocation and of informing the warfare commander of the status of these assets, the results achieved by them, and the information gained from their sensors.

[1] The HEC or AREC is the coordinator of tiltrotor aircraft.

c. The helicopter element coordinator. When two or more ships other than an aircraft carrier are helicopter-equipped, a central scheduling authority for flight operations from these ships should be employed. In a multithreat environment, helicopters may be in demand by numerous PWCs. The HEC's functions, therefore, will, in many ways, parallel those of the AREC, with whom the HEC should coordinate helicopter operations. The OTC will delegate the HEC functions generally to the senior commanding officer of helicopter-equipped ships. These coordinating functions will normally not apply to amphibious force and logistic helicopters. Requests for helicopters embarked in other than aircraft carrier, amphibious, and (potentially) logistic ships will be directed to the HEC. The OTC must be made aware of helicopter scheduling, tasking, and flight operations in order to be able to resolve potential requirement conflicts. The HEC should promulgate a daily flight schedule.

3.26 Electronic and acoustic warfare coordination. The OTC promulgates electronic and acoustic warfare (EAW) policies for the force. Force EAW functions may be delegated to the electronic warfare coordinator (EWC). However, the planning and execution of these functions must take overall joint force EAW issues into account; thus strong linkages must exist with the electronic warfare coordination cell which operates at the joint force level. The EWC is the principal advisor to the OTC in all matters pertaining to the employment and exploitation of the electromagnetic and acoustic spectra. Accordingly, the EWC has broad responsibilities which impact upon TG planning as well as the management and control of all active and passive weapons, sensors, and electronic communications equipment which operate in or target the electromagnetic spectrum/environment to include: electronic warfare support measures (ESM), electronic countermeasures (ECM), electronic protective measures (EPM), emission control (EMCON), operational deception, operations security, signals intelligence (which includes communications intelligence and electronic intelligence), signals security, and communications and electronic security. The extent, to which the EWC exercises actual control over assets is scenario-dependent, should be clearly stated by the OTC and understood by the PWCs. The EWC's planning and management responsibilities encompass several areas:

a. The EWC ensures that electronic warfare (EW) assets are employed to support the requirements of the OTC and PWC. Coordination between the EWC and PWCs is vital to ensure that all assets with ESM, ECM, and EPM capabilities are managed effectively.

b. The EWC may be designated as the principal manager of the acoustic spectrum. This is situational-dependent. The EWC formulates, promulgates, controls, and monitors the EMCON plan based upon the OTC's emission policy. The PWCs have the authority to break acoustic EMCON in defence of the force but must, however, notify the EWC of this action.

c. The EWC ensures that the force deception plan and assets are employed in a manner that facilitates the mission and policy of the OTC.

d. The EWC ensures that cryptologic assets, both organic and nonorganic, are employed in a manner that facilitates responsiveness to the anti-air warfare (AAW), ASW, antisurface warfare (ASUW), and EW information needs of the OTC.

3.27 Surveillance. The OTC establishes the surveillance areas for each commander within the overall guidelines of the general picture compilation plan. Surveillance functions may be delegated to warfare commanders.

3.28 Naval mine warfare coordination. The OTC formulates and promulgates the naval mine warfare (NMW) policy. NMW functions may be delegated to a designated naval mine warfare coordinator (NMWC). The NMWC is the principal advisor to the OTC on matters pertaining to NMW. The NMWC coordinates the laying of sea minefields in support of the OTC and the efforts of supporting mine countermeasure (MCM) forces which are usually not under the direct command or control of the OTC. Specific functions of the NMWC include:

- Employment of tactical sea mining against targets of opportunity using force assets;
- coordination with appropriate commanders for the laying of tactical sea minefields and the execution of sea mining plans;
- tasking of MCM forces assigned to the TACOM of the OTC/CWC;
- coordination with appropriate local commanders for response to enemy mining of chokepoints, safe havens, or operating areas and for the execution of MCM plans; and
- maintaining and disseminating a plot of relevant NMW information to the force.

3.29 Force protection coordination. At the tactical level, the OTC promulgates policies and plans to provide adequate force protection (FP) for assigned units. FP functions may be delegated to a designated force protection coordinator (FPC). The FPC is the principal advisor to the OTC on matters pertaining to FP and should be designated in particular circumstances (for example, when units are in harbour or at anchor, or conduct inshore transits in the absence of the OTC), thus allowing more effective C2 of FP aspects of an operation.

Delegation of authority

3.30 The OTC may retain TACOM and TACON authority or may delegate some of that authority (i.e., TACON) to subordinate commanders and coordinators. Such delegation does not mean that the OTC relinquishes authority over subordinates. It also does mean that the subordinate is given some or all of that same authority over forces assigned by the OTC.

Delegation considerations

3.31 General. The following general considerations are provided for selection and location of warfare commanders:

- availability of interoperable data link and access to required displays;
- sufficiency and interoperability of communications equipment;
- availability of sufficient skilled personnel and state of training (staff augmentation if necessary);

- living/working space available in units;
- no undue limitations imposed by electromagnetic radiation hazards restrictions;
- level of tension/state of hostilities;
- threat assessment;
- area of operations and formation/disposition required;
- emission policy including need for silence on unique emitters;
- compatibility of unit force weapons and sensors employment with proposed warfare command functions; and
- the desirability of delegating all functions in a single warfare area to a single subordinate.

3.31.1 The OTC should consider the primary mission of the platform before assigning PWC responsibilities as most naval platforms are multimission-capable.

3.32 Authority and responsibility. In deciding what degree of control is to be delegated, and when, the OTC must observe one cardinal principle: To operate effectively, each unit and command must know in detail its obligation to the OTC, warfare commanders and coordinators, and other units. To achieve this, it is essential that the OTC clearly specify the chain of command. Although control of different force weapons systems in a single ship may be delegated to different warfare commanders, only one commander may exercise control over the movements of an individual unit at any one time. Should it be necessary to change TACON to meet specific circumstances, the OTC must clearly specify under what circumstances and when such change is to take place. Should another commander wish to move a unit to better carry out duties in a warfare area, the order must go through the commander having TACON of that ship or unit, as specified in the task organization, with the OTC or CWC adjudicating any differences.

Section 5 — The roles of the commander and the staff

The role of the maritime component commander

3.33 The MCC is responsible for the maritime aspects of the JFC's mission. The MCC coordinates operations with other component commanders, ensures unity of effort, and establishes liaison accordingly.

3.34 The key to the commander's approach is to provide clear commander's intent. There is a widespread perception that the intrusiveness and pervasiveness of modern communications can act against the principles of mission command. It can, of course, but it need not and it should not. The amount of information available through modern communications systems, and the requirement to consult widely, means that there is a greater need for clarity of command intent – and the associated freedom to act.

3.35 Successful command depends upon a climate of command that encourages subordinate commanders at all levels to think independently and to take the initiative. In training serials and exercises, it should be recognized that, even when the principles of mission command or command by veto have been fully grasped, mistakes will still be made. These occasional mistakes should not lead a superior commander to instantly adopt a more rigid and tighter approach to command. Trust and confidence are necessary both up and down the chain of command and should be an integral part of a commander's approach.

The commander's role during an operation

3.36 The commander must be satisfied that the staff battle rhythm, and that of all subordinates, satisfies the needs of the operation. The commander should ask: "What has changed and what do I need to know?"

3.37 Media reports and political caution exacerbate demands for information from higher authorities. During operations, it is the commander's and the staff's task to scrutinize and respond to these requests. Exercising the command at sea, by setting a physical separation with those solicitors, can help greatly to fulfil this requirement.

3.38 The commander should allocate spare capacity, as mission requirements allow, to form an integral part of protracted operations to allow for periods of high tempo and a possible surge in activity. The increasing paucity of Allied maritime assets will mean that individual units may be required to serve for longer periods while conducting operations, greatly increasing the risk of personnel fatigue and material failure. Building in spare capacity often allows practitioners to stand back from a situation, reassess, and think. The commander's need to look after the forces during operations should never be forgotten, be that their body, mind, or spirit.

3.39 The MCC:

- plans and executes maritime operations and employs designated maritime forces in support of the JFC's concept of operations;

- exercises OPCON and/or TACOM/TACON over assigned forces;

- advises the JFC on the proper employment of all forces under MCC control;

- selects units for assignment to subordinate TF/TGs according to capabilities, JFC's intention, and required missions;

- as supported commander, the MCC integrates and synchronizes manoeuvre, fires, and interdiction within a maritime area of operations (when assigned);

- designates target priority, effects, and timing of fires within the area of operations;

- provides inputs to the target nomination list and joint prioritized target list;

- serves as a member of the joint targeting coordination board, if established, and designates the target priorities, required effects, and timing within the maritime area of operations;

- requests required logistic support from the JFC;
- provides the CIS services that are required for the C2 of subordinate formations;
- develops information operations (Info Ops) requirements that support maritime operations and synchronize the maritime force assets when directed;
- establishes combat identification standing operating procedures and other directives based on JFC guidance;
- coordinates maritime air activities with the ACC;
- coordinates targeting and combat assessment with the JFC and other component commanders;
- conducts liaison with the airspace control authority for air space control and the area air defence commander (AADC) for air defence matters, particularly for the naval TG air defence area of interest;
- provides cross-component support as directed by the JFC and agreed by the respective national contingent commander;
- provides liaison support to the JFC staff and others as required;
- assesses the results of maritime operations and forwards these results to the JFC to support the overall combat assessment effort;
- keeps the JFC and other component commanders informed of the situation, with emphasis on developments that may require changes in the concept of operations or the need for additional resources;
- conducts public affairs activities as directed by the JFC;
- maintains liaison with the SUBOPAUTH;
- contributes to the joint intelligence picture as directed by the JFC;
- coordinates intelligence, surveillance, target acquisition and reconnaissance (ISTAR) activity with JFC and other components to ensure effective utilization of low-density/high-demand assets;
- provides JFC with best choices to implement maritime security and coordination with designees;
- may also be assigned as the ACC; and
- coordinates force protection (including harbour protection) with JFC/land component commander (LCC)/ACC.

3.40 Commanders should give their command an identity, promote self-esteem, inspire it with a sense of common purpose and unity of effort, and give it achievable aims. High morale depends on good leadership, which instills courage, energy, determination, and care for the personnel under command.

Command relationships

3.41 The commander must build relationships up, down, and across the chain of command. This can be particularly challenging in Allied operations where the different elements of the command team often come together for the first time, normally from a wide range of different national backgrounds and with different levels of experience and expectations at the beginning of an operation. That said, a certain level of compromise and understanding is required to best achieve unity of purpose. The use of liaison officers at all levels is particularly useful and will pay dividends by avoiding potential misunderstandings and confusion at an early stage, whether during a planning phase or once operations are under way. These liaison officers should cross over nationalities, components, and tiers of command.

Role of the staff

3.42 Operations are to be command-led, not staff- or process-led. That said, the commander cannot operate effectively without the full support of the staff. The staff, be they a large body or a small core of individuals, must all understand their particular role and what is expected of them at each stage of the process. Whilst this management responsibility rests with the chief of staff, the commander should ensure that he is content with the division of responsibilities and that the staff is capable of undertaking the duties assigned to them in the time available. Ultimately, the staff are responsible for keeping the commander fully informed regarding the production of plans and the issuing of orders to subordinates, the overall conduct of operations, and the support functions required to undertake them. These support functions will include liaison at all levels (up and down the command chain and with the other component commanders) as well as providing medical, legal, cultural, political, and any other advice deemed necessary for a particular operation.

Staff structure

3.43 The joint forces maritime component command (JFMCC) should be organized in a structure that will make best use of their resources and allow them to integrate with a higher headquarters. The headquarters must be organized to manage an integrated movement of plans from their formulation through development and refinement to execution. This is a key element within the maritime operational art, and the structures need to be robust enough to cope with changing circumstances. The JFMCC headquarters will normally comprise the following staff areas:

a. The command group. The command group invariably comprises the MCC, chief of staff and deputy chief of staff Plans, advised by the political advisor and legal advisor and designated cell heads. It may include other staff members from the operational support group as required as well as any liaison officer (LNO), depending on the preferences of the commander.

b. Plans. This is the core planning branch that develops long-range joint plans and orders (including the initiating directive in the case of an amphibious operation and associated estimates of the situation. It should be manned by experienced warfare officers, ideally with a strong nucleus of joint staff trained personnel. Other specialist staff will augment this nucleus as required. Plans produces the maritime estimate, maintains a long-range planning function, and produces the maritime operation plan (OPLAN). Thereafter, its focus will remain on contributing to joint force contingency planning and any other branches and sequels that become evident within the operation.

c. Future operations (FOPS). The FOPS cell's focus is to develop orders and plans in a mid-term time frame. It should be manned by experienced warfare officers, ideally with a strong nucleus of joint staff trained personnel. Future operations planning also develop the branch plans in support of current and ongoing operations. The operations planning teams[2] must work closely with the current operations (COPS) cell in order to maintain situational awareness and ensure that there is a smooth transition of responsibility for the plans.

d. Current operations. The COPS cell focuses on the management and execution of plans. COPS conducts any last-minute adjustments to operation orders (OPORDs) through fragmentary orders (FRAGOs), monitors their conduct, and coordinates any execution. It will also maintain situational awareness through quality control in the production of the recognized maritime picture (RMP).

e. Operational support group. The operational support group acts as the central repository of information and knowledge so that plans/FOPS/COPS can function effectively. Resident within it is various support specialists (combat support and combat service support) and individuals with specialist skills in areas such as intelligence, targeting, civil-military cooperation (CIMIC) and Info Ops, etc. These staff functions will contribute to the COPS/FOPS/plans cells as required or contribute to discrete operations planning teams when they are stood up to address an issue. A Red Cell may be formed during the conduct of the estimate and when the maritime planning demands their involvement.

Functional sections of the staff

3.44 The traditional makeup of an Allied commander's staff uses the N1 to N9 functions. In this case, there needs to be a clear delineation of responsibilities to ensure the cross-functional staff areas are covered. The key is to have the right balance, using reach-back where appropriate, but also having the key expertise close at hand when it is needed. Each situation will require minor modification, but in essence each has a role to play.

Legal support

3.45 The effective application of national and international law governing the conduct of armed conflict relies on a sound knowledge and understanding by those engaged in it, at all levels. There are three areas of international law that influence maritime operations: law of the sea, law of armed conflict (LOAC), and Geneva and Hague Conventions and their protocols.

[2] Operations planning teams are small planning groups that are focused on a specific or specialist planning activity with bespoke membership according to the task. A number of operations planning teams may run simultaneously with leadership devolved to the most appropriate staff branch.

3.46 The legal basis for operations will be specific to each operation, and commanders at all levels should be aware of the legal conditions that pertain for any military operation. All personnel must at all times observe the laws and regulations under which they are operating. Any member of the force who acts outside of his lawful powers may be the subject of criminal proceedings.

3.47 Commanders must ensure that their subordinates understand the LOAC, the ROE, and the mandate authorizing the use of force. Maritime commanders are supported by qualified legal advisors embedded in their staffs. It is important to coordinate across international and state ROE to ensure a joint understanding of ROE.

Medical support

3.48 Whilst this is in itself an N4 function, the medical advisor advises on specific force health protection measures to include general medical, dental, veterinary, or environmental health services. They can liaise with host nations on support that is available beyond that provided by the joint forces.

Political and cultural advisors

3.49 The roles of the political and cultural advisors have increased during operations since the end of the cold war. This is partly due to NATO forces now operating outside its original theater of operation and the realization that these key advisors, often civilians, have much to offer the commander and staff. An understanding of strategic intent, geo-political, and local cultural issues, particularly where Allied forces are operating alongside indigenous forces, which, if overlooked, may lead to incorrect decisions and a resulting loss in operational capability.

Liaison officers

3.50 LNOs at all levels are key to the cohesion of the different commanders' staffs and greatly increase interoperability and mutual understanding amongst NATO forces. LNOs can be used between the different levels of command; the different components, nationalities, or units participating in operations—from civilian governmental or non-governmental organizations; or from partner nations. If asked to provide an LNO, the commander should seek to send some of the most experienced and competent members of his own staff, vested with the proper decisionmaking authority where necessary. The embedding of LNOs not only seeks to clarify issues between different organizations, but can often have the added benefit of providing an interpreter in a foreign language, a subject matter expert in an area of expertise not contained within the staff, a facilitator at improving communication beyond the staff, or simply a person who can help expedite a variety of external issues required by the commander and the staff. Although the LNO may have workspace in the operations center to facilitate the exchange of information, the LNO is not a duty officer but a representative of one commander to another.

Reach-back support

3.51 Reach-back support from deployed maritime commanders has been in existence since worldwide communications became widely available. With today's CIS technology, this has improved dramatically. As always, it is important that the commander identifies at an early stage what is required at close hand and what is best placed elsewhere and accessible using reach-back (e.g., intelligence; chemical, biological, radiological, and nuclear (CBRN); and METOC support). The fine balance of having too big a deployed staff footprint must be weighed against the CIS available to support it and the impact those personnel will have on their immediate environment, be that at sea or ashore. As an example, a staff officer that, once given a simple task then relies on near constant access to a telephone system, is invariably better placed back in a shore headquarters, whilst an advisor that needs to monitor all that is said at command meetings and briefs will need to be co-located with the commander and core staff.

3.52 As a final consideration, during a protracted high-tempo operation lasting many months or even years, the need for staff rotation needs to be planned. This is where the use of reach-back support, even on a temporary basis, can be sufficient to allow deployed staff personnel to leave the immediate area of operations for short periods even if no other subject matter expert in their particular field is available to take their place.

Section 6 — The exercise of command and methods of control

Control methods used in the maritime environment

3.53 Historically, in striking a balance between orchestrating operations and granting freedom of action to subordinates, commanders have used three methods of control: mission command, command by veto, or detailed control type orders. In practice, no commander will rely solely on detailed control, mission command, or even command by veto. The type of control used will depend on the nature of the operation or task, the environment, the nature and capabilities of the adversary and, perhaps most of all, the quality of the force and its respective commanders. Detailed control may be more appropriate in performing specific, precise tasks of a procedural or technical nature, such as controlling airspace, but it is less effective in the conduct of high-tempo operations where judgement, creativity, and initiative are required. Mission command is the more demanding, as it requires the highest standard of interoperability and understanding of the commander's intent.

a. Mission command

(1) Mission command is the conduct of military operations through decentralized execution based upon mission-type orders. Successful mission command demands that subordinate leaders at all echelons exercise disciplined initiative and act independently to accomplish the mission. Essential to mission command is the thorough understanding of the commander's intent at every level of command. Commanders issue mission-type orders focused on the purpose of the operation rather than on the details of how to perform assigned tasks. They delegate decisions to subordinates wherever possible to minimize detailed control and empower subordinates to use their initiative to make decisions based on understanding

the commander's intent rather than on constant communications. When joint maritime operations are decentralized and reliant on mission command, coordination and planning considerations should include the procedures, measures, and resources (including time) required to implement those plans. The MCC and staff should anticipate requirements for joint support, prioritization of operations or force elements, and extensive coordination with other affected components.

(2) Mission command does not end with the commander of that particular group or unit. It is the duty of everyone at whatever level to ensure that they fully understand the general and specific intentions of their commander and, if necessary, act to achieve those intentions without recourse to their commander. There is a clear responsibility on the part of a subordinate to fulfil the superior's intention. In the context of mission command, it is likely that the subordinate will have to work out personally how to meet that intention. An essential first step, therefore, is to be absolutely sure about what that intention is. If in doubt, ask.

(3) Subordinate commanders must play a part in developing trust. Total silence is unlikely to engender trust nor, at the other end of the spectrum, are repeated requests for further guidance or approvals. It is vital to keep a superior informed to the extent that is comfortable to both parties. Some thinking and planning will be required, drawing in the expertise of those under command. The command estimate provides the best discipline for this, even if used in an abridged form. It identifies the centers of gravity, main effort, and the objectives to be achieved. Eventually, the mission command chain reaches its lowest practical level. But this is probably lower down the command chain than realized. Mission command is not just for joint or component commanders.

b. Detailed control. When using detailed control, a commander manages with a tight rein. Command and control is centralized. Orders and plans are explicit, as when a formation of ships is conducting tactical manoeuvring. Such control emphasizes vertical information flow, with information flowing up and orders flowing down the chain of command. Detailed control is often the preferred method when procedures must be closely adhered to for safety reasons or when restrictive ROE demand close monitoring and extensive reporting of events. It should be avoided when time is a critical factor. Detailed control, however, neither works well in a rapidly changing situation, nor does it function well when the vertical flow of information is disrupted or when the force is facing major/critical interoperability problems. Therefore, it is not the preferred method of control under conditions of great uncertainty and when there are tight time constraints.

c. Command by veto. In many aspects of maritime warfare, it is necessary to preplan the actions of a force to an assessed threat and to delegate some missions to a subordinate. Once delegated, the subordinate is to execute the mission without delay, always keeping the commander informed of the situation. The commander retains the power to veto any particular action.

Location of the commander and staff

3.54 Unlike land or air commanders, the maritime commander may be faced with radically different locations from where to exercise command. Whilst each situation will be different and

bring about its own challenges and opportunities, the maritime commander's first decision is whether to exercise command from at sea or ashore. Each will bring about its different pros and cons. Whilst the maritime professional might logically feel drawn towards the sea and the maritime units that he commands, the reality of a particular operation might mean that command is better executed from a permanent shoreside headquarters, possibly even alongside the JFC. This eases interaction and will not have the same limitations for the staff that a floating headquarters is likely to bring, both in terms of sheer physical space but also with regard to access to communications and information systems.

3.55 The commander must decide, with the advice of the chief of staff, whether the staff are to remain in one unified group or not. There will be occasions where it will be necessary to split the staff, perhaps when the commander is based at sea, taking a core element with him or her, or leaving a large supporting team ashore or in other vessels to conduct the remainder of the supporting functions required. Modern CIS allows for considerable reach-back to headquarters and additional staff, often in other parts of the world, thereby reducing the personnel footprint immediately around the commander and the core staff.

3.56 Should the commander be sea-based, the travel challenges associated with the need to interact face-to-face with others should not be underestimated. The use of precious air assets and the repositioning of naval units to allow air or boat transfers to take place should also be fully considered when deciding from where best to command. The unpredictable vagaries of weather systems and sea states further complicate such transfers. Likewise, having a commander and his staff embarked on some vessels could pose an unnecessary distraction or even hamper the prime operational effectiveness of that platform.

3.57 In contrast, some platforms such as command ships or large amphibious warfare ships, offer all capabilities needed to command at sea efficiently, allowing seamless communications with the shore and the full accommodation of large staffs. Command at sea gives a better proximity between the commander and his subordinated units, allowing frequent interaction and a better understanding of the commander's intent, as well as a finer knowledge of his subordinates' characters and skills. It facilitates and enhances the commander's and associated staff's assessment of the environment and situation. The presence of a naval force and the physical environment of a combat ship can also usefully strengthen the commander's influence and power when he is dealing with other authorities, should they be friend or foe.

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CHAPTER 4 — Planning for maritime operations

Section 1 — Operational art and maritime principles

Operational art

4.1 Operational art is the employment of forces to attain strategic and/or operational objectives through the design, organization, integration, and conduct of strategies, campaigns, major operations, and battles. Operational art seeks to ensure that the maritime commander uses forces, space, time, and information effectively through the appropriate sequencing and synchronization of component activity to support the design of joint operations. Without operational art, operations would become a set of disconnected actions with poorly defined measures of success or failure. It requires a broad vision, the ability to anticipate, a careful understanding of the relationship of means to ends, an understanding of the risk inherent in pursuing these, and effective joint cooperation. In the planning for maritime operations, whether or not in contribution to joint operations, this challenges the maritime component commander (MCC) to answer four questions:

a. What is the objective of the maritime operation and what conditions in the maritime environment will achieve the operational objectives in the theater or area of operations (ends)?

b. What sequence of maritime actions is most likely to produce those conditions (ways)?

c. How should maritime resources be applied, within established limitations (e.g., political constraints) to accomplish that sequence of actions (means)?

d. What risks are involved?

4.1.1 These questions require the MCC to consider the ends to be achieved to support the joint force commander (JFC), the ways to achieve those ends, and how to use the means available. By answering these questions, the MCC articulates a statement of intent for the maritime force and a command structure for executing the plan.

Application of principles of Allied joint and multinational operations

4.2 Fundamental principles and operational requirements of Allied joint and multinational operations as well as related considerations are described in AJP-01. The following addresses selected issues from the maritime perspective. An understanding and knowledge of key principles for joint and multinational operations and their application to maritime operations provides the starting point for maritime operations. These principles are not absolute, and nations may place greater emphasis on some rather than others, but there is common agreement on their importance and relevance.

a. Definition of objectives. Allied joint operations are directed by the JFC towards clearly defined and commonly understood objectives which contribute to the attainment of the desired end state.

b. Unity of effort. Given agreement on the objectives, all participating entities, which may include non-military actors alongside the multinational force, must unite their efforts to attain the desired end state. Military forces achieve this principally through unity of command, which provides the necessary cohesion for planning and execution of operations. Goodwill, a common purpose, clear and agreed division of responsibilities, and an understanding of the capabilities and limitations, especially of non-military actors, become essential elements in maximizing collective effort. The MCC unites the efforts of cooperating maritime forces and functions as the principal maritime spokesman during the planning and conduct of Allied joint operations.

c. Sustainment. Planning for sustainment consists of making all arrangements necessary for the successful implementation of the operation plan (OPLAN), including logistic, medical, and personnel support. Alliance navies are mutually supporting due to extensive standardization of equipment and procedures.

d. Concentration of force. Combat power should be concentrated at a preselected time and place to achieve decisive results. Conversely, tactical objectives sometime dictate the dispersal of maritime forces. Many modern, long-range weapons systems, such as ballistic or cruise missiles, allow concentration of firepower at the decisive time and place from dispersed naval forces.

e. Economy of effort. In the face of limited resources and taking into account the considerable size that maritime areas of operations may embrace, it will be necessary to employ maritime force in those areas where decisive effects can be created and take risks in those areas of lower priority.

f. Flexibility and initiative. Maritime doctrine and tradition embrace both of these principles. Understanding the superior commanders' intentions, flexibility of mind, rapid decisionmaking, good organization, and concise communications are regularly exercised within the Alliance. Maritime forces are inherently mobile to allow forces to concentrate quickly at decisive times and places. Naval training and operational culture promotes an attitude of calculated risk-taking in order to win rather than simply to prevent defeat and encourages commanders to recognize, seize opportunities, and solve problems in an original manner.

g. Surprise. Surprise is built on speed and secrecy and, if successful, achieves results disproportionate to the effort expended. Even in the maritime domain where the adversary's use of surveillance aircraft, radar, and electronic warfare support measures (ESM) often reduce the chance of undetected operations, plausible deception measures can provide tactical advantages.

h. Security. Security measures range from intelligence gathering and early warning up to specific threat weapon systems. Measures to prevent target acquisition by the adversary, such as decoys and evasive manoeuvring, the reinforcement of ship structures, and intensive damage control training, complement these efforts. Most naval units carry basic self-defence systems but depend on the presence of assets with specialized warfighting capabilities in a multidimensional threat environment.

i. Simplicity. Simple plans and clear orders minimize misunderstandings and confusion and are essential for delivering timely instructions to bandwidth limited naval units.

j. Multinationality. The North Atlantic Treaty Organization (NATO) is, at its heart, an alliance of nations; its naval forces have been working side by side in multinational high-readiness task groups (TGs) from the outset of the Alliance, fostering mutual understanding and standardization. However, today, NATO forces frequently find themselves operating in coalitions with forces from outside the Alliance. Command of as well as integration into multinational forces demand an attitude of mind that is able to understand differing national and cultural perspectives and how they relate to the common purpose.

The commander's approach to planning

4.3 Whilst the early planning phase of a maritime operation is often undertaken well in advance of the actual start of the operation, it is important to remember the "one third, two thirds" rule when preparation time is limited. The idea is that the commander and the staff only spend up to one third of the time available prior to undertaking such a venture to conduct their planning and issue all orders, thereby allowing subordinates the remaining two thirds of the time to fully prepare for the task ahead. Whilst this is historically a land-based rule, it has its relevancy at sea when planning time is short and subordinates are being given mission command.

4.4 The maritime commander should also do the utmost to be fully available for consultation throughout every stage of the planning process by the staff. Failure to do this will lead to wasted staff effort, at best, or orders being incomplete or delayed at worst. Consultation is key to avoid misinterpretation of commander's intent being misinterpreted by any of the staff. Likewise, command decisions may change when new information becomes available, thereby changing previous command direction. Reviews and reassessment as a plan develops remain important factors of the process and ones where the commander has a vital role to play.

Section 2 — Joint functions in maritime operations

Joint/Operational-level functions important to the maritime commander

4.5 In orchestrating the maritime operation and designing ensuing battles, the maritime commander, in close cooperation with superiors, needs to cover a number of operational-level or joint functions. These are not ends in themselves. Rather, they are related capabilities and activities grouped together to assist JFCs alongside with their subordinate commanders to integrate, synchronize, and direct various capabilities and activities in joint operations. These functions should not be considered separately. They are interdependent and produce a synergistic effect or the planning and execution of these joint functions; the JFC should be closely coordinating efforts between the various component commanders.

Command and control

4.6 A maritime operation involves the direction and coordination of many activities in uncertain or hostile operating environments. Command and control (C2) should be robust, flexible, and capable of dealing with a rapidly changing situation. It should permit swift decisionmaking so that opportunities can be exploited as they are provided. Additionally, it should support the principle of centralized direction and decentralized execution, thus allowing and encouraging freedom of action within the overall concept of operations.

4.7 Where a maritime operation is conducted in a broader joint setting, then the support and supporting relationships between components needs to be clearly defined.

4.8 If the C2 arrangements, including communications and doctrine, are inadequate or lacking in some way, an operation may be undermined and an entire mission placed in jeopardy. While an operation will never succeed by effective C2 alone, it will undoubtedly fail if the C2 arrangements break down completely. C2 arrangements are, therefore, a very high priority when planning any operation, particularly a maritime operation.

Intelligence

4.9 Success is often dependent on the maritime situational awareness (MSA) efforts, especially the maintenance of a clear picture of the disposition of forces, known at sea as the recognized maritime picture (RMP). The role of intelligence is to contribute to a continuous and coordinated understanding of a complex maritime environment. Intelligence should not be restricted to the RMP as a clear picture of the disposition of land forces may be more critical in the littoral, requiring the development of a joint operational picture (JOP). Intelligence is an important contributor to this picture, particularly during the early stages of an operation when it may be necessary to seek political clearance for reconnaissance and intelligence-gathering activities. Intelligence is not just a matter of information gathering over the duration of an operation. Strategic intelligence, which is of more long-term significance than operational or tactical intelligence, is the product of continuous in-depth analysis of the political, economic, industrial, and social characteristics of potential adversaries, as well as the military capabilities of any adversary and the characteristics of their armed forces and military leadership. Strategic intelligence is derived from a variety of sources and is used to inform and educate operational intelligence, which is more military in focus and specific to the theater of operations.

4.10 Operational intelligence needs the political, economic, and psychological context for interpretation. Tactical intelligence mainly comprises the RMP and has the narrowest and most detailed military focus. Strategic intelligence, collected over time, enables a commander to use judgement in planning an operation in the absence of operational intelligence or tactical information and allows subordinate commanders to act appropriately even when the RMP is sketchy. A commander should nonetheless seek to obtain as much intelligence and information as possible to inform decisionmaking. This will require the optimum employment of NATO intelligence capabilities and collection assets. On the other hand, the commander should not become a slave to intelligence gathering. There will always be gaps in a commander’s knowledge, particularly in the matter of adversary intent, and a commander

must be prepared to take decisions in situations of incomplete intelligence. Information that is available must be analysed, but commanders must be aware of the tendency, present in everyone, to make information fit any preconceptions. “Pattern of Life” (surveillance method used for understanding a subject’s habits) is an essential element of the JOP and must be fully understood in order to recognize the unusual to be able to identify the non-combatants within the joint operations area (JOA) and support post-operation reconstruction.

4.11 A tactically exploitable knowledge of the physical environment based on superior technology is essential for both joint and maritime commanders. The recognized environmental picture consists of foundation and dynamic information and is the environmental element of the JOP. The ability to maintain and exploit the recognized environmental picture, supported where necessary by rapid environmental assessment, is an essential part of a maritime force’s range of combat capabilities. The recognized environmental picture and rapid environmental assessment enhance operational capabilities by providing increased options for positioning forces to advantage, for example, in theater entry operations. Modern weapons systems continue to demand high resolution and accurate environmental information so they can be employed to best effect, particularly in the littoral where there are likely to be different conditions over sea and land that must be taken into consideration.

Force protection

4.12 The protection of maritime forces as an operational function is concerned specifically with preserving the combat power of the force. It includes measures and means to minimize the vulnerability of personnel, facilities, materiel, operations, and activities from threats and hazards in order to preserve freedom of action and operational effectiveness, thereby contributing to mission success. This can take a variety of forms: layered defence of high-value targets, including harbours, ports, and critical infrastructure; routing to avoid adversary capabilities; deception to prevent successful adversary attack; and, of course, the destruction or neutralization of the adversary’s combat power. The aim is to preserve one’s own combat power so that it can be used to advantage in the manner and at the place and time of one’s choice.

Manoeuvre and fires

4.13 The combat power of a maritime force is a combination of its combat systems and its ability to bring firepower to bear effectively. Combat power is not constrained to just weapon systems; in delivering the maritime function of maritime security and international engagement, it can also include non-lethal effects. Individual units must be given suitable tasks and commanders the necessary direction so that they can coordinate their efforts to execute the concept of operations. A commander should seek to maximize the combat power of the force and then use it to advantage against the adversary. Crucial to success are an accurate assessment of the adversary’s strengths and weaknesses and a correct judgement as to how one’s own combat power can most effectively be brought to bear against the adversary’s critical vulnerability to cause incapacitation or systemic disruption. Manoeuvre allows a commander to gain a positional advantage in respect to the adversary from which force can be threatened or applied. Maritime forces can be manoeuvred freely while at sea, rarely restricted to normal egress points, thus placing the adversary at a disadvantage as intelligence resources are stretched to locate Alliance forces.

Sustainability

4.14 Logistics is the planning and carrying out of the movement and sustainment of forces. It is both an enabler and a constraint, and the logistic tempo should match the operational tempo. Logistic considerations pervade all aspects of an operation from deployment, through employment, to withdrawal. Operational tempo cannot be achieved without responsive and reliable logistic resupply. During an operation, logistic support will usually be limited to some degree. Logistic priority must be given to support the main effort, yet all elements of the force must be adequately provisioned, including those engaged in holding or economy of force operations. A commander may surge the logistic support when the situation demands. Conversely, the need to consolidate logistics may be a major factor in planning an operational pause. Maritime forces may use a mobile afloat staging base to reduce the logistics footprint ashore.

Information operations

4.15 Information operations (Info Ops) is a military function to provide advice and coordination of military information activities in order to create desired effects on the will, understanding, and capability of adversaries, potential adversaries, and other North Atlantic Council (NAC)-approved parties in support of Alliance mission objectives. Info Ops and NATO military public affairs are separate but related functions. They directly support military objectives, counter adversary disinformation, and deter adversary actions. They both require (involving all levels from the joint operational level to the lowest tactical level) planning, message development, and media analysis, though the efforts differ with respect to audience, scope, and intent. All military information activities must be closely coordinated with NATO military public affairs in order to ensure consistency in the messages to external audiences and to promote overall effectiveness and credibility of the campaign. Maritime forces provide a ready platform from which to execute Info Ops.

Civil-military cooperation

4.16 Civil-military cooperation (CIMIC) is defined as the coordination and cooperation, in support of the mission, between the NATO commander and civil actors, including the national population and local authorities as well as international, national, and non-governmental organizations and agencies. CIMIC needs to be incorporated in the maritime plans as an integrated element, coordinated with all maritime actors, in line with the joint CIMIC plans and guidance.

Section 3 — Planning considerations for the maritime contribution to a joint operation

Introduction

4.17 AJP-01, *Allied Joint Doctrine*, and AJP-3, *Allied Joint Doctrine for the Conduct of Operations*, describe the stages of a joint operation, however, in slightly varying wording.

According to these stages, but in adaptation to the characteristics of maritime operations, there are typically six stages of a maritime operation in support of a joint operation:

- intelligence preparation of the operating environment;
- preparation of the force;
- deployment of the force;
- execution of operations;
  - sea control operations;
  - maritime power projection;
  - sustainment of operations;
- operation termination and transition; and
- redeployment.

4.17.1 In reality, these stages may overlap and not be easily distinguishable; nor will they predetermine the phases or coincide with the phases of a specific operation plan.

Intelligence preparation of the operating environment

4.18 Intelligence collection, processing, and dissemination may involve close cooperation with non-NATO allies, clear presentation, and early background advice to commanders. Intelligence gathering and surveillance will continue throughout an operation, although its focus will shift from the strategic and general in the early stages to the operational and tactical and, hence, become more specifically military as the operation develops.

4.19 Maritime staff and maritime forces can collect a wide variety of useful intelligence and provide a significant surveillance capability (e.g., recognition of potential mining, suspicious shipping or air activities, warning of changes in an adversary's operating patterns, exercise and work-up programmes, and communications). Early assessment of the military capability of any potential adversary will play a significant part in assessment of the size and composition of forces needed to address a crisis. This information would support adequate framing of the operational problem and tailoring the own operational approach.

Preparation of the force

4.20 The size and composition of the forces required to respond to a developing crisis will be shaped by:

- the policy objectives and strategic concept of what the Alliance wants to achieve, how it wishes to act, and, being a multinational operation, what national contributions should be;

- understanding of the military conditions for success – what the military commander must achieve to be successful;

- assessment of the threat – and, therefore, the combat power and levels of protection that may be required to achieve the aim;

- the forces available and their readiness, which will depend in part on the priority given by the various national governments to the policy objectives;

- the time available to respond; and

- the size and location of the operating amphibious objectives areas are examples of areas that may be restricted by both size and physical characteristics.

4.21 Among the factors that must be considered is the requirement for a robust, flexible, and responsive command and control system able to adapt to changing force levels and threats. The potential duration of the operation, the need to sustain or increase force levels, and logistic support requirements throughout the operation will also have a profound influence on force preparation. Whilst NATO has some standing naval forces at high readiness, the reality is that for most operations a maritime force has to be put together which may take time to assemble and which may demand the MCC's thorough consideration on how he manages the integration of units and training requirements of the force in preparation of the mission.

Deployment of the force

4.22 Deployment to a theater of operations involves: embarkation and sailing the force from various national home bases or often from their current locations forward-deployed; passage to the area of operations; transit; and arrival in the theater of operations in a posture appropriate to the threat and mission.

4.23 Coordination of the deployment will require detailed planning; close liaison with diplomatic posts, other civil authorities, Allied military authorities and, probably, foreign government agencies. Consideration must be given to the legal position of the forces, selection of rules of engagement (ROE), and the use of civil transport such as chartered ships.

4.24 The routing of forces must be carefully considered to ensure their security. The protection of shipping forming a part of a maritime force and providing strategic lift into theater may take on the characteristics traditionally associated with the wider wartime task of protecting maritime trade and strategic sea lines of communication (SLOC). This can take different forms and depends upon whether the aim is to deter attacks or to defend against them.

Execution of operations

4.25 For discussions on sea control, sea denial, and maritime power projections, see para 2.34–2.48.

4.26 Sustainment of operations.

a. Over a lengthy period of operations, possibly lasting several years, the need to rotate elements will become essential to ensure vessels undergo both defect and preventative maintenance, and crews are rested to avoid fatigue. In some scenarios, substantial maintenance can be achieved at sea, and personnel can be rotated (including entire crews) whilst vessels continue their operational task. This tends to work better with aircraft, smaller warships, and naval auxiliaries. The logistical requirements to achieve this for a large task force (TF) will be complex, and the rotation is likely to be staggered to ensure no operational capability is lost during a protracted operation. Host-nation basing, or at least limited support, will greatly assist such sustainment.

b. If the focus of an intervention operation moves ashore, the emphasis of maritime force operations will shift from being enabling to being supportive. Maritime forces can contribute to all the components required for the conduct of operations ashore. In particular, the focus will be on enhancing the manoeuvre characteristics of land forces by intelligent application of the attributes of maritime forces and applying force where it is least expected. Additional tasks are likely to be protection and logistic support: protection of units using the SLOC, of the maritime flank, and of logistic support to forces ashore and afloat through joint sea basing, sustainment by sealift, and an alternative supply to host-nation support (HNS). Lengthy operations may require the short-term rotation of major units, a common technique enabling both the relief of forces in place as well as the introduction of differently configured forces.

c. Training is a key element of sustainment; either training to hone skill sets needed for current operations or training for contingent operations. In an operational theater, it is a challenge to balance the operational requirement with the need for training; however, training can be conducted during lulls of activity or in areas of low threat. Operations may require units to be rotated out of area for training purposes.

Operation termination, recovery, and redeployment

4.27 It is likely that once the objective(s) of an operation are achieved, effort will be directed at supporting increased stability as well as the handover of responsibility to regional organizations, non-governmental organizations (NGOs), and international organizations (IOs).

4.28 Elements of the maritime force might find themselves engaged on tasks designed to improve stability, even if other elements of the force are still engaged in combat. As military activities draw down, transition to another stage, or even to another operation with different objectives, the force will usually adopt one of two broad options: facilitating the transfer of authority to civilian authorities or acting as an occupying force. Military resources may also be diverted at any stage to assist with humanitarian assistance operations either in the form of life saving or in life-sustaining aid.

4.29 The recovery and/or redeployment of forces at the end of a successful operation will need to be planned as carefully as the deployment to the area of operations. Indeed, there may be the added complication of recovering unusable equipment and a political requirement for a speedy extraction and return. Amphibious forces may need to use an intermediate staging base to arrange loads prior to another operation.

4.30 Moreover, if conditions for success have not been achieved and an amphibious withdrawal is to be made in the face of continuing or escalating conflict, it will be even more problematical. There may be a need to increase combat power ashore to stabilize the situation before withdrawal can take place. C2 will be difficult and fragmented. A joint TF headquarters (afloat) may provide the most secure and capable communications to assist in this respect and there will be a requirement to provide protection and logistics, including medical support, both for the maritime forces supporting the withdrawal and for the forces being withdrawn. Protection of a withdrawal, like a landing, but in reverse, requires the establishment of necessary levels of sea control.

Section 4 — Maritime operation plans and documentation

Introduction

4.31 The primary responsibility of a maritime commander is to coordinate and balance maritime ends, ways, and means to achieve objectives and obtain favourable outcomes in support of JFC objectives. The MCC will do that in a number of ways, from informal discussions with his superiors, peers, and subordinates to issuing formal guidance in the form of written orders, plans, and directives. This section provides an overview of the main maritime plans and documentation, from the operational (MCC) level down to the tactical (officer in tactical command (OTC), principal warfare commanders (PWCs)) level.

Operation plan

4.32 The MCC's OPLAN is developed in close cooperation with the JFC, other component commanders, and subordinate commanders; normally it is approved at the JFC level since it also reflects cooperation with, and support from, other commanders in the joint operation.

a. Analysis of the background to the crisis, as well as its causes and any assumptions and limitations upon which planning is based. It should clearly articulate the maritime component's role in the overall joint plan.

b. The mission statement and maritime concept of operations (CONOPS) (intent, scheme of manoeuvre, and main effort).

c. The assignment of maritime force elements and prioritization of logistic effort.

d. C2 and liaison arrangements for the maritime force with the JFC and other components and arrangements for comprehensive, interagency coordination if and when required.

Mission statements

4.33 An MCC should write a mission statement – a clear concise statement of the task and purpose of the maritime force – for each of his subordinate commanders. The mission statement contains the elements of who, what, when, where, and why; but seldom specifies

how. There are three broad types of mission statement: single task; multiple task; and (usually for forces assigned as reserve) a list of contingent or be prepared to tasks.

a. Each mission statement contains task, purpose, and unifying purpose (the “in order to or effect required” statement in relation to the CONOPS). Subordinates’ freedom of action and scope for initiative should be made clear.

b. The sum of the purposes of all the MCC’s mission statements; covers all the scheme of manoeuvre (otherwise some aspect has been left untasked).

c. Mission statements are expressed precisely and unequivocally using defined language. This is particularly important in Allied operations where orders are translated and in multiagency situations where military terminology has to be interpreted (abbreviations and jargon should be omitted).

Concept of operations

4.34 The MCC’s CONOPS is the most important aspect of the maritime operation plan; it provides an enduring reference point to which subordinates can refer in order to confirm their understanding of commander’s intent and to orientate themselves to their role in the overall scheme. In setting out the commanders’ vision to subordinates, an MCC’s CONOPS should detail the purpose of the operation, its phases and activities, main effort, how the entire operation will achieve the operational objectives and contribute to the accomplishment of strategic objectives, and, finally, what are the inherent risks.

a. Commander’s intent. Intent is a concise and precise statement of how a commander intends to achieve the assigned operation plan objectives. It should demonstrate the enduring logic underlying the operation plan. Commander’s intent can be reinforced by restating it on each occasion that they provide direction to their subordinates. Commander’s intent should be broadly enduring unless there is a significant change to the situation or the mission.

b. Main effort. An MCC declares the main effort to direct the concentration of capability or activity in order to bring about a specific outcome. Main effort indicates what an MCC considers to be crucial to the success of the operation. This is given substance in a variety of ways:

(1) Additional resources may be allocated to the commander assigned to the main effort.

(2) Other commanders may be assigned specific tasks to support the main effort either directly or indirectly.

(3) Other steps may be taken, such as the narrowing of boundaries and economy of effort elsewhere, to concentrate fighting power.

c. Scheme of manoeuvre. A scheme of manoeuvre describes how an MCC sees the operation unfolding; it sets the missions assigned to subordinate commanders in a broader context. It explains where and when the maritime force is to achieve its purpose so that subordinate commanders can understand their role in the overall plan.

d. Cognizance of the MCC's main effort and priorities. Subordinates can use their initiative to take timely and independent decisions and action, thereby optimizing tempo. A subordinate commander may declare his own main effort to support that of the MCC.

e. Key themes and messages. The key themes are the key ideas in the MCC's concept or intention that have been derived from the strategic narrative. They are designed for broad communication across all audiences and explain the overarching operational approach. They are supported by messages that are more narrowly focused on specific target audiences.

4.35 The MCC's CONOPS should serve to exploit the joint forces' strengths and ensure that NATO forces seize and maintain the initiative. The commander should always seek to limit enemy activity to reaction to NATO actions, thereby ensuring that battles and engagements are fought in the manner and at the place and time of NATO's choice. All these areas are pre-eminent in shaping the operating environment for subsequent exploitation.

Directives, plans, and orders

4.36 The operation plan is developed through a series of steps:

a. An operations planning directive issued by the JFC provides the joint force mission and initial guidance and direction for planning at MCC level. This directive, as well as the subsequent JFC CONOPS, is the basis for the MCC's planning staff work on the maritime CONOPS for the maritime force, outlining the maritime role in the overall operation.

b. A maritime OPLAN produced by the MCC's planning staff provides increased resolution and precision on selected aspects of the JFC OPLAN. An OPLAN can trigger force preparation and the detailed synchronization of activities (fires, Info Ops, and manoeuvre) between subordinate maritime commands and other bodies. The development of an OPLAN may already identify any requirement for subsequent branches and sequels as well as for support plans (SUPPLANs) (e.g., by maritime air and submarine C2 elements).

c. An initiating directive is issued to support and complement any directive issued by the operational commander when it is clear that an amphibious operation will be part of the campaign. It is issued at the highest appropriate level by the operational-level commander delegated overall responsibility for the amphibious operation.

d. An operational general matters (OPGEN) message conveys general matters of policy, general instructions, and general information about aspects common to all forms of warfare. Like most operational messages and orders, it conveys instructions in a standardized format, allowing for additional information and paragraphs if required. It also contains detailed instructions about the warfare responsibilities of the OTC.

e. An operation task (OPTASK) provides supplementary instructions and supporting information to the maritime force; it complements the OPLAN and the OPGENs. OPTASKs can be used by maritime commanders to provide detailed guidance, operational intent, and clear tactical instructions for a particular event or warfare discipline. They are not necessarily limited by time or space. Amplifying signals and orders can also be used where deemed necessary.

f. As the operation unfolds, additional detailed orders can be provided when/as required: they can either have the form of an update to one of the above documents or be issued as a fragmentary order.

g. Warning orders indicate commander's intent to subordinates, who can then contribute to higher-level planning and conduct their own informed planning. The MCC should strike a balance between providing too little information too late and inundating subordinates with a succession of evolving, but potentially contradictory, directions. There is no prescribed format; warning orders are likely to become progressively more definitive as the planning process progresses.

Logistic planning

4.37 Planning for any operation must include consideration of the logistically possible. Logistic planning, begun in the early stages of operations planning, enables coherent and coordinated planning activity to be driven from an early stage. It constitutes a functional assessment of the logistic capabilities of the contributing nations. The logistics plan gives the commander the opportunity to modify the operation plan based on the supportability of the course of action. Thus, the logistic considerations are an integral part of the planning process. Items to be considered when determining a logistic plan include: mission and likely tasks, concept of operations, national requirements, and compatibility and interoperability of systems.

4.38 The overall aim of logistic support planning for operations and exercises is to:

- define the logistics support concept;
- determine the organization and structure required to support the operation or exercise afloat and ashore;
- identify the requirements (including sustainability levels), shortfalls, and necessary arrangements to deploy, support, and sustain NATO maritime operations;
- determine the availability of and requirements for HNS, contractor support, or port agency contracting; and
- identify the requirements and arrangements for redeployment of forces, to include the preparation for and recovery of maritime forces, individuals, and materiel from the area of operations to the home base.

4.39 Command and control of force and group logistic readiness is an MCC role. The MCC may assign a force or group logistic coordinator to monitor logistic readiness and effect resupply of the maritime from force or group assets or external sources. These ships may be under the operational control (OPCON) or tactical control (TACON) of the MCC. Full details of the responsibilities of the force and group logistics coordinator can be found in ALP-4.1, *Multinational Maritime Force (MNMF) Logistics*.

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CHAPTER 5 — Maritime forces in the joint operation

Section 1 — The maritime contribution to joint operations

Introduction

5.1 There are numerous ways in which Allied maritime forces can conduct operations in their own right as a single component. These are explored in great detail in a range of North Atlantic Treaty Organization (NATO) Allied joint publications (AJPs) and Allied tactical publications (ATPs) which cover maritime warfare specialist areas such as above-water warfare, antisubmarine warfare, submarine operations, naval mine warfare, amphibious operations, and maritime aviation. The following represent ways in which the maritime component can contribute to joint operations:

a. Monitor a crisis. Maritime forces can provide valuable information from the outset of a crisis. Intelligence-gathering may focus initially at the strategic level before transitioning to the operational and tactical as the operation develops. Intelligence collections assets can be launched and monitored from mobile maritime platforms.

b. Mobility. A maritime task group (TG) may be the principal means of initial deployment for an intervention force. It can move significant numbers of forces and materiel up to 400 nautical miles in 24 hours.

c. Force protection. A maritime force can provide air defence (both offensive and defensive counterair) and protection to ground forces through close air support and air interdiction. An amphibious force with a tailored air group or other craft are capable of recovering personnel if required. They can provide harbour protection for the loading and unloading of civilian ships in support of military operations.

d. Organic air support. Maritime aircraft will contribute to counterair, antisurface warfare, and combat support air operations in conjunction with land-based aircraft, when available. Maritime air operations should be integrated across the force and coordinated and synchronized by the joint forces air component command (JFACC).

e. Fire support. A maritime force can deliver fires using carrier-based aircraft, long-range precision attack missiles, and medium-range gun munitions. As well as engaging targets, it can also integrate fire support and conduct battle damage assessment using aviation assets.

f. Surface and subsurface land attack. Surface and subsurface land attack missiles may provide the primary means of organic long-range attack, especially in the early stages of an operation, and have particular utility for coercion. They will subsequently complement other air interdiction forces. Naval fire support may also conduct preparatory fires, then complement land fire support once deployed, and is available to any ground unit operating in the littoral.

g. Amphibious operations. An amphibious task force is focused on the projection of landing forces ashore. The five principal types of amphibious operation are: demonstration,

raid, assault, withdrawal, and amphibious support to other operations.[1] The need for detailed coordination across all environments makes amphibious operations extremely complex.

h. Sea basing and sustainment. The ability to posture offshore may provide essential logistical and medical support to forces ashore and afloat through sea basing, possibly as an alternative to host-nation support. Additionally, maritime forces offer genuine command and control (C2) facilities with secure communication and information systems (CIS) to be used in support of joint forces. Once the focus of an operation moves ashore, the maritime effort may shift from enabling to supporting. A maritime force can provide sea basing to minimize risk to land forces, maximize surprise, and minimize the requirement for host-nation support. Joint sea basing complements expeditionary operations by projecting sea-based power against land-based objectives. Joint sea basing increases the agility of a joint force through the development and application of a process that further exploits existing force capabilities and equipment. Joint sea basing is an option that offers flexibility across the different levels of command and the entire spectrum of military operations and throughout the different phases of an operation. Joint sea basing can optimize the agility with which expeditionary forces deploy into theater and then exploit the maritime environment in the conduct of the joint operation. In doing so, it can increase political choice without irreversible commitment.

i. Operation termination, recovery, and redeployment. Maritime forces are able to transport large numbers of personnel and heavy items of equipment out of area of operations while protecting them during transit. Additionally, this capability may be used to recover land forces but remain in theater acting as a strategic reserve.

Section 2 — Integration with other components

The liaison between component commanders and other organizations

5.2 In addition to the liaison up to the joint force commander (JFC), it is absolutely vital to maintain the liaison across components and out to any other organizations that are a core part of the maritime plan. The component liaison officer (LNO) acts as the principal method of coordination by ensuring that critical information is rapidly assessed and disseminated up and down the chain of command. The component LNO has an essential role to play in the host component's plans and execution, particularly regarding the synchronization of component activity. While the air operations coordination centre (maritime) (AOCC(M)) is fully integrated into the headquarters, they are nonetheless ultimately responsible to their parent command. Likewise, LNOs should also be integrated from any other organization or force element that will have a significant impact on the conduct of maritime operations.

[1] Amphibious forces routinely conduct amphibious support to other operations. These are amphibious operations which contribute to conflict prevention or crisis mitigation. They include: security cooperation, humanitarian assistance and disaster relief, noncombat evacuation officers, peace support, recovery operations, etc.

Maritime support to and from the air component commander

5.3 The JFC normally designates a single authority to coordinate joint air operations and integrate air capabilities. Based on the complexity and scope of operations, the JFC can either retain authority or designate an air component commander (ACC) to exploit the capabilities of joint air operations. Air, maritime, and land forces assigned to operations are likely to include air capabilities/forces that individual component commanders may make available for joint air operations. These capabilities/forces are tasked directly according to the JFC's air apportionment plan. Should a component not have the organic air capabilities/forces to support its assigned mission, it may request support from the ACC, who may task components based on the JFC's air apportionment plan. The maritime force benefits from and contributes to the joint air defence plan using surface-based and organic airborne early warning, fighter aircraft, and ships armed with surface-to-air missiles, long-range search radars, and electronic warfare systems. The maritime component commander (MCC) and ACC normally provide mutual support in air defence (AD), (including defensive counterair and missile defence), airborne early warning, and strike warfare and antisurface warfare.

5.4 There are two key liaison elements between the maritime and air environments. The overall role of the maritime liaison element is to integrate the maritime plan with that of the ACC, thereby ensuring an effective and efficient joint execution of the JFC's operation plan. On the other hand, the maritime coordination element is an integrated part of the combined air operations centre (CAOC) that is functionally subordinate to the joints force maritime component command (JFMCC). It provides coordination between the CAOC and (various) task groups at the tactical level through the maritime air operations centre (MAOC). The maritime coordination element provides expertise and liaison on naval matters relevant to tactical air planning, tasking, and execution, and monitors and evaluates the maritime situation. It also advises on planning and execution of air operations in support of naval operations and units, and identifies and provides analysis of naval operations in support of current and future CAOC operations and planning.

5.5 Joint air operations do not include air capabilities/forces organic to a component and used by that component solely in pursuit of its own operations to accomplish its assigned mission. Notwithstanding, these organic assets should appear on the air tasking order (ATO) to enable coordination and minimize the risk of fratricide; however, their appearance on the air tasking order neither implies any command or tasking authority over them, nor does it restrict component commanders' flexibility to respond to changing battlespace dynamics. Component air capabilities/forces not available for joint air tasking must adhere to the guidance provided by the airspace control plan, the airspace control order, the air defence plan, and the special instructions to assure integration and minimize the risk of fratricide.

5.6 The officer in tactical command (OTC) coordinates all friendly air movement within the force air coordination area (FACA) and ensures that airspace requirements are coordinated with the airspace control authority and that airspace control orders are adhered to.

5.7 The JFC will normally designate the ACC as the supported commander and the MCC as a supporting commander for air and missile defence (AMD). The individual designated to be the ACC is also normally designated the area air defence commander (AADC). On behalf of

the JFC, the AADC coordinates AMD planning across the joint force. The MCC may recommend establishing a regional air defence commander. During the shape phase of a joint operation and during operations of limited scope or duration, the JFC may elect to retain operational control (OPCON) of multimission AMD-capable ships. However, during complex AMD operations, the MCC normally exercises OPCON of maritime forces to include multimission AMD-capable ships, or may transfer OPCON or tactical control (TACON) of multimission ships with AMD capability to a subordinate Commander, Task Force.

5.8 Strike operations may employ ballistic or cruise missiles, aircraft, naval surface fires, amphibious forces, and special operations forces (SOFs) to attack targets ashore. The term “strike warfare” is used in the maritime domain and commonly includes joint fire support, interdiction, strategic attack, and close air support. Amphibious operations may involve extensive application of strike warfare capabilities.

5.9 Strike warfare may be conducted by ballistic and cruise missile-carrying submarines, aircraft carrier strike aircraft, surface action groups of one or more naval surface vessels, land-attack missiles, naval surface gunnery, rotary-winged aircraft, unmanned aircraft systems, and amphibious forces.

5.10 Air strikes require close coordination with ACC planners at the CAOC. Integration of autonomous land-attack missiles with strike aircraft in the same attack requires close coordination between the airspace coordinating authority, ACC and MCC, and, possibly, the land component commander (LCC) to deconflict airspace and target selection.

Maritime support to the land component commander

5.11 The MCC may be directed by the JFC to support the through various means, to include amphibious operations, sea-based joint fires, and maritime pre-positioned forces. Maritime forces can also contribute significant intelligence, area surveillance, and communications capabilities to land forces. They can also provide air defence over littoral areas, including theater ballistic missiles. Maritime platforms such as aircraft carriers, large deck amphibious warfare ships, and dedicated hospital ships provide medical facilities to support medical evacuations, treatments and return to operations. Finally, maritime forces can protect land forces by providing a sea-based defensive barrier or by preventing enemy manoeuvre from the sea.

a. Amphibious operations

(1) When operating in or near the littoral, a range of amphibious operations may complement land forces. Amphibious forces can, depending on the specified objectives, create effects at the tactical, operational, or strategic levels.

(2) Amphibious operations integrate virtually all types of ships, aircraft, weapons, and the landing force in a concerted joint military effort in an environment ranging from permissive to hostile. They are the most complex of naval operations; detailed specialist knowledge and a high degree of coordination and cooperation in planning, training, and execution are essential for success. Amphibious operations require coordination between the elements of

the amphibious TF, the landing force, the land component (if any), and supporting forces at every level. This dictates that careful consideration is given to the formation of TGs and command structures to provide economy of effort.

(3) Amphibious forces offer strategic mobility together with both political and military flexibility. Although their points of entry are, to a certain extent, constrained by geography and hydrography, amphibious forces poised at sea pose a significant problem to an enemy who is compelled to disperse forces to meet the threat and defend all possible landing options. Given sound, up-to-date intelligence, amphibious forces can exploit the element of surprise and capitalize upon an adversary's weaknesses through application of the required type and degree of force at the most advantageous time and place.

b. Sea-based joint fires. Maritime-based aircraft contribute to joint fires by filling roles such as close air support and air and maritime interdiction. Submarines and surface ships armed with land-attack missiles or naval surface fires contribute to attacks on important shore targets. Naval systems can provide fire support to all operations within range of the sea, which may be especially important in the early stages of an operation before ground forces have fully deployed. Naval systems can even continue providing fire support to land units in situations where the "footprint ashore" is minimalized to only essential units (i.e., when conducting joint sea-based operations).

c. Maritime pre-positioning force (MPF)

(1) Although not an extant NATO capability, some nations do possess the capability to pre-position equipment and supplies to support NATO operations. An MPF enables operations across the range of military operations and through any phase. When combined with the forces and their equipment arriving in the fly-in echelon, pre-positioning programmes provide forward-deployed equipment and supplies needed to sustain an amphibious expeditionary brigade-sized force for 30 days of operations; thus reducing total strategic lift requirements. Close coordination is required between the amphibious force and the LCC staff during an MPF operation.

(2) An MPF is an option for the deployment of land forces made available to a LCC. The MPF will be assigned to a functional or Service component commander as appropriate and perhaps based on the phase of the operation. For example, the deployment order may assign the MPF to a MCC during transit and then transfer the MPF to the LCC upon reaching the port of debarkation within the LCC's area of operations.

Special operations forces and the maritime component

5.12 SOFs are a scarce and valuable resource who should be employed with caution and in accordance with clear guidelines from the JFC. SOFs may require transport on or insertion to a location from MCC assets.

5.13 SOFs may be embarked on board maritime assets to conduct operations as required by the unit commander, MCC, or the joint force special operations component commander.

Section 3 — Logistics

Afloat support

5.14 Maritime elements routinely access three levels of support in order to achieve the sustainability needed to meet operational requirements:

a. Organic. Organic support is that logistic support contained within warships and afloat support shipping.

b. Host-nation support (HNS). In common with the other components, and where appropriate, the maritime component will utilize HNS for services such as port facilities, accommodation, transport, food, and water.

c. Resupply. Resupply is that support required in order to replace the expenditure of the classes of supply not held organically or available through HNS. Due to the limited availability of air and sealift assets and the fact that maritime units generally operate over a wide area, this type of logistic support is the most challenging. In order to meet joint force integration and prioritization requirements, maritime force logisticians will require direct support from the joint logistic support group (JLSG) commander. See AJP-4.6, *Allied Joint Doctrine for the Joint Logistic Support Group*, for more information on the role of this commander.

5.15 A further advantage of afloat support is the availability of replenishment at sea. This means of transferring a wide variety of items (including equipment, personnel, liquids (fuels and water), ammunition, and general stores) whilst units are underway (either by rafting, line, aircraft, or boat) gives greater flexibility and allows for change to the planned logistical supply whilst units are either engaged on operations or on passage to an operational area. It does require detailed planning and careful management, but it does allow both flexible afloat support and increased use of joint sea basing. Unlike dedicated naval auxiliary shipping, most merchant vessels used by navies in times of crisis will lack the ability to transfer liquids or other items by line transfer. However, they can still often be used to conduct replenishment at sea operations using helicopters and boats to transfer a variety of general stores, often in pallets.

Logistics during joint sea basing

5.16 Logistically, the use of properly loaded ships, military afloat support or commercially chartered to support other components, may assist in issues such as force protection (FP), the environmental impact on stocks, and even the joint desired order of arrival where capability held in the maritime force could allow earlier movement of forward element that might otherwise have had to await lift assets. Use of the joint sea base for logistic support will be determined by the logistic estimate process and will involve a high level of coordination between the maritime component and the JLSG.

5.17 For the JFC, joint sea basing offers the flexibility to conduct selected offload in theater at a time and place of his choosing. The joint force commander can also choose which elements of his units, that normally would operate ashore, will remain afloat, considering the potential

threat to these assets. Afloat support vessels can offload in ports with minimal infrastructure. Using amphibious offload enablers, the JFC also has the option to bypass seaports of debarkation (SPODs) if he wishes, either due to non-suitability, host-nation constraints, congestion; or in circumstances where he wishes to build up his forces at an alternative point. The advantages that this ability to bypass the SPOD brings must be balanced against the potential reduction in tempo of offload across a beach compared to that achieved in a port. It will also be dependent upon the amount of enablers (helicopters and surface movement) that are available.

Maritime logistic nodes

5.18 The principal nodes of the maritime logistics operational pipeline are the advance logistic support site and forward logistic site(s) (FLS(s)):

a. Advanced logistics support site (ALSS). An ALSS is an expeditionary logistic support organization that is task organized to facilitate the delivery of shore-based logistic support to forces, primarily afloat but also ashore. It is the primary maritime entry and departure point for passengers, mail, and cargo moving within an operating area. The ALSS is normally established at or near a secure airfield or seaport not in close proximity to the operating forces. The ALSS acts as the hub of a “hub and spoke” distribution network that includes FLSs as spokes. An ALSS should also possess the requisite medical capability (Role 3 or 4) to accept battle casualties and to hold such casualties until they can be returned to duty or evacuated by national medical evacuation systems. Besides maritime forces afloat, the ALSS is also capable of supporting special warfare units, shore-based aviation units, medical facilities, mine countermeasure (MCM) units, and other shore-based maritime organizations. ALSS staffing and equipment is made up from a combination of member military forces, HNS, and contracted support. The ALSS normally moves critical passengers, mail, cargo (passengers, mail, cargo (PMC)) to and from its FLSs using intratheater airlift or ground transport. PMC may also be delivered direct to the multinational maritime force from the ALSS where feasible.

b. Forward logistic sites. An FLS is the forward-most shore-based transshipment point that provides the bridge between an ALSS and forward-deployed maritime forces. An FLS is typically established at an airfield or seaport that is close to the main battle area. Like the ALSS, the FLS is task organized and staffed with functional capabilities derived from member nation military and host nation sources. The FLS organization must remain flexible and agile as it may be called upon to relocate as the operation area and supported forces afloat change. While the range of support offered by an FLS is normally less than that offered by an ALSS, its capabilities can range from very austere to near those of an ALSS, including a supporting seaport. FLS possess the requisite medical support capabilities (Role 2 or 3) to accept, stabilize (life and limb saving surgery), and hold battle casualties until they can be returned to duty, evacuated by intratheater airlift to the ALSS, or evacuated directly into national systems.

5.19 Full details on concept of operation organization responsibilities activation and operation of ALSS and FLS are contained within ALP-4.1.

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Lexicon

Part I — Acronyms and abbreviations

This List of Abbreviations contains abbreviations and acronyms used in this document as well as others commonly used in joint and combined operations. A comprehensive list of NATO abbreviations is contained in AAP-15, NATO Glossary of Abbreviations Used in NATO Documents and Publications.

AADC	area air defence commander
AAW	anti-air warfare
AAWC	anti-air warfare commander
ACC	air component commander
AD	air defence
AJP	Allied joint publication
ALP	Allied logistic publication
ALSS	advanced logistics support site
AMD	air and missile defence
AOCC(M)	air operations coordination centre (maritime)
AREC	air resource element coordinator
ASUW	antisurface warfare
ASUWC	antisurface warfare commander
ASW	antisubmarine warfare
ASWC	antisubmarine warfare commander
ATO	air tasking order
ATP	Allied tactical publication
C2	command and control

CAOC	combined air operations centre
CBRN	chemical, biological, radiological and nuclear
CIMIC	civil-military cooperation
CIS	communication and information systems
COG	centre of gravity
CONOPS	concept of operations
COPS	current operations
CWC	composite warfare commander
EAW	electronic and acoustic warfare
ECM	electronic countermeasures
EEZ	exclusive economic control
EMCON	emission control
EMS	electromagnetic spectrum
EPM	electronic protective measures
ESM	electronic warfare support measures
EW	electronic warfare
EWC	electronic warfare coordinator
FACA	force air coordination area
FLS	forward logistic site
FON	freedom of navigation
FOPS	future operations
FP	force protection
FPC	force protection coordinator

FRAGO	fragmentary order
HEC	helicopter element coordinator
HNS	host-nation support
Info Ops	information operations
IO	international organization
ISTAR	intelligence, surveillance, target aquisition and reconnaissance
JFACC	joint forces air component command
JFC	joint force commander
JFMCC	joint forces maritime component command
JLSG	joint logistic support group
JOA	joint operations area
JOP	joint operational picture
LCC	land component commander
LNO	liaison officer
LOAC	law of armed conflict
MAOC	maritime air operations centre
MCC	maritime component commander
MCM	mine countermeasures
METOC	meteorological and oceanographic
MIO	maritime interdiction operation
MNMF	multinational maritime force
MPF	maritime pre-positioning force
MSA	maritime situational awareness

MSO	maritime security operations
MUS	maritime unmanned systems
NAC	North Atlantic Council (NATO)
NATO	North Atlantic Treaty Organization
NCAGS	naval cooperation and guidance for shipping
NEO	non-combatant evacuation operation
NGO	non-governmental organization
NMW	naval mine warfare
NMWC	naval mine warfare coordinator
NSA	national shipping authority
OPCON	operational control
OPGEN	operational general matter
OPLAN	operation plan
OPORD	operation order
OPTASK	operation task
OTC	officer in tactical command
PMC	passengers, mail, cargo
PWC	principal warfare commander
RMP	recognized maritime picture
ROE	rules of engagement
SLOC	sea lines of communication
SOF	special operations force
SPOD	seaport of debarkation

STW	strike warfare
SUBOPAUTH	submarine operating authority
SUPPLAN	support plan
SUPSIT	support operations situation
TACOM	tactical command
TACON	tactical control
TF	task force
TG	task group
TU	task unit
WMD	weapon of mass destruction

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Part II — Terms and definitions

amphibious force
A naval force and landing force, together with supporting forces that are trained, organized and equipped for amphibious operations. (NATOTerm - NATO Agreed)

amphibious objective area
A geographical area, delineated in the initiating directive, for purposes of command and control within which is located the objective(s) to be secured by the amphibious task force. This area must be of sufficient size to ensure accomplishment of the amphibious task force's mission and must provide sufficient area for conducting necessary sea, air and land operations. Also called **AOA**. (NATOTerm - NATO Agreed)

amphibious operation
A military operation launched from the sea by a naval and landing force embarked in ships or craft, with the principal purpose of projecting the landing force ashore tactically into an environment ranging from permissive to hostile. (NATOTerm - NATO Agreed)

amphibious raid
A type of amphibious operation involving swift incursion into or temporary occupation of an objective followed by a planned withdrawal. (NATOTerm - NATO Agreed)

amphibious task force
A task organization of naval forces and a landing force, with their organic aviation and other supporting forces, formed for the purpose of conducting an amphibious operation. (NATOTerm - NATO Agreed)

amphibious withdrawal
A type of amphibious operation involving the extraction of forces by sea in naval ships or craft from a hostile or potentially hostile shore. (NATOTerm - NATO Agreed)

antisubmarine warfare
Operations conducted with the intention of denying the enemy the effective use of their submarines. Also called **ASW**. (NATOTerm - NATO Agreed)

area of operations
An area defined by the joint force commander within a joint operations area for the conduct of specific military activities. (NATOTerm - NATO Agreed)

associated support
In naval usage, operations in which a designated unit operates independently of a specified force or group, but is tasked to provide contact information to, receive intelligence from and, if authorized, to cooperate and coordinate operations with the supported force. Tactical control of the unit remains with the establishing authority who coordinates tasking and movement of the unit in response to the requirements of the supported force commander. Also called **AS**. (NATOTerm - NATO Agreed)

campaign
A set of military operations planned and conducted to achieve a strategic objective. (NATOTerm - NATO Agreed)

combat service support
The support provided to combat forces, primarily in the fields of administration and logistics. (NATOTerm - NATO Agreed)

composite warfare commander
The officer to whom the officer in tactical command has assigned some or all of his authority and responsibilities for the overall direction and control of the defense of the force. Also called **CWC**. (This term and definition are only applicable in this publication.)

deception
Those measures designed to mislead the enemy by manipulation, distortion, or falsification of evidence to induce him to react in a manner prejudicial to his interests. (NATOTerm - NATO Agreed)

direct support
1. In land operations, a primary tactical task given to an artillery unit to provide fire requested by a support unit other than an artillery unit, without specifying the command relationship. 2. In maritime usage, operations related to the protection of a specific force by other units, normally under the tactical control of that force. 3. The support provided by a unit not attached to or under the command of the supported unit or formation, but required to give priority to the support required by that unit or formation. (NATOTerm - NATO Agreed)

electronic countermeasures
That division of electronic warfare involving actions taken to prevent or reduce an enemy's effective use of the electromagnetic spectrum through the use of electromagnetic energy. There are three subdivisions of electronic countermeasures: electronic jamming, electronic deception and electronic neutralization. Also called **ECM**. (NATOTerm - NATO Agreed)

electronic protective measures
That division of electronic warfare involving actions taken to ensure effective friendly use of the electromagnetic spectrum despite the enemy's use of electromagnetic energy. There are two subdivisions of electronic protective measures: active electronic protective measures and passive electronic protective measures. Also called **EPM**. (NATOTerm - NATO Agreed)

electronic warfare support measures
That division of electronic warfare involving actions taken to search for, intercept and identify electromagnetic emissions and to locate their sources for the purpose of immediate threat recognition. It provides a source of information required for immediate decisions involving electronic countermeasures, electronic protective measures and other tactical actions. Also called **ESM**. (NATOTerm - NATO Agreed)

emission control
Selective control of emitted electromagnetic or acoustic energy. The aim may be twofold: a. to minimize the enemy's detection of emissions and exploitation of the information so gained, b. to reduce electromagnetic interference thereby improving friendly sensor performance. Also called **EMCON**. (NATOTerm - NATO Agreed)

force protection
All measures and means to minimize the vulnerability of personnel, facilities, equipment and operations to any threat and in all situations, to preserve freedom of action and the operational effectiveness of the force. Also called **FP**. (NATOTerm - NATO Agreed)

host-nation support
Civil and military assistance rendered in peace, crisis or war by a host nation to NATO and/or other forces and NATO organizations which are located on, operating on/from, or in transit through the host nation's territory. Also called **HNS**. (NATOTerm - NATO Agreed)

humanitarian operation
An operation specifically mounted to alleviate human suffering in an area where the civil actors normally responsible for so doing are unable or unwilling adequately to support a population. (NATOTerm - NATO Agreed)

joint operations area
A temporary area defined by the Supreme Allied Commander Europe, in which a designated joint commander plans and executes a specific mission at the operational level of war. A joint operations area and its defining parameters, such as time, scope of the mission and geographical area, are contingency- or mission-specific and are normally associated with combined joint task force operations. Also called **JOA**. (NATOTerm - NATO Agreed)

landing force
The task organization of ground and aviation units assigned to an amphibious operation. Also called **LF**. (NATOTerm - NATO Agreed)

littoral
In military operations, a coastal region consisting of the seaward area from the open ocean to the shore that must be controlled to support operations ashore, and the landward area inland from the shore that can be supported and defended directly from the sea. Note: This definition does not have any implications on rules of international law of the sea and the rights and duties of states arising from rules on international law of the sea and the rights and duties of states arising from rules on international law of the sea. (This term and definition are only applicable in this publication.)

logistics
The science of planning and carrying out the movement and maintenance of forces. In its most comprehensive sense, those aspects of military operations which deal with: a. design and development, acquisition, storage, movement, distribution, maintenance, evacuation, and disposal of materiel; b. transport of personnel; c. acquisition or construction, maintenance, operation and disposition of facilities; d. acquisition or furnishing of services; and, e. medical and health service support. (NATOTerm - NATO Agreed)

maritime interdiction operation
An operation conducted to enforce prohibition on the maritime movement of specified persons or material within a defined geographic area. Also called **MIO**. (NATOTerm - NATO Agreed)

maritime operation
An action performed by forces on, under, or over the sea to gain or exploit control of the sea or to deny its use to the enemy. (NATOTerm - NATO Agreed)

mine countermeasures
All methods for preventing or reducing damage from mines. Also called **MCM**. (This term and definition are only applicable in this publication.)

mine warfare
The strategic and tactical use of mines and counter-measures. (NATOTerm - NATO Agreed)

multinational force
A force composed of elements of two or more nations. (NATOTerm - NATO Agreed)

NATO military public affairs (NATO military PA)
The function responsibl for promoting NATO's military aims and objectives to audiences to enhance awareness and understanding of military aspects of the Alliance. Note: This includes planning and conducting media relations, internal communications, and community relations. (NATOTerm - NATO Agreed)

non-combatant evacuation operation
An operation conducted to relocate designated noncombatants threatened in a foreign country to a place of safety. Also called **NEO**. (NATOTerm - NATO Agreed)

officer in tactical command
In maritime usage, the senior officer present, eligible to assume command, or the officer to whom he has delegated tactical command. Also called **OTC**. (NATOTerm - NATO Agreed)

operation
A sequence of coordinated actions with a defined purpose. (NATOTerm - NATO Agreed)

Note:
1. NATO operations are military.
2. NATO operations contribute to a wider approach including non-military actions.

operation order
A directive, usually formal, issued by a commander to subordinate commanders for the purpose of effecting the coordinated execution of an operation. Also called **OPORD**. (NATOTerm - NATO Agreed)

operational control
The authority delegated to a commander to direct forces assigned so that the commander may accomplish specific missions or tasks which are usually limited by function, time, or location; to deploy units concerned, and to retain or assign tactical control of those units. It does not include authority to assign separate employment of components of the units concerned. Neither does it, of itself, include administrative or logistic control. Also called **OPCON**. (NATOTerm - NATO Agreed)

operations security
The process which gives a military operation or exercise appropriate security, using passive or active means, to deny the enemy knowledge of the dispositions, capabilities and intentions of friendly forces. Also called **OPSEC**. (NATOTerm - NATO Agreed)

peacebuilding
A peace support effort designed to reduce the risk of relapsing into conflict by addressing the underlying causes of the conflict and the longer-term needs of the people. Note: Peacebuilding requires a long-term commitment and may run concurrently with other types of peace support efforts. (NATOTerm - NATO Agreed)

peacekeeping
A peace support effort designed to assist the implementation of a ceasefire or peace settlement and to help lay the foundations for sustainable peace. Note: Peacekeeping is conducted with the strategic consent of all major conflicting parties. Also called **PK**. (NATOTerm - NATO Agreed)

peace support
Efforts conducted impartially to restore or maintain peace. Note: Peace support efforts can include conflict prevention, peacemaking, peace enforcement, peacekeeping, and peacebuilding. (NATOTerm - NATO Agreed)

recognized maritime picture
An electronically produced display compiled from active and passive sensors covering a three-dimensional volume of interest in which all detected maritime contacts have been evaluated against threat parameters and assigned a recognition category and track number. Also called **RMP**. (This term and definition are only applicable in this publication.)

rules of engagement
Directives issued by competent military authority which specify the circumstances and limitations under which forces will initiate and/or continue combat engagement with other forces encountered. Also called **ROE**. (NATOTerm - NATO Agreed)

support
The action of a force, or portion thereof, which aids, protects, complements, or sustains any other force. (NATOTerm - NATO Agreed)

tactical command
The authority delegated to a commander to assign tasks to forces under his command for the accomplishment of the mission assigned by higher authority. Also called **TACOM**. (NATOTerm - NATO Agreed)

tactical control
The detailed and, usually, local direction and control of movements or manoeuvres necessary to accomplish missions or tasks assigned. Also called **TACON.** (NATOTerm - NATO Agreed)

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