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of Defence

Joint Doctrine Publication 0-10

# UK Maritime Power

Fifth Edition



Development, Concepts and Doctrine Centre

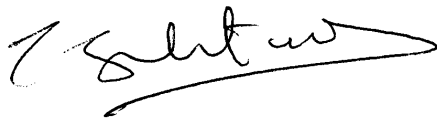


# Joint Doctrine Publication 0-10

## UK Maritime Power

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dated October 2017,

is promulgated  
as directed by the Chiefs of Staff



Director Concepts and Doctrine

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# Foreword

We are living through an era of almost unprecedented change characterised by complexity, instability, uncertainty and the pervasiveness of information. The distinction between war and peace has blurred and adversaries, both state and non-state, will continue to threaten the stability of the rules-based order as the basis for peace and prosperity in the world. Reflecting this complexity and instability, we are witness to greater challenges at sea; ranging from smuggling, piracy and terrorism in the arteries of world trade to disputes over the sovereignty of international waters. As an island nation, and a trading power, our future continues to depend on our ability to freely use the sea within the boundaries of international law.

The growing complexity of these challenges calls for us to work ever more closely with our sister Services and with our international partners. As mariners, we in the Royal Navy, the Royal Marines and the Royal Fleet Auxiliary instinctively appreciate the importance of our ability to use the sea to protect, project and promote our national interest. The sea provides us with the ability to project forward a war fighting presence without commitment. We must be ever vigilant, whether protecting our home waters, meeting our international commitments or promoting our nation's interests far from our home shores. In each case, the need to deter is constant – and when deterrence fails, we must be ready to fight and win.

This keystone environmental doctrine explores the requirement, roles and purpose of UK maritime power. It builds on the collective experience of previous editions and provides a corporate knowledge that defines the Naval Service. In preparing ourselves for the challenges of the future we must be masters of our current profession but have an awareness of what has gone before. History and experience have a place in forming our plans for the future but as a guide not a constraint. This doctrine exists to help us understand, to learn from history but more importantly to think about and prepare for the challenges of the future. It has been written primarily for joint staffs, officials, allies and partners in industry. I encourage you to read it as a framework for understanding how maritime forces perform their vital role in protecting our nation.

Chief of Naval Staff/First Sea Lord



# Preface

## Purpose

1. Joint Doctrine Publication (JDP) 0-10, *UK Maritime Power* is the keystone maritime environment publication. Drawing authority from JDP 0-01, *UK Defence Doctrine*, which provides a broad philosophy on how Defence is employed, *UK Maritime Power* brings together higher-level doctrine and Government policy, with enduring maritime knowledge and experience. It provides a basis of understanding of the attributes and roles of maritime forces, and principally is designed to explain the strategic requirement for maritime forces, and how they contribute to national power.

## Context

2. The UK is an island nation and with that comes a maritime heritage that is woven into our national history. While this means that there is an inherent reliance on the sea it also provides opportunities to use the sea in the pursuit of national objectives. The critical importance of the maritime environment to the UK's economy is addressed in detail later. As the *National Security Strategy and Strategic Defence and Security Review 2015* noted, our economic security depends on our national security, and *vice versa*, clearly indicating that any national strategy must pay due regard to the importance of the maritime environment to the UK's enduring prosperity.

## Scope

3. This fifth edition of JDP 0-10 draws on previous versions for enduring concepts but looks to continue the joint theme initiated in the fourth edition. Supporting this joint approach it seeks to generate consistency across its sister publications; JDP 0-20, *UK Land Power* and JDP 0-30, *UK Air and Space Power*, which has led to developing a revised structure. In addition, advice from numerous stakeholders has led us to revise and develop some of the traditional themes. Specifically, this edition:

- provides a new broader definition for maritime power and discusses military maritime power as a subset of this wider concept;
- continues the joint nature of the maritime environment, namely it is not just the preserve of navies;

- re-examines the traditional attributes and roles in the maritime environment; and
- demonstrates how maritime forces contribute to joint action.

To ensure consistency across the maritime, land, air and space environments, the content has been collated and verified from a wide range of sources. The results have then been rigorously peer reviewed and validated, and endorsed by all three Services and Joint Forces Command.

## Audience

4. This edition of JDP 0-10 seeks to inform a wide audience. It should be of particular value to the Joint Services Command and Staff College, joint commanders and staffs, the broader Defence community and our allies, as well as elected representatives and other government departments.

## Structure

5. JDP 0-10 is divided into four chapters.

- a. **Chapter 1 – An introduction to maritime power.** Chapter 1 introduces the maritime environment and explains why maritime power is important to the UK. It introduces and defines maritime power, provides an overview of the wider maritime environment and the enduring utility of maritime forces.
- b. **Chapter 2 – Maritime power in context.** Chapter 2 introduces the dimensions of the maritime environment and explains why the maritime environment is globally important. It then focuses on national considerations and discusses how maritime forces contribute to national security objectives.
- c. **Chapter 3 – The foundations of maritime power.** Chapter 3 builds on the military dimension of maritime power. Initially presenting the aspects of fighting power provided in JDP 0-01, *UK Defence Doctrine*, it then introduces the inherent attributes of maritime forces, while also highlighting some of the limitations of operating in the maritime environment. Finally, Chapter 3 describes the principles that underpin the way maritime forces operate to project national maritime power.



d. **Chapter 4 – Employing maritime power.** Chapter 4 examines the three roles of UK maritime forces – war fighting, maritime security and Defence Engagement – and how they come together with the other elements of military power to deliver joint action and the roles they undertake to support national objectives.

## Linkages

6. JDP 0-10, *UK Maritime Power* provides keystone maritime environment doctrine within the UK Joint Doctrine Architecture, drawing from JDP 0-01, *UK Defence Doctrine* (5th Edition) and sitting alongside existing joint environmental doctrine, JDP 0-20, *UK Land Power* and JDP 0-30, *UK Air and Space Power*. It is also founded upon an understanding of current policy, in particular the *National Security Strategy and Strategic Defence and Security Review 2015* and *The UK National Strategy for Maritime Security*. JDP 0-10 is coherent with North Atlantic Treaty Organization (NATO) capstone doctrine, Allied Joint Publication (AJP)-01, *Allied Joint Doctrine* and AJP 3.1, *Allied Joint Maritime Operations*. JDP 0-10 also complements the Royal Navy's Book of Reference (digital) 4487, *The Fighting Instructions* series.



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# Chapter 1

## An introduction to maritime power

Chapter 1 introduces the maritime environment and explains why maritime power is important to the UK. It introduces and defines maritime power, provides an overview of the wider maritime environment and the enduring utility of maritime forces.

1

//  
...2017 is the start of a **new era** of  
**maritime power**, projecting Britain's  
**influence** globally and delivering  
**security** at home.

//  
Sir Michael Fallon,  
Defence Secretary

# Chapter 1 – An introduction to maritime power

'The sea is the lifeblood of our economy.'

*The UK National Strategy for Maritime Security*

1

1.1. UK maritime forces are deployed 365 days a year across the world to provide a forward national presence that projects influence to safeguard our interests. This is a tempo and pattern of operational deployments that has persisted since before the Royal Navy was formally established in 1660. Although often obscured by an apparently shrinking, but increasingly interconnected, complex and uncertain globalised world, the UK was, and remains, a maritime state.<sup>1</sup> *The UK National Strategy for Maritime Security*<sup>2</sup> acknowledges this and reinforces that as a nation we continue to depend on the sea for our prosperity and security to a high degree, relative to other states, and that it is critical to sustaining our way of life. Supporting this, the *National Security Strategy and Strategic Defence and Security Review 2015*, while painting a world of persistent competition, emphasises that our national security depends on our economic security, and *vice versa*.<sup>3</sup> Combined, these factors highlight the national requirement to influence and shape the maritime environment in pursuit of the UK's national objectives.

## Maritime power

1.2. Maritime power is an inherently broad concept, founded on a state's maritime tradition and dependency. It encompasses a number of economic, political, military and influence elements, realised through the ability of a state to use the sea.<sup>4</sup> As such it straddles the three levers of national power – diplomatic, economic and

.....  
1 Department of Transport, *Our Maritime Nation: Achievements and Challenges*, March 2015, available at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/410714/150309\\_Maritime\\_Lfl-ACCESSIBLE\\_1\\_.PDF](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/410714/150309_Maritime_Lfl-ACCESSIBLE_1_.PDF)

2 Her Majesty's Government (HMG), *The UK National Strategy for Maritime Security*, May 2014, available at <https://www.gov.uk/government/publications/national-strategy-for-maritime-security>

3 *National Security Strategy and Strategic Defence and Security Review 2015, A Secure and Prosperous United Kingdom*, available at <https://www.gov.uk/government/publications/national-security-strategy-and-strategic-defence-and-security-review-2015>

4 Ian Speller, *Understanding Naval Warfare*, 2014.

military – underpinned by information.<sup>5</sup> Maritime power is therefore a measure of the total national engagement with the sea, the capacity to operate there and the ability to exploit it. It cannot be accurately calculated because it includes intangible elements such as culture, identity and mythology.<sup>6</sup> Maritime power, therefore, is not solely a military calculation as it includes, but is not limited to:

- the value of maritime trade as a percentage of national economic output;
- dependence on overseas resource supply;
- total manpower engaged in shipping;
- offshore economic interests – including oil and gas, fishing, renewable energy installations;
- shipyards, docks and ports; and
- all other sea-related economic activity ashore.

## Military maritime power

1.3. Consistent with North Atlantic Treaty Organization (NATO) maritime doctrine,<sup>7</sup> this publication will refer to military maritime power as maritime power and is concerned specifically with the utility of military power at and from the sea. Maritime power is defined as: **the ability to apply maritime military capabilities at and from the sea to influence the behaviour of actors and the course of events.**<sup>8</sup>

## Maritime forces

1.4. Maritime forces are those operating at or from the sea.<sup>9</sup> While the Naval Service is the principal actor in the maritime environment, maritime power is delivered by all of the UK military; the Royal Navy and Royal Marines, the British Army, the Royal Air Force (RAF) and Joint Forces Command. Maritime power could therefore be delivered through British Army aviation assets operating from amphibious shipping, with Royal Marines and Army Commando personnel embarked, or Fleet Air Arm (FAA) and RAF fixed-wing aircraft operating from an aircraft carrier, delivering the carrier strike capability of Carrier Enabled Power Projection (CEPP).

1.5. Similarly, land power, air and space power and cyber and electromagnetic activities (CEMA) also influence events in the maritime environment. For example,

5 Joint Doctrine Publication (JDP) 0-01, *UK Defence Doctrine*, 5th Edition.

6 Professor Andrew Lambert, *The Future of Maritime Power*.

7 Allied Joint Publication (AJP)-3.1, *Allied Joint Doctrine for Maritime Operations*, paragraph 1.3.

8 This is a new definition of maritime power and it will be added to the UK's terminology glossary JDP 0-01.1, *UK Supplement to the NATO Terminology Database*, on promulgation.

9 UK maritime forces are deemed to be: the Naval Service which includes the Royal Navy (which includes the Surface Fleet, Submarine Service, Fleet Air Arm) and the Royal Marines, the Royal Fleet Auxiliary and also elements of the British Army and Royal Air Force operating from the maritime environment.

While the Naval Service is the principal actor in the maritime environment, **maritime power is delivered by all of the UK military.**



aircraft such as maritime patrol aircraft operating from land bases over the sea to protect UK waters, land-based shore batteries guarding littoral regions or the interdiction of navigation satellites in space all have the ability to influence activities in the maritime environment.

## Maritime environment

1.6. In the physical sense the maritime environment comprises the high seas, exclusive economic zones and territorial seas. Within this description it is important to recognise that the maritime environment is multidimensional as maritime forces operate above,<sup>10</sup> on and below the surface of the sea. In addition, to fully appreciate the utility of maritime power it is also necessary to understand the littoral, particularly when considering how maritime power can be projected onto land from the sea. The littoral region is defined as: those land areas (and their adjacent areas and associated air space) that are susceptible to engagement and influence from the sea.<sup>11</sup> Conversely, it also includes those areas of the sea susceptible to engagement from the land, from both land and air forces.

1



A Type 23 frigate ploughs through rough seas towards a United States tanker for replenishment

10 AJP-3.1, *Allied Joint Doctrine for Maritime Operations*, paragraph 1.20.

11 This is a modified definition proposed by this publication to replace the definition currently included in JDP 0-01.1, *UK Supplement to the NATO Terminology Database*, 8th Edition.

## The enduring utility of maritime power

1.7. Maritime forces provide a national global presence through three classical roles – war fighting, maritime security<sup>12</sup> and Defence Engagement. The unique attributes of the maritime environment allow maritime forces to provide a persistent and versatile military capability free of the liability of extensive host-nation support. The long-standing principle of freedom of navigation in international waters allows maritime forces to poise without commitment, to project national influence and develop understanding,<sup>13</sup> while remaining highly mobile to exploit opportunities or to counter emerging threats. Ultimately maritime forces provide a mobile, responsive and persistent basis for military capabilities, which can rapidly move up and down a spectrum of soft and hard power<sup>14</sup> options to support national objectives.



HMS Ocean on operations in the Middle East in 2017

12 Maritime security operations includes activities such as humanitarian assistance and disaster relief (HADR), constabulary operations, counter piracy, counter-drug, counter people trafficking and non-combatant evacuation operations (NEO).

13 Understanding is defined as: the perception and interpretation of a particular situation in order to provide the context, insight and foresight required for effective decision-making. JDP 04, *Understanding and Decision-making*, 2nd Edition.

14 Hard power is defined as: the threat or use of military or economic coercion or physical effect to achieve influence. Soft power is defined as: the ability to persuade or encourage others to adopt an alternative approach. The combination of hard and soft power is referred to as 'smart power'. JDP 04, *Understanding and Decision-making*, 2nd Edition.

## Key points

- UK maritime forces are deployed 365 days a year across the world to provide a forward national presence that projects influence to safeguard our interests.
- As an island nation the sea is the lifeblood of the UK's economy.
- Maritime power straddles the three levers of national power – diplomatic, economic and military – underpinned by information.
- Military maritime power is defined as: the ability to apply maritime military capabilities at and from the sea to influence the behaviour of actors and the course of events.
- Maritime power is not only applied in the maritime environment but also across the other environments as well.
- Maritime forces are those operating at or from the sea.
- Land power, air and space power, and cyber and electromagnetic activities also influence events in the maritime environment.
- In the physical sense the maritime environment comprises the high seas, exclusive economic zones and territorial seas.
- The three classical roles of maritime forces are: war fighting, maritime security and Defence Engagement.
- The long-standing principle of freedom of navigation in international waters allows maritime forces to poise without commitment, to project national influence and develop understanding.



## Maritime power in context

Chapter 2 introduces the dimensions of the maritime environment and explains why the maritime environment is globally important. It then focuses on national considerations and discusses how maritime forces contribute to the national security objectives.

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“  
The **history of sea power** is largely,  
though by no means solely, a narrative  
of **contests between nations**, of  
mutual rivalries, of violence frequently  
**culminating in war.**

”  
Alfred Thayer Mahan

# Chapter 2 – Maritime power in context

2.1. The volume of total trade that travels by sea supports the premise that the world's economy is reliant upon a safe and secure maritime environment. Nationally, as an island nation that views the sea as the lifeblood of its economy and therefore prosperity, it is important that we understand the vital role a safe, secure and reliable maritime environment plays in our economic and national security. This chapter will explain: the ways in which the maritime environment is of significant global importance; why it is strategically vital for the UK; and that any complacency towards changes within it could have significant consequences for the UK's prosperity.

2

## Section 1 – The maritime environment

2.2. The *National Security Strategy (NSS) and Strategic Defence and Security Review (SDSR) 2015* recognises that the UK sits at the heart of the global rules-based international order that has provided stability to the world's political and economic landscape since the end of World War II.<sup>15</sup> This stability is of common interest to all trading nations, with the maritime environment acting as the principal means of movement for over 80% of the world's trade by volume, and over 70% by value.<sup>16</sup> Uncontested access to the world's oceans is therefore a paramount concern to all the major economies.

2.3. The importance of the sea is not only economic. It is: a defensive barrier; a medium for transporting people as well as goods; a source of generating power in terms of both fossil fuels and renewable energy; a source of food; an area of recreation; and a huge proportion of the Earth's surface that possesses areas that are yet to be fully explored. Its importance can be viewed through economic, physical, legal, political and military dimensions as shown at Figure 2.1, each of which applies equally in the land, air and space and cyber environments.

15 *National Security Strategy and Strategic Defence and Security Review 2015, A Secure and Prosperous United Kingdom* (NSS and SDSR 2015), available at <https://www.gov.uk/government/publications/national-security-strategy-and-strategic-defence-and-security-review-2015>

16 For more information see <http://unctad.org>

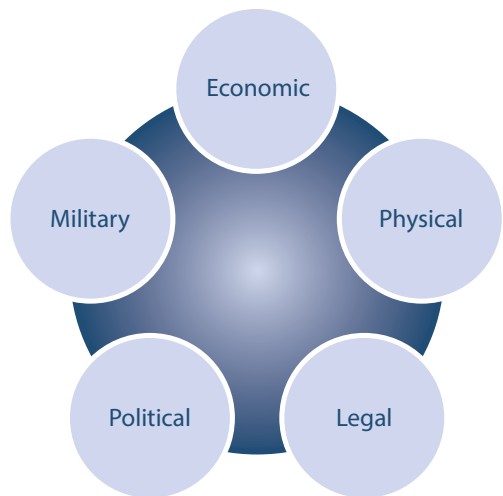


Figure 2.1 – The dimensions of the maritime environment

The economic dimension

2.4. Notwithstanding the reliance of the global economy on the sea for the movement of goods, there are further factors within the economic dimension that offer benefit but also present areas of potential conflict. Importantly, the world is in a stage of economic transition with many forecasting the long-term shift of economic wealth to South-East Asia, and the relative decline of the established powers of the West.<sup>17</sup> While this is disputed by some it does highlight the importance of the sea as the dominant medium for trade between the West and South-East Asia.

2.5. Fossil fuels and minerals are an important resource in the maritime environment. New deposits of oil and gas, as well as mineral wealth, are discovered under the seabed each year, and improvements in technology will facilitate future exploitation. Access to these, whether found on the continental shelf or within an exclusive economic zone, is likely to be contentious. For example, Russia, Norway and Canada have all laid competing claims to large areas of the resource-rich Arctic seabed.

2.6. Over one billion members of the global population are reliant on fish as their main source of protein. Overfishing and unregulated fishing pose serious challenges not only to the sustainability of this resource, but to the economies of small-island and coastal states. Somali piracy, for example, developed from fishermen defending coastal waters from illegal fishing. Managing situations like this is both a regional and global concern.

17 NSS and SDSR 2015.

99% of global Internet traffic is dependent upon submarine cables rather than satellite transmission.



2.7. It is a widely unknown fact that 99% of global Internet traffic is dependent upon submarine cables rather than satellite transmission.<sup>18</sup> Disruption to it, intentional or otherwise (as seen in Lagos (2009),<sup>19</sup> Egypt (2013)<sup>20</sup> and Singapore (2016)<sup>21</sup>), can have a major impact on essential services. Internet hubs are also predominantly found within the littoral zone and are susceptible to influence from the sea.

## The physical dimension

2.8. The sea covers over 70% of the globe's surface ranging from the deep waters of the open oceans to the shallower littoral regions adjacent to the land. Along with space and cyberspace, the oceans outside of state authority make up the global commons and no state may legitimately subject any part of the high seas to its sovereignty.<sup>22</sup> Geographic, oceanographic and meteorological conditions vary and this results in large ranges in air and sea temperature, salinity and humidity. The weather generated by these conditions make the sea a difficult environment in which to operate and affects the physical performance of individuals and equipment. To survive and operate at sea it is imperative to understand fully the challenges of the physical environment.

2



Aircraft engineering technicians working off the coast of Scotland in force nine weather conditions

18 Further detail is available at <http://europe.newsweek.com/undersea-cables-transport-99-percent-international-communications-319072?rm=eu>

19 Further detail is available at <http://allafrica.com/stories/200908250150.html>

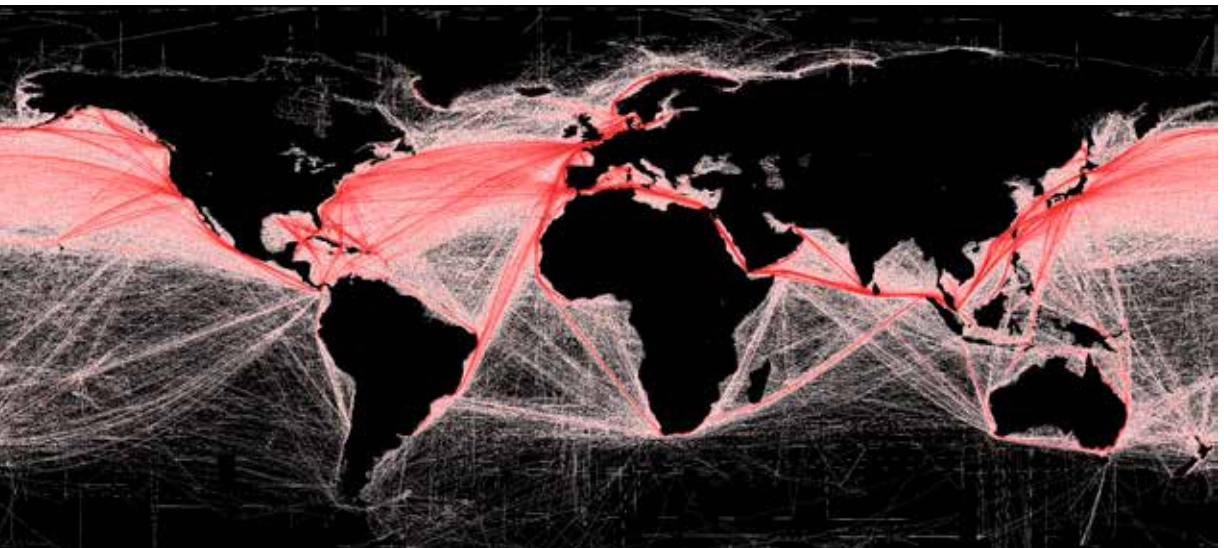
20 Further detail is available at <https://www.theguardian.com/technology/2013/mar/28/egypt-undersea-cable-arrests>

21 Further detail is available at [https://www.theregister.co.uk/2016/03/03/linode\\_says\\_several\\_cables\\_serving\\_singapore\\_cut/](https://www.theregister.co.uk/2016/03/03/linode_says_several_cables_serving_singapore_cut/)

22 States may make continental shelf claims to 350 nautical miles, but the seabed of the high seas is administered by the International Seabed Authority.

2.9. One of the more significant physical characteristics of the sea is the importance of maritime choke points, such as the Strait of Hormuz joining the Arabian Gulf to the Indian Ocean, or the Dover Straits between the UK and mainland Europe.<sup>23</sup> The graphic below demonstrates the way in which maritime choke points funnel international shipping and restrict the freedom of navigation. This increases the risk of collision, piracy (particularly around the Horn of Africa off Somalia), but also influence from the land in ways that the opens seas are not. These areas are of prime strategic importance to the global economy.

The Bab-el-Mandeb strait is an area of the Red Sea leading up to the Suez Canal where the distance between Yemen and Djibouti reduces to 20 miles. It is one of the world's busiest choke points. From mid-2016 Houthi fighters in Yemen have engaged maritime forces in the strait, and on 30 January 2017 attacked a Saudi Arabian warship with missiles and suicide boat attacks killing two sailors and wounding three others.



Maritime choke points funnel international shipping and restrict freedom of navigation

© Grolltech

.....  
<sup>23</sup> Other choke points include the Suez Canal, the Panama Canal and the straits of Skagerrak, Malacca, Gibraltar, Bosphorus, Bering, and Bab-el-Mandeb.

## The legal dimension

2.10. The 1982 *United Nations Convention on the Law of the Sea* (UNCLOS)<sup>24</sup> is a broad-ranging legal framework which defines many of the rights and responsibilities of states in the use of the world's oceans. It establishes a framework for conducting maritime commerce, protecting the environment, managing marine natural resources and, critically, the entitlements of individual states in the various maritime areas described in Table 2.1.

Zone/area	Description
Baseline	Except where otherwise provided in the United Nations Convention on the Law of the Sea (UNCLOS), the normal baseline for measuring the breadth of the territorial sea is the low-water line along the coast as marked on large-scale charts officially recognised by the coastal state.
Internal waters	Covers all of the waters on the landward side of the baseline. The state is responsible for setting laws and governing their use.
Territorial seas/waters	From the baseline to 12 nautical miles. The state is responsible for setting laws and governing their use, subject to the right of vessels from other states exercising the right of innocent, or in international straits, transit passage.
Contiguous zone	A zone that may not exceed 24 nautical miles in which a state can intervene to prevent potential offences which may otherwise occur inside territorial waters, or to apprehend a vessel that has committed an offence inside territorial waters and is attempting to escape.
Exclusive economic zone (EEZ)	This area extends up to 200 nautical miles from the baseline. Within this area a state has sole claim over all natural resources. This includes exploiting resources such as oil, gas and fishing. Other states enjoy high seas freedoms in the EEZ, provided these activities do not impact on the coastal state's rights and jurisdictions in the EEZ as set out in UNCLOS.
Continental shelf	The continental shelf of a coastal state comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baseline.
High seas	The high seas are open to all states who may enjoy the freedom of the high seas subject only to the conditions described in UNCLOS/customary law. Vessels on the high seas are subject to the exclusive jurisdiction of their flag states, with a few very important exceptions: for example, piracy is a crime of universal jurisdiction.

Table 2.1 – Sea zone descriptions

<sup>24</sup> [http://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf)

2.11. The UNCLOS legal framework divided the sea into a number of zones measured from the baseline, normally the low water line along a nations coast, which set geographical limits in which state authority diminishes as the distance from the baseline increases. Figure 2.2 highlights the principal zones.

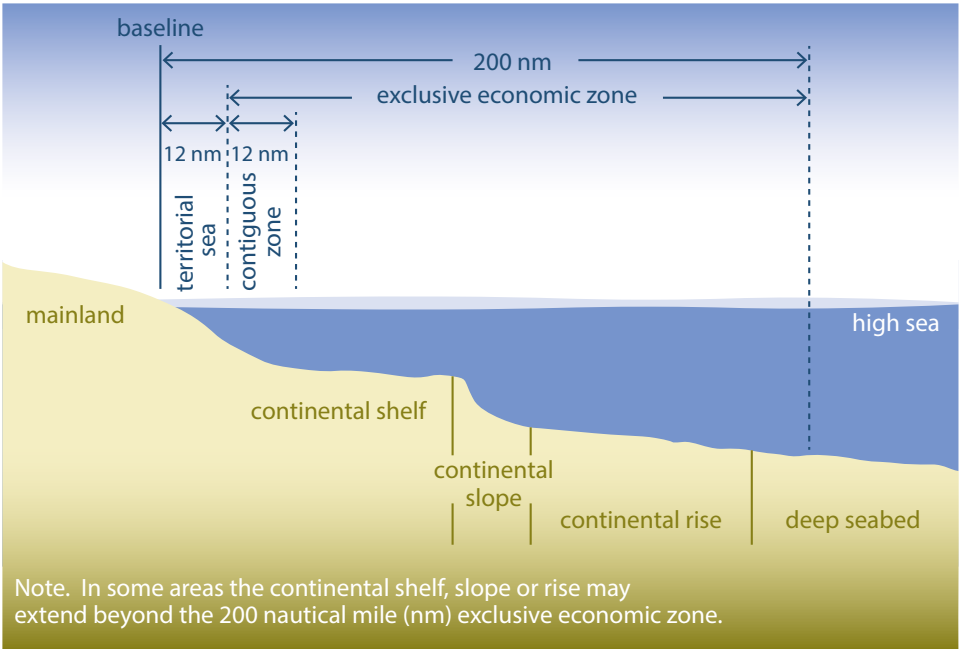


Figure 2.2 – United Nations Convention on the Law of the Sea zones

2.12. Freedom of navigation is the term given to the rights and freedoms that apply to all forms of transit on, over and under the high seas; it is vital to the security and economic stability of the UK. It facilitates global maritime trade and provides the UK military with the legal landscape that allows it to respond to threats to security and pursue national interests at range from the UK.<sup>25</sup>

2.13. Freedom of navigation operations provide an enduring strategic benefit to UK security by protecting the UK’s maritime rights and freedoms, encouraging lawful practice and preventing excessive geographical<sup>26</sup> and/or jurisdictional<sup>27</sup> claims gaining legal traction in international law. UK maritime operations will themselves generate an audit trail of state practice. Freedom of navigation operations influence other states’ governments and therefore constitute a form of naval diplomacy; they

25 Her Majesty’s Government (HMG), *The UK National Strategy for Maritime Security*, May 2014, available at <https://www.gov.uk/government/publications/national-strategy-for-maritime-security>

26 For example a territorial sea claim of more than 12 nautical miles.

27 For example an assertion that vessels must seek permission from, or notify the coastal state, before entering its territorial seas.

may be symbolic or coercive. Freedom of navigation operations in peacetime are one means by which maritime forces maintain the freedom of the seas for maritime trade, ensuring that the UNCLOS provisions are respected.

## The political dimension

2.14. The modern political dimension of the maritime environment took shape largely during the 1970s. Initially the extension of national sovereignty out to sea was often a political act that happened to have some economic consequences; more recently it is frequently undertaken for calculated economic benefit. Many states, especially, but by no means exclusively, small island territories, struggle to police their maritime environments and to manage their maritime resources effectively. The extension of coastal state jurisdiction may increase the likelihood of disputes both between bordering states and also between coastal states and flag states exercising freedom of navigation; maritime power plays a vital role in resisting further restrictions on high seas freedoms.

2.15. This political dimension also has a diplomatic element. States and people have used the seas as a point of interaction for many centuries. Bilateral and multilateral maritime engagements are still very much a routine element of international affairs with long-term benefits. States use the freedom provided by the oceans as a conduit for building relationships, strengthening ties and providing assistance and reassurance to like-minded states.

## The military dimension

2.16. The seas have had a military dimension for well over 2,500 years. This has been dominated by naval forces, of which there are now in excess of 150 worldwide, ranging from superpower navies at one end of the spectrum to small coastal policing forces at the other. Even relatively minor maritime powers, or non-state actors, can pose a significant threat, especially in the context of restricting access through maritime choke points by using land-based missiles and capabilities such as sea mines, which are widely available and relatively cheap.

2.17. States or other actors may seek to exploit the sea to exert influence upon those they wish to persuade, deter and, if necessary, compel. Equally, maritime forces can offer reassurance to allies through a military presence which may also be a useful lever to help prevent conflict. Maritime forces can also provide support to humanitarian and disaster relief operations, which has the added benefit of building global political relationships and influence. Many states are therefore opting to develop their maritime power, equipping themselves with modern warships and submarines and developing expeditionary capabilities, while also acquiring



The seas have had a **military dimension** for well over **2,500 years**.



sophisticated land-based anti-access and area denial capabilities to deter other states' maritime forces. They are also seeking to exploit cyber and electromagnetic activities (CEMA) that can influence the maritime environment.

2.18. The NSS and SDSR 2015 painted a picture of a changed world, not a changing one. These changes challenge the rules-based order that the UK seeks to uphold to safeguard our prosperity and security, providing an era of strategic state-on-state competition, but one dominated by sub-state conflict.<sup>28</sup> Within this there are likely to be challenges for the maritime environment resulting from population growth, migration, greater demand for energy, climate change, continuing globalisation, rapid urbanisation and the exponential rate of change in some readily-available technologies.

2.19. In addition to the traditional factors, new developments such as the pervasive nature of information, the increasing importance of space, hybrid tactics and a potential network of combat-experienced terrorists, will influence the future in which maritime forces operate. Within these, it is the pervasive nature of information that is potentially paramount. When attempting to generate or project influence it is likely that the prevailing narrative and not necessarily the facts that will prove decisive in determining success or failure. The ability to control and/or shape the information environment may prove pivotal in future operations.

**'Decisive battles in new-generation wars will rage in the information environment.'**

Col S G Chekinov and Lt Gen S A Bogdanov (retired)<sup>29</sup>

2.20. In acknowledging the vital value of the sea to the UK and global economy, we must also recognise that this makes the sea an area worth fighting to control.<sup>30</sup> Therefore we must be able to push back against any potential challenge to the 'freedom of navigation'. Only by doing so will we be able to deliver against the principal tasks of the continuous at sea deterrent and providing maritime security for our island nation, while remaining international and meeting these threats to the UK at distance from our shores.<sup>31</sup>

28 Chief of the Defence Staff's (CDS') speech to Royal United Services Institute (RUSI), 14 December 2016.

29 Extract from 'The Nature and Content of a New Generation War' article in the *Russian Journal of Military Theory and Strategy* 2013.

30 Professor Andrew Lambert, *The Future of Maritime Power*.

31 CDS' speech to RUSI, 14 December 2016.



## Section 2 – The national context

### The influence of the sea on the UK

2.21. As an island nation the dimensions of the maritime environment impact the UK more acutely than our continental allies. The UK's history reflects that. From the earliest days of recorded history, people and states have sought to be powerful at sea as they recognised that those who were able to exploit the environment enjoyed enormous advantages over those who did not. The UK benefited significantly from this realisation, making us for a time the wealthiest and most powerful of all states.<sup>32</sup> Today the UK is well positioned to influence what happens within the maritime environment. It benefits from London being a global hub for finance, commerce and law; being a permanent member of the United Nations Security Council, the G8 and G20 international forums and North Atlantic Treaty Organization (NATO); and although leaving the European Union (EU), a key European state with close trade, defence and cultural links across the continent.

2



Royal Marines operating alongside Polish tanks taking part in NATO Exercise SABRE STRIKE

<sup>32</sup> Professor Geoffrey Till, *Seapower: A Guide for the Twenty-First Century*, 3rd Edition, 2013.

## A maritime nation

2.22. *Our Maritime Nation: Achievements and Challenges* published by the Department of Transport in 2015 states that where maritime industries may have shaped our past they will also shape our future. They remain an engine for growth, and are a vibrant, dynamic and indispensable element of our economy. While other factors will also shape our national future, it should not be overlooked that globally 80% of trade by volume transits by sea, and for the UK this figure rises to in excess of 95%; almost everything that we import comes by sea.<sup>33</sup>

2.23. A study commissioned by the Department of Transport in 2015 predicts the doubling of global sea trade by 2030. Current estimates suggest that the direct contribution to the UK economy from the maritime sector, including marine industries, was at least £11 billion in 2012.<sup>34</sup>

2.24. In appreciating the role of the maritime sector the NSS and SDSR 2015 announced that the Government would publish a new national ship building strategy<sup>35</sup> to lay the foundations for a modern and efficient sector capable of meeting the country's future defence and security needs. An independent report commissioned to inform the strategy made a number of recommendations to improve the way in which the MOD procures and designs warships, and exploit the 'renaissance in shipbuilding' in UK regional shipyards.

### *The UK National Strategy for Maritime Security*

2.25. The UK Government recognises the role that the sea plays in supporting the country's security and prosperity. *The UK National Strategy for Maritime Security* 2014 highlights that the maritime environment is a complicated international system in which the UK, as a leading player, uses diplomatic, military and law enforcement levers to drive international cooperation and build capacity. To manage a security environment which incorporates numerous overlapping interests, both domestically and internationally, the UK has adopted two key principles – integration and collaboration. These principles bring together the full range of instruments of government, driving cooperation and efficiency and emphasising that maritime power is not the sole preserve of navies.

33 HMG, *The UK National Strategy for Maritime Security*, May 2014.

34 This is a similar order of magnitude to other important high-value industries like the manufacture of pharmaceutical products (£13.3 billion gross value added (GVA) in 2013), the aerospace industry (£6.8 billion GVA in 2013) and the road freight industry (£9.4 billion GVA in 2013). Department of Transport, *Maritime Growth Study: keeping the UK competitive in a global market*, 2015, available at <https://www.gov.uk/government/publications/maritime-growth-study-report>

35 MOD, *National Shipbuilding Strategy: The Future of Naval Shipbuilding in the UK*, 2017, available at <https://www.gov.uk/government/publications/national-shipbuilding-strategy>

“  
...almost  
everything that  
we [UK] import  
comes by sea.”



## National security objectives

2.26. The NSS and SDSR 2015 provides a national vision of a 'secure and prosperous United Kingdom, with global reach and influence', with three national security objectives that emphasise the enduring requirement to protect our people and our economy.

- a. **National Security Objective 1** is to protect our people – at home, in our Overseas Territories and abroad, and to protect our territory, economic security, infrastructure and way of life.
- b. **National Security Objective 2** is to project our global influence – reducing the likelihood of threats materialising and affecting the UK, our interests, and those of our allies and partners.
- c. **National Security Objective 3** is to promote our prosperity – seizing opportunities, harnessing innovation to strengthen our national security, and working with industry to ensure we have the capabilities and equipment that we need. Our economic and national security go hand-in-hand. Our strong economy provides more opportunities at home and overseas for us to increase our prosperity. A growing global economy helps to reduce poverty and build security for all.



HMS St Albans and Typhoon jets escorting the Russian Aircraft Carrier Admiral Kuznetsov and the nuclear-powered guided missile cruiser Petr Velikiy

'We are man-marking these vessels every step of the way around the UK as part of our steadfast commitment to keep Britain safe.'

Defence Secretary Sir Michael Fallon

2.27. The core roles of UK maritime forces – war fighting, maritime security and Defence Engagement – contribute to the National Security Objectives. In doing so maritime forces operate close to the UK to uphold the integrity of our territorial waters and **protect** national trade, **project** globally to support the UK Overseas Territories and, in cooperation with other like minded nations, **promote** the free movement of global trade. Concurrently, UK maritime forces support the ‘international by design’ approach and play a leading role in generating influence and combat power; which contributes to effective conflict prevention through diplomacy and deterrence.

### International by design

2.28. The UK has worldwide interests and responsibilities; including responsibility for the security of 14 Overseas Territories (12 of which are islands),<sup>36</sup> with over five million UK nationals living overseas.<sup>37</sup> To support the integration and collaboration agenda set out by *The UK National Strategy for Maritime Security*, the military instrument of national power intends to be ‘international by design’. This theme strengthens the international dimension of UK Defence policy and planning as a way of enabling Defence to deliver against each of the National Security Objectives set out above. Our international approach aims to deliver against these outcomes through developing strong strategic relationships; bilateral and multilateral, which in turn are based on the pillars of Defence Engagement, combined formations and capability collaboration, all of which is underpinned by a persistently engaged global Defence network. The tempo and pattern of maritime deployments is a key enabler to this intent.



HMS Ocean with allied and partner forces during Exercise BALTOPS in 2015

36 Anguilla; Bermuda; British Antarctic Territory; British Indian Ocean Territory; British Virgin Islands; Cayman Islands; Falkland Islands; Gibraltar; Montserrat; Pitcairn Islands; Saint Helena, Ascension and Tristan da Cunha; South Georgia and South Sandwich Islands; Sovereign Base areas of Cyprus; and Turks and Caicos Islands; along with the UK and dependencies, have a combined exclusive economic zone of over 2.5 million square miles, the fifth largest in the world.

37 HMG, *The UK National Strategy for Maritime Security*, May 2014.

2.29. We cannot address all risks on our own. It is essential that where practicable our UK Armed Forces train and exercise to operate alongside allies and partners, keeping NATO at the very heart of UK Defence.<sup>38</sup>

Maritime support to the Defence Tasks

‘We will protect our people, territories, values and interests, at home and overseas, through strong armed forces and in partnership with allies, to ensure our security and safeguard our prosperity.’

Defence Strategic Direction 2016

2.30. The *Defence Strategic Direction 2016* defined the above vision for Defence policy. To deliver this the Ministry of Defence has taken the key themes from the SDSR and distilled them into eight Defence Tasks that support the National Security Objectives. The UK’s maritime forces contribute directly to all eight of the Defence Tasks, and are inherently ‘international by design’. The Defence Tasks are listed below in Table 2.2 with an indication of which national security objective they fall under.

Defence Task 1	Defence, Security and Resilience of the Homeland and Overseas Territories (National Security Objective (NSO) 1)
Defence Task 2	Nuclear Deterrence and the Defence Nuclear Enterprise (NSO 1)
Defence Task 3	Understanding (NSO 2)
Defence Task 4	Influence through International Defence Engagement (NSO 2)
Defence Task 5	Overseas Defence Activity (NSO 1)
Defence Task 6	UK Prosperity and Civil Society (NSO 3)
Defence Task 7	Direct Defence
Defence Task 8	Strategic Base and Enabling Functions

Table 2.2 – The Defence Tasks

38 *Defence Strategic Direction 2016*.

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The maintenance and operation of the UK's minimum credible independent nuclear deterrent is Defence's priority task.

//

2.31. The Naval Service force elements constitute the principal components of UK maritime forces. These are apportioned to the Defence Tasks in the *Naval Plan*, a classified document. However, the breadth of activity conducted by maritime forces at distance from the UK means that virtually all ships at sea on either task group operations or operating independently are contributing to a Defence Task, or multiple tasks, concurrently. In particular, maritime forces play a unique and pivotal role in the first two.

## Deterrence

2.32. At the heart of the UK's defence posture is the principle of deterrence; its purpose is to dissuade a potential opponent from adopting a course of action that threatens national interests. Deterrence is a simple idea arising from enduring facts about human behaviour: that in decision-making, all people take account of the probable consequences of their actions. It can be based on denial or punishment. It may be broadly preventative or immediately focused to address specific threats. Within the UK's maritime forces there are two modes of deterrence; nuclear (supporting Defence Task 2) and conventional (supporting Defence Task 1). Underpinned by understanding, the effect of deterrence depends on four areas, the:

- capability of the system;
- credibility of the intent to use it;
- communication of these to any potential aggressors; and
- comprehension of the effect of deterrence on our adversaries.

## Nuclear deterrence

2.33. The maintenance and operation of the UK's minimum credible independent nuclear deterrent is Defence's priority task. To be credible, a deterrent must be able to function regardless of any pre-emptive action. For the UK the nuclear deterrent is delivered by the submarine enabled continuous at sea deterrent (CASD), known as Operation RELENTLESS.

## Conventional deterrence

2.34. Conventional deterrence has a number of elements. Jointly, the non-nuclear components of the UK's maritime, land and air forces, provide the collective capability that underpins conventional deterrence. It is based upon the potential and the actual use of hard power. Here the attribute of poise means that maritime forces are particularly well-suited to creating a conventional deterrent effect at distance from the UK. Maritime forces play a key deterrent role in maintaining the security of UK territorial waters and those of the Overseas Territories.

## Key points

- The *National Security Strategy and Strategic Defence and Security Review 2015* recognises that the UK sits at the heart of the global rules-based international order that has provided stability to the world's political and economic landscape since the end of World War II.
- Strategically there are five dimensions to the maritime environment.
  - a. **Economic.** Uncontested access to a safe and secure maritime environment is a principal requirement for all the world's trading nations.
  - b. **Physical.** The sea provides access to almost all parts of the earth's surface and outside of legal jurisdiction is called the global commons.
  - c. **Legal.** The United Nations Convention on the Law of the Sea (UNCLOS) defines many of the rights and responsibilities of states in the use of the world's oceans.
  - d. **Political.** Bilateral and multilateral cooperation at sea are still very much a routine element of international affairs with long-term benefits.
  - e. **Military.** While the character of conflict is changing, the developing nations of the world are increasing their maritime strength due to the vital value of the sea to national and the global economy. This makes the ability to exert sea control, secure freedom of navigation or simply to influence events in the maritime an important aspect of a countries military.
- Our future prosperity depends on our continued ability to safeguard national and global trade; most of which moves by sea.
- The UK's maritime forces contribute directly to all eight of the Defence Tasks and the three National Security Objectives.
- UK maritime forces train and operate alongside numerous allies and partners, and keep NATO at the very heart of UK Defence.
- Deterrence is at the heart of the UK's defence posture and maintenance of the continuous at sea deterrent (CASD) is the defence priority and predominately delivered by the Naval Service.





# The foundations of maritime power

Chapter 3 builds on the military dimension of maritime power. Initially presenting the aspects of fighting power, it then introduces the inherent attributes, or capabilities, of maritime forces, while also highlighting some of the limitations of operating in the maritime environment. Finally, Chapter 3 describes the principles that underpin the way maritime forces operate to project national maritime power.

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Section 4 – Principles and applications of  
maritime power . . . . . 42

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Almost every aspect of our national life depends on our **connections to the wider world**, and most of these connections are **provided by the sea**.

//

*The UK National Strategy for  
Maritime Security*



# Chapter 3 – The foundations of maritime power

## Section 1 – Fighting power

3

3.1. Fighting power is at the core of every military Service as it defines the ability to conduct successful operations.<sup>39</sup> It is not simply a calculation of the number of people and equipment, it is also the ability to maximise the potential of such equipment and the ability to motivate people to fight. While these aspects are common across all environments, the different attributes and roles of maritime power offer a unique contribution to military power and therefore a unique perspective on fighting power.

3.2. Applying fighting power must be considered in context. It should take account of:

- the character of the situation;
- the physical environment;
- the opponent;
- allies, partners and other agencies; and
- culture and history.

3.3. Fighting power is made up of three interrelated components outlined at Figure 3.1. They are:

- **conceptual component** – the thought processes providing the intellectual basis and theoretical justification for providing and employing our Armed Forces;
- **moral component** – the ability to get people to fight, individually and collectively; and
- **physical component** – the means to fight – balanced, agile forces at readiness, with war fighting at their core.

<sup>39</sup> Further detail can be found in Joint Doctrine Publication (JDP) 0-01, *UK Defence Doctrine*, 5th Edition.

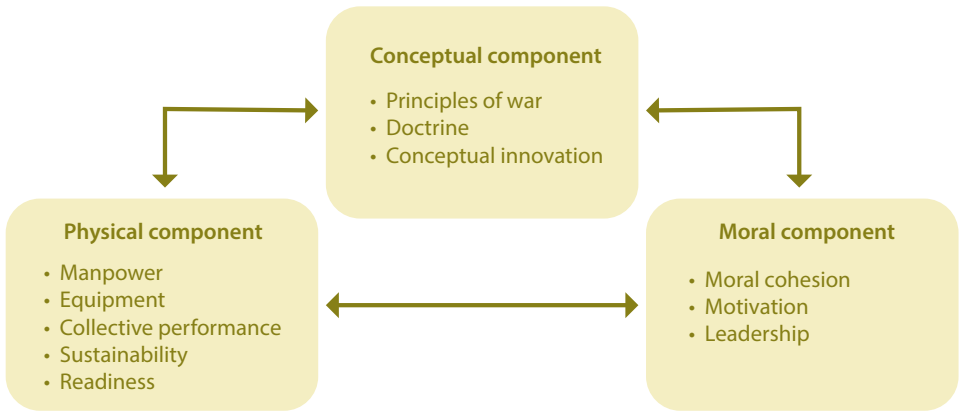


Figure 3.1 – The components of fighting power

3.4. The single-Service Chiefs of Staff are responsible, through the Chief of the Defence Staff, for delivering fighting power to the Secretary of State. While the Royal Navy will deliver the greater part of UK maritime power, the British Army, the Royal Air Force and Joint Forces Command have to ensure that elements of their own forces can operate effectively in the maritime environment as part of a joint force, just as maritime forces have to be able to operate in the air and land environments. This requires dedicated joint training along with common education to generate understanding and effectiveness.

The conceptual component

‘Ideas matter, sometimes fundamentally.’

General J Mattis, United States Marine Corps

3.5. The elements of the conceptual component are: the principles of war;<sup>40</sup> doctrine; and conceptual innovation. Together these provide an intellectual framework within which maritime military personnel can develop an understanding about the specifics of both their profession and the activities they may have to undertake. The conceptual component reflects accumulated experience, ideas for improvements to existing practice and analysis of the future security environment. This provides commanders with the ability to understand the context within which they operate and serves as the foundation upon which creativity, ingenuity and initiative may be exercised in complex situations.

40 The UK principles of war are: selection and maintenance of the aim; maintenance of morale; offensive action; security; surprise; concentration of force; economy of effort; flexibility; cooperation; and sustainability.

3.6. To assist commanders in planning and executing operations the maritime forces use three core functions to support this aspect of the conceptual component.<sup>41</sup>

- a. **Understand.** A detailed understanding of the problem and the situation is required to enable effective decision-making.
- b. **Fight.** Fight is used to describe those effects, offensive and defensive, hard and soft, that relate to action against an enemy or adversary.
  - (1) **Shape** – manipulating the operational environment for own advantage, and to disadvantage the enemy.
  - (2) **Engage** – the decisive element of an operation will usually involve some form of offensive action against the will and cohesion of the enemy.
  - (3) **Exploit** – seize and retain the initiative. Using manoeuvre and offensive action is fundamental to seizing and holding the initiative.
  - (4) **Protect** – a comprehensive and coordinated approach to force protection is required and must allow maintenance of the operational narrative.
- c. **Sustain.** Freedom of action is underpinned by sustainment.



Royal Marines operating in extreme environments present a significant logistic sustainability challenge

<sup>41</sup> Royal Navy's Book of Reference (digital) 4487, Volume 3.2, *Conduct of Maritime Operations*.

The moral component

3.7. It is fundamental to operational effectiveness that the components of the moral component are understood, upheld and passed on, since once they have been lost they are difficult to recover. As the principal UK military actor in the maritime environment the Naval Service core values encapsulate the moral component. These are represented in Figure 3.2.



Figure 3.2 – Naval Service core values

3.8. Ethos is also a key aspect of the moral component. Ethos is the distinctive character, spirit and attitudes of a community, people, culture or group; it defines and motivates the shared ideas, understandings and customs. It is of fundamental importance to continued success in future operations and armed conflict.

‘The enduring spirit derived from our people’s loyalty to their ship, unit or team sustained by high professional standards and strong leadership, that gives us courage in adversity and the determination to fight and win.’

Royal Navy ethos

### Admiral A B Cunningham – evacuation of Crete 1941

The rapid German advance through Greece required an exhausted Royal Navy to evacuate 50,000 troops from the next target, Crete. Badly organised and short of heavy equipment, the land forces and limited air forces were ill-prepared for the German invasion of Crete, which began on 20 May 1941. Five days later the battle for the island was lost. Forced to withdraw his two damaged aircraft carriers (HMS Formidable and HMS Illustrious), Admiral Cunningham began the evacuation without any form of air cover. Most of the troops were taken off a shallow beach on the south coast by worn-out destroyers with fragile crews. Suffering heavy losses on the passage to Egypt, the Admiralty questioned the wisdom of carrying on without air cover (Crete cost the Royal Navy 1,828 casualties and significant damage and loss of equipment including three cruisers and six destroyers). Despite the serious losses, Admiral Cunningham refused to give up insisting that the Navy return one more night – ‘the Navy had never yet failed the Army in such a situation, and was not going to do so now’. As he told his staff when they advised him to call off the operation, ‘you can build a new ship in three years but you can’t rebuild a reputation in under 300 years’.



3

## Leadership

3.9. Military leadership is characterised by projecting personality and purpose to influence subordinates to do what is required of them and to engender within them the confidence that breeds initiative and the acceptance of risk and responsibility. Leadership starts with self-discipline. It is a continuous process throughout training and daily life. Leaders promote this amongst their subordinates through: decisive action; clear direction and guidance; rules and example; advice, encouragement and discipline; and by giving subordinates every opportunity to contribute to mission success by delegating responsibility sensibly.

3.10. The commanding officer, be that of a ship, a submarine, a commando, a Fleet Air Arm unit or higher headquarters, sets the benchmark. They are responsible for inspiring their people to do their job to the best of their ability during peace, through adversity and in war.

### Leadership – Chief Petty Officer Jonathan ‘Buck’ Rogers

Jonathan ‘Buck’ Rogers enlisted in the Royal Navy in 1938, later being awarded the Distinguished Service Medal for his ‘coolness and leadership’ under enemy fire during an action off Dunkirk in 1944. At the end of the war he was discharged from the Royal Navy and in 1950 he applied to join the Royal Australian Navy. In 1963 Chief Petty Officer Rogers was embarked as the senior sailor on board the destroyer Voyager where he was responsible for the ‘good order and discipline’ of the ship’s company. On 10 February 1964 Voyager took part in exercises with the aircraft carrier Melbourne off the south coast of New South Wales. That evening Voyager collided with Melbourne and was cut in two. Voyager’s severed forward section immediately heeled sharply to starboard, turning upside down in minutes and sinking within five minutes. Rogers was one of the 82 men who died. Sailors who escaped later told how Rogers had taken charge of the situation. He had calmed terrified shipmates, attempted to control the flooding, tried to free a jammed escape hatch, and organised men to move into other compartments with functioning emergency exits. When it was obvious that some of his comrades would not get out in time, he led them in prayer and a hymn, ‘encouraging them to meet death’ beside him ‘with dignity and honour’. His wife remarked, ‘It was typical of him – he never thought of himself’. He was posthumously awarded the George Cross.

### The physical component

- 3.11. The physical component of fighting power provides the means to fight. Broadly this consists of manpower, training, collective performance, equipment and sustainability, at readiness including effective deployment and recovery.
- 3.12. **Readiness, deployability and recovery.** Fighting power can only be effective if it is applied at the right time and at the right place. In this regard maritime forces are unique as they are able to deploy independently, provide a persistent forward presence and then self-recover to the UK on completion of an operation. Within the UK they are brought to a material state to be safe to, and capable of, deploying, with suitable material enhancements as required. In addition the collective training provided by the Flag Officer Sea Training organisation ensures ships of the Royal Navy (and many foreign navies that the UK helps to train) deploy at readiness. In practice this means that maritime forces are able to move from peacetime operations to a state of war in a matter of hours.
- 3.13. **Sustainability.** Sustainability enables ships, submarines, aviation and commando units to deploy to an area of operations, remaining fully mission capable for a variety of roles. This provides the commander with the flexibility to remain on task and operationally capable for as long as necessary. Sustainability depends

upon the provision of a variety of logistic functions and is a complex, dynamic and wide ranging series of disciplines which, on a task group scale, often dictates the operational tempo. Logistics encompasses the delivery of organic medical functions, the supply chain and a considerable portion of engineering output. Together these are equal partners in the maintenance of task group or single ship sustainability. Sustainability is defined as: **the ability of a force to maintain the necessary level of combat power for the duration required to achieve its objectives.**<sup>42</sup> Sustainability is:

- one of the ten principles of war;
- the responsibility of commanders at every level of command;
- an integral part of the planning, preparing and executing of, and withdrawal and recovery from, every operation; and
- must be fully exercised in peacetime to be effective in war.

### 3.14. Deployed maritime forces.

Deployed maritime forces aim to be as self-sufficient as possible. Maritime first line sustainability is provided by the units' on-board stocks,<sup>43</sup> including food, the ability to make potable water and engineering spares.<sup>44</sup> Second line support, particularly for fuel, is provided by the support shipping of the Royal Fleet Auxiliary (RFA).<sup>45</sup> If external support is required it is provided through the Defence Support Network, which could include host-nation support, potentially through a deployed forward logistic site; or resupply from the UK strategic base. This logistic capability provides the UK with 'blue water'<sup>46</sup> maritime forces which are able to operate at distance from the UK.



Replenishment at sea

.....  
42 NATOTerm.

43 On-board stocks are referred to as classes of supply. These are: Class 1 – provisions (including potable water); Class 2 – scaled stores items (principally this includes marine engineering spares, weapon engineering supplies); Class 3 – petrols, oils and lubricants; Class 4 – non-scaled items; Class 5 – munitions.

44 Where stocks are not routinely held on-board (for example, to support an aviation asset) a deployable spare pack is embarked.

45 Reciprocal agreements exist where maritime forces share logistic support shipping capabilities.

46 In this context 'blue water' refers to maritime forces able to operate on the open oceans or high seas. Green and brown water refers to maritime forces that are limited in their operations to a state's coastal waters, ports and harbours, and inland rivers and estuaries, respectively.



# Section 2 – The attributes of maritime forces

3.15. Every military force has distinctive attributes brought about by the characteristics of the environment in which it operates. It is these attributes that provide the foundations for the military power that assists political decision-makers in supporting national objectives.

3.16. In this fifth edition of Joint Doctrine Publication (JDP) 0-10, *UK Maritime Power* the range of attributes has been refined. In addition, as the purpose of maritime power is to exert national influence, the purpose of each attribute is to generate influence.<sup>47</sup>

‘The ... greatest value [of the Navy] will be found in events that fail to occur because of its influence.’

Professor Colin Gray

3.17. Influence is defined as: **the capacity to have an effect on the character or behaviour of someone or something, or the effect itself.**<sup>48</sup> The ability to influence is intrinsically related to the ability to project military power. Therefore the shape and nature of a maritime force should be carefully considered before deploying from the UK. Figure 3.3 highlights the attributes of maritime forces.

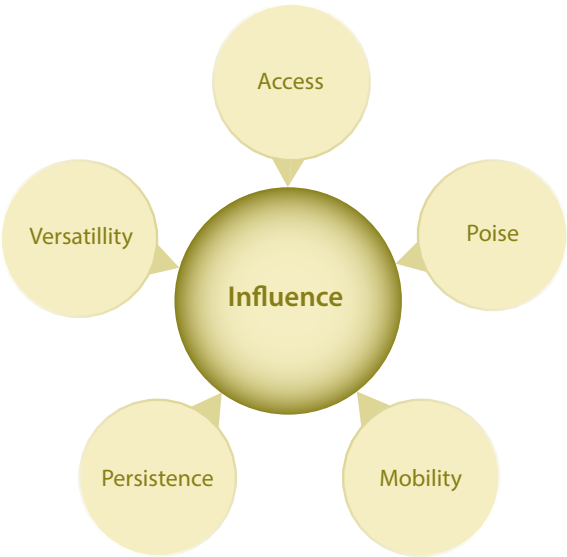


Figure 3.3 – The attributes of maritime forces

47 Previously the summation of the attributes had been designated as ‘leverage’.  
48 *Concise Oxford English Dictionary*, 12th Edition, 2011.



## Access

3.18. The long-standing principle of freedom of navigation in international waters allows maritime forces to access areas of national interest and potential threat. This access guarantees freedom of navigation for maritime forces up to 12 nautical miles from a coastline to allow options for intervention at a time and place of national choosing. This enables forces to poise in or near areas of interest, covertly or overtly as circumstances require. By having an expeditionary stance and a forward presence, maritime forces are often closest to crises as they develop and are able to respond accordingly. While adversaries may use anti-access and area denial methods such as mines and shore-based missiles, alternative approaches such as cyber and electromagnetic activities (CEMA) can be used to attack navigation systems or exploit cognitive methods such as social media messaging in an attempt to restrict or deny access. Maritime forces can use their mobility and freedom of navigation to attempt to counter these activities, but these threats will require consideration when generating a maritime force.

## Poise

3.19. Poise is the ability of maritime forces to loiter in international waters demonstrating a forward military presence at readiness without the political and military complications and risks of deploying forces ashore or projecting from a third-party location. The forward presence of credible maritime forces also demonstrates commitment to allies without requiring a military footprint ashore. Maritime forces poised in this manner have great utility in deterring or resolving potential or emerging conflict.

3

‘The fact that naval forces can ‘loiter’ and be minimally intrusive is an important and unique contribution to deterrence. The Army can loiter, but it cannot be minimally intrusive; the Air Force can be minimally intrusive (although, because it still needs some land-based infrastructure, it is more intrusive than maritime forces), but it cannot loiter. Only naval forces can do both simultaneously.’<sup>49</sup>

## Mobility

3.20. Exploiting the access and freedom of navigation afforded by the sea, provides maritime forces with a high degree of mobility. These rights facilitate maritime manoeuvre and provide a deployable force that can reposition quickly or cover

.....  
 49 Gerson M and Whiteneck D, *Deterrence and Influence: The Navy's Role in Preventing War*, CRM D0019315. A4/1Rev, March 2009.

significant distances to respond to situations. While shipping lacks the speed of aircraft, unless maritime-based aircraft are available to respond, maritime platforms are continuously mobile while having the ability to carry significantly more payload. This provides huge flexibility at both the tactical and operational levels. Sealift, either through Defence-owned shipping or hired commercial shipping is the most cost-effective means and only real practicable method of deploying at scale to even land locked countries.

### Persistence

3.21. Maritime forces are able to offer a unique persistence providing the UK with a sovereign capability that can be established with minimal political and logistic commitment and easily withdrawn. The endurance provided by on-board stocks, the ability to replenish at sea and operate at range from host-nation support provides a sustained presence unlike that provided by any other military force. However, persistence is tempered by the nature of the environment, the range of engineering spares held on-board and the inability to replenish some weapon systems while at sea. The sea is unforgiving and takes its toll on people as well as equipment. In addition the weather can also be a challenge to maritime operations, although maritime forces can use their mobility to counteract this. While persistence is achievable, if maritime operations are being conducted at significant range from the UK or another supporting base, operations can be constrained or limited in their duration.

3



HMS Defender with the French aircraft carrier Charles de Gaulle supporting operations against Daesh

## Versatility

3.22. Maritime forces are uniquely versatile, easily changing their military posture, while undertaking several tasks concurrently and remaining available for rapid re-tasking. Deploying with inherently high levels of readiness, a warship can transition from a peacetime state to a combat ready one in a matter of hours. This capability offers opportunities to coordinate maritime activity with diplomacy and supports the 'international by design' approach. Designed and trained to operate in a multinational context, UK maritime forces are capable of being deployed independently, with a partner nation under a bilateral agreement, or as a part of a wider coalition, such as North Atlantic Treaty Organisation (NATO), in pursuit of common goals.

### Versatility – Operation VERITAS

From 2001 to 2002 HMS Illustrious was deployed on the large UK and Omani exercise, Saif Sareea II. During the exercise, the terrorist attacks on the World Trade Centre took place. HMS Illustrious remained in theatre while other elements of the task force returned to the UK. Overnight and while still at sea HMS Illustrious converted from the carrier strike to the commando role. HMS Illustrious had elements of the special forces and Royal Marines on board, ready for possible combat operations in Afghanistan. In November 2001 a Special Boat Service unit and then Royal Marines were lifted by helicopter from HMS Illustrious to capture Bagram air base and pave the way for deploying the International Security Assistance Force (ISAF). In addition, Special Air Services troops operated with Chinooks from the carrier. This capability played an important part in the UK's effort in the fighting in Afghanistan as it provided the ability to get a small number of high-quality forces on the ground at a really early stage which played a hugely significant part in the fall of Kabul.

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Maritime forces are **uniquely versatile**, easily changing their military posture, while undertaking several tasks concurrently and remaining **available for rapid re-tasking**.

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## Section 3 – Adaptability of maritime forces

3.23. Although all maritime forces can take advantage of the five inherent attributes it does not follow that they will succeed on operations. To achieve the necessary influence required to fulfil national objectives it is highly likely that maritime power will need to be adjusted to the prevailing context within which it is employed. The adaptability of maritime forces is the pre-eminent quality which ensures that maritime power remains relevant in new and changing situations.

3.24. While maritime forces are inherently versatile, they require adaptability to be able to learn quickly and alter plans to respond to changing situations. The character of future conflict cannot be predicted accurately, so a maritime force must prepare for the most complex and demanding operations but also maintain the agility to adapt rapidly to specific operational requirements. Adaptable maritime forces are able to recognise and understand new challenges, experiment with solutions and implement effective responses at a higher tempo than the enemy. This allows them to seize and maintain the initiative and exploit opportunities. Our command philosophy of mission command embraces decentralised execution, providing the freedom of action to adapt to circumstances within the commander's intent. Adaptability is further enabled by investment in developing experience, education, training and equipment.

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A United States Marine Corps V-22 Osprey operates from HMS Illustrious during Operation PATWIN

### Adapting for disaster relief operations – Operation PATWIN

In the autumn of 2013 Typhoon Haiyan struck the Philippines causing widespread damage. Almost 300 miles wide it was one of the most intense tropical storms to ever make landfall and it ripped through the south east of the country killing, injuring and leaving thousands of people homeless.

As part of the joint UK response – Operation PATWIN, HMS Daring was detached from an air defence exercise with the Australian, New Zealand, Singaporean and Malaysian navies, and was on station within five days. Prior to deploying HMS Daring's ships company had undertaken intensive disaster relief training meaning that the ships company were able to adapt from an air defence posture overnight. When on station HMS Daring spent ten days providing support to some 10,000 people in isolated and devastated areas on remote islands around the Visayan Sea. Concurrently HMS Illustrious was in Oman on the return leg of the Exercise COUGAR 13. Operating in the landing platform helicopter (LPH) role Illustrious was detached from the task group and dashed 6,000 miles from the Horn of Africa to the Philippines via Singapore. In Singapore, HMS Illustrious offloaded equipment embarked for the Exercise COUGAR deployment and working closely with a team of logistics experts from the Department for International Development (DFID) loaded over 500 tonnes of disaster relief stores. In addition further Royal Marines, medical teams, personnel from 24 Commando Royal Engineers and additional carrier air group personnel were all embarked.

Upon arrival in the Philippines the carrier relieved HMS Daring and spent three weeks providing humanitarian assistance as part of the international effort. Like HMS Daring, HMS Illustrious' ships company had undertaken disaster relief training at the Flag Officer Sea Training organisation and were therefore able to adapt quickly to the requirements of the mission. In addition to HMS Illustrious's seven helicopters, a United States Marine Corps V-22 Osprey was embarked. The ship was able to access remote areas quickly and the sea-based helicopters were able to survey large areas and then deliver aid that simply could not be accessed by any other means.

An estimated 50,000 people were helped by the efforts of the men and women of HMS Daring and HMS Illustrious in the Philippines. Vital infrastructure was repaired and shelters erected to help the large number of people whose homes had been destroyed. In addition over 300 tonnes of food and aid, 16,000 litres of water were delivered by the two warships. The embarked helicopters flew 431 hours of relief missions, with their effect maximised by the proximity of the ship.

While Operation PATWIN demonstrates the inherent versatility, mobility, access and persistence of maritime forces it also demonstrates the adaptability of the personnel. The investment in disaster relief training prior to deployment enhanced the forces' ability to adapt to the prevailing conditions and successfully achieve the mission.

# Section 4 – Principles and applications of maritime power

3.25. The strategic use of maritime power is made possible through the concept of sea control and underpinned by the principles of maritime manoeuvre and maritime power projection. These are supported by a number of operational approaches.

## Sea control

3.26. Previously the total control of the sea was referred to as command of the sea. In the modern context the worldwide growth in navies has tempered ‘command of the sea’ to the concept of ‘sea control’, where a maritime force establishes the conditions to allow freedom of action in a particular part of the sea, at a particular time, to the required degree and, if necessary, deny its use to an opponent. Sea control requires control of the surface and subsurface environments (including the seabed), the air above the area in which sea control is required,<sup>50</sup> the electromagnetic environment and potentially areas of the land where that part of the land dominates the sea.

3.27. The level of sea control required, and indeed achievable, will depend upon the threat and the mission. Where sea control is not contested the force has achieved it by default and can focus on delivering maritime manoeuvre or maritime power projection. If there is any risk to freedom of action, sea control is necessary; however, if the risk is small, the capabilities required can be correspondingly modest. Gaining the necessary level of sea control early, and retaining it, will be a major component of any maritime or expeditionary operation. In addition control of the air above the sea, across the shoreline and some distance inshore may also be a fundamental requirement. This will need to be achieved by a combination of sea-based, land-based and CEMA capabilities.

3.28. Where sea control is necessary it can be achieved through one of a number of operational approaches.

- a. **Decisive battle.** While a successful decisive battle at sea, where maritime forces classically oppose each other is exceedingly rare in the modern era, a decisive engagement is not. A singular act can provide sea control. What is more common is a process of cumulative attrition or the concentration of military effect at a singular point rather than the concentration of maritime assets.

50 Allied Joint Publication (AJP)-3.3.3, *Allied Joint Doctrine for Air Maritime Coordination*, Edition A, Version 1, page 3.4.

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“ The level of sea control required, and indeed achievable, will depend upon the threat and the mission. ”

### Decisive battle – Falklands War, 1982

The Argentine Navy was strong enough to pose a serious threat to the British task force during the Falklands War, even seeking to launch a two-pronged attack against it on 1 May. The following day, however, the nuclear submarine HMS Conqueror torpedoed and sank the cruiser General Belgrano. While the British still faced submarine and air threats, as a result of this single engagement, the Argentine surface fleet, including a carrier and several missile-armed destroyers and corvettes, pulled back into territorial waters and played no further part in the conflict.

b. **Sea denial.** Sea denial is a form of anti-access and area denial exercised when one party prevents an adversary from controlling a maritime area without being able to control that area oneself. It can be a tool for a superior maritime force, either in a secondary area of operations, or for one phase of a larger campaign. Classic means of achieving sea denial include laying a minefield or deploying submarines to threaten enemy surface forces. A more recent method, particularly appropriate in littoral operations, is to project land assets such as surface-to-surface missile batteries along the coast to pose an unacceptable level of risk to maritime units. In addition, non-lethal effects such as control of the electromagnetic environment and other passive means can be used to support sea denial activities.

c. **Fleet-in-being.** A state deprived of maritime superiority might choose, or be forced, to adopt a strategy of fleet-in-being. By avoiding confrontation with a superior enemy a state can hold back its own maritime forces but continue to threaten those of the enemy or their ability to carry out their mission. The submarine provides an excellent contemporary example of a fleet-in-being, as it could be held covertly in reserve but could also be operating undetected in an area vital to the superior force.

### Fleet-in-being – German Navy, 1941

After the sinking of the Bismarck in May 1941, the German Navy was wary of the threat posed by the combination of Royal Navy battleships and carriers. Seeking to preserve its capital ships, it stationed them in Norwegian fjords. From here, they represented a potential threat to convoys to Russia, as well as to Atlantic shipping if they could break out, and therefore tied down several British capital ships for an extended period. While this represented something of a success for a fleet-in-being approach, they might have achieved more if they had been used in a more positive and active way, in combination with other units of the German Navy and Air Force: fleet-in-being has potential but risks becoming passive.

- d. **Blockade.** This allows the presence of a stronger maritime power to contain an adversary reluctant to fight, or force a decisive battle on them.

3.29. Sea control is unlikely to be an end in itself. It provides the necessary baseline condition to allow use of the sea for further purposes such as maritime manoeuvre and maritime power projection.

‘Since men live upon the land and not upon the sea, great issues between nations at war have always been decided – except in the rarest cases – either by what your army can do against your enemy’s territory and national life or else by the fear of what the fleet makes it possible for your army to do.’

Julian Corbett, *Some Principles of Naval Strategy*

### Maritime manoeuvre

3.30. Sea control and the legal framework which allows unrestricted access and presence no closer than 12 nautical miles from the baseline in peacetime is a key enabler for maritime manoeuvre. The ability to operate, particularly in littoral areas, is of crucial importance, either as the main effort or as the staging area for deploying and sustaining ground forces. Therefore, as well as the central requirement to be capable of controlling events at sea, UK maritime power must also be capable of influencing events on land from the sea.

#### Maritime manoeuvre – The Battle of Madagascar, 1942

In early 1942, the British Government became worried that Japan might seek to capture the naval and air base at Diego Suarez in Vichy French Madagascar. A landing directly into the town was too risky due to the well-defended, narrow channel leading to it. The British force therefore exploited the mobility of sea power to land on the other, less well-defended side of the isthmus – at night, when the French believed navigation to be impossible. This allowed the amphibious landing to avoid most of the defending forces, and to surprise and capture the few gun batteries facing them, while the Fleet Air Arm knocked out the defending air force in its base. The land forces were then able to advance on the objective from an unexpected direction.

3.31. Tactically the sea offers a hiding place for submarines; and even surface ships are hard to locate and identify if they are not radiating a significant electromagnetic or acoustic signature. Mobility and the ability to relocate a large maritime force can gain the initiative and allow an adversary’s vulnerabilities to be exploited at a time



of choosing to demonstrate political will, apply influence or, if required, use force. In international armed conflict, only the national waters of neutrals are not available to belligerents.

### Maritime power projection

3.32. Maritime power projection is the threat, or use, of national power from the sea to influence events. It exploits sea control and maritime manoeuvre to achieve access to threaten or project force ashore using a combination of amphibious forces, embarked aircraft, land attack weapons, cyber capabilities, electronic warfare and special forces.

3.33. 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 build-up of friendly joint forces in theatre, 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.



Naval gunfire is a method of projecting maritime power at sea or from the sea

“ Alliance maritime forces can guard the maritime flanks of an operating area and by doing so, limit the freedom of manoeuvre of an enemy. ”

- 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 theatre, 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 them 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 theatre, 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 theatre, acting as a strategic reserve.

## Key points

- Fighting power is at the core of every military service as it defines the ability to conduct successful operations. It comprises three interrelated components – conceptual, moral and physical.
- Three core functions are employed to assist maritime commanders in planning and executing operations: understand; fight (shape, engage, exploit and protect); and sustain.
- Ethos is a key aspect of the Naval Service. The core values comprise: commitment; courage; discipline; respect for others; and integrity.
- UK maritime forces globally deploy at readiness and can transition from peacetime operations to a state of war in a matter of hours.
- Sustainability is a key aspect of maritime forces. A high level of self-sustainability and provisioning allows UK maritime forces to operate at distance from the UK for prolonged periods.
- Maritime forces have inherent attributes that all serve the purpose of providing national influence. The attributes are: access; poise; persistence; mobility; and versatility.
- The adaptability of maritime forces is the pre-eminent quality which ensures that maritime power remains relevant in new and changing situations.
- The strategic use of maritime power is made possible through the concept of sea control and underpinned by the principles of maritime manoeuvre and maritime power projection. These are supported by a number of operational approaches – decisive battle, sea denial and fleet-in-being.
- Maritime power projection is the threat, or use, of national power from the sea to influence events.



## Employing maritime power

Chapter 4 examines the three roles of maritime forces – war fighting, Defence Engagement and maritime security – how they come together with the other elements of military power to conduct joint action and the roles they undertake to support national objectives.

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A **good navy** is not a provocation to war.  
It is the surest **guarantee of peace**.

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Theodore Roosevelt



# Chapter 4 – Employing maritime power

## Section 1 – Roles of maritime forces

4.1. Traditionally maritime forces have been used by states for a wide variety of tasks. The accepted consensus is that there is a 'trinity' of 'three characteristic modes of action by which maritime forces operate: namely military, diplomatic and policing functions'.<sup>51</sup> These functions have evolved to war fighting, maritime security and Defence Engagement as shown in Figure 4.1.

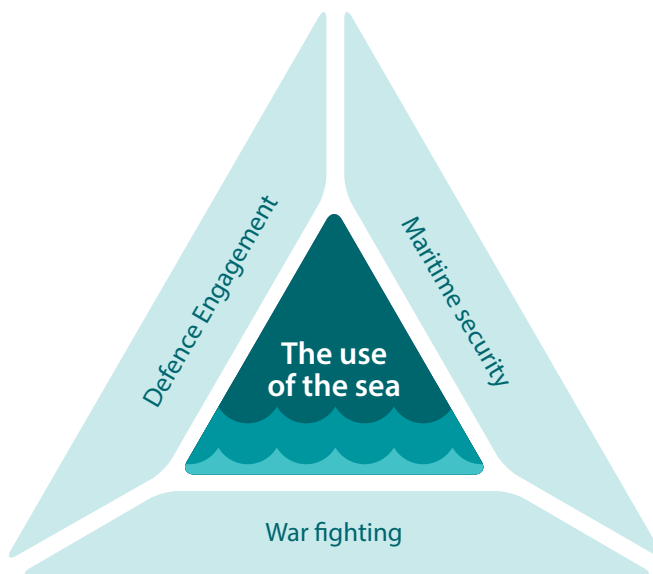


Figure 4.1 – The three roles of UK maritime forces

4.2. The primary objective of maritime power is to assist in preventing conflict through deterrence; conscious of the need to escalate if deterrence fails. The ability to conduct each of the three roles contributes towards conflict prevention. Ultimately the product of each role is more than simply preventing conflict; it is to support national objectives in helping shape a more stable international community. The

<sup>51</sup> Ian Speller, *Understanding Naval Warfare*, 2014.

three roles, collectively or individually, depending upon the specific circumstances, seek to stabilise the strategic maritime environment as well as help to ensure a secure and resilient UK.

4.3. In practice, most operations undertaken by maritime forces will incorporate aspects of each of these three roles. They are interrelated and may be conducted concurrently or consecutively with little or no physical change to the force structure. Often the boundaries between maritime security and war fighting operations may be difficult to distinguish and will invariably involve Defence Engagement as well. This versatility is one of the most valuable features of maritime forces; they offer options to decision-makers for escalation or de-escalation simply by altering posture.

Role 1 – war fighting

‘Soft power flows to the owner of hard power.’

Joseph Nye<sup>52</sup>

4.4. A credible hard power capability provides the foundations on which the softer roles of maritime security and Defence Engagement are built. Therefore, at its core UK maritime forces must be able to deter potential aggressive acts against the UK, and where this fails, conduct successful combat operations in pursuit of the national interest. In this role maritime forces will generally be configured into a maritime task group,<sup>53</sup> able to project maritime power through either carrier strike<sup>54</sup> or littoral manoeuvre,<sup>55</sup> which provides the capability of projecting a landing force ashore.

Role 2 – maritime security

4.5. Exploiting powers under international, national and cooperating partner states law, maritime security operations are conducted against a wide range of activities. Principally the focus is on the support to trade, including fisheries, to safeguard national prosperity. However, other activities include: defence (short of war fighting); humanitarian assistance and disaster relief; non-combatant evacuation operations; and countering piracy, slavery, people smuggling, illegal immigration, drug smuggling, arms smuggling, terrorism and the proliferation of weapons of mass destruction.

52 Joseph Nye, *Hard, Soft and Smart Power*, 2013.  
53 A maritime task group or force is a group of maritime military assets assigned together for a specific purpose.  
54 Carrier strike is the ability to use fixed-wing aircraft from a maritime base to project military power from the sea.  
55 Littoral manoeuvre is exploiting the access and freedom provided by the sea as a basis for operational manoeuvre.





A type 23 frigate provides maritime security in the Northern Arabian Gulf

### Role 3 – Defence Engagement

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‘...navies have shown themselves to be uniquely useful as instruments for the conduct of foreign policy for time immemorial. As such, they express the foreign policy objectives of the state. Depending on the nature of those objectives, naval diplomacy can be used in a competitive or collaborative way, or, more usually, some mixture of the two.’

Professor Geoffrey Till<sup>56</sup>

4.6. The versatility and mobility of maritime forces provides a means for political and diplomatic influence in international relations. Conflict prevention is a key tenet of the UK's overall security strategy. Such influence requires an investment in long-term habitual engagement that creates worthwhile connections that engender trust. When executed effectively, conflict prevention promotes, develops and maintains stable relationships between states and encourages cooperation and conciliation in managing 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 demonstrations of national intent involving all levers of national power. In addition, the Government acknowledges that Royal Navy ships' visits are an important way of projecting the UK's soft power globally,<sup>57</sup> and it is a clear demonstration of the 'international by design' intent. The added benefit is that greater stability leads to greater trade and prosperity.

<sup>56</sup> Professor Geoffrey Till, *Seapower: A Guide for the Twenty-First Century*, 3rd Edition, 2013, page 221.

<sup>57</sup> *National Security Strategy and Strategic Defence and Security Review 2015, A Secure and Prosperous United Kingdom (NSS and SDSR 2015)*, available at <https://www.gov.uk/government/publications/national-security-strategy-and-strategic-defence-and-security-review-2015>

## Section 2 – The maritime contribution to military power

4.7. While all Services contribute to maritime forces, the principal actor is the Naval Service. There are four fighting arms of the Naval Service, supported by the Royal Fleet Auxiliary.

a. **The surface fleet.**<sup>58</sup> The various platforms of the surface fleet promote and protect UK national interest at home and abroad.

(1) **Aircraft Carriers.** Aircraft carriers have been a core capability of the Naval Service since the First World War. The introduction of HMS Queen Elizabeth followed by HMS Prince of Wales will see the resumption of carrier operations able to provide a maritime power projection capability for fixed-wing carrier strike, rotary wing strike and littoral manoeuvre operations. The two Queen Elizabeth Class carriers will provide the focus for UK task group operations for the next 50 years.

(2) **Frigates and destroyers.** Frigates and destroyers are multipurpose combatants with an emphasis on anti-submarine warfare and anti-air warfare respectively, but with capabilities in many disciplines, including the ability to provide fire support and air defence to forces ashore. They are able to deploy autonomously for extended periods and their versatility allows them to cover a wide range of tasks across all three maritime roles, in particular establishing presence. They are essential elements of any task group.

(3) **Amphibious shipping.** The UK's amphibious shipping constitutes ships of the Royal Navy, the Royal Fleet Auxiliary and, when necessary, chartered merchant vessels. These platforms provide the littoral manoeuvre capability that enables the maritime power projection of a land force as part of an amphibious task group.

(4) **Mine countermeasures vessels.** Mine countermeasures vessels operate in the approaches to harbours and choke points where they are used to maintain the flow of both commercial and naval shipping. They are also tasked with ensuring access to the open ocean for the nuclear deterrent and an important element of task groups, particularly in advanced sea control operations or to clear the amphibious operating areas prior to a landing.

<sup>58</sup> <http://www.royalnavy.mod.uk/our-organisation/the-fighting-arms/surface-fleet>

(5) **Hydrographic and oceanographic survey vessels.** Hydrographic and oceanographic survey vessels provide a specialist military data gathering capability in support of safety of navigation, the production of charts, and maritime and joint operations, including the nuclear deterrent. Hydrographic, oceanographic and meteorological information is used to inform campaign planning and to provide situational understanding. It is a vital precursor to theatre entry and littoral manoeuvre. Survey vessels require a measure of forward support and appropriate force protection when operating in a sub-surface, surface or air threat environment.

(6) **Patrol vessels.** Specialised vessels are deployed routinely on patrol around the UK and Overseas Territories, chiefly on maritime security operations undertaking constabulary tasks, to protect sovereignty, economic interests and ensuring good order and security of the maritime environment. Their capabilities extend to the full extent of the UK's fishing and energy zones. For fishery protection, the ships are an integrated capability operated under contract to the Department for Environment, Food and Rural Affairs (DEFRA). They patrol UK waters protecting UK fishing vessels and enforcing fisheries regulations but may be more widely tasked to support government departments contributing to maritime security. HMS Protector (the Royal Navy's ice patrol ship) makes annual deployments to Antarctic waters to demonstrate the national commitment to the Antarctic Treaty, exercise sovereignty over the British Antarctic Territories and to provide assistance to the British Antarctic Survey; it also concurrently undertakes hydrographic survey and meteorological work.



HMS Protector on annual deployment in Antarctic waters

b. **The Submarine Service.**<sup>59</sup> The Royal Navy operates a mix of ballistic missile and conventionally armed submarines – all are nuclear powered to give them global reach.

(1) Providing nuclear deterrence (Operation RELENTLESS) is a Defence Task in its own right and the Defence priority. A force of four Vanguard-class nuclear powered submarines (ship submersible ballistic nuclear (SSBN)) with nuclear armed ballistic missiles is operated such that at least one is continually on deterrent patrol; known as the ‘continuous at sea deterrent’ (CASD).

(2) Nuclear powered attack submarines (ship submersible nuclear (SSN)) provide the principal sea denial capability due to having both anti-submarine and anti-ship systems. When combined with an appropriate land attack missile, such as the Tomahawk, SSNs have a power projection capability of considerable range and penetrability, with important uses for deterrence and coercion. SSNs can also covertly gather intelligence, and insert and recover special forces. They can operate independently or in conjunction with surface and air forces and contribute to protecting the nuclear deterrent.



For the UK the nuclear deterrent is delivered by the submarine enabled continuous at sea deterrent

59 <http://www.royalnavy.mod.uk/our-organisation/the-fighting-arms/submarine-service>

c. **The Fleet Air Arm.**<sup>60</sup> The Fleet Air Arm is the Naval Service's maritime aviation capability and consists of specialist anti-submarine, anti-surface, airborne surveillance, reconnaissance and battlefield support helicopters. However, their versatility enables them to carry out a number of secondary roles such as search and rescue. In addition the Fleet Air Arm 809 Naval Air Squadron will operate the F-35B Lightning II aircraft alongside the Royal Air Force (RAF) and will be able to deliver carrier strike, control of the air, and intelligence, surveillance and reconnaissance when full operating capability is achieved. When operating in a maritime task group aviation assets will be integrated into an embarked tailored air group. A tailored air group is configured to provide the aircraft to meet the operational requirement and will vary depending on whether supporting carrier strike or littoral manoeuvre. Along with Fleet Air Arm aircraft it is likely to include aviation assets such as battlefield attack and support helicopters from the Joint Helicopter Command of the British Army and fixed wing aircraft from the RAF.

d. **The Royal Marines.**<sup>61</sup> The Corps of the Royal Marines are a light infantry force who are highly specialised in amphibious warfare. Held at very high readiness and optimised for worldwide rapid response they are fully integrated with the Royal Navy's amphibious ships. They can be deployed globally without host nation support and can be projected from the sea to conduct operations on land.

These operations range from raids to full assaults as the spearhead of littoral manoeuvre operations. In addition, the Royal Marines conduct the specialist role of security for the nuclear deterrent.

e. **The Royal Fleet Auxiliary.**<sup>62</sup> Although not officially classed as a fighting arm by the *Queens Regulations for the Royal Navy*, the ships of the Royal Fleet Auxiliary are of vital importance to maritime forces. Primarily they provide the sustainability through fuel, food, stores and ordnance that can be transferred at sea to enable persistence, which sits at the heart of maritime operations. With the ability to embark helicopters and significant elements of a landing force, the Royal Fleet Auxiliary is a vital asset in supporting operations. They are also capable of undertaking activities such as anti-piracy and disaster relief in their own right.

British Army forces play a significant role in the maritime environment.

4.8. **Elements of land forces.** British Army forces play a significant role in the maritime environment. As well as those members of the British Army integrated into 3 Commando Brigade in artillery, engineering and logistic functions, army personnel based at sea as part of a landing group are classed as part of that maritime

<sup>60</sup> <http://www.royalnavy.mod.uk/our-organisation/the-fighting-arms/fleet-air-arm>

<sup>61</sup> <http://www.royalnavy.mod.uk/our-organisation/the-fighting-arms/royal-marines>

<sup>62</sup> <http://www.royalnavy.mod.uk/our-organisation/the-fighting-arms/royal-fleet-auxiliary>

“  
**Air force personnel are also an integral part of a maritime force providing specialist air knowledge.**”

force. In addition, 17 Port and Maritime Regiment provides the UK Armed Forces’ only specialist port and maritime component designed to facilitate the loading and offloading of military equipment at ports across the globe. The Joint Helicopter Command<sup>63</sup> is the principal contributor of support helicopters to provide the lift capability required to enable littoral manoeuvre and battlefield attack and reconnaissance helicopters to a tailored air group.

4.9. **Elements of air forces.** Embarked aircraft project maritime power from the sea as part of a maritime force, although the command and control of joint assets may be invested elsewhere within the joint force. Air force personnel are also an integral part of a maritime force providing specialist air knowledge. In addition, land-based aircraft can also influence the maritime environment through providing force protection, battlespace management, reconnaissance, surveillance, targeting, air-to air refuelling, air defence, attack and logistics resupply to the maritime force. The speed of transit, wide sensor and communications fit, ability to cover large areas and substantial capacity for weapons, make maritime patrol aircraft such as the P-8A Poseidon, important contributors to both anti-surface and anti-submarine warfare. They are optimised for area anti-submarine operations, surveillance and reconnaissance and search and rescue, and may be well placed to provide some command and control capabilities.

4.10. **Chartered shipping.** An amphibious force will normally include chartered shipping to complement the lift provided by specialist amphibious shipping. Chartered shipping may include transport for personnel (passenger vessels), vehicles (roll-on/roll-off ferries), hospital ships, container ships, water ships, tankers and specialist lift shipping, such as semi-submersibles to transport additional landing craft. All with the purpose of projecting a land force from the sea.

**Maritime task group operations**

4.11. The maritime component to a joint force will be provided through a maritime task group able to deliver sea control and maritime power projection. This task group will generally be comprised of a capital ship such as an aircraft carrier or amphibious vessel accompanied by frigates, destroyers, submarines, mine clearance vessels and support shipping; plus fixed- and rotary-wing aircraft and potentially a landing force from across the three Services, providing a truly joint maritime power projection capability.

4.12. The Carrier Enabled Power Projection (CEPP) programme will deliver an integrated and sustainable joint capability, interoperable with our North Atlantic Treaty Organization (NATO) Allies and other coalition partners. CEPP coordinates the

.....  
<sup>63</sup> In the UK’s Armed Forces structure Joint Helicopter Command is part of the British Army.



delivery of the Queen Elizabeth Class aircraft carriers, F-35B Lightning II aircraft, Merlin CROWSNEST, battlefield helicopters and enabling capabilities to:

- deliver carrier strike;
- support littoral manoeuvre; and
- deliver humanitarian assistance and other Defence Engagement operations.

### The value of Carrier Enabled Power Projection

‘The delivery of the Carrier Enabled Power Projection (CEPP) programme will offer a step change in the UK’s ability to globally project decisive military power and influence, either independently or as part of a coalition operation. It will exploit the attributes of maritime, air and land forces to deter, coerce or deliver action across the 3 environments.’

CEPP concept of employment, 2014

‘CEPP provides the UK with increased freedom of action and policy choice, including when responding to crises. It projects our national power and influence, and reassures our allies and partners. It is an important element of our modern deterrence posture and will contribute to all three of national security objectives set out in the National Security Strategy 2015.’

CEPP Policy Statement, November 2016

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4.13. **Carrier strike** allows the maritime task group to strike targets from anywhere in the world. The UK will operate a mix of aircraft from its Queen Elizabeth Class aircraft carriers – secure, sovereign and well-found airbases which can move freely through the world’s oceans.<sup>64</sup> In the carrier strike role the ships will routinely carry and fully support the F-35B Lightning II aircraft. They will also embark the multi-role Merlin Mark 2 helicopter which will be used to deliver intelligence, surveillance, target acquisition and reconnaissance, and air-space management.

4.14. When required this tailored air group can be shaped to provide either a strike focus with the ship routinely carrying F-35B Lightning II aircraft, with the capacity to surge to a maximum of 36, or when supporting littoral manoeuvre to embark greater numbers of support and attack helicopters. Transition between roles can be achieved when the ship is deployed.

<sup>64</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/62491/Factsheet9-Carrier-Strike.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/62491/Factsheet9-Carrier-Strike.pdf)

4.15. **Littoral manoeuvre** is exploiting the access and freedom provided by the sea as a basis for operational manoeuvre from which a sea-based amphibious force can influence situations, decisions and events in the littoral regions of the world. The ability to deploy a land force from a sea base is a key capability of the maritime force.

4.16. The UK's specialist amphibious forces represent a comprehensive range of capabilities, fully able to operate independently or alongside allies and partners. They comprise three essential components:

- the landing force;
- specialist amphibious shipping; and
- the tailored air group.

4.17. The landing force is provided by 3 Commando Brigade Royal Marines in the form of the lead commando group. The lead commando group comprises personnel from the Royal Marines and British Army, who can be landed and sustained from the sea. This may be supporting a larger land campaign, exploiting the maritime flank, or conducting discreet operations (such as a raid), a non-combatant evacuation operation or limited theatre entry. The lead commando group aims to be established ashore within six hours, using both landing craft and helicopters. Aviation assets and landing craft can be regrouped to the landing force during ongoing operations enabling the amphibious shipping to be tasked elsewhere.



An Apache attack helicopter on the deck of HMS Ocean



4.18. The Royal Navy's specialist amphibious shipping can tactically offload, sustain and recover the landing force without recourse to harbours or airfields, in hostile, or potentially hostile environments. They provide the launch platforms for assaults and raids by landing craft and helicopters. The amphibious shipping<sup>65</sup> has the necessary command and control facilities for up to a brigade size operation, and are capable of landing a company group surface assault, heavy equipment (such as armour) and landing force vehicles and equipment.

### Command and control

4.19. The scale and type of mission will determine the command and control of an operation. When conducting joint operations the command and control construct will be detailed within the Chief of the Defence Staff's Directive. This will invest command and control functions in the Permanent Joint Headquarters (PJHQ) based at Northwood, who will delegate command and control to the appropriate operational component commander. Otherwise the operational command and control of maritime forces will rest through the Royal Navy's 2\* Commander Operations based at Northwood. The local command of a task group is usually conducted at the 1\* level, but can be scaled up to a 2\* battle staff dependent on the size and complexity of the operation.

## Section 3 – Joint and multinational operations

4.20. UK maritime forces routinely include capabilities of the Royal Navy and components of the British Army and RAF to support the military instrument to national power, particularly when operating in a task group. Maritime forces are therefore predominately a joint force.<sup>66</sup> These forces, along with all other government departments, should be integrated behind a common national goal, and synchronised to create best effect. In the UK this is known as the full spectrum approach, with the military component of this referred to as joint action.

4.21. NATO is at the heart of UK Defence, therefore a UK national approach will generally be framed within a broader multinational response including allies, international organisations and non-governmental organisations. This multinational approach creates greater opportunities and capabilities, but can also generate frictions, where national objectives differ. Developing coherence on areas such as risk

65 Currently provided by HMS Albion and HMS Bulwark landing platform dock (LPD) ships.

66 Joint force is defined as: **a force composed of significant elements of two or more Services operating under a single commander authorised to exercise operational command and control.** Joint Doctrine Publication (JDP) 0-01.1, *UK Supplement to the NATO Terminology Database*, 8th Edition.

and identifying priorities can be challenging, with the adversary able to exploit these potential differences.<sup>67</sup>

### Joint action

4.22. Joint action is the orchestration of national military capabilities and activities to achieve influence in pursuit of national objectives. It is the combination of attack and defensive capabilities, information activities and the ability to outreach and manoeuvre to affect an actor's will, capability or understanding. Maritime forces are a key contributor to joint action. In recognising the primacy of influence as an objective, maritime power is highly capable of providing influence without commitment. By using the attributes of the maritime environment, maritime forces can use maritime manoeuvre and maritime power projection to affect an actor's will, understanding or capabilities. Often this presence can act as a method of conflict prevention.

'Our presence in the first place: engagement without entanglement may be a sufficient demonstration of intent and deterrence to prevent the need for final engagement.'

Admiral Sir Mark Stanhope<sup>68</sup>

4.23. Joint action coordinates and synchronises:

- fires (military power effect through both physical and virtual means);
- information activities (including regional and key leader engagement);
- manoeuvre (the ability to remain mobile to gain advantage in time and space); and
- outreach (including stabilisation, support to governance and capacity building).

### Joint operations

4.24. A joint operation is one where two or more of the Royal Navy, British Army and RAF operate as a single military force, under a single command structure, to

<sup>67</sup> JDP 01, *UK Joint Operations Doctrine*, covers multi-agency planning in greater detail and is available at <https://www.gov.uk/government/publications/campaigning-a-joint-doctrine-publication>

<sup>68</sup> Speaking when First Sea Lord at the International Institute for Strategic Studies, 24 February 2010.

accomplish a specific mission.<sup>69</sup> Maritime forces are often joint but when constructed of only the Naval Service will often contain an air power (Fleet Air arm) and land power component (Royal Marines). Maritime power therefore offers policy-makers with a broad range of military options to achieve specific national objectives. Maritime power enhances the scale of options for the joint force. Through access and mobility, maritime power projection in the form of carrier strike can reach almost any battlespace and provide a persistent presence. In addition, support shipping can provide vital deployment, sustainment and recovery capabilities.

4.25. As a maritime force is likely to be joint, it can be used independently or in conjunction with coordinated air and land operations to create a larger joint force. A sole maritime force does not have the same capacity as a joint operation. Therefore, for enduring operations, UK maritime forces will operate within a joint approach.

4.26. Although the effects of joint action are primarily targeted at an adversary, it has an impact on a wide range of other actors that also need to be influenced. This can include civilian partners, such as non-governmental organisations, the UK population, allies and regional audiences. Such engagement and influence helps preserve freedom of action for military operations. Therefore, joint action requires coordination or integration with the activities of other government departments in a full spectrum approach.<sup>70</sup>



Joint Helicopter Command Chinook helicopters from the RAF operating as part of a joint maritime force

<sup>69</sup> In most instances the maritime component to joint action will be coordinated through the Permanent Joint Headquarters (PJHQ).

<sup>70</sup> The full spectrum approach develops the integrated approach (described in JDP 0-01, *UK Defence Doctrine*, 5th Edition) by widening it to include all parts of Government. For further information see Her Majesty's Government (HMG), *Full Spectrum Approach Primer*, 2017.

Full spectrum approach

4.27. Effective crisis management requires active cross-government and multi-agency cooperation, to develop, employ and sustain a comprehensive and successful response. The full spectrum approach to national power is therefore an approach which deals with a wide variety of challenges by creating and managing strategies to address complex problems. It employs diplomatic, economic and military instruments of national power to achieve desired political and strategic objectives. The coordination and synchronisation of these capabilities reduces duplication of effort, creates synergies and leads to more effective use of resources. UK maritime power is a key component of the full spectrum approach, as part of the broader Defence input. Figure 4.2 highlights the relationship between joint action and the full spectrum approach.

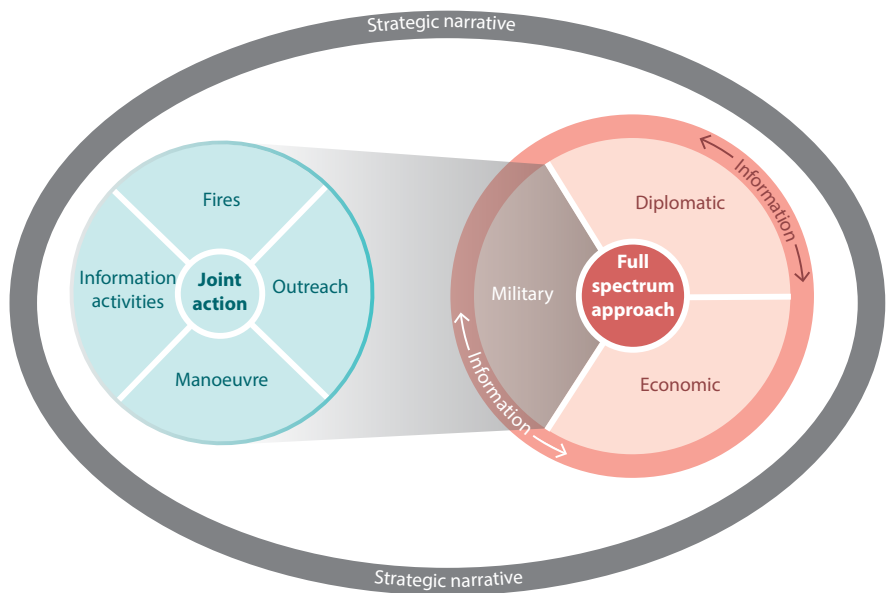


Figure 4.2 – The relationship between joint action and the full spectrum approach

The Joint Expeditionary Force

4.28. One of the principal ways in which joint action will be demonstrated is through the Joint Expeditionary Force (JEF). Whilst not a standing force, the UK components of the JEF are a pool of high readiness and contingent forces that provide a flexible expeditionary intervention capability across maritime, land, air and

UK maritime power is a key component of the full spectrum approach...

joint environments that can operate alongside key allies and partners. For example, it can be developed as:

- a UK-led framework for partner nations;<sup>71</sup>
- the Combined Joint Expeditionary Force (CJEF) with France, or
- part of a broader coalition effort.

4.29. The maritime component of the JEF is referred to as the Joint Expeditionary Force (Maritime) (JEF(M)). The JEF (M) will demonstrate the ability to project a highly effective UK maritime component anywhere in the world, whilst reassuring our allies. It will be capable of conducting a wide range of operations, including conventional deterrence, combat operations and humanitarian assistance. The JEF(M) will be organised around a single maritime task group consisting of capital ships,<sup>72</sup> frigates and destroyers, afloat support and, potentially, a landing force, aviation, mine countermeasures vessels and nuclear powered attack submarines. The two central capabilities that the JEF(M) will offer are carrier strike and littoral manoeuvre. Both capabilities seek to create considerable land effect from the maritime environment. Until carrier strike reaches its initial operating capability, the primary output of the JEF(M) is littoral manoeuvre at commando group level.

4.30. In a JEF(M) context the Commander UK Task Group, working closely with the landing force commander, will likely command the JEF(M) at sea, before becoming the supporting commander once the landing force is ashore and established. Due to its joint nature the JEF(M) relies upon elements of all three Services to function appropriately.

71 In April 2016, the Joint Expeditionary Force (JEF) partner nations comprised Denmark, Estonia, Finland, Latvia, Lithuania, the Netherlands, Norway, Sweden and the UK, although there are aspirations to expand the JEF regional membership into the High North.

72 HMS Albion and HMS Bulwark LPDs, with HMS Ocean landing platform helicopter (LPH) (out of service in 2018), the Queen Elizabeth Class aircraft carriers will perform this central function.

## Key points

- The accepted consensus is that there is a 'trinity' of 'three characteristic modes of action by which maritime forces operate: namely military, diplomatic and policing functions'. These functions have evolved to war fighting, maritime security and Defence Engagement.
- The ability to conduct war fighting is the essential aspect for a military force as soft power flows to the owner of hard power.
- The Naval Service is the main actor within the maritime environment. It comprises of four fighting arms supported by the Royal Fleet Auxiliary. The fighting arms are: the surface fleet; the Submarine Service; the Fleet Air Arm; and the Royal Marines.
- UK maritime forces routinely include capabilities of the Royal Navy and components of the British Army and Royal Air Force to support the military instrument to national power, particularly when operating in a task group. Maritime forces are therefore predominately a joint force.
- Multinational (predominantly through NATO) and bilateral operations and exercises are common place within the maritime environment.
- The Maritime component of the UK Joint Expeditionary Force is referred to as the Joint Expeditionary Force (Maritime) JEF(M).
- Carrier Enabled Power Project (CEPP) is the programme that will deliver the UK a carrier strike capability and support littoral manoeuvre which will be the cornerstone of the JEF(M) capability, and the maritime's contribution to joint action.

# Lexicon

## Part 1 – Acronyms and abbreviations

AAP	Allied administrative publication
AJP	Allied joint publication
CASD	continuous at sea deterrence
CEMA	cyber and electromagnetic activities
CEPP	Carrier Enabled Power Projection
CDS	Chief of the Defence Staff
CJEF	Combined Joint Expeditionary Force
DEFRA	Department for Environment, Food and Rural Affairs
DFID	Department for International Development
EEZ	exclusive economic zone
EU	European Union
FAA	Fleet Air Arm
GVA	gross value added
HADR	humanitarian assistance and disaster relief
HMG	Her Majesty's Government
ISAF	International Security Assistance Force
JDP	joint doctrine publication
JEF	Joint Expeditionary Force
JEF(M)	Joint Expeditionary Force (Maritime)
LPD	landing platform dock
LPH	landing platform helicopter
LSD(A)	landing ship dock (auxiliary)
NATO	North Atlantic Treaty Organization
NEO	non-combatant evacuation operation



NSO	national security objectives
NSS	National Security Strategy
PJHQ	Permanent Joint Headquarters
RAF	Royal Air Force
RFA	Royal Fleet Auxiliary
RUSI	Royal United Services Institute
SDSR	Strategic Defence and Security Review
SSBN	ship submersible ballistic nuclear
SSN	ship submersible nuclear
UNCLOS	United Nations Convention on the Law of the Sea

## Part 2 – Terms and definitions

This section is divided into three areas. First, we list new terms proposed by this publication. We then list modified definitions proposed by this publication and finally we list endorsed terms and their definitions.

### New definitions

#### maritime power

The ability to apply maritime military capabilities at and from the sea to influence the behaviour of actors and the course of events. (JDP 0-10, 5th Edition)

### Modified definitions

#### littoral region

Those land areas (and their adjacent areas and associated air space) that are susceptible to engagement and influence from the sea. (JDP 0-10, 5th Edition)

### Endorsed definitions

#### hard power

The threat or use of military or economic coercion or physical effect to achieve influence. (JDP 04, 2nd Edition)

#### influence

The capacity to have an effect on the character or behaviour of someone or something, or the effect itself. (*Concise Oxford English Dictionary*)

#### joint force

A force composed of significant elements of two or more Services operating under a single commander authorised to exercise operational command or control. (JDP 01)

**soft power**

The ability to persuade or encourage others to adopt an alternative approach.  
(JDP 04, 2nd Edition)

**sustainability**

The ability of a force to maintain the necessary level of combat power for the duration required to achieve its objectives. (NATO Term)

**understanding**

The perception and interpretation of a particular situation in order to provide the context, insight and foresight required for effective decision-making.  
(JDP 04, 2nd Edition)





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