Land Warfare Studies Centre

Working Paper No. 117

A Capability of First Resort

Amphibious Operations and Australian Defence Policy 1901–2001

^{by} Russell Parkin

May 2002

© Land Warfare Studies Centre 2002

This work is copyright. Apart from any fair dealing for the purpose of study, research, criticism or review (as permitted under the *Copyright Act 1968*), and with standard source credit included, no part may be reproduced by any process without written permission. Inquiries should be directed to the Head, Land Warfare Studies Centre, Ian Campbell Road, Duntroon ACT 2600.

National Library of Australia Cataloguing-in-publication Entry

Parkin, Russell.

A capability of first resort : amphibious operations and Australian defence policy 1901–2001.

ISBN 0 642 29567 0.

1. Amphibious warfare—History—20th century.

2. Australia—Military policy. I. Land Warfare Studies Centre (Australia). II. Title. (Series : Working paper (Land Warfare Studies Centre (Australia)) ; no. 117).

355.460994

Land Warfare Studies Centre Working Papers

ISSN 1441-0389

Working papers produced by the Land Warfare Studies Centre are vehicles for initiating, encouraging or nurturing professional discussion and debate concerning the application of land warfare concepts and capabilities to the security of Australia and its interests. Working papers, by their nature, are not intended to be definitive.

Disclaimer

The views expressed are the author's and not necessarily those of the Australian Army or the Department of Defence. The Commonwealth of Australia will not be legally responsible in contract, tort or otherwise for any statement made in this publication.

About the Author

Major Russell Parkin is a RAEME officer who has served in a variety of staff and instructional postings, including the Army Logistic Training Centre and the Directorate of Army Research and Analysis. In 2000, he attended the Army Command and Staff College, Fort Queenscliff, and on completion of the course was posted to the Land Warfare Studies Centre (LWSC), Duntroon, as a Research Fellow during 2001–02. Major Parkin holds a Bachelor of Arts and Diploma of Education (1978), a Master of Defence Studies (1990) and a PhD (1998) from the University of New South Wales. He has published articles in the Proceedings of the Army History Conference, the *New Zealand Army Journal*, the RAAF Air Power Studies Centre Papers and the Australian War Memorial publication, *Wartime*. Major Parkin has represented the Army at international conferences in both Australia and overseas. His research interests include joint warfare, coalition warfare and political–military relations.

Land Warfare Studies Centre

The Australian Army established the LWSC in July 1997 through the amalgamation of several existing staffs and research elements.

The charter of the LWSC is to promote the wider understanding and appreciation of land warfare; provide an institutional focus for applied research into the use of land power by the Australian Army; and raise the level of professional and intellectual debate within the Army. The LWSC fulfils these roles through a range of internal reports and external publications; a program of conferences, seminars and debates; and contributions to a variety of professional, academic and community fora. Additional information on the centre may be found on the Internet at http://www.defence.gov/army/lwsc.

Comment on this working paper is welcome and should be forwarded in writing to:

The Office Manager Land Warfare Studies Centre Ian Campbell Road DUNTROON ACT 2600 Australia Telephone: (02) 6265 9624 Facsimile: (02) 6265 9888 Email: dir.lwsc@defence.gov.au

ABBREVIATIONS AND ACRONYMS

ADF	Australian Defence Force
AIF	Australian Imperial Force
AN&MEF	Australian Naval and Military Force
APA	large amphibious attack transport
AWM	Australian War Memorial
BLO	Bombardment Liaison Officers
DSC	Distinguished Service Cross
DSO	Distinguished Service Order
EAS	Entry from the Air and Sea
FEG	Force Element Group
FLEXS	Fleet Exercises
INTERFET	International Force East Timor
JOOTS	Joint Overseas Operational Training School
LARC-V	Lighter, Amphibious, Resupply, Cargo-Mark V
LPA	Landing Platform Amphibious
LSD	Landing Ship Detachments
LSI	Landing Ship Infantry
LST	Landing Ship Tanks
MOLE	Military Operations in a Littoral Environment
MLC	Motorised Landing Craft
NGS	Naval Gunfire Support
NSRB	National Security Resources Board
PBM	Principal Beachmaster
RAAF	Royal Australian Air Force
RAN	Royal Australian Navy
RANB	Royal Australian Naval Brigade
SEATO	Southeast Asia Treaty Organization
SWPA	South-West Pacific Area
UN	United Nations
USMC	United States Marine Corps
USN	United States Navy

ABSTRACT

During the 20th century, joint operations—and particularly amphibious operations—have played an important role in the defence of Australia. This paper is a survey of the major joint operations undertaken by Australian Forces in the past one hundred years and aims to examine key factors such as the changing mechanisms for joint operations, doctrine and equipment.

The survey begins with the first joint operation that Australian Forces undertook in 1914. The influence of Gallipoli on Australian defence policy is also considered briefly. Gallipoli eclipsed the success of the joint Army–Navy operation in German New Guinea, and the importance of such operations to the defence of Australia and its national interests. In the inter-war period, amphibious operations did not feature greatly in Australian defence planning. Although there was one training exercise, Imperial Defence was the predominant theme in Australian security policy. However, both British and US Forces experimented with amphibious operations. These experiments laid the groundwork for victory in World War II and Australians were heavily involved in landing operations during the Allied campaigns in the South-West Pacific.

Between the late 1940s and the early 1990s, however, the Australian Defence Force (ADF) concentrated on operations aimed at the defence of the continent. This was a dark period for amphibious and joint operations, which were only kept alive in largely unread doctrine or through heavily orchestrated training exercises. Only in the late 1990s, with the impetus provided by operations in East Timor, did the ADF rediscover the importance of joint operations to national security. The paper ends by briefly considering the problems that the ADF faces as it attempts to revitalise this important capability in the 21st century.

A CAPABILITY OF FIRST RESORT Amphibious Operations and Australian Defence Policy 1901–2001

Introduction

In an address to an amphibious warfare conference in 2000, Major General Peter Cosgrove informed his audience that 'increasingly Australia's amphibious capability is being viewed as a capability of first resort'.¹ He was referring to the experience gained during the events of 1999 in East Timor. Australia's leadership of the International Force East Timor (INTERFET) highlighted the importance of the power projection capabilities provided by close cooperation between land, naval and air forces.² The Australian Defence Force's (ADF) response to the violence in East Timor, which followed the former Portuguese territory's vote for independence from Indonesia, was based on the rapid deployment of forces by both sea and air. Close cooperation between the three Services was also a major theme of the latest Defence White Paper, *Defence 2000: Our Future Defence Force*. The paper adopted a maritime strategy based on joint operations in the littoral areas of

¹ Unpublished address Major General P. Cosgrove to the AMPHIB 2000 Conference, Randwick Barracks Conference Centre, 22 June 2000 quoted in the Royal Australian Navy's *Amphibious and Afloat Support Force Element Group Master Plan*, dated 6 September 2000.

² It should be noted that, without the naval contributions made by INTERFET partners such as New Zealand, Singapore and the United States, the Royal Australian Navy (RAN) would have been unable to cope with the complexities of the operation because of its limited amphibious and sea lift capability, especially in the areas of force protection, mobility and logistics.

South-East Asia and the Western Pacific, which cover the strategic air and sea approaches to Australia.³

In retrospect, East Timor was merely the last of a number of operations that, during the 20th century, required close cooperation between Australia's naval, military and air forces. During our first century as a nation, close cooperation between the Commonwealth's armed forces has occurred more frequently than is generally realised. This paper aims to provide a survey of such operations, briefly discussing the key particulars of each to underscore the scale of inter-service cooperation between sea and land forces, which has been a much-neglected aspect in studies of the Australian experience of warfare.⁴

The paper will conclude with some general observations about these operations; such observations may be useful in planning similar operations in the future.

The Role of Joint Operations in Defence of Australia's Interests

The ability to project military power via a combination of land, sea and air forces seems a logical capability for an island continent to develop.⁵ The capabilities of joint forces provide a flexible range

³ See Commonwealth of Australia, *Defence 2000: Our Future Defence Force*, Canberra, 2000, chap. 6, p. 47.

⁴ The literature on the Australian experience of amphibious warfare is sparse. For two useful overviews see Glenn Wahlert (ed.), *Australian Army Amphibious Operations in the South-West Pacific, 1942–45*, Army Doctrine Centre, Headquarters Training Command, Sydney, 1994; and Michael Evans, 'Unarmed Prophets: Amphibious Warfare in Australian Military Thought', *Journal of the Australian Naval Institute*, January–March 1999, vol. 25, no. 1, pp. 10–19.

⁵ While air power was not specifically part of the earliest considerations for defence of the Commonwealth, by 1911 articles in the *Commonwealth Military Journal* were speculating on the role that aircraft might play in the defence of Australia. See, for example, Major C. D. Field, 'Aviation—Wireless Telegraphy—Telephony. What effect will they have on a modern battlefield, and a suitable role and organization for their use',

of military options—a fact that was quickly recognised by the men charged with planning the defence of the new Commonwealth of Australia. In December 1901, the Barton Government appointed a British officer, Major General Sir Edward Hutton, as the General Officer Commanding the Australian Military Forces. The following April, Hutton submitted a report to the Government on the defence of Australia, in which he did not hesitate to remind the Government that it must look to defending Australia's interests outside its territorial waters.⁶ He believed that:

It [was] hardly consistent with the present development of Australia as a young and vigorous nation to neglect her responsibility for defence outside Australian waters, and in the robust period of her youth thus to rely entirely upon the strong arm of the Mother Country.⁷

It followed that, 'for the defence of Australian interests wherever they might be threatened, the first essential was the sea supremacy, which was guaranteed by the Royal Navy. The second was the possession of a Field Force capable of undertaking military operations in whatever part of the world it might be desired by Australia to employ them'.⁸ From the Army's perspective, these words proved to be prophetic. While successive governments throughout the past century have tended to see the Army's role in national security as being that of local or continental defence, the Australian Army has never yet had to defend Australia in operations on the mainland. Instead, the Army has primarily been an expeditionary force, engaged in operations to defend Australian interests wherever they were threatened. The Royal Australian

Commonwealth Military Journal, May 1911, pp. 155–69; and Captain J. W. Niesigh, 'Aviation in relation to Australian Defence', *Commonwealth Military Journal*, August 1911, pp. 403–10.

⁶ National Archives of Australia (NAA), Canberra Office Series A5954/69, Item 794/5. *Major General Hutton on Australian Defence and the Military Forces*.

⁷ *Ibid.*

⁸ Ibid.

Navy (RAN), and later the Royal Australian Air Force (RAAF), have been close partners in those operations.

Before Gallipoli—The Australian Naval and Military Expeditionary Force in New Guinea, 1914

Few people now recall that Australia's first independent military operation was a successful joint campaign by elements of the RAN and the Commonwealth Military Forces to seize German colonial possessions in New Guinea. Undertaken between mid-August and early December 1914, this brief campaign secured Australia's trade routes in the Pacific by denying the Germans the ability to use their chain of wireless stations in the region to direct the surface raiders of their East Asian Squadron against Allied shipping. Although the Commonwealth had already committed 20 000 men to the formation of the Australian Imperial Force (AIF), it readily agreed to create the smaller Australian Naval and Military Force (AN&MEF) to counter the serious threat posed by the German Navy operating from bases in New Guinea and the Pacific.

The force comprised six companies (500 men) of the Royal Australian Naval Brigade (RANB), a battalion of infantry (1023 men), two sections of machine-guns, a signals section and elements of the Australian Army Medical Corps. These forces were placed under the command of Colonel William Holmes, DSO, VD, Officer Commanding the 1st Australian Brigade. Rear Admiral Sir George Patey commanded the ships involved in the operation. Eventually, his fleet would comprise the cruisers HMAS *Australia*, *Encounter* and *Sydney*; an auxiliary cruiser, the *Berrima*; the destroyers HMAS *Parramatta*, *Yarra* and *Warrego*; and the submarines *AE 1* and *AE 2* with their tenders *Upolu* and *Protector*.⁹

⁹ Accompanying the fleet were the transport *Kanowna*, the supply ship *Aorangi*, the collier *Koolonga* and a tanker, the *Murex*. See S. S. Mackenzie, *Official History of Australia in the War of 1914–18*, vol. X, *The Australians at Rabaul*, Angus and Robertson Ltd, Sydney, 1937.

Rear Admiral Huguet, made the campaign both a joint and coalition operation.

One of the most remarkable aspects of the expedition was the relative speed with which it was mounted. In early August the Government took the decision to raise the force, and *Berrima* sailed from Sydney with her escorts on 19 August 1914. At the same time, Admiral Patey was coordinating the convoying of a similar force from New Zealand to take German Samoa. As a result of this simultaneous operation, *Berrima* did not rendezvous with all the other elements of the fleet until she reached Townsville and Port Moresby. On 9 September, the whole fleet assembled near Rossel Island to the south-east of the New Guinea mainland, where Holmes and Patey made final plans for the attack.

The first troops to go ashore in enemy territory on the morning of 11 September were two RANB landing parties, each twenty-five men strong. They were landed at Kaba Kaul and the main German settlement of Herbertshöhe respectively, with the aim of locating and capturing the German wireless station situated in the vicinity. The twenty-five men put ashore at Kaba Kaul soon located the wireless station at Bitapaka, which was also the main German defensive position.¹⁰ By mid-morning, however, this small landing party was facing serious opposition and had to be reinforced by two companies of the RANB, supported by an Army machine-gun section. The *Sydney Morning Herald* reporter F. S. Burnell recorded that, as the reinforcements left *Berrima*, they were 'pursued by the envy of every other man on the military side of the expedition.'¹¹

¹⁰ The Germans expected the main Australian attack to be launched against the settlement of Herbertshöhe. However, the German operational plan placed a higher priority on defending the wireless station, which was a strategic communications link for their East Asian Squadron. See NAA, Melbourne Office, Series MP1049/1, Item 1915/079, *Narrative of Events, Operations 11th, 12th Sept*, dated 11 March 1915.

¹¹ F. S. Burnell, *Australia v. Germany: The Story of the Taking of German New Guinea*, Allen and Unwin, London, 1915, p. 91.

After a series of small but sharp engagements, the wireless station was captured on the morning of Saturday, 12 September, with six dead and four wounded. The enemy's casualties were unknown, but nineteen Germans, including three officers, and fifty-six native constabulary were taken prisoner.¹² Eight naval personnel (five officers and three enlisted men) were recommended for bravery awards for their part in the fight for the wireless station. The citation for Lieutenant Rowland Griffith's Distinguished Service Order (DSO) indicates that the Navy was quite accustomed to conducting operations ashore:

By his disposition of skirmishers [he] discovered what was virtually an ambush, and by capturing the 3 Germans in command, utterly demoralised the native force and probably averted a disaster to the small party of Naval Reserves. Later on, the scheme of attack drawn up by him & Lieutenant Hill [Gerald Hill was also recommended for the DSO] proved to be sound, and eventually brought about the surrender of the trench. Was slightly wounded.¹³

The successful attack on the Bitapaka wireless station demoralised the German authorities. Two days later, early in the morning of 14 September, the *Encounter* shelled the ridge behind Herbertshöhe and in the afternoon four companies of infantry, escorting machineguns and a 12-pounder artillery piece, marched unopposed on the settlement of Toma. On the morning of the 15th, with *Montcalm* newly arrived in the harbour, the Acting Governor of Rabaul, Dr Haber, surrendered the colony.

Although it was both brief and small scale, the expedition against Rabaul clearly demonstrated the usefulness of joint forces in the defence of Australian interests. To echo General Hutton, it showed the value of troops who could go anywhere and a fleet capable of taking them there. Between mid-September and early December

¹² See Commonwealth Military Journal, *Seizure of the German Pacific Possessions*, vol. 6, 1915, pp. 45–54.

¹³ NAA, Melbourne Office, Series MP1049/1, Item 1915/079, *Letter to Naval Secretary from Major P. Molloy*, dated 20 April 1915.

1914, small elements of the AN&MEF took control of the German settlements at Madang, New Ireland, Nauru, the Admiralty Island Group and the Solomons.

Gallipoli

For Australians, the main legacy of the British-led amphibious landings at Gallipoli lies in the foundation of the ANZAC legend and the impetus that this legend gave to an increased sense of nationhood. Unfortunately, the mythology of ANZAC meant that the highly successful joint operations of the AN&MEF were overshadowed in the national memory. Moreover, participation in the Gallipoli Campaign did not contribute to any greater understanding of the potential role that joint operations might play in Australia's national security. One contemporary account referred to the Australian troops as the 'Kangaroo Marines'. The author of this semi-fictional account focused more on the ANZAC mythology than on the fighting at Gallipoli. He believed that the Australians and New Zealanders had 'astonished the world'.¹⁴ He went on to observe:

They have even exceeded our own expectations. Let us not stint our praise. Let us write deep in the annals of our literature and military history this supreme devotion, this noble heroism.¹⁵

From the broad perspective of the history of warfare in the 20th century, the Gallipoli Campaign was to have considerable influence on the development of both British and American amphibious tactics in World War II. The masterful evacuation of the Allied Forces from the Gallipoli Peninsula demonstrated how quickly armed services are able to learn during wartime. Had the Allies been as concerned with planning, security and surprise in early 1915, the initial landings might have met with the same success as the evacuation. The campaign's failure can be attributed

¹⁴ R. W. Campbell, *The Kangaroo Marines*, Cassell, London, 1915, p. 5.

¹⁵ *Ibid*.

in part to poor doctrine, but inadequate command arrangements and planning also played significant roles in dooming the operation. While the British did possess a *Manual of Combined Naval and Military Operations* (1913), it treated the subject in a very general fashion and was more of an historical overview than an instructional manual. For example, it discusses in very general terms that:

... when operations oversea [*sic*] are contemplated by the Government, it will be necessary for the naval and military authorities to advise as to the forces to be employed for the attainment of the object, having regard to the information available concerning the enemy, the topography and resources of the proposed theatre of operations, the anchorages, landing places and harbours, and the districts inland. A detailed scheme will also be required for the organization and mobilization of the expedition; and plans must be prepared for its embarkation and disembarkation and, as far as possible, subsequent operations.¹⁶

Naval historian, Clark Reynolds, lists ten key areas in which the Gallipoli landings illustrated 'remarkable ignorance of the basic tenets of Britain's combined army-navy landing operations in the past.'¹⁷ However, as the first amphibious operation carried out under the conditions of industrialised warfare, Gallipoli may simply have presented the British and their French allies with a set of new and complex problems that proved to be intractable under the prevailing conditions of 1915. After Gallipoli the Allies did not

¹⁶ Cited by John Lee in *A Soldier's Life: General Sir Ian Hamilton 1853–1947*, Macmillan, London, 2000, pp. 145–6.

¹⁷ See C. G. Reynolds, *Navies in History*, Naval Institute Press, Annapolis, MD, 1998, pp. 158–9. Reynolds' list includes failures in the key areas of unity of command; control of local waters; surprise; rehearsal; beach reconnaissance; shore bombardment; specialised landing craft; ship-to-shore movement; aggressive exploitation of the beachhead; and commitment of floating reserves.

attempt to use amphibious forces in another large-scale campaign for the remainder of the war.¹⁸

Between 1916 and 1918, the Australian Services operated separately, aside from those occasions when RAN ships convoyed elements of the AIF to and from the Middle East and Europe. The postwar period was one of retrenchment for the Australian armed forces. The three Services were frequently pitted against each other in fierce bureaucratic contests for limited defence funds. Under these conditions, with only few exceptions, the trend in training during this period was towards single-service exercises.

Inter-war Developments

The small size of the Australian armed forces and a general lack of funds for development meant that opportunities for officers to pursue professional education were extremely limited. Australia had no staff college system and officers selected for higher ranks were sent to British staff colleges. There they were imbued with the doctrine of Imperial Defence, in which Australia, like the other Dominions, was expected to contribute forces to grand schemes for the defence of the Empire. During the 1920s and 1930s, Australian governments of all political persuasions willingly subscribed to Imperial Defence. While it was relatively cost-effective-Australia's contribution was largely to provide escort ships for the Royal Navy's battle fleet-Imperial Defence was nonetheless detrimental to Australia's development of a clear understanding of its own strategic circumstances. There was, for example, no independent Australian assessment of Gallipoli and hence no development of doctrine for amphibious operations by the

¹⁸ The Germans, however, did. In 1917, they successfully mounted amphibious assaults on fortified, Russian-held islands in the Gulf of Riga. In contrast to the British planning in 1915, the German staff were methodical in their preparations. See James B. Agnew, 'From where did our amphibious doctrine come?', *Marine Corps Gazette*, vol. 63, no. 8, August 1979, pp. 55–7.

Australian armed forces. The lessons of Gallipoli were, however, not entirely neglected, since both the British and the American staff colleges studied the campaign extensively. The results of these studies were incorporated into doctrinal manuals. Occasionally, they were also used as the basis for joint training exercises, which were held to test assumptions, conduct trials of unit organisations or equipment, and to familiarise troops with amphibious techniques.

Doctrinal Developments

The work carried out in British and American staff colleges during the inter-war period made a significant contribution to the development of the amphibious doctrine and techniques employed by the Allies in World War II. While the interpretation of the Gallipoli experience varied between the British and US Forces, the fundamentals of the doctrines developed by each nation were remarkably similar. During World War II, there were frequent but minor disputes over terminology, organisations and other small matters, but the Allies had few problems agreeing on the basic doctrinal principles governing the conduct of amphibious operations.

In 1919, the British renamed and revised the original *Manual of Combined Naval and Military Operations*. Now entitled the *Manual of Combined Operations*, new editions were published in 1925, 1931 and 1938. Successive editions of the manual included chapters on planning and preparations, and incorporated new developments in air support and naval gunfire support. One area in which the British manual lacked both depth and precision was logistics. While the subject of logistics received some consideration, it was largely theoretical. Aspects such as beach parties and the division of responsibilities between the Services for boat handling and moving stores off the beach were settled in the 1931 edition of the manual. There were, however, few practical exercises to rehearse these matters, and little attention was given to such important logistical factors as the development of specialised landing craft or the mechanisation of stores handling.

The Americans did significantly more work on the complex logistics required to put a force ashore and maintain it there. As Major Charles D. Barrett, an instructor on the United States Marine Corps (USMC) 1929 Field Officers Course, told his class:

If Gallipoli has proven anything, [it has] proven that landing operations even against opposition are comparatively simple. It has also proven that keeping troops ashore and keeping them fighting is even more difficult than the landing.¹⁹

In 1934, the US Navy and USMC set up a *Landing Operations* Text Board charged with producing a manual for amphibiouslanding doctrine. To achieve the production of such a manual, the board examined six core areas governing the conduct of amphibious operations: command relationships; naval gunfire support, aerial support; ship-to-shore movements; securing the beachhead; and logistics. The Gallipoli campaign was the key to the board's deliberations on these six areas.

The board examined in detail the failures at Gallipoli and proposed solutions to address them. For example, the British had loaded vital equipment and stores in accordance with the most efficient methods for stowing cargo, not on the basis of their importance to operational success. This mistake had caused significant delays because the British commander, General Sir Ian Hamilton, was compelled to unload and sort cargoes in the Egyptian port of Alexandria, before being able to send them on to his main base on the Greek Island of Lemnos. The solution adopted by the *Landing Operations* Text Board was the development of precise procedures for the loading of equipment and stores in accordance with their importance to the success of the mission, now commonly referred

¹⁹ See Oral History Transcript of Lieutenant General Alfred H. Noble, USMC (Rtd), interviewed by Major L. E. Tatem, 1973. USMC Historical and Museums Division, Washington, DC, p. 49.

to as 'combat loading'.²⁰ The board continued its work up to the eve of World War II. The *Tentative Landing Operations Manual*, first published in 1934, was revised several times, especially in the light of new technological developments and experience gained through both exercises and operations.

Joint Training

In addition to the work of the *Landing Operations* Text Board, the US Navy and the USMC conducted a series of Fleet Exercises (FLEXS), which tested the procedures laid down in the 1934 manual. Between 1935 and 1941, a series of FLEXS were held, mainly in the Caribbean, on the Puerto Rican island of Culebra. Over time, these exercises grew from operations involving a few battalions and a handful of ships to large-scale manoeuvres comprising full divisions, battleships and carrier air groups. The main thrust of the FLEXS was to test the techniques that had been developed to address the six key areas initially identified by the *Landing Operations* Text Board.

As Timothy Moy points out, the FLEXS also proved to be a 'bureaucratic battleground'.²¹ In the late 1930s, participation in the FLEXS by the US Army was a source of extreme irritation to the USMC, which had worked so hard to develop the amphibious landing doctrine. The Marines felt that the Army was trying to steal their doctrine. Such inter-service battles are typical features in the history of joint doctrine and operations. A strong element of inter-service rivalry at the highest level had taken its toll on the Gallipoli campaign and similar feuds would mar the course of many joint

²⁰ For a detailed discussion of the work of the Landing Operations Text Board, see K. J. Clifford, Amphibious Warfare Development in Britain and America from 1920–1940, Marine Corps Association, Edgewood, NY, 1983, especially chap. 2.

²¹ See T. Moy, War Machines: Transforming technologies in the U.S. Military, 1920–1940, Texas A&M University Press, College Station, TX, 2001, p. 139.

operations both during and after World War II. In the case of the three US Services, the dispute resulted in the withdrawal of the US Army from the 1939 FLEX. The *New York Times* made the incident front-page news, noting that it was 'serious evidence of friction and inadequate cooperation between the two services'.²² Undaunted, the Army ran its own amphibious training exercises—on land! Trucks, travelling in textbook amphibious-assault formation, approached a line of flags representing a beach. On reaching their objective, the soldiers in each truck assaulted the beach while their 'landing craft' withdrew to a 'staging area offshore'.²³ The Army did not engage in another FLEX until 1941.

During the whole inter-war period British and Commonwealth Forces took part in a very limited number of training exercises for combined operations. In India, for example, during the early 1920s the Army Staff College at Quetta undertook two exercises that practised students in the planning of combined operations. The second of these exercises was followed by a landing exercise in which 1000 troops were put ashore at Kasid, south of Bombay.²⁴ In Scotland, during another exercise held in the 1920s, a battalion of the Black Watch was embarked in three destroyers at Aberdeen and landed in boats near Rattray Head to recapture their own barracks at Fort George.²⁵ In 1934, almost a decade later, 2000 troops from the 5th Division were disembarked from cruisers and destroyers onto the Yorkshire coast near Hull, at the mouth of the Humber River. Although it was mainly aimed at testing signal communications, this exercise was an opposed landing, with an

²² *Ibid.*, p. 140.

²³ *Ibid.*

²⁴ See L. E. H. Maund, *Assault from the Sea*, Methuen, London, 1949, p. 2.

²⁵ See B. Fergusson, *The Watery Maze*, Holt, Rinehart & Winston, New York, p. 36. No date is given for the Black Watch exercise; the author merely states that it occurred 'in the twenties'. The Kasid landing is also mentioned, but is again undated.

infantry brigade providing the defending force.²⁶ Following this exercise, the Commander-in-Chief of the British Home Fleet, Admiral Lord Cork and Orrery, recommended changes to the signal and artillery chapters of the revised *Manual of Combined Operations*. He also urged the building of more 22-ton Motorised Landing Craft (MLC), which were to be the sole responsibility of the Admiralty rather than a joint Army and Navy undertaking, as had previously been the case.

In Australia, on a weekend just ten days before the twentieth anniversary of ANZAC Day, Tasmanian militia forces from the 40th Battalion took part in an amphibious landing exercise at Blackman's Bay, south of Hobart. The assault was launched from the cruisers HMAS *Canberra* and HMS *Sussex*, two of the Australian Squadron's most powerful ships. A local newspaper report painted a light-hearted picture of the soldiers 'storming' ashore in the miserable conditions provided by a steady downpour. A photograph of the event shows sailors in neat white shorts steadying the bow ropes of boats that had been towed ashore by cutters from the two naval vessels. From the boats enthusiastic militiamen gingerly disembark via planks suspended from the bows. Such rudimentary amphibious techniques harked back to World War I, with the only touch of modernity and realism being supplied by a seaplane that made mock attacks on the landing forces.²⁷

Indeed, the whole event was remarkable for the air of unreality surrounding it. The good-humoured tone of the newspaper story was mirrored by the official reports. The Royal Navy's Rear Admiral W. Ford, commander of the Australian Squadron, remarked on how '... the exercise was entered into whole heartedly

²⁶ Public Record Office, United Kingdom (Hereafter PRO UK) ADM 116/3674 (1676/HF 1360) C-in-C Home Fleet, HMS *Nelson* to Admiral, 27 October 1934.

²⁷ NAA, Melbourne Office, Series B1535/0, Item 754/4/29. Unnamed newspaper cutting on file. Apparently, the mock attacks made by this aircraft were too realistic because the Navy complained to the RAAF about the 'safety' of the attacks.

by all concerned. I understand that the military thoroughly enjoyed their stay on board ...'.²⁸ The unopposed landing had been watched by interested crowds of civilians who turned out in large numbers despite the weather. Given the timing of the exercise, perhaps the most striking feature of the whole affair is the absence of even a hint of irony in the contemporary reports. The press and the military alike seemed totally unconcerned by the fact that, almost twenty years after Gallipoli, the best Australian forces could do was to stage a very small scale replay of the fateful landings. Admiral Ford's report to the Naval Board concluded with the observation:

... useful experience was gained by naval personnel, particularly by Australian officers and men, few of whom had taken part in an exercise of this nature, and an excellent liaison was established between the Army and Navy. It is in this latter respect that such an exercise is so valuable.²⁹

Despite Ford's acknowledgment of the value of joint exercises, the landing at Blackman's Bay remained the only one of its type held in Australian waters during the inter-war period.

The largest combined-operations exercise mounted during the inter-war period was held in the United Kingdom in early July 1938 at Slapton Sands, near Dartmouth. In poor weather, the landing force had set out in a mixed naval force of cruisers and destroyers. Indeed, the weather was so bad that the troops on board suffered from seasickness and an aircraft had to be used to determine whether the condition of the landing beaches was still suitable for the exercise to proceed. The landing site had been selected because it conveniently offered deepwater anchorages close to the shore. At 2 a.m. the first assault waves rowed ashore with muffled oars to maintain surprise. There was no opposing force, however—merely observers from the brigade staff and the War Office. The 22-ton MLCs were not used because none of the ships had gear capable of putting them over the side. The result of this

²⁸ Report on Combined Operations in Hobart to the Secretary of the Naval Board, dated 26 April 1935.

²⁹ NAA, Melbourne Office, Series B1535/0, op. cit.

oversight was that no vehicles, artillery or other heavy equipment were landed and the logistic build-up, so important in this type of operation, was not practised.

A report written for the journal *Fighting Forces* by an anonymous correspondent describes the British troops coming ashore in much the same manner as their Australian counterparts had three years earlier:

Directly the keel beached a soldier jumped out from the bows, doubled up the beach a few yards, halted, turned about, and stood at ease ... Two sailors then got out and affixed the plank gangway to the bows of the boat. This took some time [about two minutes] ... Then I counted twenty-six men landing in single file and forming up on the leading man.³⁰

The reporter found much to praise in the bearing of the troops and the comprehensive staff-work undertaken by Brigadier Bernard Montgomery and his staff over a period of several weeks prior to the exercise. That aside, he was moved to ask, 'But let us consider what was achieved from a wider point of view?'.³¹ To begin with, he noted that any or all of the four key advantages enjoyed by the landing force-adequate planning time, favourable weather, the absence of opposition and the ability to have the troopships anchored within sight of land—would be unlikely to pertain during hostilities. He suggested that the Slapton landing had only proven the self-evident fact that under such conditions it was possible to conduct an amphibious exercise in the dark and to bring the landing force ashore in an orderly fashion. The reporter also contrasted the precisely planned conditions of the peacetime exercise with the chaos experienced at Gallipoli. He concluded that, for a landing on a hostile shore, 'the primitive fighting qualities [initiative, speed and aggression] should be stressed, rather than the modern conception of precise chain of command, discipline [and a] complicated system of communications.³²

³⁰ 'The Slapton Sands Landing', *The Fighting Forces*, vol. XV, no. 3, August, 1938, p. 225.

³¹ *Ibid.*, p. 226.

³² *Ibid.*, p. 230.

This accurate and professional assessment highlights a major failing of all the joint training exercises that British and Commonwealth Forces undertook during the inter-war period. Without exception, they appear to have suffered from the same tendency to orchestrate the scenario, resulting in a lack of reality. The trend to disregard logistics, micro-manage training exercises and ignore the need for research and development of equipment necessary for successful amphibious operations was in marked contrast to the Japanese. At Shanghai in 1932, over a period of three days, the Japanese had landed an entire division (12 000 men), sixty artillery pieces, fifteen tanks and twelve aircraft (in crates). Although the landing was unopposed, the gross weight landed for the forces was an impressive 66 341 tons, which required only fourteen ships, many of them specially constructed for participation in landing operations.³³

Considering what the Allied naval, land and air forces eventually achieved in the amphibious operations that they undertook during the North African, European and Pacific island campaigns of World War II, their relatively poor preparation was obviously grounded on sound principles. So far as the Australian Forces were concerned, the legacy of World War I and the inter-war period was a distortion of the relative value of land, sea and, later, air forces to the defence of Australia. In the minds of many leaders, both political and military, their belief in the ability of a fleet operating from the Royal Navy's Singapore base to defend Australia negated the need for detailed inter-service training and cooperation by the Australian Forces.

Reliance on 'Fortress Singapore' was so complete that the specifications of the base's artillery defences had been used to decide the calibre of coastal defence guns (9.2-inch, rather than 15-inch) in Sydney, Melbourne, Newcastle and Fremantle—much to the frustration of Army leaders, who were ultimately responsible

³³ Cited in Clifford, *op. cit.*, p. 47.

for defence of these areas.³⁴ However, the chief importance of Singapore was that it offered Australia's politicians a cheap option for national defence. In the decade before World War II, the majority of Australia's meagre defence spending was devoted to the RAN—approximately double that expended on the land forces.³⁵ The role of the Australian naval forces was to cooperate with the Royal Navy in Imperial Defence. The RAN was not designed for local defence—that is, the defence of the Australian continent—which was left to the Army and the RAAF.

The task of continental defence was a huge burden for these two small, poorly equipped and under-trained Services to assume. By 1939, twenty years of financial neglect by both conservative and Labor governments had created fierce inter-service rivalries, leaving the three Australian Services poorly placed to cooperate in the defence of the nation. In addition, with the outbreak of war, commitments to Imperial Defence in the Middle East stripped Australia of her best naval and land forces. When Japan attacked in 1941, the forces available for national defence were extremely limited.

Training for Amphibious Operations in World War II

In the first six months of World War II in the Pacific, the Japanese conquered a vast area to the north of Australia in a series of well-planned and executed amphibious operations. The occupation of Australia's northern approaches by an enemy power was an event that Australian defence planners had long feared, but had done little to counter.³⁶ As they recovered from the psychological and

³⁴ N. Gow, 'Australian Army Strategic Planning 1919–39', *Australian Journal of Politics and History*, vol. 23, no. 2, August 1977, p. 171.

³⁵ J. Robertson, *Australia at War*, 1939–1945, Heinemann, Melbourne, 1980, p. 7.

³⁶ An account of the last-minute defensive preparations made by Australia in this area is given by Michael Evans in *Developing Australia's Maritime Concept of Strategy: Lessons from the Ambon Disaster of* 1942, Study Paper No. 303, Land Warfare Studies Centre, Duntroon, ACT, July 2000.

physical shock of the rapid Japanese assaults, Australia's political and military leaders realised that recapturing these conquered territories would require the closest cooperation between all three Services to master the techniques of amphibious warfare. In a memorandum of March 1942, the Deputy Chief of the General Staff, Major General S. F. Rowell, noted that there were at least two steps that Australia could take to re-establish a ring of island bases to the north and north-east of the continent. One step was the planning for the provision of special equipment, including landing craft and air landing equipment; and another was the establishment of a School of Combined Operations.³⁷

At this stage, planning was all that could be done because, like so much else in early 1942, no amphibious equipment or training facilities existed in Australia. About the only amphibious asset the Australian Army possessed was a handful of officers, from the 6th and 7th Divisions, who had attended courses at the British Combined Training Centre Kabrit, in Egypt.

In April 1942, three officers—Commander F. N. Cook, DSC, RAN; Lieutenant Colonel M. Hope, a British artillery officer; and an Australian Army officer, Major A. Rose—took the first steps to commence amphibious training in Australia. They conducted a rapid, but extensive, reconnaissance of Australia's east coast to find suitable training areas. Their survey resulted in the selection of three sites: Port Stephens, north of Newcastle in NSW; the Toorbul Point – Bribie Island area, north of Brisbane; and the San Remo – Trinity Beach area, just to the north of Cairns. In each of these locations major amphibious training establishments were developed during the war. At Port Stephens, the sheltered waters of Salamander Bay offered the rare combination of calm water close to surf beaches. This combination was ideal for the conduct of basic and advanced landing exercises. Due to these unique features, the Port Stephens area soon became the

³⁷ NAA, Melbourne Office, Series MP 1587/1, Item 289. Long Range Planning for Offensive Action—Landing Operations, 13 March 1942.

site of two major amphibious training establishments: HMAS *Assault* and the Joint Overseas Operational Training School (JOOTS).

Well before the arrival of the US Navy's Rear Admiral Daniel Barbey to take command of Amphibious Forces in the South-West Pacific Area (SWPA) in early 1943, these training establishments had started to grapple with the complex problems of amphibious warfare. Adding to the difficulties that these early planners faced was the simple fact that any amphibious operations conducted by the US-Australian coalition would involve all three Services from each nation. At the elementary level, problems existed because the basic terminology used by the two nations was different. For example, instead of the word 'amphibious', the Australians used the British term, 'combined operations'.³⁸ However, as mentioned above, when it came to fundamentals, the US and British doctrines were remarkably similar, with only slight variations in operational methods. Even small differences in terminology and style were nevertheless enough to create friction between the coalition partners. Moreover, the operational focus of the JOOTS meant that conflict between US and British methods was bound to manifest itself at that school first.

Many of the criticisms of American methods came from British, New Zealand and Australian officers with experience in amphibious operations in Europe and the Middle East. At the core of these criticisms was the belief that the Americans were too rigidly theoretical and the instruction at the JOOTS was based on 'rather out of date theory from American Army text books'.³⁹ In the SWPA, the US Army and Navy, but not the USMC, had prime carriage of amphibious operations. Both of these services had

³⁸ As part of longstanding agreements between Britain and Australia, the training and equipment of the two nations was standardised to meet the needs of cooperation in Imperial Defence. Australian forces used British doctrine manuals, generally without any alteration for local conditions.

³⁹ PRO UK, DEFENCE 2/1045. Letter from Lieutenant Colonel Walker, RM, to Chief of Staff Combined Operations HQ UK, dated 24 March 1943.

separate doctrine manuals that were based on the Marine Corps 1934 *Tentative Manual for Landing Operations*. The US Army's manual was entitled *Landing Operations on Hostile Shores*, and several new editions were published throughout the war as the Army gained practical experience. For this and a variety of other reasons, amphibious operations in the SWPA differed in character from the assault landings undertaken by the USMC, US Army and US Navy in the Central Pacific Campaigns.

Two sets of factors combined to make the SWPA ideal for the conduct of amphibious operations. The first set consisted of the physical characteristics of the region, which had numerous islands, most of which were mountainous and almost all of which were covered by dense tropical rainforests. The second comprised the difficulties faced by armed forces operating in this harsh physical environment. The 1942 Kokoda-Buna Campaign had shown the Allies the wide range of problems—tactical, logistic and medical involved in land operations conducted in the tropics. In addition, for much of the war, the SWPA was denied the shipping and manpower resources devoted to the European and Central Pacific In an effort to overcome these problems, General Theatres. MacArthur and his staff developed a strategy that made maximum use of their limited air and sea power to avoid protracted land combat.

When MacArthur's forces conducted landing operations, economy of force was a key element in planning. Amphibious operations in the SWPA were often used to bypass Japanese strong points and put troops ashore in areas that were only lightly held by the enemy. Captured areas were then rapidly developed as air bases and logistic bases. After a few weeks they would provide the necessary air cover and materiel support for the next amphibious leap along the northern coast of New Guinea, or later from island to island within the archipelago of the Netherlands East Indies (Indonesia). Thus the air and logistical build-up, not the destruction of the enemy, was the key purpose of these landings. This is not to say that the fighting was any less bitter or less difficult than in other Pacific theatres, but there were no Tarawas or Iwo Jimas in the SWPA, mainly because MacArthur did not have the resources for assault landings on a lavish scale.

The reports of British officers such as Lieutenant Colonel Walker of the Royal Marines, who had been seconded to Australia to assist with the establishment of amphibious training, are nevertheless filled with resentment and frustration. They felt that the Americans were obstructive and they occasionally vented their anger at not being able to institute what they considered to be a useful program of training. After one exercise involving the RAN's Landing Ship Infantry (LSI) *Manoora* and the US Navy's (USN) APA (large amphibious transport) ship *Henry T. Allen*, Walker wrote acerbically:

It was quite a good exercise but, all the same, there is a lot which they [the Americans] could learn from us [the British]—if only they would!... What worries us is the American unwillingness to learn anything from British methods or to let the Australians and British have any say in running preparations for amphibious ops. For instance: *Manoora was made to lower her boats empty and to go through that fatuous American boat-circling drill before the boats left to go inshore; from the beach we could hear the roar of landing craft engines five miles out to sea for one hour before the 0200 hrs landing.*⁴⁰

Despite these initial problems, under Barbey's able leadership the US and Australian forces soon overcame their differences and conducted fifty-six successful assault landings between late 1943 and the end of hostilities in 1945. In these operations, *Manoora* and the other RAN LSIs formed part of the success story of inter-Allied cooperation.

The spirit of improvisation that prevailed during the early days of training is captured in *Spearheads of Invasion*, the wartime memoir of Lieutenant Commander W. N. Swann, RAN. Swann served on HMAS *Westralia* from early 1942, when it was converted from an

⁴⁰ PRO UK, DEFENCE 2/1045. Letter from LTCOL Walker, RM, to Chief of Staff Combined Operations HQ UK, dated 10 April 1943. Emphasis added.

Armed Merchant Cruiser to one of the RAN's three LSIs. HMAS *Assault*'s role of training landing craft crews and beach teams made it a logical base for the LSIs *Manoora*, *Kanimbla* and *Westralia*.

These three ships were each capable of carrying a battalion of soldiers. Together they could transport an Australian Brigade Group or an American Regimental Combat Team, both formations consisting of approximately 5000 troops, making them important assets in the Allied war effort. Swann, who remained with *Westralia* throughout the war, also records his ship's participation in seven of the key landing operations launched by American and Australian Forces in New Guinea, the Netherlands East Indies and the Philippines.

Inter-service Cooperation and the Conduct of Amphibious Operations in the New Guinea Campaign

The strategy adopted by MacArthur for the SWPA required close cooperation between the three Services, both US and Australian. The ground forces of each country often worked separately from each other, but air and naval support typically drew on US and Australian resources. One of the first amphibious operations in which Australian troops took part was Operation *Postern*—the assault on Lae by the 7th and 9th Divisions.

Postern was a truly joint operation, involving an amphibious assault from the east by the 9th Division in conjunction with an air landing operation from the north-west by the 7th Division. Naval participation in the attack included a brief bombardment of the landing beaches by five USN destroyers, one of which also acted in the fighter-direction role for Allied aircraft. The ships were divided between two assault beaches, codenamed Yellow and Red. Two destroyers were allocated to Yellow Beach, and three to the larger Red Beach.

Acting as Bombardment Liaison Officers (BLO), Australian Army artillery officers coordinated bombardment operations from the USN ships. Major N. A. Vickery, the BLO on USS *Lamson*, noted that, although generally cooperative, the American crew's knowledge of this type of operation was 'superficial'. According to Vickery, the Americans were 'unwilling to depart from set and standard ideas on procedure' and 'did not seem to appreciate the Army's problems'.⁴¹ The BLOs soon proved their worth when the initial bombardment of the target area was 1500 yards out of line, due in part to the inaccuracy of the ships' radars. Fire was adjusted using map readings supplied by the BLOs and the fire missions proceeded as planned.

Other minor problems arose when the USN ships did not answer the Army's call for fire, leaving the troops wondering whether the support they had requested would arrive.⁴² Brigadier R. N. L. Hopkins, the Australian Liaison Officer with Admiral Barbey's 7th Amphibious Force, also listed several areas where the Australians and their allies could make improvements for future operations. He concluded, however, that the landings on the morning of 4 September 1943 were carried out on schedule and surprise was complete against the lightly held Japanese positions.

At Aitape, during July 1944, No. 100 Squadron, RAAF, and its attached Army Unit, 11 Australian Air Liaison Section, provided aerial observation and direction for naval gunfire support (NGS) of ground operations. The squadron's Bristol Beauforts had not been used in this role prior to this operation, but the skilled aircrews and their air liaison section were able to adapt their skills to provide NGS. Indeed, the naval personnel were fulsome in their praise of the high degree of cooperation provided by the squadron, enabling missions fired against suspected accurate to be enemy concentrations, headquarters, supply troop areas and communications facilities. As 11 Australian Air Liaison Section's

⁴¹ Australian War Memorial (AWM) Series 54 Item 505/7/18 Part 2: *Report on Naval Bombardment in the Lae Operations* dated 28 October 1943, p. 1.

⁴² *Ibid.*, p. 5.

Captain K. A. Coventry wrote in his report of the operation, 'the ships' captains and gunnery officers (USN and RAN) were emphatic that they had never before experienced such simple and accurate observations or had better communications with the spotting aircraft.'⁴³

The extent and prevalence of inter-service cooperation in the SWPA was a necessary response to the unique problems imposed by the geography and climate of the theatre. Units of all the armed forces undertook long periods of training before participating in amphibious assaults. With greater experience came the realisation that the complexity of amphibious operations required the development of specialised units in all three Services. From late 1944 onwards, the SWPA—particularly USN units and American ground forces—also enjoyed an increase in resources. This enabled MacArthur to intensify his campaign, and while the Americans pushed on towards the Philippines and Japan the Australians were left to fight their own campaign in New Guinea and the Netherlands East Indies.

Towards the end of the war, the Australian 1st Corps, with significant air and naval support from the US Forces, undertook three large-scale amphibious operations on the Japanese-held island of Borneo. Codenamed *Oboe*, the first of these operations involved the seizure of Tarakan Island, beginning on 1 May 1945. The second was the attack at Brunei Bay from 10 to 17 June 1945, while the final *Oboe* operation took place on 1 July 1945, with the landing of the 7th Division at Balikpapan. Tarakan was carried out in order to seize a base from which fighter aircraft could support the other *Oboe* operations. Unfortunately, although the attack was successful, the landing fields proved to be waterlogged and required a great deal of preparation. However, the scale of resources now available in the SWPA were such that ample fighter

⁴³ AWM Series 54 Item 603/6/1. *Aerial Observations and Control of Naval Bombardment—Aitapte, July 1944*, dated 11 August 1944.

Brunei Bay

Both historically and strategically, the Brunei Bay operation was controversial. The reason for the operation was to capture a port for the British Far Eastern Fleet to use as an advanced operational base. There are, however, strong indications that, even before the attack was launched, the British had rejected the area as a base for operations against the Japanese. By this time such operations were taking place in the Philippines and the Japanese home islands. Historians have suggested that MacArthur's insistence on carrying out this operation was sheer obduracy.⁴⁴ For whatever reason, the attack went ahead, and it is to the credit of the Australian commanders and their supporting forces that the operation succeeded with relatively light casualties: 114 dead against 1234 Japanese killed and 130 taken prisoner.

As the war progressed, the Japanese adopted new measures to counter the strength of Allied landing forces. Initially all landings had been met with fierce resistance on the landing beaches. By 1945, however, virtually all landing forces found that the enemy's main defence lines were now encountered well back from the beach and that resistance stiffened as the attacking forces pushed further inland. This had certainly been the case at Tarakan, and Allied forces encountered similar tactics at Brunei Bay. Although the Australian 9th Division was well established ashore on 16 June, when the main body of the naval force supporting the landings departed for their base at Morotai, the fighting did not cease until 1 July.

⁴⁴ See, for example, Lieutenant G. Hayes, USN, *The History of the Joint Chiefs of Staff in World War II—The War Against Japan*, vol. 2, *The Advance to Victory*, Historical Section, Joint Chiefs of Staff, Washington DC, 1957, p. 365ff. (NARA RG 218, Box 1.)

The *Argus* reported that the 1st Corps Commander, Lieutenant General Sir Leslie Morshead, expected a 'tedious and arduous' campaign largely due to the difficult terrain and the Japanese ability to make good use of such ground in the defence.⁴⁵ Troops would have to negotiate 'many bridgeless rivers and swamps, knife-edged rivers and mountain passes ... and generally there would be no roads'.⁴⁶ These terrain features created problems for the tanks supporting the infantry. As David Horner has noted, however, good use of artillery at Brunei enabled the Australians to overcome this problem to a great extent.⁴⁷ Such support was certainly a far cry from the level of artillery support at Buna in 1942, when the number of guns north of the Owen Stanley Mountains was less than ten.

Indeed, with the abundance of materiel and the logistical support that it made so readily available, the final result of the operation was never in doubt. The USN's post-landing report for the Brunei operation runs to just under one hundred pages and details every aspect of the landings-from rehearsals in the pre-assault phase to the performance of logistics, medical and fighter aircraft direction during the campaign. The report contains recommendations for improvements and even includes a pictorial section, illustrating aspects of the campaign. As the USN's assault force withdrew on 16 June, Morshead sent a signal to its commander, Rear Admiral Royal. Morshead expressed his '... admiration and appreciation of the thorough, efficient, gallant and successful manner in which the naval force ... carried out its vital role ... Thank you for all your help and cooperation. Our best wishes for further success and good luck to you always'.⁴⁸ The sentiments in this message were more than simple courtesy; they were a heartfelt acknowledgment that,

⁴⁵ *Argus*, 14 June 1945.

⁴⁶ *Ibid*.

⁴⁷ D. Horner, *The Gunners: A History of Australian Artillery*, Allen & Unwin, Sydney, 1995, pp. 415–17.

⁴⁸ NAA, Melbourne Office, Series MP1185/8, Item 1932/2/179. *Report of Amphibious Attack on Brunei, Borneo*, dated 19 June 1945.

Balikpapan

The landing at the important oil-exporting port of Balikpapan had been the subject of a dispute between the Australian military and US naval planning teams. The Australians wanted to land their troops on the objective and had selected landing beaches in the Klandasan area. The idea was that an early success would counter the new Japanese tactics and reduce the duration of the campaign, and thus the number of causalities the ground troops would suffer.

Attacking the centre of the enemy's defences would disorganise them and permit the rapid capture of key points.⁴⁹ It was a calculated risk, but at this stage of the war the Japanese had altered their tactics for defending against amphibious assaults. They no longer placed the majority of their forces to cover the landing beaches. The bulk of their troops were now held back so that, even when the assaulting forces had secured a beachhead, they still had to fight for every piece of ground. The USN planners had wanted to land near Sepinggang, where their ships could stand closer in, and were away from the strongest Japanese coastal artillery Such landing would required defences. a have the 7th Division to make an approach march of over ten miles, fighting all the way. Eventually, the Navy agreed to the Army's plan, and a preliminary bombardment was conducted by both air and naval forces to soften up the coastal guns and anti-aircraft defences. The bombardment lasted over thirty days.

In addition to the preliminary bombardment, the display of firepower on F-Day, 1 July 1945, was the heaviest ever witnessed by Australian troops during the war. Malcolm Uren recalled:

⁴⁹ The full list of reasons is given in G. Long, *Australia in the War of 1939–1945: The Final Campaigns*, Australian War Memorial, Canberra, 1963, p. 505.

Never had the Australians seen such destructive forces let loose by their side. The air and sea shook and reverberated to the crashing discharge of hundreds of naval guns ... Whole buildings and trees were tossed grotesquely in the air, to fall back shapeless and shuddering ... all the time the Japanese guns continued firing but without much effect. The Air Force added its quota to the inferno until it seemed nothing could possibly live on or near those belted beaches.⁵⁰

If this display of firepower was a measure of how far the US and its Australian allies had come in just three years, so were a wide variety of specialised RAN and Army units that went ashore with the first waves of assaulting infantry.

In *The Final Campaigns*, the Army's Official Historian, Gavin Long, comments on the 'multitude of specialist units and detachments which exited at this stage of the war.⁵¹ The RAN's LSIs each had Landing Ship Detachments (LSD) from the Royal Australian Engineers. These men assisted with the loading and unloading of the ships and by this time had reached very high degrees of efficiency. For a previous operation, the LSD commander in *Kanimbla* recorded that launching all ships' boats had taken under fourteen minutes and that 972 men, 44 vehicles and 100 tons of stores and equipment had been discharged in just over two hours.⁵²

In *Westralia*, Commander A. V. Knight had already noted that the LSD on his ship had proven to be 'a very definite asset', contributing 'greatly to the general efficiency shown in all the operations in which the ship has participated.⁵³ By 1945, in addition to the three LSIs, the RAN had a flotilla comprising six Landing Ship Tanks (LST), which represented a significant allocation of resources to another specialist amphibious task.

⁵⁰ M. Uren, *1, 000 Men at War: The Story of the 2/16th A.I.F.*, Heinemann, Melbourne, 1959, p. 229.

⁵¹ *Ibid.*, p. 506.

⁵² Australian War Memorial (AWM) 54, Item 963/21/14 Part 1: *3 Australian Ship Detachment Reports*, dated 25 March 1944.

⁵³ AWM 78, Item 363/2. *Report of Proceedings Westralia*, dated 1 June 1944.

On the beach, both RAN and Army units assisted with the rapid unloading and turnaround of landing craft, and with the dispatch of men and equipment towards the front line. RAN Commando groups would go ashore with the first waves of the assault to signpost the beaches for the delineation of various landing areas and for any other naval tasks on the beach. The Principal Beachmaster (PBM), an RAN officer, was charged with the task of guiding and supervising all craft that landed during the operation, while the role of the Army Beach Groups was to unload the landing craft. These various layers of responsibility, distributed as they were between the two services, required a high degree of inter-service cooperation. Following the Tarakan Operation in May 1945, the RAN's PBM had reported that 'complete harmony' had existed throughout the operation with his Army counterpart in the 2nd Australian Beach Group.⁵⁴

Assessing the Balikpapan Operation, Rear Admiral Albert Noble, USN, wrote in his after-action report:

In spite of the many nationalities and military services involved in the operation, there was little difficulty experienced in the preparation and planning for this operation. Minor differences in organisation and methods of operation were quickly adjusted by adoption of the other's ideas, or, when necessary, by compromise.⁵⁵

The value of this spirit of inter-service cooperation that was developed in the Pacific left its mark on the Services well before the end of the war. In his report on the postwar defence of Australia, the Deputy Chief of the Naval Staff, Captain R. Dowling, noted:

The whole trend of modern attack warfare in the Pacific is towards combined operations [*sic*: joint operations]. By definition this involves the participation of naval units ... Thus any plan for a post-war naval

⁵⁴ NAA, Melbourne Office, Series MP 1587/1, Item 289. Naval Requirements for AMF Units in Amphibious Operations, dated 30 June 1945.

 ⁵⁵ PRO ADM 199/1516. Action Report on Balikpapan–Manggar–Borneo Operations, US 7th Fleet, 30 August 1945.

force must include landing craft for amphibious training. For the same reason an amphibious force, patterned on the United States Marine Corps, is a most desirable naval contribution to combined operations.⁵⁶

In the immediate postwar period, the lessons of the Pacific War were not lost on Australia's defence planners. In February 1946, the Australian Chiefs of Staff drafted their appreciation of the nation's strategic circumstances. As they saw it,

The strategic choices open to Australia were isolation or cooperation with other nations. The chiefs rejected what they termed the fallacy of isolation because, as an isolated continent with a small population and limited resources, [Australia] is unable to defend herself unaided against a major power.⁵⁷

They concluded that an isolationist policy of continental defence would only lead to disaster, and hence national security policy '... must be built upon cooperation with other nations.'⁵⁸ It followed that the nation's preparations for war '... must be such that her forces can co-operate with those of other nations [and that] overseas commitments may be necessary and in fact unavoidable in ... a future war.'⁵⁹

⁵⁶ NAA, Melbourne Office, Series MP1185/8, Item 1855/2/549. Paper by DCNS, CAPT R. Dowling on the postwar defences of Australia, dated 27 October 1943.

⁵⁷ NAA, Canberra Office, Series A5954/69, Item 1645/9, An Appreciation by the Chiefs of Staff on the Strategical Position of Australia, February, 1946, Part 1, Introduction, p. 6.

⁵⁸ *Ibid*.

⁵⁹ Ibid. The Chiefs' conclusions, based as they were on recent experience in World War II, remain sound. The most significant conclusion of Williamson Murray's and Allan Millett's three-volume work, *Military Effectiveness*, which presents case studies of the performance of military organisations in the period 1914 to 1945, was that nations with a sound strategy could redress the tactical and operational deficiencies of their armed forces. However, those nations with a faulty strategy, notwithstanding the effectiveness of their armed forces on the battlefield,

In order to meet the requirement for credible forces to contribute to coalition operations, the appreciation called for a force structure in which the three Services were organised and trained to provide a mobile joint taskforce based on permanent personnel, rather than specially raised forces or militia. Key aspects of the force structure that the service chiefs wanted were a fleet train capable of maintaining the task force operating in the South-East Asian littoral; Army units trained for amphibious operations to take and hold forward operating bases; and an air component that included not only fighters and bombers, but also sufficient strategic transport assets to support the other services.⁶⁰ The involvement of Australian naval and military forces in an international conflict was a direct result of this policy of developing joint forces for participation in coalition operations.

Australia's Postwar Defence Policy and Political Economy

The 1946 Appreciation was written by men who had learnt the lessons of World War II. They believed that Australia could only be successfully defended with allied support and, in order to attract such support, the nation needed to field joint forces that were structured for coalition operations. The high degree of interoperability that enabled the RAAF, RAN and the Australian Army to work as part of the UN coalition in the Korean War was a vindication of that belief. The Menzies Government, elected in 1949, had endorsed the nation's requirement for versatile joint forces to support its policy of Forward Defence, which would see Australian personnel deployed overseas to oppose the communist threat.

In December 1950, with the added impetus of the Korean War, the Coalition Government had formed a National Security Resources Board (NSRB) to 'superimpose an expansion of the immediate and

were invariably defeated. See A. Millett and W. Murray (eds), *Military Effectiveness*, 3 vols, Unwin Hyman, Boston, 1989.

⁶⁰ *Ibid.*, Part X, Local Defence, p. 24 and Part XII, Australia's Forces to be Maintained in Peace, p. 27.

prospective defence programs on an economy already bearing the strain of ambitious programs of development and immigration^{1,61} The main tasks of the NSRB were to manage the expansion of the armed services, build new defence infrastructure and purchase new equipment. The program was allocated £395 million over the three years 1951 to 1953. For the RAN it included the construction of ten new ships and the refit or conversion of seventeen more. The RAAF received 690 new aircraft, including nineteen Australian-built Lincoln bombers, and funds were also spent to further plans to produce Canberra and Sabre jets locally. The Army purchased sixty Centurion tanks and 1000 transport vehicles.⁶² Towards the end of 1952, however, the cost of this massive expansion began to tell on the already strained Australian economy.

In the three years up to 1950, Australia had taken in 350 000 migrants. The Menzies Government made plans to accommodate a further 200 000 per year, without impacting on the nation's standard of living. This program was to be achieved by boosting production of commodities such as raw materials and foodstuff, which were Australia's chief income-producing exports.⁶³ However, even with a wool boom in the early 1950s, the Government's ambitious programs of national development and defence expansion soon created a balance-of-payments problem. As early as December 1951, the Treasurer, Arthur Fadden, had warned Menzies that these programs would put the country in debt. The only means of financing the trade deficit they would create was to cut imports or increase borrowing from overseas.⁶⁴ Faced with these unpleasant choices, the Government decided that the defence expansion could

⁶¹ NAA, Canberra, Series A4639/XMI, *Minutes of the First Meeting of the NSRB*, dated 18 December 1950.

⁶² NAA, Canberra, Series AA 1985/58/1, Item 4, *NSSRB Report: Defence* and Development, 1950–1953, dated December 1953.

⁶³ NAA, Canberra, Series A816/1, Item 11/301/739, *Economic Development in Australia*, dated 8 August 1950.

⁶⁴ NAA, Canberra, Series A571/2, Item 51/1723, *The Balance of Payments Problem*, Cabinet Agendum dated 3 December 1951.

not be allowed to have a detrimental effect on the nation's economic development. Indeed, the Prime Minister felt that 'excessive expenditure on defence preparations to meet a threat which may never materialise would further the communist aim'.⁶⁵

The Defence Committee's Report, A Strategic Basis of Australian Defence Policy, which cited changes in the international environment, made the Government's shift to a more affordable defence policy possible. The Defence Committee had concluded that '... the likelihood of global war is now more remote than it was considered to be at the time the present Defence Policy was determined [1950] for two main reasons, namely the strength of the Allies has considerably increased and Russia has achieved much by her cold war tactics'.66 While the threat of global war had abated, the committee reported that the Cold War had intensified. On the basis of these assessments, the committee recommended that Australia's defence preparations combine preparation for the remote possibility of global war with participation in Cold War operations. The highest priority was allocated to Cold War operations, such as the counterinsurgency operations in Malaya and supporting collective security arrangements under the Southeast Asia Treaty Organization (SEATO).

The effect of this change in defence policy on Australia's defence capability was not long in coming. Commenting on the defence committee report, the Minister for Defence, Philip McBride, noted that the defence vote for the year 1953–54 had yet to be decided. The decision hinged on 'the outcome of the Armistice negotiations in Korea, and the effect of the armistice on the future strength of the Forces'.⁶⁷

⁶⁵ NAA, Canberra, Series A4940/1, Item C2813, *A Strategic Basis of Australian Defence Policy*, dated 8 January 1953, p. 6. Emphasis added.

⁶⁶ *Ibid.*, p. 7.

⁶⁷ NAA, Canberra, Series A5954/69, Item 1509/16, *Defence Department File* on the Strategic Basis of Australian Defence Policy, dated 8 January 1953.

The Long Decline of Australian Naval–Military Cooperation

The Cold War period, from mid-1950s to the late 1980s, saw a slow decline in cooperation between the Services. A key reason for this gradual deterioration of inter-service cooperation was that the daily routines of peacetime and the low-intensity conflicts of the period (the Malayan Emergency and the Vietnam War) allowed few opportunities for regular training in joint operations. For almost three decades single-service operations and issues dominated the concerns of the whole ADF.

For a time after World War II, limited joint training was continued in the Port Stephens area. In general, however, the postwar period was one of retrenchment. Budgetary pressures focused the minds of Service leaders inwards and sapped their resolve to engage in large-scale joint training activities. Among the first to go were the many specialist units required for amphibious warfare. The RAN's 10th Flotilla, comprising LSTs, was disbanded in 1951. Even when such units survived, their existence was often vestigial and they were often allocated to the reserve components of the three Services. Instances of joint cooperation did occur during the period, such as when HMAS *Sydney* was employed as a fast troop transport during the Vietnam War. *Sydney*'s twenty-two voyages to Vietnam again underlined the value of the strategic lift capabilities of the Navy, since the vessel was responsible for transporting the bulk of the Army's Task Force to and from the war zone.

Notwithstanding significant reorganisation and frequent calls for better coordination between the Services, in the period following the Vietnam War single-service issues or inter-service rivalries dominated thinking in the ADF.⁶⁸ Without a clearly defined threat,

⁶⁸ There were, however, also men of vision such as Commander P. J. M. Shevlin and Lieutenant Colonel L. D. Johnson. See Commander Peter Shevlin, 'A New Amphibious Capability for the Australian Services', *Defence Force Journal*, September–October 1978, no. 12, pp. 6–11; 'Australian Amphibious Capability—An Essential Element of National Seapower', *Journal of the Australian Naval Institute*, February

strategic guidance once again drifted towards the fallacy that Australia's armed forces should only be concerned with continental defence. During the 1980s, the ADF conducted the Kangaroo series of exercises to practise the use of joint forces in continental defence. While relatively large scale, these exercises were highly choreographed and their chief value consisted in keeping alive the broad concepts of inter-service cooperation. By the mid-1990s, despite much hard work and goodwill from all three Services, the ADF possessed only rudimentary joint doctrine and no clear concept for the conduct of joint operations.

From the mid-1990s, however, a series of economic and political crises in the Asia-Pacific region gave fresh impetus to inter-service cooperation, largely by illustrating the need for Australia to adopt a maritime strategy as the only effective method to safeguard her national interests.⁶⁹ A corollary of this new strategic direction was the need for the RAN and the Army in particular to give fresh thought to the problems of amphibious operations. At the same time, following the Navy's purchase of two USN Newport Class ships and the Army's decision to return to service a limited number of amphibious cargo lighters (LARC-V), the ADF's small amphibious capability received a significant boost. Between 1999 and 2001, both the Navy and the Army gave serious attention to the development of operational concepts for this rejuvenated capability.

^{1980,} vol. 6, no. 1, pp. 35–8; and Lieutenant Colonel L. D. Johnson, 'The Need for an Australian Amphibious Force', *Army Journal*, no. 297, February 1974, pp. 3–21. For an analysis of amphibious theorists, see Evans, 'Unarmed Prophets: Amphibious Warfare in Australian Military Thought', *op. cit.*, pp. 10–19.

⁶⁹ See Commonwealth of Australia, *Defence 2000: Our Future Defence Force*, p. 47.

Difficult and Practical Problems—Towards an Australian Amphibious Force

Reflecting on the problems of defence planning, Lord Tedder offered advice that might well have been formulated with Australia in mind:

Awkward questions of relative priority will always arise, but in the final stages of a war they rarely have the critical urgency they have at the outset ... Surely it is the problems of the early stages of the war which we should study. Those are the difficult problems; those are the practical problems which we and every democratic nation have to solve.⁷⁰

Over the past three years, the ADF has begun to examine the questions of relative priority posed by the unstable international security environment. Faced by such a formidable range of variables required by ongoing peacekeeping operations, commitments to the war on terror and homeland defence, no policy can possibly meet all eventualities.

As in the past, however, the creation of balanced joint forces will provide the Government with the widest range of options to meet the threats that may arise.⁷¹ Recognition of this fact led the Chief of the Army, Lieutenant General Peter Cosgrove, to note that an amphibious capability would 'increasingly [be] viewed as a capability of first resort'.⁷² From his experience in INTERFET, General Cosgrove understood how sea power, including

⁷⁰ Lord Tedder, 'The Unities of War', in E. Emme (ed.), *The Impact of Air Power: National Security and World Politics*, Van Nostrand Company, New York, 1950, p. 339.

⁷¹ For material on the need for the ADF to possess balanced joint forces in a maritime context, see Michael Evans, *The Role of the Australian Army in a Maritime Concept of Strategy*, Working Paper No. 101, Land Warfare Studies Centre, Duntroon, ACT, July 1998; and John Caligari, *The Army's Capacity to Defend Australia Offshore: The Need for a Joint Approach*, Working Paper No. 348, Strategic and Defence Studies Centre, Australian National University, Canberra, 2000.

 ⁷² Unpublished address Major General P. Cosgrove to the AMPHIB 2000 Conference, Randwick Barracks Conference Centre, Randwick, NSW, 22 June 2000.

amphibious elements, provided force protection, mobility and considerable sustainment capabilities. Significantly, the ADF has, in recent years, increased the materiel necessary for amphibious operations. This materiel build-up has been accompanied by corresponding doctrinal and organisational developments.

The most significant conceptual work in recent years has been the Army's manoeuvre operations in a littoral environment (MOLE) study, which has been ongoing since 1999. The formation of the RAN's Amphibious and Afloat Support Force Element Group (FEG) has also been an important development. In 2000 the FEG's master plan sought to link strategy and finance closely, in order to justify and manage the capability within the restrictions of peacetime defence budgets. The document is a cogent business case for the maintenance and further development of this key capability.

Within the MOLE concept, the littoral region becomes the place from which operations are projected in the offence and the area in which the defence is conducted. In line with the joint nature of the concept, offensive and defensive operations are conducted using the striking power of the air force, the mobility of the navy and the holding power of land forces. The Army's MOLE concept is aimed at making a significant contribution to the development of joint warfighting doctrine. In late 2001, the Army began to finalise work on an Entry from the Air and Sea (EAS) concept. The latter is concerned with the development of tactical-level joint operations, for which MOLE provides a strategic setting. Both MOLE and EAS will be the subject of experimentation, which may also further assist the development of a joint warfighting concept for the ADF.⁷³

⁷³ Work on a joint warfighting concept, provisionally entitled 'Sea–Land– Air Battle: The Australian Joint Warfighting Concept', is currently under way in the ADF.

This significant progress on both the technical and doctrinal areas is just a beginning. As this paper has attempted to demonstrate, after World War II Australia had a credible amphibious capability, which it chose to reduce for reasons of economy. Few would regard the current Landing Platform Amphibious (LPA) ships *Manoora* and *Kanimbla*, which form the core of this capability, as more than expedient, medium-term solutions.

Maintaining and developing a capability for amphibious operations within a maritime strategy is a task for all three Services. There are important questions of air defence, air support and logistics that the ADF must still address. Above all, priorities for funding and procurement of key equipment and its replacement must be resolved if this newly rejuvenated capability is to become a potent joint force. As in the past, these developments will probably depend as much on the condition of the national economy and continuing instability in the international security environment as they do on the goodwill and cooperation between the branches of the armed forces.

Conclusion

At the beginning of the 21st century Australia's defence policy has come full circle. The Howard Government's White Paper, *Defence 2000*, echoes General Hutton's recommendation that Australia's defence policy and plans must consider 'the defence of Australian interests outside Australian waters'. As past experience has shown, achieving this aim requires the creation of credible joint forces. Yet, from Rabaul in 1914 to East Timor in 1999, Australia's employment of its armed forces has repeatedly been an ad-hoc reaction to crises, rather than part of a well-considered strategic policy. When the crisis subsides, forces built up at great cost are dismantled or degraded, due either to frugality of peacetime defence preparations or shifts in policy direction. During the early stages of almost all of its conflicts in the 20th century, Australia was required to employ joint forces in its national defence. All too often, due to economic stringency, these forces found themselves ill-prepared for deployments beyond the nation's borders. The difficult and practical problem, which Australia's civilian and military defence planners have repeatedly failed to solve during peacetime, is the creation and maintenance of balanced joint forces. The challenge for policy makers is to create an ADF that is tailored to the nation's geo-political circumstances, not, as so often in the past, to its short-term economic interests. Only an ADF constituted on a strategic, rather than an economic, basis will result in the creation of standing forces capable of defending not only the national territory but the national interests, without significant augmentation.

One of the few clearly discernible trends of the post–Cold War period has been the requirement to project armed forces into remote areas and sustain them there, often for long periods. Sea power has the unique ability to project, protect and sustain, but only land forces can take and hold territory. If the ADF learns the lessons of its history and continues to develop its amphibious capability, it will be better prepared for the challenges of their inevitable deployments. In the 21st century, the RAN will probably draw its inspiration from Corbett rather than Mahan. In Sir Edward Grey's words, the Army will be the projectile that the Navy fires from the sea. In the future, cooperation between the ADF's sailors and seaborne soldiers is likely to retain the same high priority it has so often had in the past, making these amphibious forces the 'capability of first resort'.

LAND WARFARE STUDIES CENTRE PUBLICATIONS

WORKING PAPERS

- 101 Evans, Michael, *The Role of the Australian Army in a Maritime Concept of Strategy*, September 1998.
- 102 Dunn, Martin, *Redefining Strategic Strike: The Strike Role and the Australian Army into the 21st Century*, April 1999.
- 103 Evans, Michael, Conventional Deterrence in the Australian Strategic Context, May 1999.
- 104 de Somer, Lieutenant Colonel Greg, *The Implications of the United States* Army's Army-After-Next Concepts for the Australian Army, June 1999.
- 105 Ryan, Alan, The Way Ahead? Alternative Approaches to Integrating the Reserves in 'Total Force' Planning, July 1999.
- 106 de Somer, Lieutenant Colonel Greg, *The Capacity of the Australian Army to Conduct and Sustain Land Force Operations*, August 1999, reprinted October 1999.
- 107 de Somer, Lieutenant Colonel Greg, Professional Mastery: The Human Dimension of Warfighting Capability for the Army-After-Next, October 1999.
- 108 Zhou, Lieutenant Colonel Bo, South Asia: The Prospect of Nuclear Disarmament After the 1998 Nuclear Tests in India and Pakistan, November 1999.
- 109 Ryan, Michael and Frater, Michael, *A Tactical Communications System for Future Land Warfare*, March 2000.
- 110 Evans, Michael, From Legend to Learning: Gallipoli and the Military Revolution of World War I, April 2000.
- 111 Wing, Ian, *Refocusing Concepts of Security: The Convergence of Military and Non-military Tasks*, November 2000.
- 112 Ryan, Michael and Frater, Michael, *The Utility of a Tactical Airborne Communications Subsystem in Support of Future Land Warfare*, April 2001.
- 113 Evans, Michael, From Deakin to Dibb: The Army and the Making of Australian Strategy in the 20th Century, June 2001.
- 114 Ryan, Alan, *Thinking Across Time: Concurrent Historical Analysis on Military Operations*, July 2001.
- 115 Evans, Michael, *Australia and the Revolution in Military Affairs*, August 2001.
- 116 Frater, Michael and Ryan, Michael, *Communications Electronic Warfare and the Digitised Battlefield*, October 2001.

STUDY PAPERS

301 Evans, Michael, Forward from the Past: The Development of Australian Army Doctrine, 1972–Present, August 1999.

302	Ryan, Alan, From Desert Storm to East Timor: Australia, the Asia-Pacific and the 'New Age' Coalition Operations, January 2000.
303	Evans, Michael, Developing Australia's Maritime Concept of Strategy: Lessons from the Ambon Disaster of 1942, April 2000.
304	Ryan, Alan, 'Primary Responsibilities and Primary Risks': Australian Defence Force Participation in the International Force East Timor, November 2000.

BOOKS

Wahlert, Lieutenant Colonel G. (ed.), *Australian Army Amphibious Operations in the South-West Pacific: 1942–45*, Army Doctrine Centre, Department of Defence, Puckapunyal, Vic., 1995.

Dennis, Peter and Grey, Jeffrey (eds), From Past to Future: The Australian Experience of Land/Air Operations, University of New South Wales, Australian Defence Force Academy, Canberra, 1995.

Horner, David (ed.), Armies and Nation Building: Past Experience—Future Prospects, Australian National University, Canberra, 1995.

Dennis, Peter and Grey, Jeffrey (eds), *Serving Vital Interests: Australia's Strategic Planning in Peace and War*, University of New South Wales, Australian Defence Force Academy, Canberra, 1996.

Malik, Mohan (ed.), The Future Battlefield, Deakin University, Geelong, Vic., 1997.

Smith, Hugh (ed.), *Preparing Future Leaders: Officer Education and Training for the Twenty-first Century*, University of New South Wales, Australian Defence Force Academy, Canberra, 1998.

Evans, Michael (ed.), *Changing the Army: The Roles of Doctrine, Development and Training*, Land Warfare Studies Centre, Duntroon, ACT, 2000.

Evans, Michael and Ryan, Alan (eds), *The Human Face of Warfare: Killing, Fear and Chaos in Battle*, Allen & Unwin, Sydney, 2000.