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Amphibious operations: an introduction

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Its geo-strategic circumstances dictate that Australia adopts a maritime strategy, integral to which are amphibious operations. These involve the projection of a military force from the sea onto a hostile, or potentially hostile, shore; and include assaults, withdrawals, raids and demonstrations. These operations and contemporary amphibious tactics are described. Amphibious forces also can provide logistic support to deployed forces; and military support in non-warlike circumstances. Australia is building an amphibious force modelled on United States and British amphibious forces.

Key words: maritime strategy; amphibious operations; amphibious assault; amphibious withdrawal; amphibious raid; amphibious demonstration; amphibious logistics; humanitarian assistance; disaster relief; Australia's amphibious capability.

Before dawn on 12 August 1914, eight days after the declaration of war, two Australian destroyers entered Simpson Harbour at Rabaul, then the capital of German New Guinea. A landing party was put ashore and it raided the Rabaul post and telegraph office, destroying the telegraphic equipment before withdrawing (Meade 2005: 1-2). This, Australia's first military action of World War I, was a successful amphibious raid.

A month later, the Australian Naval and Military Expeditionary Force (ANMEF) comprising some 1000 infantry and 500 naval infantry, returned to Rabaul. It was embarked in the auxiliary cruiser, HMAS *Berrima*, and was escorted by a light cruiser, three destroyers, two submarines, and a supply ship. Rear Admiral Sir George Patey, commander of the Australian Fleet, was the overall commander; and Colonel William Holmes commanded the landing force, the ANMEF.

On 11 September 1914, the ANMEF undertook amphibious landings on the south shore of Blanche Bay at Herbertshohe and Kabakaul before advancing inland and capturing the German wireless station at Bita Paka after a day of fierce fighting. On 12 September, the Australians occupied Rabaul against light resistance (Meade 2005: 37-74). This action was a successful amphibious assault.

On 22 September, Holmes sailed from Rabaul to Madang on mainland New Guinea with a combined force of army and navy troops in the *Berrima*, accompanied by the heavy cruiser, HMAS *Australia*, the light cruiser, HMAS *Encounter*, and the French armoured cruiser, *Montcalm*. On arrival, the warships trained their guns on the town. Holmes sent an envoy ashore under a flag of truce and demanded the unconditional surrender of Madang which was immediately forthcoming (Meade 2005: 79-82). This action was a successful employment of the amphibious demonstration.

Seven months later, on 25 April 1915, Australian troops again took part in an amphibious assault, this time as

participants in an Allied seaborne invasion of the Gallipoli Peninsula, Turkey. Led by the 3rd Infantry Brigade, the 1st Australian Division began landing from rowing boats before first light on the beaches at Ari Burnu on the Peninsula's west coast with a view to advancing east to secure the high ground in the centre of the Peninsula and to isolating the main Turkish forces to the south. By dusk, despite determined Turkish opposition and heavy casualties, the Division had secured a beachhead and the first two lines of hills which dominated it, but the third ridge, their prime objective, remained beyond their grasp, as it would for the remainder of the campaign (Firkins 1971: 45-51). For this operation, the Australians were transported by ships of the Royal Navy, which also provided them with naval gunfire and logistic support.

After eight months of futile effort to secure the Gallipoli peninsula, Britain decided to withdraw. The Australian and New Zealand Army Corps, while still in contact with the enemy, successfully executed an amphibious withdrawal from the Ari Burnu beachhead over two nights, 18-19 December 1915 (Firkins 1971: 59-60). The Royal Navy again provided the naval support for the withdrawal.

So before the war was 16-months-old, Australian troops with either Australian or British naval support had successfully conducted all recognised forms of amphibious operation.

Australia's Defence Strategy

Australia is an island continent situated between the Indian and the South Pacific Oceans, and with its northern oceanic approaches interdicted by the Indonesian-Melanesian archipelago. Consequently, since European settlement, Australia's defence has been based on a maritime strategy involving:

- denying any potential enemy use of the sea and air approaches to the continent;
- denying him forward bases in the archipelago for an attack on the continent; and
- protecting the sea and air lines of communication between Australia and its trading partners.

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Inevitably, amphibious operations have been an integral component of this strategy, especially in the defence of the archipelago.

Amphibious Operations

So what constitutes an amphibious operation? An amphibious operation is any operation that involves the projection of a military force from the sea onto a hostile, or potentially hostile, shore (Speller and Tuck 2001: 7). Such operations are usually conducted without access to port facilities and frequently employ specialist amphibious shipping, including landing craft and amphibious vehicles able to deliver troops and stores over the shore across beaches. Helicopters, too, can be used to speed up the rapid build-up of combat power ashore.

While similar in many respects to other maritime activities, including administrative disembarkation of forces on a friendly shore and ferrying activities between ports, the defining characteristic of an amphibious operation is the need to land military forces on a hostile shore.

That said, the techniques and equipment designed for amphibious operations frequently also have application when providing amphibious logistic support to forces ashore – which is sometimes referred to as logistics over-the-shore operations (LOTS); and in non-warlike circumstances, especially where entry to coastal and near coastal areas is needed in the absence of port facilities – frequently a requirement following natural disasters and when delivering humanitarian assistance. As amphibious forces tend to be called on in such circumstances, such so-called ‘military support operations’ are frequently discussed along with amphibious operations.

As already indicated, there are four types of amphibious operation – the assault, the withdrawal, the raid and the demonstration – and each one needs to be underpinned by sound logistic support. We will now look at each in turn.

Amphibious Assaults

The amphibious assault is the principal type of amphibious operation and is conducted in order to establish a landing force on a hostile or potentially hostile shore. Commonly, amphibious assaults are conducted for one of three reasons (Speller and Tuck 2001: 12-13):

- to establish a firm base or point of entry for further combat operations inland – *e.g.* the Normandy landings in June 1944 served as a prelude to a major land campaign in Europe;
- to obtain a site for an advanced naval or air base – *e.g.* the majority of island landings conducted by the United States in the Pacific in World War II were to secure airfields to cover the next phase of the advance towards Japan; or
- to deny use of the area or facility to the enemy – *e.g.* the British assault on Vichy-held Madagascar in World War II was to forestall Japanese use of its naval base.

Completely unopposed landings are rare and are usually dependent on both excellent intelligence and good fortune. Even where the beach itself is undefended, as at San Carlos Water during the 1982 Falklands War, the landing may be opposed by enemy air and naval forces or

indirect artillery fire (Speller and Tuck 2001: 13-14). Sea mines in the approaches and long-range ballistic missiles also can provide hidden dangers for an apparently benign landing site.

Conventionally, the assaulting force is assembled on ships at sea. It is then transported to the shore by landing craft, where it secures a beachhead which is defensible against enemy counter-attack and large enough to accommodate the whole force and its equipment and stores on-shore. Once the force is established securely ashore, command is transferred from the naval commander to the land commander. Finally, the force attempts to break out of the beachhead and then advance to its primary objective.

Today, specialist amphibious forces when conducting assaults prefer not to establish a beachhead. Instead, wherever practicable, they employ direct ship-to-objective manoeuvre, in which the landing force treats the sea and land as one continuum. The landing force, whether deployed by helicopter or amphibious assault vehicle or both, thrusts inland straight to its ultimate objective without pausing at the shoreline. Requirements of ship-to-objective manoeuvre are that the assault be launched from over-the-horizon, preferably by night, to achieve tactical surprise; and that command and control, logistics and fire support remain afloat, a technique known as ‘sea-basing’. With sea-basing, supplies are held afloat and are delivered on a ‘just enough’, ‘just on time’, basis to the forces that need them.

In World War II, the amphibious assault was used extensively in the Pacific Theatre, given its island nature, to gain points of entry both for the capture of airfields and for the development of further operations inland. United States Marine Corps amphibious assaults at places like Guadalcanal, Bougainville and Iwo Jima, have become legend (Costello 1981: 338-553; Polmar and Mersky 1988: 96-131).

Australian amphibious operations are less well recognised. After its successes in the Western Desert in 1941-42 at Tobruk and El Alamein, the 9th Australian Division returned to Australia and trained with the United States Navy in amphibious warfare (Mallett 2007). It subsequently employed the amphibious assault in New Guinea in 1943 to gain points of entry at Lae in September (Dexter 1961: 326-346) and Finschhafen in October (Dexter 1961: 444-479). In 1945 in British North Borneo, it again employed the amphibious assault at Tarakan in May, and Brunei and Labuan in June (Long 1963: 406-471). The 7th Division also trained in the technique and then used it successfully in Dutch Borneo at Balikpapan in July 1945 (Long 1963: 502-531).

Amphibious Withdrawals

Amphibious withdrawals involve the re-embarkation of military or civilian personnel and equipment. They may be pre-planned or may involve an emergency embarkation from a hostile, or potentially hostile, shore (Speller and Tuck 2001: 18-19). A withdrawal may be conducted:

- to disengage in contact with the enemy and withdraw from a hostile shore back to a safe base – as at Gallipoli in December 1915/January 1916, Dunkirk in 1940, Greece and Crete in 1941, and Korea in 1950;

- in order to conduct further amphibious operations elsewhere (in which case the landing force needs to be tactically reloaded and reconfigured, which can make the embarkation process complex) – as in Korea in 1950;
- as the final stage of an amphibious raid; or
- to help evacuate civilian personnel, *i.e.* undertake non-combatant evacuation operations (NEOs), such as the final evacuation of United States citizens from Saigon in 1975 by helicopter from the embassy to ships off-shore.

Amphibious Raids

The amphibious raid involves both a pre-planned assault and a pre-planned withdrawal, including re-embarkation of the landing force, shortly thereafter. The objective is occupied only long enough to enable the raiding force to achieve its mission – the ‘hit and run’ concept (Speller and Tuck 2001: 15). Raids are conducted (Speller and Tuck 2001: 16-18):

- to inflict loss or damage on the enemy – *e.g.* the British Special Air Service raid on Pebble Island off West Falkland on 14 May 1982, during which they destroyed 11 Argentine ground-attack aircraft;
- to secure information say by gathering intelligence from prisoners or captured documents, or by undertaking covert reconnaissance, perhaps as a prelude to a full-scale assault – *e.g.* the regular landing of special forces reconnaissance teams from submarines to gather intelligence covertly during the Korean War;
- to create a diversion – *e.g.* repeated Allied raids on Norway in World War II forced Germany to station 18 divisions there against the possibility of a major Allied invasion; or
- to capture individuals or equipment – *e.g.* the raid on Bruneval in February 1942 during which 100 commandos were parachuted into France close to a German cliff-top radar station, and then overwhelmed the defenders and seized the radar equipment, before withdrawing back to Britain by landing craft from a beach at the base of the cliffs.

Raids also can be conducted for logistical reasons, such as to establish a temporary supply point or communications facility.

In the past century, most amphibious raids have been small in scale involving at most a few hundred well-trained soldiers or marines, at times put ashore by canoe from submarines, or by helicopter from amphibious assault ships. Wherever practicable today, the raiding force employs ship-to-objective manoeuvre. Indeed, it has now become the preferred *modus operandi* of specialist amphibious forces.

Amphibious Demonstrations

An amphibious demonstration is designed either to deceive the enemy or as a show of strength (Speller and Tuck 2001: 19-20), with a view to causing the enemy to act in a way that he otherwise would not. To be effective, it must be credible.

In peacetime, amphibious exercises demonstrate the strength of national capability and hence can serve to

deter would be aggressors. In wartime, amphibious demonstrations are employed to induce surrender without engaging in fighting – as at Madang in 1914; to tie down enemy forces; or to divert them away from the main area of operations. To do so, they must appear to pose a credible threat to the enemy force ashore.

In the 1991 Gulf War, the United States deployed 31 amphibious ships carrying 17,000 marines, 39 tanks, 12 amphibious assault vehicles, 30 light armoured vehicles and 52 howitzers to the Gulf. The force conducted numerous landing rehearsals to ensure Saddam got the message. The Iraqis were convinced a major amphibious landing would occur on the coast of Kuwait and diverted five divisions to its defence. Without having to land on the mainland, the United States amphibious force effectively neutralised an Iraqi force roughly 15 times larger than itself.

Amphibious Logistics

Sound logistic support is indispensable to all military operations. Logistics involve moving armed forces and keeping them supplied; the art and science of organisation, administration and supply. As applied to amphibious operations, this includes the tactical embarkation of troops, equipment and supplies; movement to the objective area; and the disembarkation of personnel and the unloading of ships; as well as the sustained provision of supply, medical, salvage, evacuation, construction, repair and maintenance services. Crucial sub-systems are the organisation of storage afloat, storage on the beach, and the system of movement between the two (Speller and Tuck 2001: 103-117).

The logistic support usually travels, at least initially, with the amphibious task force. It can be provided from within the task force (*e.g.* by amphibious assault ships and/or supply ships); or by certain specialist ships in the accompanying naval escort force (*e.g.* Britain maintains a Royal Fleet Auxiliary and the United States its Military Sealift Command for this purpose); and/or by suitable merchant ships, including troop transports, that have been taken up from trade – a practice referred to by the acronym ‘STUFT’ and which was used to great effect by Britain in the 1982 Falklands conflict (Speller and Tuck 2001: 115-117). It was also used by Australia in the Vietnam War and the 1999 East Timor crisis (Leach *et al.* 2004).

Forces skilled in providing such services in war are also usually well-equipped and trained for doing so in some non-warlike situations requiring similar skills and equipment, such as the provision of humanitarian assistance and disaster relief, which can have a heavy demand on emergency supply, engineering, medical, communications and control services. Accordingly, governments frequently employ their amphibious forces on such military support tasks, often at short notice.

Planning and Conducting an Amphibious Operation

The ‘seaborne soldiers’ (Parkin 2003) of the landing force can be naval infantry [*i.e.* soldiers who are part of the navy, such as the naval reservists of the ANMEF in 1914, and the Royal Naval Division which served on Gallipoli in 1915 (Page 2007)]; marines who specialise in amphibious operations (whether they be part of the navy or a separate

marine service); or an infantry-predominant balanced army formation, such as an infantry brigade group or infantry division.

Operations that involve more than one service (Navy, Army or Air Force) are referred to as 'joint' operations, and those involving the armed forces of two or more nations as 'combined' operations. Amphibious operations are normally joint operations and frequently are also combined ones; and may involve coordination with intelligence teams and partisans on the hostile shore. Consequently, amphibious operations can be among the most complex of all military activities to plan and conduct. The amphibious assault is the basic amphibious operation. There are five stages in the planning and conduct of an amphibious assault (Weller and Tuck 2001: 22-101).

Planning and preparation is a stage which may take many months. It can involve intelligence collection and deception activities; establishing command relationships; choosing a landing site; resolving the critical issues of weather, tides and timing; and training and rehearsal of the force.

Passage to the battle zone is the stage when the 'amphibious task force' (ATF) moves from its points of embarkation or its forward deployed positions by sea to the area of operations, often referred to as the 'amphibious objective area'. During transit, crowded into transports, the amphibious force can be at its most vulnerable, so sufficient sea control must be achieved to protect the ATF from enemy attack. As a consequence, possible threats, choice of route, an escort screen and battlespace dominance become key considerations.

Pre-landing operations, sometimes referred to as favourably shaping the littoral battlespace, can increase the chances of success. They can involve supporting operations to deceive the enemy; and more frequently include direct preparation of the landing beaches by beach reconnaissance, sea-mine clearing and other obstacle removal. The need for speed and surprise, however, may constrain their scope – as far as possible, they should not compromise the intended place or time of the main landing. Further, a vertical envelopment capability (e.g. helicopters) may render them less important.

Securing the beach can be most difficult and dangerous. The landing force has to be transported to the beach, get ashore and then secure the beach. Combat power must be built up rapidly on the beach in sufficient strength to defeat enemy counter-attacks and create a viable bridgehead into which reinforcements can be deployed. Air superiority must be achieved over the objective area and the assaulting force must be provided with both close air support (from ground-attack aircraft) and naval gunfire support.

Consolidation and exploitation: A period of consolidation is necessary to expand the beachhead to an adequate size, to secure it against enemy attack, and to develop the combat power, logistic support, and command and control needed for the breakout. The efficient organisation and management of the beachhead is critical. In its 1943-45 amphibious assaults, the Australian Army used beach groups consisting of infantry, engineers, pioneers, signallers, medical staff and beach commandos, totalling 1800 men to manage beachhead logistics (Crawley 2014).

Finally, with consolidation complete, the force attempts to achieve a breakout and exploit the earlier success.

Australian doctrine. While the above stages in the planning of an amphibious assault have universal applicability, current Australian amphibious doctrine, with its primary focus on the amphibious raid, recognises seven stages in the planning and conduct of an amphibious operation from its inception to its conclusion, namely: Plan, Embark, Rehearse, Move, Shape, Action, and Termination.

Contemporary Amphibious Forces

Amphibious operations are extraordinarily difficult to mount at short notice unless well-rehearsed contingency plans are available and, with little adjustment, can be given effect. This has led in recent times to several nations forming specialist amphibious forces which have an experienced commander, supported by an efficient staff, in command of well-trained and properly-equipped forces, and with the capacity to respond to lower-level contingencies at short notice. Australia's amphibious capability was found wanting during the East Timor crisis in 1999 and since then Australia has been moving determinedly to redress this deficiency. It has been attracted to two contemporary models: the United States Marine Expeditionary Unit and associated naval Amphibious Ready Group; and Britain's 3 Commando Brigade, Royal Marines, and the amphibious ships of the Royal Navy.

United States amphibious forces

Each **United States Marine Expeditionary Unit** (MEU) trains and deploys as a task-tailored Marine Air-Ground-Task Force (MAGTF) of some 2200 marines and sailors and consists of a command element, a reinforced infantry battalion, a composite fixed and rotary wing squadron, and a combat logistic battalion. When required, a Marine special operations company embarks in support. There are four MEUs in the Pacific and they deploy forward aboard Amphibious Ready Groups in areas of potential crisis to respond rapidly to crises and contingencies across the range of military operations (Speller and Tuck 2001: 165).

United States Navy Amphibious Ready Groups (ARGs) are amphibious ship formations. Each is built around a core of three ships: a multi-purpose (LHD) or general-purpose (LHA) amphibious assault ship; a landing platform, dock (LPD); and a landing ship, dock (LSD). As required, ARGs and their embarked MEUs are escorted on operations by ships of the United States Navy (Speller and Tuck 2001: 166).

The three amphibious ships that embark and deploy a MEU are led by a United States Navy captain titled Commander Amphibious Task Force (CATF). His Marine counterpart is a colonel, the MEU commander, titled Commander, Landing Force (CLF). The CATF and CLF use 'supporting command relations' to determine lead responsibility during the phases of an amphibious operation.

Britain's amphibious force

3 Commando Brigade, Royal Marines, is an all-arms formation centred around three battalion-sized commando

units, reinforced with artillery, engineer and logistic support elements (Speller and Tuck 2001: 167-8). A Royal Netherlands Marine Corps battalion is integrated into the brigade as a fourth manoeuvre unit and a Dutch colonel serves as the brigade's deputy commander. There is provision for support as needed from tanks and armoured reconnaissance from the Army's ready brigade; and from army-operated Apache attack helicopters from the amphibious assault ship.

This landing force is supported by an amphibious assault ship, helicopter (LPH); two landing platforms, dock (LPD); up to three landing ships, dock (LSD); and, if needed, a carrier group, which will include joint strike fighters in the future.

Australia's amphibious force

Australia's amphibious force draws on elements of both the United States and British models and is intended to be interoperable with them (Leggatt 2013). Current capability is the Amphibious Ready Element (ARE) that consists of: a joint Amphibious Task Force command element; a landing force, built upon a rifle company group task-tailored to form an infantry combat team of 150 – 220 personnel; a rotary-wing aviation element of 4 – 6 helicopters; and a combat support element.

The ARE has so far trained and is ready to respond to crises and contingencies aboard HMAS *Choules*, a 16,000-tonne landing ship, dock (LSD). In the future, the ARE will deploy aboard one of two Canberra-class 27,000-tonne multi-purpose amphibious assault ships (LHD) and use 100-tonne landing craft, mechanised (LCMs) and helicopters to rapidly move equipment and soldiers ashore. Once the ARE has been certified in 2015, it will be the ready amphibious force used for regional engagement exercises and to rapidly respond to crises and contingencies.

Future amphibious capability will build upon the ARE organisation, with the landing force expanded to a light infantry battalion group task-tailored to form a battle group of up to 2200 personnel; and with the rotary-wing aviation element expanded to 12 – 24 helicopters. It will require both LHDs, the LSD and up to 12 LCMs for embarkation and deployment. Called the Amphibious Ready Group (ARG), it will be the amphibious component of the ADF's contingency forces. The ADF's intent is to test and demonstrate the ARG during Exercise Talisman Sabre 2017. It will be escorted on operations by ships of the Australian Fleet and Air Force assets as needed.

Conclusion

Given its geo-strategic positioning, it is not surprising that amphibious operations, be they assaults, withdrawals, raids or demonstrations, have played a key role in the defence of Australia's national interests over the last 100 years, especially during the two world wars. Since World War II, Australia has also employed its amphibious capabilities to support peacekeeping, stabilisation, humanitarian assistance, disaster relief and other military assistance operations. The 1999 East Timor crisis, though, demonstrated the weakness of Australia's then amphibious capability. Australia has since been moving slowly but determinedly to rebuild a modern, highly-professional,

amphibious capability suitable particularly for lower-level contingencies and interoperable with that of its principal allies, the United States and Britain.

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