

Force from the Sea: Australia's amphibious capability – an update

A paper based on a presentation to the Institute on 27 August by

Colonel Kim Gilfillan CSC

Commander Landing Force, Amphibious Task Group
Australian Defence Force



This paper describes Australia's current amphibious capability. The Australian Amphibious Force is able to employ a landing force of up to battalion-group strength over the spectrum of operations from the provision of humanitarian assistance and disaster relief to high-end warfighting, the latter capability having been tested, in conjunction with allies, during Exercise Talisman Sabre 2019.

Australia responded to a military *coup d'état* in Fiji in 1987 by deploying a five-ship amphibious task group to Fiji in case Australian civilians needed evacuation. The operation, code named Operation Morris Dance, exposed serious deficiencies in the Australian Defence Force's (ADF) capacity to project force and undertake amphibious operations. It led to the acquisition of two *Kanimbla*-class amphibious transport ships (Landing Platforms Amphibious) in 1994.

The East Timor crisis in 1999 further exposed the ADF's ill-preparedness to deploy and sustain an expeditionary force amphibiously in our near region. This led, through a number of force structure reviews and Defence white papers from 2000 onwards, to the decision to acquire two *Canberra*-class amphibious assault ships (Landing Helicopter Docks), to replace HMAS *Tobruk* and the *Kanimbla*-class amphibious ships, and their commissioning in 2014 and 2015. In addition, a third amphibious platform, HMAS *Choules* (a Landing Ship Dock) was acquired in 2011; the 2nd Battalion, Royal Australian Regiment, was designated as an amphibious trials battalion to lead Army's preparations; and the ADF commenced development of joint command arrangements for amphibious operations.

This paper describes the recent evolution of the Australian Amphibious Force as a key part of Australia's overall force projection capacity. It briefly examines our strategic context, reviews our contemporary amphibious operational concepts, and describes the current state of the Australian Amphibious Force.

Strategic Context

Australia's 2016 Defence White Paper¹ identified three key strategic defence interests: first, a secure, resilient Australia; second, a secure nearer region, encompassing maritime South East Asia and the South Pacific; and third, a stable Indo-Pacific region and a rules-based global order which supports our interests. The nature of inter-state relationships and the spectrum of conditions (humanitarian assistance to high-end warfighting) within which we

conduct operations; the geography of our near region and the Indo-Pacific; and Australia's choice of role; are important context within which to consider the development of the Australian amphibious capability.

Recent security and military literature considering the spectrum of operations has focused on a model of co-operation-competition-conflict² in preference to the peace-war spectrum. While it remains useful to consider the peace-war spectrum, especially in relation to resource apportionment (resources applied to the military are typically less during peace), the co-operation-competition-conflict model recognises the enduring competition between states, particularly economic and diplomatic, inter-mixed with temporal variations of co-operation or conflict. As Henry Kissinger once observed: "America has no permanent friends or enemies, only interests", or phrased another way "there are no permanent friends in politics, only mutual self-interest". The model is in no way new, but its use is important because it recognises that the scale is not necessarily linear or of singular dimension; we may well be in conflict in one domain while co-operating in another, and also that military capability can be employed in a variety of ways simultaneously.

Within this spectrum of operations, Australia may act unilaterally or as part of a larger coalition or alliance, and may do both simultaneously on a range of different fronts. The choice of which strategy to pursue on which front is likely to be based on a mixture of interest alignment and capacity, both national capacity and relative capacity. In simple terms, there are limits to our national power; our capacity to operate unilaterally is framed around the military capability we choose to afford, now and in the future, and that of the adversaries we might compete with. This question sits at the heart of joint force design, and the evolution of the Australian amphibious capability.

Finally, from a geopolitical perspective, there are two pre-eminent factors to consider. First, the archipelagic and littoral region to our north is comprised of thousands of islands, each separated by water, and that the presence of this water precludes land manoeuvre in isolation. Second,

¹Defence (2016). *2016 Defence white paper* (Department of Defence: Canberra) pp. 17-18.

²Claire O'Neill, *Mental models – Part II: co-operation, competition and conflict*. theforge.defence.gov.au 18 May 2019.

the maritime trade routes through the region underpin our economic and social prosperity. This area, our region and the Indo-Pacific, are littoral and maritime operating areas, and setting security conditions inherently requires forces capable of manoeuvring in that environment. Indeed, although it is not publicly stated as such, the level of Australian investment in maritime, amphibious, and broader force-projection capabilities support a view that Australia's military strategy is a maritime one: a strategy of setting favourable security conditions forward of continental Australia.

The investment in, and development of, a robust but affordable amphibious capability is a central part of building a force-projection capacity that supports Australia's strategic defence interests. Further, an amphibious force is a force-projection capability that can achieve a range of strategic effects in co-operation or competition, even though designed to achieve tactical effects in conflict.

Contemporary Australian Amphibious Operational Concepts

Australian doctrine³ recognises five types of amphibious operations: demonstrations; raids; assaults; withdrawals; and support to other operations. Detailed planning for an amphibious assault is conducted using the PERMSAT model: planning; embarkation; rehearsal; movement to the area of amphibious action; 'shaping' the action area, especially ashore; the amphibious action; and termination. This is a useful model because each step is complex in its own right.

PERMSAT, however, relates specifically to the amphibious forces and does not provide a broad overview of the

inter-relationships with other force elements and actions. It is therefore useful to consider seven stages in an 'entry' operation (*i.e.* the lodgement of a force amphibiously on a potentially hostile shore) as depicted in Figure 1. Those stages are:

1. conduct advanced force operations (shaping) – air, naval and/or special forces strike operations;
2. establish sea and air control – a core maritime and air component requirement to set conditions for acceptable risk to own forces and mission;
3. manoeuvre the amphibious force to the area of amphibious action;
4. conduct pre-landing force operations (internal to the Amphibious Task Group) – reconnaissance, surveillance and shaping actions;
5. undertake the amphibious action – lodge the force to achieve the assigned mission;
6. deploy follow-on forces as required – strategic lift by air and sea; and, finally
7. reconstitution – ready the amphibious force for subsequent operations.

This is conceptually useful because it clearly articulates how reliant the amphibious force is on the operational design and other critical enablers, which I shall discuss shortly, but it also shows that our doctrine is somewhat narrowly focused on a single amphibious objective. This is not a negative in the context of developing our understanding of the building blocks of force projection and amphibious capability, but in the context of our region and the Indo-Pacific it might be useful to consider the utility of those capabilities in a broader strategy or operational design.

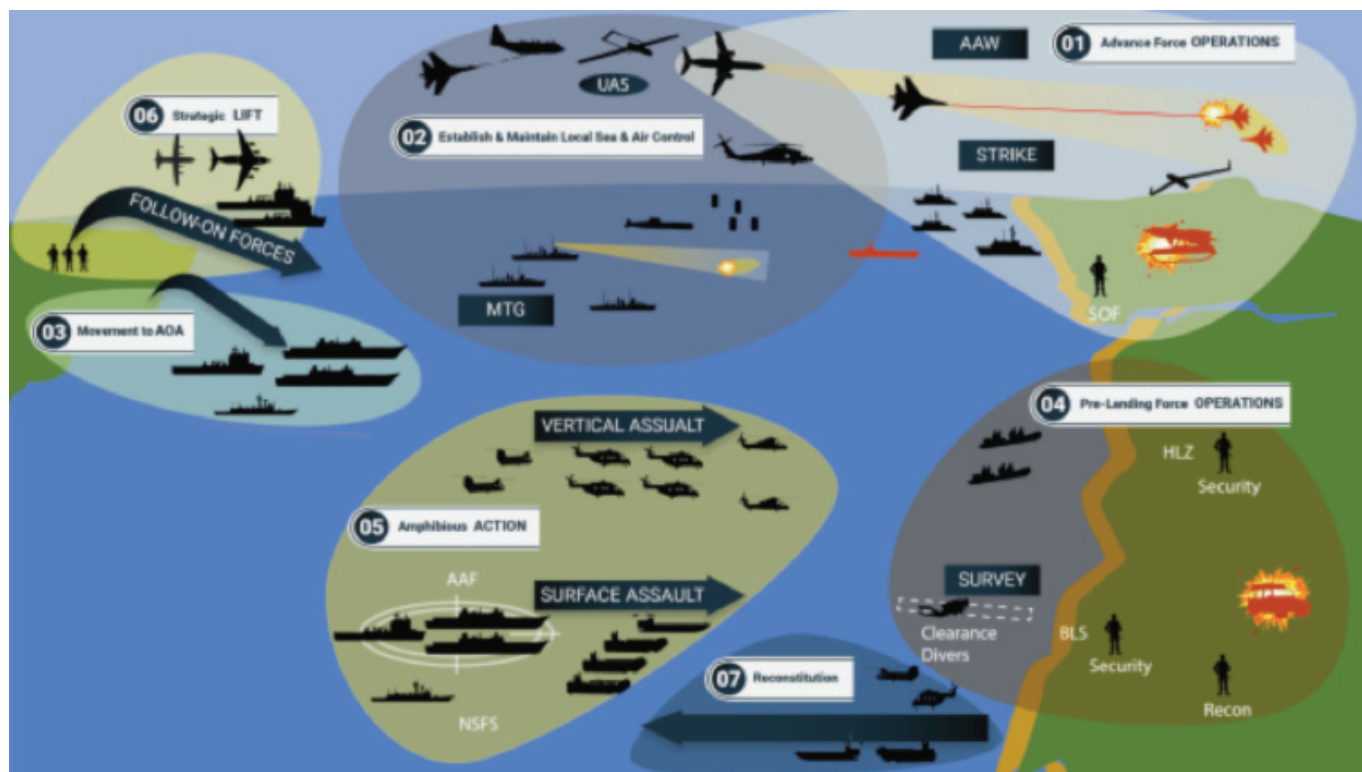


Figure 1: The seven stages of an amphibious operation

³Australian Defence Doctrine Publication (ADDP) 3.2 *Amphibious operations*, edition 3, 2018 (Department of Defence: Canberra).

The doctrinal focus on a single objective may be due to the single-instance nature of amphibious operations since World War II and perhaps Korea – Falklands (1982), Sierra Leone (2000), Battle of Al Faw (Iraq 2003) *etc.* – all single amphibious actions, even if nested in a broader operational design. The archipelago to our north, however, should we have to fight there, has thousands of islands through which we and an adversary must manoeuvre. Indeed, by some reports, the Pacific hosted over 110 amphibious lodgements in World War II⁴, all conducted within a broader operational design, but over 70 were uncontested (or there were no casualties in the first 24 hours). This speaks to a model of multiple, contiguous operations rather than single-instance actions.

It is not in the scope of this paper to review General MacArthur’s operational design, however clearly he employed amphibious or littoral manoeuvre in support of his strategy (securing land from which air power could be projected)⁵. There are echoes of this thinking evident in the United States Marine Corps evolution to Expeditionary Advanced Base Operations, and indeed General Burger’s⁶ recent Planning Guidance to the United States Marine Corps (USMC). Although the USMC context is not our own, these concepts will likely inform our own future amphibious operating concepts, especially as we seek to employ long-range precision surface-surface or surface-air fires in support of land or maritime objectives and manoeuvre in a more contested environment⁷.

Regardless of the operational design, however, amphibious operations require far more than just the amphibious forces to ensure success and rely, as mentioned briefly above, on a range of critical enablers.

Amphibious Operations are complex and challenging – complex, because of their deeply joint (*i.e.* tri-service) nature and the seams between physical domains (land, sea and air); and challenging, because of the physical obstacle that the ocean presents, both tactically in terms of supporting a force ashore, and operationally in relation to the significant distance back to the support base. They are inevitably conducted in a whole-of-government context, whether the military is supporting a non-military lead agency or is being supported by other government and non-government agencies.

Amphibious operations require favourable conditions to be set at the strategic and operational level. This includes

actions to force disaggregation or incorrect disposition of any adversary forces; and sea and air control to manage risk to one’s own forces and to enable our own freedom of manoeuvre. The support that a force needs to conduct an operation is referred to as an ‘enabler’. Whether it is a unilateral operation or an operation undertaken in coalition with allies, the critical enablers for an amphibious operation include a range of military, other government and industry capabilities: strategic intelligence; sea control (surface and subsurface); air control (local air superiority); government departments, including the Department of Foreign Affairs and Trade and the Australian Federal Police; strategic logistics; and national support base arrangements.

In this context, capacity is a key determinant in a ‘unilateral’ or ‘coalition’ choice; can Australia provide all the necessary enablers required by the situation to act unilaterally, or would an alliance be necessary to facilitate access to a broader resource base? Clearly, a related question, and one alluded to above, sits around defining what is an ‘affordable’ force projection capability in our current strategic environment.

The evolution of the Amphibious Task Group

The Australian Amphibious Force invariably deploys as a joint task group which is ‘flexible’ – its composition can be altered to meet the specific needs of a particular operation – and is ‘scalable’ – its size can be scaled up from a landing force of rifle company group strength (an Amphibious Ready Element) to one of battalion group strength (an Amphibious Ready Group). Table 1 (below) provides an indicative composition of each grouping and illustrates this flexibility and scalability.

The Amphibious Ready Unit (ARU) has been added to

Table 1: Indicative composition of amphibious forces of different sizes.

	Amphibious Ready Element (ARE)	Amphibious Ready Unit (ARU)	Amphibious Ready Group (ARG)
Command and Control	HQ ATG (CATF/CLF)		
Amphibious Shipping	An amphibious ship and landing craft	Two amphibious ships and landing craft	Three amphibious ships and landing craft
Joint Pre-Landing Force (JPLF)	1 x Joint Combat Team	1 x Joint Combat Team	2 x Joint Combat Teams
Landing Force Ground Combat Element (GCE)	1 x Combat Team	A Battle Group HQ and 2 x Combat Teams	A Battle Group HQ and 4 x Combat Teams
Landing Force Logistic Combat Element (LCE)	Vehicles, personnel, landing craft, Beach Team and C ²	Vehicles, personnel, landing craft, Beach Team and C ²	Vehicles, personnel, landing craft, Beach Team and C ²
Landing Force Air Combat Element (ACE)	Task Unit HQ MRH Troop	Task Group HQ Tiger Troop MRH Troop Chinook Troop	Task Group HQ Tiger Squadron MRH Squadron Chinook Troop +
Escorts/Strike Group	Anti-submarine helicopters, Airborne Early Warning and Control aircraft Combat air patrols, Tankers		
Elements may be commanded by, or may be supporting, the ATG to achieve the directed mission	Destroyers, Frigates, Submarines, Maritime Patrol Aircraft, Mine Hunters		

Notes: In this context, a comat team consists of a rifle company group, and a battle group consists of an infantry battalion group.

Abbreviations used: ATG = Amphibious task group; C2 = command and control; MRH = multi-role helicopter; Tiger = armed reconnaissance helicopter; Chinook = heavy-lift helicopter.

⁴Dr David Horner (2004). The military strategy and command aspects of the Australian Army’s amphibious operations in the South West Pacific Area. In *Proceedings of the Chief of Army’s History Conference 1994* (Army History Unit, Department of Defence: Canberra).

⁵ibid

⁶https://www.hqmc.marines.mil/Portals/142/Docs/2038th%20Command-ant's%20Planning%20Guidance_2019.pdf?ver=2019-07-16-200152-700 accessed 02 Aug 19

⁷<https://www.aspistrategist.org.au/lessons-for-australia-in-us-marines-new-guidance/>

the concept of employment of our amphibious force since 2014 and has now been 'certified' (as ready for operations) in 2018 and 2019. To ensure the ARU is available to respond to contingencies as they arise, a new ARU is generated annually. An Amphibious Ready Element, when needed, can be generated from the forces certified in the ARU, and an Amphibious Ready Group would be generated when required. The following paragraphs provide a broad update on each element.

Headquarters Amphibious Task Group

Headquarters Amphibious Task Group (HQ ATG) has been in existence for many years as a predominantly naval organisation. In recent years, however, it has been bolstered with additional Army representation and is now a true joint tactical headquarters with a standing strength of approximately 60, augmented for ARU and ARG operations, and including a Royal Australian Air Force Tactical Air Control Party–Afloat. It is co-commanded by the Commander Amphibious Task Force (CATF), and the Commander Landing Force (CLF). Army established the new and permanent CLF position in January 2017 to lead Army's contribution to the development of the amphibious capability. In a break from traditional amphibious models, the single joint staff support both commanders simultaneously, examining each problem from a 'whole of multi-domain operation' perspective.

The joint and co-commanded headquarters is a uniquely Australian approach, which, while not yet mature, is showing signs of being very effective. Some of the key positives are its capacity to deliver effective and integrated joint plans to subordinate force elements, it appears significantly more efficient relative to other models⁹, and produces officers and enlisted personnel who can contribute effectively in a 'joint' context. Challenges include the internalisation of the frictions imposed by multi-domain operations, and in training junior personnel for integrated joint tactical operations. It is equally clear, though, that these challenges would exist regardless of the choice of headquarters design.

Doctrinally, CATF and CLF adopt a supported/supporting relationship depending on the phase of the operation, principally based on which element of the force is subject to the most risk. In practice, and to support the joint Headquarters, CATF and CLF seek to make joint decisions wherever possible. The supported/supporting construct, however, enables the supported commander to make a decision without reference to the other if time is critical. While there are always challenges to contend with, effective command and execution in the amphibious context relies on two things: a clearly understood common goal, and an enduring desire to co-operate to achieve it.

Amphibious Shipping

HMA Ships *Adelaide*, *Canberra* and *Choules* provide

the backbone of Australia's surface force projection capability through the capacity to embark and project significant combat and logistic capabilities. Each can support a range of landing craft and embarked helicopters, and each, with a range of embarked forces, has supported operations in its own right. Examples include: HMAS *Canberra* providing humanitarian assistance and disaster relief to Fiji following Cyclone Winston in 2016; HMAS *Adelaide* supporting Papua New Guinea during the APEC summit in 2018; HMAS *Choules* providing emergency assistance to Queensland following Cyclone Debbie in 2017; and each supporting a range of other international-engagement activities such as Indo-Pacific Endeavour, the annual series of support activities and naval exercises with countries in our region.

Each ship has a 'ship's army establishment', a permanent team of soldiers to support embarkation and integration of embarked military forces, and execution of amphibious operations. Initial basic coalition integration operations have been practised, including multiple varieties of rotary-wing and landing craft, and further integration work is planned in the future.

These ships are large, have large signatures, and represent significant investment by Australia, so their protection is a key requirement in any operation, and setting favourable conditions for their employment is essential as described above.

Joint Pre-Landing Force

The Joint Pre-Landing Force (JPLF) is designed to obtain key information needed to support amphibious objectives. Its primary reconnaissance and surveillance focus is usually the beach as that is a critical 'seam' between sea and land, and gaining a clear understanding of the nature of the approaches to the beach, the beach itself and the exits from the beach, is key to understanding the risk associated with committing forces to an amphibious operation. Other foci will include landing zones and other Task-Group level objectives.

The JPLF is formed from: a company of the 2nd Battalion, Royal Australian Regiment (Amphibious) [2RAR(Amphib)], to conduct land-based reconnaissance and surveillance; a Naval Expeditionary Reconnaissance Capability to clear the approaches of mines and other obstacles; and a Naval Deployable Geospatial Survey Team to survey the approaches and beach to confirm suitability for landing-craft operations. The JPLF is also usually supported by other land capabilities including unmanned aerial systems and electronic warfare. Central to the evolution of the JPLF has been its capacity to operate these joint elements effectively together, and to fuse a range of differing sources of information in support of the ATG's amphibious information requirements and objectives.

In 2017, Army made some key decisions to further progress the amphibious capability: to transition 2 RAR(Amphib) from its previous role as the amphibious trials battalion covering all elements of land-force based reconnaissance, combat and logistics, to a battalion focused specifically on reconnaissance and surveillance tasks in support of the JPLF; and to employ a rotational model for the Ground Combat Element.

⁹By comparison, the United States command and control arrangements involve separate Amphibious Squadron headquarters and Marine Corps Marine Expeditionary Unit headquarters which together comprise approximately twice as many staff as HQ ATG uses to command the Australian Amphibious Ready Unit.

Ground Combat Element

The Ground Combat Element (GCE) is formed from one of the Australian Army's Ready Battle Groups from within the Ready Combat Brigade, and rotates on an annual basis in accordance with Army's three-yearly readiness cycle⁹. The choice of a rotational model for the GCE places extra pressure on the Ready Combat Brigade, as the nominated Ready Battle Group requires some additional amphibious training which a permanently-assigned GCE would not need. In practice, however, the training design for Australian rotational forces is approximately the same duration as that applied by the United States Marine Corps to certify its forces. The rotational model cost-effectively supports Army's aim to grow additional amphibious competence within its force-generation construct. This model has operated successfully now for two years – attitude to joint operations and co-operation, and the effective integration of command and control elements, is proving more important than experience; and the model has proved able to provide well-trained contingency forces at acceptable cost.

The 8th/9th Battalion, Royal Australian Regiment (8/9RAR), formed the core of the GCE in 2018. 7RAR leads the current GCE, and 3RAR will assume the role in 2020.

Air Combat Element.

The 5th Aviation Regiment provides the headquarters for the Air Combat Element (ACE), and the MRH 90 multi-role helicopters which form the core of the Air Combat Element. Chinook (heavy lift) and Tiger (armed reconnaissance) helicopters provide additional capacity and provide real credibility to ADF force projection capability. The inclusion of Chinook and Tiger in the ACE within the last two years demonstrates the impressive pace of amphibious development. The importance of the very positive relationship between Army Aviation and Navy Aviation in enabling this development in a safe and effective manner should not be underestimated, both at the tactical level (on board the ships) and at the operational level (between Commodore Fleet Air Arm, Commander 16th Aviation Brigade and Director General Aviation).

Logistic Combat Element.

The Logistic Combat Element provides direct logistic support to the Landing Force, integrates logistic effect with the remainder of the Task Group, and integrates Army landing craft with Navy craft. The Commander of the LCE also, very importantly, provides command and control on the beach (the traditional 'beachmaster' role), a key node in the link between maritime and land domains, and a vital element of successful amphibious operations. 35th Water Transport Squadron plays a lead role in forming the LCE, in conjunction with other logistic elements from 17th

Sustainment Brigade, the combat brigade providing the Ground Combat Element, and 2RAR (Amphib).

Recent capability progression

There has been a rapid advance in the capability of the Australian Amphibious Force over the last five years. Examples below demonstrate the key advances made in 2019 through the Joint Warfare Series of exercises, including Exercise Talisman Sabre, as well as some specific modernisation initiatives. While these advances are impressive in their own right, and the trajectory is very positive, the capability is not yet mature. Continued investment of people, resources and time are necessary to ensure continued generation and sustainment of the capability.

Exercise Sea Raider 2019

Exercise Sea Raider is a tactical exercise designed to facilitate certification of the Amphibious Ready Unit. It is focused on Australian unilateral force projection capability. Capabilities proven for the first time this year include:

- operating both HMA Ships *Adelaide* and *Canberra* concurrently in close proximity *i.e.* concurrently operating and co-ordinating two decks and multiple helicopters (effectively two airfields) and two docks with multiple landing craft;
- operating Tiger, Taipan (Army and Navy Multi-Role Helicopters) and Chinook helicopters day and night – achieved rapidly (in two years) and enabling force projection and manoeuvre by day and night across all mission sets;
- deploying a mechanised combat-team with a battle-group headquarters and a support company;
- employing armoured vehicles as the first wave – enabling us to progress tactics; and
- introducing the second rotational Ground Combat Element (7RAR) – this second successful iteration is contributing to the building of amphibious competence across the Army.

Exercise Talismans Sabre 2019

Exercise Talisman Sabre is a biennial bi-lateral exercise conducted with the United States designed to test and develop coalition interoperability. Capabilities proven this year include:

- operating within a combined (*i.e.* multi-national) amphibious operating area for the first time – this represents a key step forward in coalition command and control arrangements;
- employment of F-35B (a 5th generation fighter) and rotary-wing aircraft from USS *Wasp* in the close air-support of Australian landing forces;
- command and control of a complex multi-national beach landing site – 35th Water Transport Squadron ran the beach for Australian, United States and Japanese forces; and
- 2RAR commanded and controlled a multi-national Joint Pre-Landing Force Battle Group – the battle group was comprised of Australian Army personnel, United States Marines, Royal Marine Commandos, as well as Royal Australian Navy

⁹Each of the Army's three combat brigades rotate through a 36-month-long readiness cycle, comprising three 12-month phases. This cycle comprises a 'reset' phase during which the brigade's soldiers conduct individual training, a 'readying' phase in which the brigade's units prepare for combat operations, and a 'ready' phase in which the certified brigade is available to deploy on any required domestic or overseas operations.

Expeditionary Reconnaissance and Clearance, and Deployable Geospatial and Survey Teams, and a Royal New Zealand Navy Rapid Environmental Assessment Team.

Equipment Modernisation

2019 has seen some significant equipment modernisation advances that are indicative of the breadth of achievement over the last five years. This year, LCM-1E landing craft, with which the two LHD amphibious assault ships are equipped, have been upgraded to enable carriage of greater weight safely. This enables the landing craft to embark the M1A1 Abrams main battle tank, the M88 tank recovery vehicle and the HX77 heavy utility truck. Trials with the new craft are now complete and represent a great advance for ADF ship-to-shore manoeuvre capability.

Conclusion

The Australian Amphibious Force has evolved rapidly. Its capability now compares very favourably with that of the few other countries able to deploy expeditionary forces amphibiously; and it represents a robust and cost-effective balance between permanent and rotational forces.

Amphibious forces are a key force-projection capability

for an island nation heavily reliant on maritime trade and security. They may be employed effectively across the spectrum of operations and in supporting strategic defence interests. That said, amphibious forces are vulnerable at extended lines of communication; amphibious operations must be nested in broader strategic and operational plans that set favourable conditions for success; and they must be supported by a range of whole-of-government and military strategic enablers, whether conducted as unilateral Australian actions or as part of a coalition.

The Author: Colonel Kim Gilfillan, as Commander Landing Force, is a joint commander of Australia's Amphibious Task Group. He was commissioned into the Australian Army Aviation Corps in 1996. In addition to a wide range of staff and training appointments, as an exchange officer he commanded the British Army Lynx Detachment on operations in Iraq in 2006, and later commanded 161 Reconnaissance Squadron (which flew the Tiger Armed Reconnaissance Helicopter). Prior to assuming his current appointment in January 2019, he commanded the 5th Aviation Regiment for which service he was awarded the Conspicuous Service Cross. [Photo of Colonel Gilfillan: Department of Defence]