

Chief of Navy Address at Chilean Naval War College

The Royal Australian Navy's Recapitalisation through the development of a continuous naval shipbuilding enterprise

April 2018

Chile is a regional leader in Latin America having a stable and increasingly prosperous democracy with a well-educated population, a robust economy and excellent security.

And its Navy, your Navy, is a shining example for nations in the Pacific to follow.

You have a reputation as one of the most professional navies in the Pacific — the selection of Chile to command the combined sea forces during RIMPAC 18 is testament to your leadership.

You also have a reputation for being a strong, reliable advocate for the internationally-recognised, rules-based order that has been so conducive to open and reliable maritime trade.

You have done this through your active participation in regional fora and by partnering with other Pacific navies to address shared interests and concerns.

And I am pleased to see that the Chilean Navy, given its future naval capability plans and programmes, is determined to be a leader in guaranteeing maritime stability and security in the Pacific.

With that in mind I thought I might share some observations with you today about the lessons we have learnt so far, as the Royal Australian Navy undertakes its greatest recapitalisation since World War II through the development of a continuous naval shipbuilding enterprise in Australia.

But before I do I would like to take a moment to reflect on Australia's strategic environment so you can better understand my comments.

Australia has one of the largest maritime domains in the world, and it faces three oceans — the Indian, the Pacific and Southern — with a coastline of more than 32,000 nautical miles — and yet a population of only 25 million.

Ten per cent of the world's sea trade passes through Australian ports. Australia relies on the sea for 98 per cent of our exports—and for a substantial proportion of our domestic freight. About 95% of our data is transmitted through undersea cable.

Australia's \$1.6 trillion economy is dependent on shipping being able to freely navigate the oceans and conduct maritime trade, especially through the massive economic trading artery that runs from the Middle East, across the Indian Ocean, through the South China Sea, past Japan and on to North America.

As a result of decades of peace our region has grown dramatically. There has been a shift in strategic weight to the Indo-Pacific region and by 2025, it is expected that almost half of the world's output, and four out of the ten largest economies in the world, will come from our region.

The region will be the world's largest producer of goods, but it will also be the largest consumer of them.

Of the top five defence spenders in the world, four of them — the United States, China, Russia and India — are, and will increasingly be, active in our region.

As a result, many of the global challenges will increasingly be played out in the region especially in the maritime domain.

It might be traditional threats from the increasingly aggressive actions taken by some nations to assert their claims over disputed maritime boundaries, or the unprecedented missile and nuclear weapons testing being conducted by North Korea.

But there are new or increasing non-traditional threats like challenges to our border security whether they be from co-ordinated illegal fishing enterprises, or from international criminal syndicates seeking to smuggle illegal migrants or illicit substances into Australia.

There is also growing concern among many of our regional nations about environmental changes; be it an increasing trend in severe weather patterns or rising sea levels. Both of these threaten stability by changing the availability of natural resources on the seabed, in the subsoil, or in the water column, or through the displacement of affected populations.

And lastly maritime terrorism is on the rise in our region. Whether it is from small groups of extremists who board ships and seize sailors for ransom through to attacks launched from the sea on naval and other port facilities, maritime terrorism threatens the ability to safely use the sea in our region.

The Australian Navy will have to face these challenges in a faster-paced environment, and a more complex environment. Advanced intelligence, surveillance and reconnaissance systems will become more prevalent, ultimately reducing the effectiveness of stealth capabilities.

We will face increased offensive cyber and space-based challenges which may be able to disable or degrade our infrastructure and operational networks.

We will see more autonomous systems, such as unmanned combat vehicles, in operation in the sub-surface, surface, land and air environments.

Over the next two decades, other technological advances such as quantum computing, innovative manufacturing, hypersonics, and directed energy weapons are likely to lead to the introduction of new weapons and systems into our region.

Never before has there been a time when threats distant from our shores whether they be from the sea, land or the air, can so quickly affect our forces.

As a result of these changes and uncertainties, there has been a recognition in the past few years that Australia will need to be able to bring together a balanced, connected and integrated armed force that combines different land, air, sea, intelligence, electronic warfare, cyber and space capabilities so that the Australian Defence Force can apply more force, more rapidly and more effectively when called on to do so to deter an attack.

In essence the Australian Defence Force needs to be able to deliver lethality when required.

To digress for a moment this recognition has also caused a change to the way that the Australian Defence Force acquires new capability — we are focused on ensuring that our warfighting systems are designed to work together as one and that our people — Navy, Army, and Air Force — are trained to realise the potential of these integrated systems because that is how we will achieve significant force multiplier effects.

Fundamentally, the need for a Defence Force that can deliver lethality is why the Australian government has taken steps to rebuild and expand the Navy through the development of a continuous naval shipbuilding enterprise.

Through the Defence White Paper 2016, a series of government announcements, and the Naval Shipbuilding Plan, the government has committed to three distinct lines of investment in this continuous naval shipbuilding enterprise totalling around \$100 billion.

These are:

- the investment in the rolling acquisition of twelve new submarines, and the continuous build of nine future frigates and 12 new offshore patrol vessels;
- the investment in modern shipyard infrastructure, across the two construction shipyards in South Australia and Western Australia; and
- the investment in naval shipbuilding workforce growth and skilling initiatives; together with new generation technology and innovation hubs.

I will take a moment to highlight some key consequences of these investments

Firstly, the Australian government announced in 2016 that Naval Group France will be our international partner to design 12 Future Submarines. Already, we have formal government-to-government agreements in place; a functioning design centre has been built in Cherbourg, France and the Australian project team is being established there.

Secondly, much work has been done on progressing the acquisition of 12 new Offshore Patrol Vessels with our international partner, German designer and shipbuilder Lürssen. These vessels will provide us with an advanced capability to undertake constabulary missions and be the primary ADF asset for maritime patrol and response duties. Construction of the first two vessels will begin in 2018.

Thirdly, we have also made significant progress on the acquisition of nine Future Frigates. These frigates will be able to conduct a range of missions, with a particular focus on anti-submarine warfare noting

50% of the world's submarine will be operating in the Indo-Pacific by 2030, and will incorporate the Australian-developed CEA Phased-Array Radar. We are on schedule to commence prototype construction in 2020 with an announcement of our international partner expected in the next few months.

The shipbuilding yards are being secured and future yard design in progress — some commercial providers have already made multi-dollar investments in updated equipment and infrastructure to support the continuous naval shipbuilding enterprise. We are creating the environment in which to build and adapt our future ships.

And finally the Naval Shipbuilding College is set to commence operations very shortly, under the leadership of a joint venture between KBR and Huntington Ingalls Industries (HII). The college will provide a national hub for the management, implementation and collaboration between key naval shipbuilding industry stakeholders, along with delivery of naval shipbuilding career awareness programs.

In addition, the Australian Navy has seen the delivery of new capabilities which have allowed us to return to its practice of complex Task Group operations with a wide range of capabilities from high-end warfighting to Humanitarian Assistance and Disaster Relief.

This practice offers strategic utility to the Australian government by delivering the agility and responsiveness that is at the heart of our approach to addressing the ever-growing set of threat scenarios I outlined earlier.

Last year we successfully completed Exercise TALISMAN SABRE 2017 — it involved 30,000 personnel from Australia and the United States, 30 ships and 250 aircraft.

It provided us with invaluable mid-intensity warfighting task group operational experience and improved our training, readiness and interoperability – and we undertook *Indo-Pacific Endeavour 2017* to conduct a number of engagements with regional partners and demonstrate the ADF's Humanitarian and Disaster Relief regional

response capability as well as further supporting security and stability in Australia's near region through bilateral and multilateral engagement, training and capacity building.

But having all these new platforms and a renewed focus on deploying maritime task groups will not be sufficient if the Navy, as part of the Australian Defence Force, is to be able to address the ever-growing set of threat scenarios in our region.

There must be a fundamental shift in thinking about what the Navy actually is, where it fits in to our national architecture, and how it relates to the national economic infrastructure.

I think this is where we have had some success. Let me explain.

As one of my predecessors, Admiral Sir Louis Hamilton, wrote

A navy does not drop from the clouds. It is a miraculous and delicate instrument, a creation of nerves as well as steel, united with blood as well as rivets, it is in many ways the greatest expression of a nation's genius.

In other words, Australia must recognise that its Navy is truly a national enterprise.

An enterprise that is a manifestation of purposeful government, and people that understand that the Australian Navy is intrinsic to Australia's national capability — intimately connected to the social, economic, industrial and educational drivers of national well-being, now and into the future.

In my view, it would be a bold national leader who, confronted by the strategic environment that I outlined earlier would not seek to ensure that their nation had a capable, agile and lethal navy.

Why? Because the ability to wage war is intrinsic to the nature and purpose of the state. And because the ability to wage war is embedded

in the very concept of the modern state, the Navy, as an instrument of warfare, is truly a national enterprise.

A national enterprise bringing together the private and public sectors of the economy to deliver a fundamental national objective — security above, on and under the sea.

But to understand how a navy provides security we must truly understand how a Navy achieves its fundamental purpose as I alluded to earlier — that is deterrence.

A navy can only achieve deterrence if it is able to deploy decisive lethality to sanction anyone who might wish to use armed force against the nation or its interests.

Fear of the consequences of that lethality is what deters an armed attack — deterrence is a consequence of lethality and the ultimate output of the Navy.

To maintain deterrence, and to inflict lethality when needed, you must maximise availability for training in peacetime and operations in conflict.

And to have sufficient available systems they must be operated and maintained in a sustainable and affordable manner.

This has been my mantra— a continuum. Deterrence — Lethality — Availability — Sustainability — Affordability. It ties all elements of the National Shipbuilding Enterprise together.

It has guided my discussions with my navy and defence colleagues, government, and industry representatives over the past few years about how we are going to generate and use maritime forces now and into the future — how we are going to build the continuous naval shipbuilding enterprise.

For me, building the continuous naval shipbuilding enterprise will mean that Australia — and I mean all of Australia from government to industry, to the education sector, to immigration, and to workers unions to name just a few — must look beyond the constraints and paradigms imposed by our traditional way of generating and using maritime forces.

It means we must innovate and embrace new ways of doing things, of integrating invention into the way we conceive, design and deliver the systems and platforms that are needed by the navy to deliver lethality.

It means we must find new flexible ways to drive and co-ordinate performance across a range of stakeholders who may have different interests.

It means we must invest not only in new buildings, manufacturing equipment and techniques but also in redesigning our organisations and management systems to embed flexibility, adaptability and agility.

It means we must allow the workforce, whether in uniform or in industry, to exercise their imaginations and initiative within the framework of clear strategic direction to develop new relationships, attitudes, behaviours, and approaches.

We as a nation in must provide greater career flexibility and imbed greater integration between the service and civilian components of the continuous naval shipbuilding enterprise workforce.

Similarly, industry must decide that it is no longer sensible or even possible for Australia to pick and choose among individual elements of our national industrial capacity to ensure we have the skills — especially in engineering — that will be required across the full breadth of the enterprise.

We must find new ways of investment of planning and managing the long-term capital investments without which a continuous shipbuilding program will be unachievable.

It means we must partner with our universities, trade training institutions, and research organisations because they play an essential role in providing the needed professional and technical skills.

It means every person — officer, sailor, tradesperson, or storekeeper — must proactively work to ensure that they are delivering, to the best of their abilities, on their commitments to the national enterprise that is the Navy.

These are just a few of the challenges, and more importantly opportunities that I see the current rebuilding and expansion of the Navy offers. It is an opportunity Australia must grasp if we are to have a Navy that has the ability to maintain our sovereignty, defend our territorial integrity, and protect our national interests wherever they may be threatened.

At the beginning of my comments I said that I would share some observations with you today about the lessons we have learnt so far as the Royal Australian Navy undertakes its greatest recapitalisation since World War II through the development of a continuous naval shipbuilding enterprise in Australia.

What you have heard is that the Australian government has committed to rebuilding and expanding the Navy through a continuous naval shipbuilding enterprise so that it can address the ever-growing set of traditional and non-traditional threat scenarios that are in our region.

What you have also heard is that if we are to ensure we can use this rebuilt and expanded Navy, Australia must look beyond the traditional ways of generating maritime forces.

We must take a national enterprise approach where we innovate, invest, and find new ways of doing business together to produce a navy that is capable, agile and lethal — one that understands the relationship between deterrence, lethality, availability, sustainability and affordability.

Thank you. I welcome any questions or comments.