



## National Resilience: Prepare and Adapt

By: Anonymous

### JCSP 50

#### Exercise Solo Flight

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## NATIONAL RESILIENCE: PREPARE AND ADAPT

### INTRODUCTION

*If you want peace. Prepare for war.*

*-Publius Flavious Vegetius Renatus<sup>1</sup>*

The devastating aerial attack on Darwin by the Japanese military over 82 years ago remains etched in the minds of Australians as a stark reminder of the brutality of war and that Australia is not immune to such acts of war.<sup>2</sup> Such events are distant memories that are only genuinely reflected upon on ANZAC (Australia & New Zealand Army Corps) Day, Australia's National Remembrance Day, where Australians rally together to remember those who have served and fallen for the free country they now live in. It would be hard for the general public of Australia today to imagine being attacked again as it was in the Second World War due to the prosperous world in which the generations since have been afforded. In light of the decreasing stability in the region and the potential for conflict, it is crucial to educate the public in Australia about the current strategic concerns. This will help gain support for investing in and building resilience in the nation.<sup>3</sup>

As the world faces an impending power struggle and the stability of the global order is in question, potential conflict looms. In this era of uncertainty, Australia must take measures to safeguard its sovereignty and protect its people and interests. Building Australia's national resilience across critical areas will be crucial for the nation to withstand the trauma of global conflict.

This paper will explore the subject of national resilience through two historical case studies - the Vietnam War and the Battle of Britain (BoB). In both instances, the countries demonstrated a remarkable level of resilience and prevailed despite the difficult circumstances. By analyzing their preparations and actions, an insight into how Australia can leverage this information and adapt to the evolved characteristics of warfare can be gained. Following this, it will delve into the contemporary conflict by analyzing the Russian invasion of Ukraine and the remarkable resilience demonstrated by the Ukrainian people. This analysis aims to draw attention to the valuable insights Australia can glean from modern warfare and technological innovations, particularly in the use of drones, when confronted with a more formidable adversary.

### THREAT

The Australian government initiated a Defence Strategy Review (DSR) in late 2022 to assess if Australia had the Defence capability, posture, and preparedness to

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<sup>1</sup> Petra Goedde, *The Politics of Peace: A Global Cold War History* (Oxford, UNITED STATES: Oxford University Press, Incorporated, 2019), 13. Quote from the Roman adage "*Si vis pacem, para bellum*" – if you want peace, prepare for war."

<sup>2</sup> Peter Grose, *1942: The Year the War Came to Australia: The Bombing of Darwin and the Attack on Sydney by the Japanese* (Sydney, AUSTRALIA: Allen & Unwin, 2022), 8.

<sup>3</sup> Commonwealth of Australia, 'National Defence Strategy', 2024, 5.

defend Australia and its interest in the evolving strategic environment it now faces.<sup>4</sup> The policies and structures implemented post the Second World War, such as the United Nations (UN) and Humanitarian Law, have helped global order succeed for the most part and reduced the likelihood of global conflict, from which Australia has benefited. The United States (US) has maintained a dominant superpower status that has enforced these motions and kept a close ally of Australia. Many countries, including Australia, have prospered from this global order, allowing them to build their economies and join such things as the World Trade Organization (WTO), developing their nation's post-colonialism era.<sup>5</sup> The prosperity and peacebuilding of other nations have now led to a challenging situation for the US and its like-minded allies. They have helped nations such as China, which now appears to have a thirst for power, to challenge the global order from which it has prospered.<sup>6</sup>

The strategic situation continues to evolve, and the risk of state-on-state confrontation increasingly threatens Western nations and their militaries.<sup>7</sup> This is especially seen today with the war in Europe, with Russia invading Ukraine, and the conflict in the Middle East.<sup>8</sup> The increasing competition for control in the Southeast Asian region is also climaxing.<sup>9</sup> Australia must note the strategic situation and understand that the years of a secure environment are eroding. There is no longer a 10-year warning time for war.<sup>10</sup> The safe haven in which people have grown up could rapidly change to the likes of what their ancestors saw. This unrest resembles an all-too-familiar trajectory that once led to a major global conflict over eighty years ago in which those lessons can be harnessed.

Australia does not seek conflict; however, due to its challenging strategic environment and alliances, it may very well end up in one. As a middle-power nation and unable to go toe-to-toe with a superpower adversary, Australia must look to strengthen its alliances and focus on its investments as outlined in the DSR to build resilience in these deteriorating times. Australia is strategically positioned in the Southwest Pacific, making it an ideal launch platform into Southeast Asia. If conflict does arise in the region, and Australia is involved directly or hosts its allies, it could very well be targeted to coerce it into rethinking its support and foreign policies.

## **RESILIENCE IN HISTORY – Alliances and preparation**

The resilience of a nation at war can be the decisive factor in it emerging victorious. For instance, by the last quarter of the 20<sup>th</sup> century, Vietnam had endured and emerged victorious from wars against major colonial powers. This did not happen due to

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<sup>4</sup> ADF Department of Defence, *National Defence: Defence Strategic Review* (Commonwealth of Australia, 2023), 5.

<sup>5</sup> ADF Department of Defence, 5.

<sup>6</sup> Commonwealth of Australia, 'National Defence Strategy', 6.

<sup>7</sup> Michael S. Baker, Jacob Baker, and Jr Frederick M. Burkle, 'Russia's Hybrid Warfare in Ukraine Threatens Both Healthcare & Health Protections Provided by International Law', *Annals of Global Health* 89, no. 1 (23 January 2023): 2.

<sup>8</sup> Commonwealth of Australia, 'National Defence Strategy', 6.

<sup>9</sup> Commonwealth of Australia, 12.

<sup>10</sup> Commonwealth of Australia, 5.

better capabilities or numbers; in fact, these were inferior to the major powers of the US and its massive war machine during the Vietnam War. Vietnam's military victory instead was due to the nation's resilience through its will to fight, constant preparation, and strategy adaptation. This was also seen in the Battle of Britain, where the country came together to withstand the might of the superior *Luftwaffe* attacks. When facing major powers with superior capabilities, building resilience through prior planning, investment in allies, infrastructure, capabilities, civilian and military relationships, and a shared goal among the people are necessary to give the best chance for the nation to prevail during war and changing strategic environments.

## Vietnam

The US withdrawal from Vietnam in January 1973, following the signing of the Paris Agreement, ended more than twenty years of US involvement in Vietnam.<sup>11</sup> This led to the eventual reunification of Vietnam in 1975, which the Vietnamese rebels at the time had set as a goal since 1944.<sup>12</sup> Exploring how North Vietnam endured and emerged victorious against the US is surprising when examined through the lens of pure military capabilities. Australia can lean on this for its future strategic planning, with competition in the region on the rise. The US was considered a superpower then, while North Vietnam was labeled as a third-world country, creating a mismatch.<sup>13</sup> The North Vietnamese did, however, have prior experience fighting against major colonial forces such as the French, who were also supported by the US from 1948 to 1954.<sup>14</sup> This enabled them to plan effectively and adapt to the changing strategic environment.

The North Vietnamese Army (NVA) prided itself on using lessons learned, adapting strategy, and preparing thoroughly. They knew that if they were to succeed against the US in the Vietnam War and reunify the nation, they needed to make careful preparations to continue supporting the insurgency in the South through guerilla warfare tactics while building resilience in the North to withstand the US special air war of destruction.<sup>15</sup> The ability to withstand such a tremendous gap in military capabilities should be highlighted further. This can help other nations, such as Australia, focus on preparing in the right areas to build resilience. This starts with properly analyzing the strategic environment and then implementing a strategy that is fit for the purpose, which North Vietnam executed successfully.

Australia recently released the National Defence Strategy (NDS), which is built on the earlier released DSR and addresses key areas of concern and investment plans.<sup>16</sup> A continued concern, however, is the immediate threat to Australia and its interests due to

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<sup>11</sup> Dong Sy Hung, 'Combat in the Sky: Airpower and the Defense of North Vietnam, 1965-1973', 2023, 597.

<sup>12</sup> Orellana, Pablo de, 'The Road to Vietnam : America, France, Britain, and the First Vietnam War', 2020, 1.

<sup>13</sup> Wiest, Andrew *The Vietnam War: 1956-75* (London, UNITED KINGDOM: Bloomsbury Publishing Plc, 2022), 22.

<sup>14</sup> Orellana, Pablo de, 'The Road to Vietnam : America, France, Britain, and the First Vietnam War', 12.

<sup>15</sup> Hung, 'Combat in the Sky: Airpower and the Defense of North Vietnam, 1965-1973', 47.

<sup>16</sup> Commonwealth of Australia, 'National Defence Strategy'.

the changed characteristics of war. A nation can be targeted without the need to force project anymore. Ballistic missiles and hypersonic weapons have given adversaries the capability to target critical nodes at their luxury if required. Like Vietnam in 1965, it would be advisable for Australia to invest in an Integrated Air and Missile Defence (IAMD) capability to protect its critical areas and build its national resilience.<sup>17</sup> This will be further discussed in the BoB section.

## Alliances

North Vietnam's preparation and flexibility allowed them to succeed, leveraging the strengths of other communist allies, such as China and Russia, to establish a solid resupply line for economic aid and military hardware support.<sup>18</sup> The power of strong alliances cannot be underestimated when it comes to winning a war. Even when confronted with proxy conflicts from major powers, maintaining a strong alliance can be crucial. For example, the US aid to Afghanistan was an essential element in defeating the Soviets during the Soviet-Afghan war of 1979-1989.<sup>19</sup> The North Vietnamese Army (NVA) understood this all too well. Their small economy and lack of infrastructure meant they were vulnerable to attacks from the US. An alliance made all the difference in this situation, where communist nations with strategic intent, such as the former Soviet Union, continued to supply military capabilities and economic aid, offsetting the strategic bombing effect made by the US. North Vietnam also leveraged this alliance to build the capacity of military training, which it was limited to in its own country, by sending forces such as pilots and technicians to the Soviet Union and China.<sup>20</sup>

North Vietnamese President Ho Chi Minh anticipated that they would have to confront the US military strength and would have to take measures to mitigate its impact on the nation and its ability to wage war. This was no easy task and a testament to their overall strategy, including diplomatic engagements and national narrative for its unification of the South. A key attribute in building resilience is to prepare for it before it knocks on your door and educate your people about the impacts that it will have if the nation is not prepared. North Vietnam meticulously prepared and planned to be equipped for aerial destruction, which was accomplished before the war with the US began.<sup>21</sup> This began with the establishment of the North Vietnamese Air Defence Service and the Air Force Service, with pilots and engineers traveling to the Soviet Union, China, and even Poland for military training. A complete change to the structure of the military took place

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<sup>17</sup> Tomasz Pietrus, 'IAMD (Integrated Air and Missile Defence) Strategic Aspects with SBAD Focus', *Safety & Defense* 9, no. 1 (27 November 2023): 69–73, <https://doi.org/10.37105/sd.200>. IAMD is crucial to today's characteristics of warfare. Adversaries can strike deep within nations at critical points without having to force project. Defence of Inter-continental ballistic missiles and hypersonic weapons, for example, will have to be invested in strengthening the resilience of a nation when deterrence fails.

<sup>18</sup> Luong Thi Hong, 'Center and Periphery in the Cold War: Soviet Economic Aid to Vietnam, 1954–1975', *The International History Review* 46, no. 2 (3 March 2024): 187.

<sup>19</sup> Isby, David, and Volstad, Ronald, 'Russia's War in Afghanistan, 2013, 95. US economic aid and the supply of military capabilities such as the "Stinger" anti-aircraft weapon were significant elements in helping the Afghan people create an intolerable AO for the former Soviet Union to operate in and pursue its political objectives in the region.

<sup>20</sup> Hung, 'Combat in the Sky: Airpower and the Defense of North Vietnam, 1965-1973', 331.

<sup>21</sup> Dong Sy Hung, 'Combat in the Sky: Airpower and the Defense of North Vietnam, 1965-1973', 2023, 47.

in building its resilience. By the time Operation Linebacker II commenced in 1972, North Vietnam had endured severe bombing. Still, it managed to continue its support in the South and actually build up its defensive capabilities despite the barrage of bombs. The line of communication between the Soviet Union and China was critical to enabling this.

The strength of the Vietnam alliance was also witnessed as a strong deterrent to the US's war strategy. The US was reluctant to risk a potential conflict escalation with China and the Soviet Union, which gave the NVA a secure logistical supply route.<sup>22</sup> This support was instrumental in the NVA's ability to sustain its operations. This contributed to degrading the US's major military advantage over North Vietnam as a superpower and helped build North Vietnam's resilience despite the bombardment and losses.<sup>23</sup> This further highlights the great benefits of alliances; it may not deter a nation from resorting to conflict but may shape the strategies available to an adversary. This is an important lesson that Australia can leverage with the US through the formation of the AUKUS.<sup>24</sup>

From an Australian perspective, allying with a country like the United States, which can provide crucial supplies and military capabilities, increases the nation's resilience and ability to withstand physical and non-physical attacks. This is similar to the Soviet Union and China's support of North Vietnam during the war. However, the challenge for Australia is that it is an island nation isolated in the Southwest Pacific. Ensuring Australia can keep open its trade routes with allies and trading partners can transform a possible military war of attrition with a stronger nation into a war of attrition of economies and global opinion.

Australia's newly released NDS states, "Australia's Alliance with the US is fundamental to our national security and the Australian Defence Force's (ADF) capacity to generate, sustain and project credible military capability."<sup>25</sup> The strategy states how Vietnam perhaps viewed the alliance with the former Soviet Union and China during the Vietnam War. The overall strategy does not consider the growing concern about the immediate future within the region and how potentially stronger adversaries can cut off its lines of communication. Yes, agreements and alliances have been formed, such as the AUKUS; however, these will not deliver any real maritime capability until well into the next decade.<sup>26</sup> In addition to military hardware investments, there is the challenge of *generating* human capacity, as Vietnam did with Soviet-trained pilots and techniques; Australia is facing a retention and recruitment crisis. It is currently not meeting the required vector to meet the government's strategy of increasing personnel across the ADF and Public services forces by 18,500 people over the next ten years.<sup>27</sup> Although the NDS outlines the challenges Australia's security faces, it fails to articulate to the Australian people the impacts it could have on the way of life Australia has today if the region enters conflict. Australian people must be educated about the effects it could have, and the

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<sup>22</sup> Wiest, *The Vietnam War*, 42.

<sup>23</sup> Brian Laslie, 'Air Power's Lost Cause: The American Air Wars of Vietnam', 2021, 44.

<sup>24</sup> Commonwealth of Australia, 'National Defence Strategy', 50.

<sup>25</sup> Commonwealth of Australia, 46.

<sup>26</sup> Commonwealth of Australia, 50.

<sup>27</sup> Australian Department of Defence, Recruiting and Retention Leadership Guide, 1.3 (Australia: Australian Government - Defence, 2023), 5.

government must start to deliver this, bolstering its support in building its national resilience. Australia must take note of the challenging situation and take action to increase its military capabilities more rapidly, invest in resilient infrastructure, and bridge the military-civilian integration to build a resilient nation. Australia is an island nation and must be able to keep its supply lines open if it is to prevail in wartime. This requires immediate heavy investment in its maritime capabilities.

### **Nation unified**

A key factor in the North Vietnamese resilience and ability to withstand the US's strategic bombing effects was their ability to repair critical infrastructure overnight. The North Vietnamese party was united with its people and its objections to unification with the South. The general public's horsepower and capabilities were leveraged to repair key capabilities like airfields and roadways.<sup>28</sup> The planning and integration of the public into the nation's overall strategic narrative is one to be admired. The more the US bombed, the more it fed the public's hate for them, and it rallied the public even more behind the North Vietnamese party's objectives. A lesson China has taken on board is ensuring that information to the public is controlled, as opinions are a critical factor in warfare.<sup>29</sup> Clear goals and information warfare within North Vietnam worked amazingly to uphold the narrative and public support despite the carnage. Australia must take note and ensure that it is upfront and honest about the repercussions of not planning, investing, and building its national resilience. Naming and shaming of potential adversaries by the government will have to walk that delicate line of bringing the nation along with the narrative and managing its foreign relations. As Australia stamps its authority in the Southwest Pacific, it must back it up with a credible and resilient unified nation.

### **Britain – Preparing a focused force for resilience**

The BoB showcases how the British showed pure determination and preparedness in mobilizing the nation, both military and civilian population, for the forthcoming defence against the Nazi attack.<sup>30</sup> In his paper, Caleb Gray discusses how Britain's industry to the operator had been mobilized to support its centre of gravity and build the nation's resilience—Fighter Command.<sup>31</sup> This rally of the nation was the critical recipe for national resilience, allowing them to not only prevail in the BoB but to go on and win the war. Britain's communication network and radar chain were largely decisive factors in their victory against the *Luftwaffe*, allowing early detection and a measured air defence response.<sup>32</sup> With the fall of France to Nazi Germany, Britain took action to ensure it could endure war on its own land and not have the same fate.

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<sup>28</sup> Brian Laslie, 'Air Power's Lost Cause: The American Air Wars of Vietnam', 2021, 200.

<sup>29</sup> Edmund J. Burke et al., 'People's Liberation Army Operational Concepts' (RAND Corporation, 29 September 2020), 15, [https://www.rand.org/pubs/research\\_reports/RRA394-1.html](https://www.rand.org/pubs/research_reports/RRA394-1.html).

<sup>30</sup> Crowley, Mark J; Dawson, Sandra Trudgen, *Home Fronts - Britain and the Empire at War, 1939-45*, 2017, 147.

<sup>31</sup> Major Gray, Caleb, 'Fighter Command - A Nation in Support: The Battle of Britain. 'Modern Joint Air Campaigns Paper" Joint Command and Staff Programme 50', 2024, 2.

<sup>32</sup> Higham, Robin 'Unflinching Zeal : The Air Battles Over France and Britain, May-October 1940', 2012, 212.

## Island Supply lines

Recognizing the advantages and limitations of the island nation, specifically its reliance on the English Channel as a defence against the Blitzkrieg tank strategy, it became apparent that a concentration on air defence was necessary. The *Luftwaffe* was in range, and Britain correctly anticipated that they would be attacked. The downside of Britain's island nation compared to North Vietnam, as previously discussed, is that it had no unmolested line of communication to an adjacent allied border. Britain had to pursue slow and risky supply lines of communication across the Atlantic Ocean with the risk of being sunk by German U-boats. This supply line was regarded as Britain's vital life support system throughout the war, demonstrating how important it is to have a strong maritime capability to ensure a nation can still receive much-needed supplies during the war.<sup>33</sup> Britain was so highly dependent on these imports that it was assessed as only self-sustainable for two months, with its survival and ability to fight entirely dependent on the re-supply by sea.<sup>34</sup> Britain's narrow margin of victory is argued to be attributed to the US supply of 100-octane fuel, which was deemed a significant factor in operational success.<sup>35</sup> The line of communication across the Atlantic proved pivotal in the BoB, supplying air command the much-needed resources for the nation's defence. This further highlights the investment of maritime capabilities for island nations to secure lines of communication and bolster their national resilience during a war.

## Air Defence investment

The challenge for Britain was how to endure the effects of strategic bombing by the *Luftwaffe*. To Britain's credit, this was not a last-minute thought, and the strategy of defence in this manner had been worked on since the end of the First World War. Britain highlighted this by having twice as many squadrons of aircraft by the end of BoB as the French Air Force (FAF) did by the end of the Battle of France.<sup>36</sup> Britain's industrial basin was well-invested and ready to meet the conflict demands. Another crucial aspect was that Air Chief Marshal Sir Hugh Dowding had been involved in planning and refining an Integrated Air Defence System (IADS) since 1918 to counter such attacks.<sup>37</sup> This system became what is known now as the first ever fully integrated air defence system, harnessing RADAR technology along the coastline for early detection.<sup>38</sup> What Dowding and British leadership did not anticipate was the fall of Norway, in addition to France, which now gave Nazi Germany the ability to attack Britain from multiple directions instead of the most likely being directly from mainland Germany.<sup>39</sup> However, Britain had successfully invested in its air defence industrial basin, enabling it to surge when required and cover the entire coastline, adapting to the changing environment and integrating the

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<sup>33</sup> Smith, William, *Churchill's Atlantic Convoys: Tenacity & Sacrifice*, 2023, 19.

<sup>34</sup> Smith, William, 16.

<sup>35</sup> Gavin Bailey, 'The Narrow Margin of Criticality: The Question of the Supply of 100-Octane Fuel in the Battle of Britain: English Historical Review', *English Historical Review* 123, no. 501 (April 2008): 395.

<sup>36</sup> Robin Higham, 213.

<sup>37</sup> Robin Higham, 215.

<sup>38</sup> James Holland, 'The Battle of Britain: A REASSESSMENT', *The RUSI Journal* 155, no. 4 (1 August 2010): 72.

<sup>39</sup> Robin Higham, 'Unflinching Zeal : The Air Battles Over France and Britain, May-October 1940', 219.

Royal Observer Corps (ROC), consisting primarily of civilians. The civilians working within the ROC were deemed invaluable by Dowding and signified true national mobilization to bolster Britain's resilience.<sup>40</sup> The early investments in industry, science, and technology for new capabilities such as the RADAR and the development of Identification Friend or Foe (IFF) were pivotal in sustaining the nation, the Air Force, and its eventual growth despite the significant losses during the BoB.<sup>41</sup> The development of all-metal aircraft and parachutes since the First World War gave aircraft a greater chance of survival, and the technical revolution of things such as production facilities and electronics meant that Britain's sustainment of operations could surge when it was most needed.

Success often hinges on a nation's ability to expand its capabilities rapidly during war. Churchill recognized that this expansion could only be achieved by investing in the organization's infrastructure, systems, and technologies. As he famously declared, "The growth of machinery of an organization must precede the growth of the organization itself."<sup>42</sup> The British followed this philosophy by heavily investing in aircraft production and other key technologies before the war. This investment paid off, enabling them to ramp up production quickly and gain a significant advantage during the war of attrition through sustainment. In short, Churchill's words serve as a reminder that when it comes to achieving success, investment and planning are key to resilience, increasing the victory in conflict. For an island nation, however, the most critical aspect underpinning Churchill's words is ensuring safe communication lines with allied nations.

### **Australia – An Island Nation**

This is a stark reminder that Australia, an island nation, relies heavily on sea trade for survival. Although Australia has abundant non-renewable energy resources, it lacks the infrastructure and supply security of petroleum, a critical wartime resource.<sup>43</sup> Vlado Vivoda asserts in his paper on Australia's energy security that Australia's dependence on crude oil and refined petroleum imports is a source of strategic vulnerability.<sup>44</sup> This critical resource is dependent on sea trade from the Southeast Asia region. In an analysis conducted on energy policy within Australia, it was deemed that Australia's long-term and short-term liquid fuel security remains compromised with its import dependency.<sup>45</sup> The NDS has called for a significant investment in maritime capabilities to protect trade routes, but its scope and timeline are limited.<sup>46</sup> The Australian Navy has gone with limited maritime capabilities until its announced nuclear-powered submarines arrive in the next decade.<sup>47</sup> It would be in Australia's best interest to diversify its maritime

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<sup>40</sup> Major Gray, Caleb, 'Fighter Command - A Nation in Support: The Battle of Britain. "Modern Joint Air Campaigns Paper" Joint Command and Staff Programme 50', 5.

<sup>41</sup> Major Gray, Caleb, 3.

<sup>42</sup> Robin Higham, 'Unflinching Zeal : The Air Battles Over France and Britain, May-October 1940', 225.

<sup>43</sup> Vlado Vivoda, 'Australia's Energy Security and Statecraft in an Era of Strategic Competition', *Energies* 15, no. 19 (2022): 1, <https://doi.org/10.3390/en15196935>.

<sup>44</sup> Vivoda, 1.

<sup>45</sup> Tina Soliman Hunter and Madeline Taylor, 'Long-Term and Short-Term Liquid Fuel Security in Australia – What Role for the Great Australian Bight?', *Energy Policy* 157 (1 October 2021): 112472.

<sup>46</sup> Commonwealth of Australia, 'National Defence Strategy', 42.

<sup>47</sup> Commonwealth of Australia, 42.

capability investment to ensure its trade routes are to be kept open. Nuclear-powered submarines will not be a one-stop-shop solution. Britain's example in the Second World War should resonate with the Australian government and its people if it is to receive critical supplies in wartime for its survival.

Additionally, the seas surrounding Australia can only offer limited defence and provide challenges for potential adversaries. Much like the English Channel did for Britain against the Nazis, an amphibious assault on Australia with Blitzkrieg tanks is highly unlikely. However, today's evolved characteristics of warfare and the ability to be targeted from many domains make Australia's island nation status redundant in its defence strategy.<sup>48</sup> Nuclear-powered Submarines, as a deterrent capability, do not protect the people when that deterrence has failed. No longer does a force like the Japanese did in 1942 have to sail to great lengths to reach out and bomb a Darwin. The ability of Australia to maintain out of range to potential adversary capabilities has completely disappeared. The island nation can be touched when chosen through invisible strike capabilities such as cyber, counter-AI, electronic warfare, and long-range precision kinetic strikes such as ballistic missiles and hypersonic weapons.<sup>49</sup>

The nation must adapt to this changing characteristic of warfare. It must invest in industrial basins for redundancy, wartime surging, and civil-military integration to create an all-inn national approach to resilience. The most critical capability that was fundamental in the BoB was the development of an IADS, which, in today's era and mentioned in the Vietnam War section, is now known as IAMD. Australia does not currently have an IAMD capability, and as highlighted in the DSR, Australia must urgently deliver a layered IAMD operational capability.<sup>50</sup> However, the release of the NDS does not call for this urgency. Deep within the document and outside the defence's top six immediate priorities, it mentions increasing its investment in IAMD over the coming decade.<sup>51</sup> Australia's Integrated Investment Program (IIP) states that "acquisition of new active missile defence systems will be considered as the technology matures."<sup>52</sup> This statement is inconsistent with the urgency indicated in the DSR for acquiring an IAMD capability. Australia's move to focus on a deterrence strategy with nuclear-powered submarines and conventional long-range precision strike capabilities could fail to heed the lessons of past conflicts in building its resilience for when deterrence has not worked.<sup>53</sup> These lessons should signal to Australia that it must diversify its investments and rapidly acquire an IAMD system capable of defending against kinetic attacks. Much like Nazi Germany failed to adapt their strategy in the bombing of Britain, which saw

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<sup>48</sup> Australia can be attacked in many domains and in various forms of capabilities. The evolved characteristics of warfare, such as a focus on cyberattacks, ballistic missiles, and long-range precision strikes, demonstrate that island nations such as Australia no longer bear a significant advantage in their defence strategy due to the isolation the island provides.

<sup>49</sup> Frank Hoffman, 'Defeat Mechanisms in Modern Warfare', *The US Army War College Quarterly: Parameters* 51, no. 4 (17 November 2021): 58.

<sup>50</sup> ADF Department of Defence, *National Defence: Defence Strategic Review*, 69.

<sup>51</sup> Commonwealth of Australia, 'National Defence Strategy', 37.

<sup>52</sup> Commonwealth of Australia, *Integrated Investment Program*, 2024, 67.

<sup>53</sup> Commonwealth of Australia, 'National Defence Strategy', 37.

high attrition rates due to the introduction of RADAR, Australia's military capabilities and critical resources could be targeted today with impunity.<sup>54</sup>

## MODERN WARFARE AND NEW THREATS

### Ukraine-Russian war

The Russian invasion of Ukraine in 2022 is an ideal example of modern warfare characteristics and how they are changing with technology. It demonstrates how Ukraine's resilience strategy and mobilization of the nation have succeeded to some degree in fending off a superior force. In particular, the tactical-level benefits of drone warfare have been discovered when used against a stronger adversary.<sup>55</sup> Manned aircraft have largely been replaced by cheap drones in the fight at the front line.<sup>56</sup> This technological shift and the advancement of cheap capabilities have transformed the battlefield.<sup>57</sup>

Russia has employed a formidable hybrid warfare strategy against Ukraine that combines new technologies with a range of tactics in their invasion.<sup>58</sup> Ukraine had been preparing for the invasion for eight years by the time of the invasion, mobilizing the nation to build the resilience required to prevail. There was no shock and awe in Russia's large military operation, as seen by the massing of troops on the border in the lead-up to the invasion.<sup>59</sup> This is a testament to the changing aspect of the fog of war. Satellite imagery, aerial surveillance, and drones make it almost impossible for a military to manoeuvre without detection. The Russian build-up of troops could be compared to China's unprecedented conventional and non-conventional military build-up, which is taking place without strategic reassurance or transparency today.<sup>60</sup> This uncertainty in the region should be ringing alarm bells for the nation, and Australians should equally be prepared to meet the challenge ahead.

Ukraine has focused heavily on its science and technology industry to help build resilience. The development of drone technology has been pivotal in its defence, assisting in kinetic strikes and reshaping the battlefield, much like tanks did in the First and Second World Wars.<sup>61</sup> For a nation like Ukraine, with a smaller military and industrial

<sup>54</sup> Robin Higham, 'Unflinching Zeal : The Air Battles Over France and Britain, May-October 1940', 221.

<sup>55</sup> Dominika Kunertova, 'Drones Have Boots: Learning from Russia's War in Ukraine', *Contemporary Security Policy* 44, no. 4 (2 October 2023): 577, <https://doi.org/10.1080/13523260.2023.2262792>.

<sup>56</sup> Barno, David. Bensahel, Nora, 'Drones, the Air Littoral, and the Looming Irrelevance of the U.S. Air Force', *War on the Rocks*, 7 March 2024, <https://warontherocks.com/2024/03/drones-the-air-littoral-and-the-looming-irrelevance-of-the-u-s-air-force/>.

<sup>57</sup> Pettyjohn, Stacie, 'Drones Are Transforming the Battlefield in Ukraine But in an Evolutionary Fashion', *War on the Rocks*, 5 March 2024, <https://warontherocks.com/2024/03/drones-are-transforming-the-battlefield-in-ukraine-but-in-an-evolutionary-fashion/>.

<sup>58</sup> Baker, Baker, and Frederick M. Burkle, 'Russia's Hybrid Warfare in Ukraine Threatens Both Healthcare & Health Protections Provided by International Law', 2.

<sup>59</sup> Rakesh Sharma, 'Russian Military Campaign in Ukraine: Prognosis and Impact', *National Security* 5, no. 3 (2022): 309, <https://doi.org/10.32381/NS.2022.05.03.2>.

<sup>60</sup> Commonwealth of Australia, 'National Defence Strategy', 6.

<sup>61</sup> Zachary Kallenborn, 'Seven (Initial) Drone Warfare Lessons from Ukraine', *Modern War Institute*, 12 May 2022, <https://mwi.westpoint.edu/seven-initial-drone-warfare-lessons-from-ukraine/>.

basin fighting against a major power like Russia, it could be argued that cheap drones have closed the gap.<sup>62</sup> Drones of all types used by Ukraine are raising the risk level of forces operating within its borders. Targeting troops, tanks, and ships in the Black Sea is revolutionizing close combat and beyond-visual-range strikes.<sup>63</sup>

As this capability grows, the question remains: how best to defend against such capabilities when employed? This is one that Australia must investigate further. As this technology advances into mass autonomous capabilities, it may revolutionize warfare.<sup>64</sup> As previously mentioned, the lack of investment in an IAMD capability in Australia will only add to the lack of resilience if Australia's deterrence strategy fails in future warfare. It will also need to consider how best to defend against drones in the maritime environment if it is to keep its trade routes open for vital supplies in wartime, as discussed earlier. Australia should note a critical lesson in which Ukraine closed the gap of a superior force through asymmetric means. Continued investment in science and technology innovation in today's era will be crucial to a competitive edge.

Although drone warfare has made a significant impact on the battlefield, it will not win the war, and artillery has once again been a prominent capability, bringing the war to an almost stalemate. Long-range fires have been critical for both sides, and drones have made standard artillery rounds precision weapons.<sup>65</sup> Russia was using 20,000 rounds of artillery per day compared to Ukraine's 6,000, highlighting the need for an industrial basin to continue to supply the fight and maintain open supply routes with allies in war.<sup>66</sup> This once again highlights the critical need for Australia to be able to independently produce warfighting capabilities and ensure its supply lines are kept open in a time of war. It must start this investment now.

Rallying the nation for mobilization and investment is critical for governments to manage as the strategic security environment erodes. The government of Ukraine set out to educate the public on the grim realities of war and how it could escalate with a public exhibition of burned-out cars, tanks, and truck-mounted multiple-launch rocket systems.<sup>67</sup> Aiming to bring the realities of war to the general public, it was seen as a requirement to mobilize the country in time of need. For most Ukrainians, the war was 750km away and was out of sight and out of mind. In line with this tactic, the Australian Government should bring the realities of war today to the minds of the Australian people in the pursuit of support in the investment of military capabilities and to grow its industrial basin to improve its resilience.

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<sup>62</sup> Kerry Chávez and Ori Swed, 'Emulating Underdogs: Tactical Drones in the Russia-Ukraine War', *Contemporary Security Policy* 44, no. 4 (2 October 2023): 594, <https://doi.org/10.1080/13523260.2023.2257964>.

<sup>63</sup> Chávez and Swed, 593.

<sup>64</sup> Pettyjohn, Stacie, 'Drones Are Transforming the Battlefield in Ukraine But in an Evolutionary Fashion'.

<sup>65</sup> Pettyjohn, Stacie.

<sup>66</sup> Sharma, 'Russian Military Campaign in Ukraine', 315.

<sup>67</sup> Puri, Samir, 'Russia's Road to War with Ukraine: Invasion amidst the Ashes of Empires', 2022, 253.

## CONCLUSION

This paper explored the subject of national resilience to provide insights and lessons that Australia can harness as the strategic environment has changed and the stability of global order is in question. Historical and modern-day warfare examples emphasize Australia's need to adapt its defence strategies amid the evolving geopolitical environment and the changing characteristics of warfare.

The paper first contextualizes the threat to Australia and its interests today, highlighting that the rules and global order implemented after the Second World War are now challenged. Australia has prospered like many other nations during this time and should seek to maintain it. The risk of conflict appears more likely as the world has witnessed unprecedented military build-up by China without strategic reassurance or transparency. Australia must take note of the situation and build its national resilience across all areas.

The Vietnam War provided insights into a nation's resilience as North Vietnam faced and defeated the US, a superpower nation. Insights revealed that resilience in the face of adversity often hinges not on superior military firepower but on strategic foresight, meticulous preparation, and robust alliances. It showed that despite being outmatched by the military capabilities of the US, North Vietnam triumphed through relentless strategy adaptation and leveraging international support through its alliances with the Former Soviet Union and China.

Similarly, the BoB showcases the strategic advantage of early and sustained investments in technology and infrastructure, enabling Britain to withstand the attacks from the formidable *Luftwaffe*. The development of the first Integrated Air Defence System and the nation's mobilization proved pivotal in their success. As technology has advanced, and new threats such as ballistic missiles, hypersonic weapons, and drones are available, Australia must invest in an IAMD capability to create a layered defence of the nation, bolstering its resilience as Britain did.

Furthermore, Australia's strategic position in the Southwest Pacific and its island status necessitate a strong focus on maritime capabilities to secure its trade route and ensure supply chain continuity in times of conflict. Britain's experiences during the Second World War and its national reliance on the supply line across the Atlantic to its allies underscore the importance of safeguarding these critical lifelines.

The ongoing Russian invasion of Ukraine has provided insights into modern conflict and emphasized the significance of technological advancements and hybrid warfare strategies. Ukraine's development and use of drones exemplify how innovation can level the playing field against a superior power, an approach that Australia should emulate as it looks for asymmetric ways to fight potential adversaries.

A unified nation and proper government narrative throughout proved pivotal in unifying the nations in the case studies and emphasized resilience through a collective effort. Australia must engage with its people and educate them on the stark realities of the

challenging environment in which they live and the realities of war if a conflict should emerge. This should aid in fostering a national ethos that is prepared to support defence investment and strategies.

Future research areas where Australia must bolster its resilience include cyber warfare and information operations. Both could shape the modern-day battlefield. Further research is required to understand how Australia can best strengthen its resilience to these effects.

In conclusion, Australia must proactively bolster its national resilience in the current strategic environment. By integrating lessons from the past and present into its capability investments and preparation planning, Australia can prepare itself for the potential trauma of global conflict. To achieve this, Australia should focus on enhancing its military capabilities, strengthening alliances, investing in technology and infrastructure, and mobilizing public support. By taking these steps, Australia will be better equipped to withstand any crisis that may come its way.

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