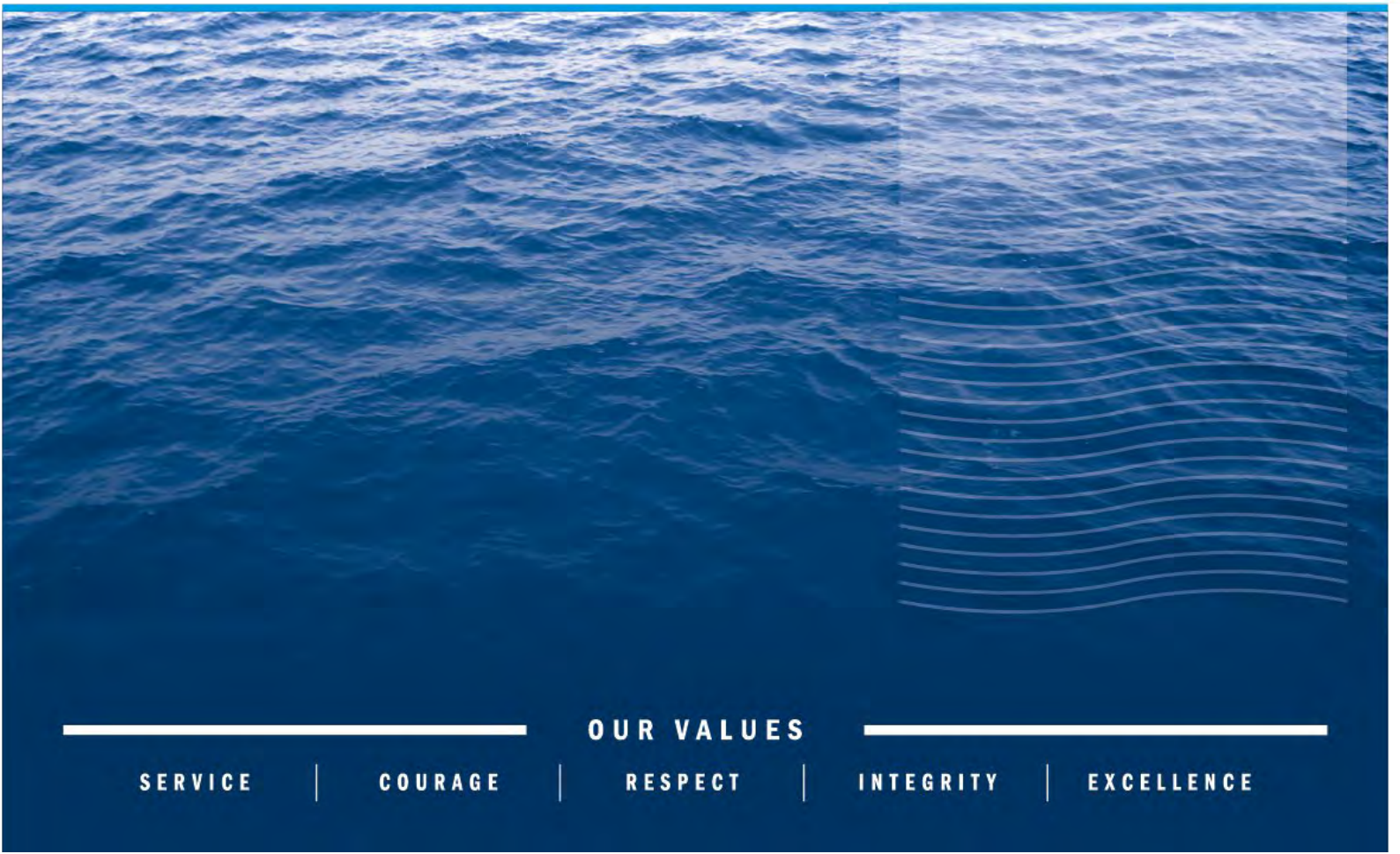
## OUR VALUES

SERVICE | COURAGE | RESPECT | INTEGRITY | EXCELLENCE

# OPERATION BUSHFIRE ASSIST 2019-2020: THE ROYAL AUSTRALIAN NAVY'S ROLE AND RESPONSE

SEA POWER CENTRE – AUSTRALIA: SEA POWER SERIES PAPER 6
DR HONAE CUFFE, DECEMBER 2020



© Commonwealth of Australia

This work is subject to copyright. Apart from any fair dealing for the purpose of study, research, criticism or review, as permitted under the Copyright Act 1968, and with the standard source credit included, no part may be reproduced without written permission. Inquiries should be directed to the Director, Sea Power Centre – Australia.
The views expressed are those of the authors and do not necessarily reflect the official policy position of the Australian Government, the Department of Defence and the Royal Australian Navy. The Commonwealth of Australia will not be legally responsible in contract, tort, or otherwise for any statement made in this publication.

Author: Cuffe, Honae
Title: Operation BUSHFIRE ASSIST 2019–2020: The Royal Australian Navy's Role and Response
ISBN: 978-0-9805674-5-8

The Sea Power Centre – Australia was established to undertake activities to promote the study, discussion and awareness of maritime issues and strategy within the Royal Australian Navy, the Department of Defence and civil communities at large. Its mission is:

- to promote understanding of sea power and its application to the security of Australia's national interests
- to manage the development of RAN doctrine and facilitate its incorporation into ADF doctrine
- to contribute to regional engagement
- to contribute to the development of maritime strategic concepts and strategic and operational level doctrine, and facilitate informed force structure decisions
- to preserve, develop and promote Australian naval history.

Comments on this volume or any enquiry related to the activities of the Centre should be directed to:

Director
Sea Power Centre - Australia
Department of Defence
PO Box 7942
Canberra BC ACT 2610
AUSTRALIA

Email: seapower.centre@defence.gov.au
Website: www.navy.gov.au/spc

# FOREWORD

The 2019-2020 bushfire season in Australia was unprecedented in modern Australian history. In a speech to Parliament on 4 February 2020, Prime Minister Scott Morrison confirmed that 33 people had died as a result of the fires, a number that included nine firefighters.

17 million hectares had burned across NSW, Victoria, Queensland, ACT, South Australia and Western Australia claiming 3,094 homes across the continent. A conservative figure of one billion animals died nationally, excluding insects. It was a national emergency of epic proportion and it is hardly surprising that the Australian Defence Force (ADF) was called upon to assist on 31 December 2019 under the auspices of Operation BUSHFIRE ASSIST.

This report examines and records how the ADF, and in particular how the Royal Australian Navy (RAN), responded to the crisis.

Operation BUSHFIRE ASSIST was in every sense joint in nature extending beyond the ADF and linking up with Australia's civil emergency service organisations. While this is not unprecedented in the face of natural emergencies, the magnitude of the ADF's response saw it cooperating closely with the civil services on land, sea and in the air.

From that experience important lessons were learned and many of these are evident in this report which is aimed at not only recording the RAN's involvement in Operation BUSHFIRE ASSIST, but at informing and equipping Navy's people with those lessons so that they might benefit from them if faced with a similar crisis in the future.

This report is both comprehensive and succinct in nature and I feel confident that readers will benefit greatly from reading it. I commend it to you.

SAG Andrews
Captain, RAN
Director Sea Power Centre - Australia

01 December 2020

# CONTENTS

Foreword ..... 1
Executive Summary ..... 3
Key Recommendations ..... 5
Introduction ..... 7
Defence Assistance to the Civil Community ..... 8
Operation BUSHFIRE ASSIST 2019–2020 ..... 11
The 2019–2020 Bushfire Season Overwhelms Australian Firefighters and Emergency Services ..... 11
The Evacuation of Mallacoota ..... 15
Cyclone Tracy and Operation NAVY HELP DARWIN ..... 19
RAN Support to NSW ..... 20
International Cooperation ..... 24
The RAN Faces its own Bushfire Threats ..... 26
Recovery ..... 28
Observations and Lessons Learnt ..... 29
Conclusion ..... 34

## EXECUTIVE SUMMARY

With fires burning across every state and territory, the 2019–2020 bushfires were, in every sense of the phrase, a national emergency. On 31 December 2019, Defence Minister, Senator the Hon. Linda Reynolds, CSC, announced the commencement of Operation BUSHFIRE ASSIST 2019–2020 (OP BA). OP BA, which concluded 26 March 2020, saw the Australian Defence Force (ADF) support civilians and emergency services in New South Wales, Victoria, Queensland, the Australian Capital Territory, South Australia and Tasmania. Royal Australian Navy (RAN) personnel were among the more than 8,200 ADF members – including 2,500 reservists – who contributed to OP BA. In addition to highly visible activities like civilian evacuations and fire mapping, Navy personnel carried out medical triage, delivered fuel, cleared roads and provided drinking water to fire affected communities. These efforts were part of the largest coordinated bushfire relief and recovery operation in Australia's history.

It is the unprecedented nature of the Black Summer, as it came to be known, and OP BA that necessitated the writing of this report. The aim of this report is threefold. The first aim is a historical one, documenting the role of the RAN in providing support to Australian citizens and emergency services. Not only is there a remarkable story to be told, OP BA can act as a playbook for future humanitarian assistance and disaster relief (HADR) operations. The second aim is to reflect on past RAN operations and experiences, considering how these have informed doctrine and practices during OP BA. Finally, this report considers the limitations apparent in OP BA and the RAN's broader HADR practices and doctrine. A critical assessment of the RAN's performance in OP BA can bring to the fore both the Navy's strengths and the vulnerabilities that must be addressed to ensure a resilient and fit for purpose organisation going forward.

Although fires burnt in every Australian state and territory, it was the scale and speed of the NSW, ACT and Victorian fires that dominated domestic and international news headlines and ultimately defined the Black Summer. Accordingly, the scope of this report is limited to the Navy's efforts in these areas. In tracing the story of OP BA, this report draws on Reports of Proceedings, media coverage and scholarly observations. Throughout OP BA, members of the ADF recorded lessons learnt and operational analysis, the purpose of which is to inform short-term command level considerations and longer-term decisions concerning Defence Assistance to the Civil Community (DACC). A major public inquiry concerning the bushfires and natural disasters more broadly was also held during 2020, the Royal Commission into National Natural Disaster Arrangements. In compiling the critical assessment of the RAN's role and response to OP BA, this report makes use of these sources.

The main themes apparent in the narrative of OP BA can be organised into three categories: capabilities, preparedness and people-to-people links.

OP BA demonstrated how the specialist capabilities and assets pertinent to core Navy operations can be readily applied to a variety of HADR taskings. The Navy's primary strengths lay in the characteristics and attributes of sea power. Warships are uniquely mobile in mass, with HMA Ships *Choules* and *Adelaide* able to deliver a huge payload of personnel, equipment and stores, and move a large number of evacuees to safety. Critically, the RAN operated self-sufficiently, avoiding any burden on the scarce resources of the overwhelmed emergency services. Furthermore, warships are continuously mobile and can operate anywhere there is sufficient depth of water to float. This access was significantly expanded through the embarkation of aircraft. The landing docks on *Choules* and *Adelaide* effectively allowed the RAN to operate a military airfield anywhere it was needed on the coastline. It is this utility and flexibility that allows RAN capabilities to be so effective in HADR settings.

The Navy proved itself prepared and able to be deployed quickly, providing much needed support to Australian emergency services and communities at risk. This readiness to respond can be attributed to the RAN's organisational focus on maintaining seaworthiness and unit readiness (UR). Upon assuming responsibilities as the nominated HADR vessel on 6 December, *Choules* embarked HADR equipment and completed a suite of trials and training. This preparation proved fortuitous when, on 31 December, the ship was directed to proceed to Mallacoota. Throughout January and early-February, HMAS *Canberra* completed an intensive UR work-up program. This program ensured the ship's company was prepared should it be called upon to join OP BA at short notice. It also facilitated an ease of transfer when *Canberra* assumed the role of HADR response vessel on 11 February. Similarly, in NSW, the Fleet Air Arm, which flew hundreds of hours in support of OP BA, pre-empted a sustained and high tempo period of HADR activities and prepared accordingly. It is this commitment to preparedness that aided in the efficient provision of support and saw RAN personnel ready for multiple contingencies and able to realign quickly as priorities changed. This adaptability is particularly pertinent in the face of unpredictable bushfires.

OP BA has been a testament to the value of people-to-people links. Throughout OP BA and, in particular, the evacuation of Mallacoota, the Navy conducted itself with compassion and prioritised clear communication with evacuees. This demeanour ensured evacuees felt safe and welcome onboard and no doubt contributed to the smoothness of the operation. The RAN's strong and continued link with industry was also a triumph. Without the support of civilian specialists – the dockyard workers, private contractors and engineers – the RAN simply could not have provided assistance in OP BA.

Despite the significant achievements apparent in OP BA, this report also identifies areas of weakness. OP BA made clear that disaster management is a national and human security issue, in turn, contributing to an expectation that the ADF will go on to assume a greater role in responding to domestic disasters. This expectation is complicated by climactic changes, which will increase the likelihood and severity of natural disasters. Natural disasters and climatic changes not only threaten human life, but damage to infrastructure, climate refugees, and the loss of food sources will have cascading strategic consequences. There are pressing questions concerning how the RAN will adapt to this future without impinging on the capacity to maintain core activities.

OP BA saw high level cooperation between the Navy and state and territory emergency services to provide much needed support. Unfortunately, seamless cooperation was not the universal experience. Both the Royal Commission findings and lessons and operational analysis captured by ADF personnel told of unnecessary delays and uncertainty among emergency and ADF personnel as how best to interact with ADF personnel. This situation was largely the result of inadequate liaison and uncertainty among emergency services and state, territory and local governments as to what ADF capabilities were available.

The weaknesses identified in this report are primarily structural ones that can be remedied through a suite of targeted modifications. The key recommendations made in this report are listed below. To be fully appreciated, however, they are best read in the context of the entire report. A number of these observations and recommendations are in line with those presented in the final report of the Royal Commission.

## KEY RECOMMENDATIONS

- Defence acknowledges the security risks posed by climatic changes and the increasing need for HADR capabilities. *Australian Maritime Doctrine* does not adequately reflect this and should be updated presently to do so.
- The RAN should develop a more tailored role for Royal Australian Navy Reserves, focusing on HADR operations. This would ensure the RAN was able to provide DACC without undue pressure on permanent personnel and core activities.
- OP BA highlights the utility and capability of the RAN in responding to a national disaster. However, the RAN and broader ADF cannot be seen as an infinite and transient workforce.
- Natural disasters in Australia and its immediate region regularly coincide with the Navy's Christmas reduced activity period (RAP). The RAN should undertake a partial Christmas stand-down to decouple from the end of the calendar year.
- Pre-deployment and/or work-up periods should be instituted in the lead-up to the peak disaster season for Australia and its region.

- International cooperation, both in OP BA and previous HADR operations, is imperative to fatigue management, and the efficient and sustained delivery of support. Maintaining interoperability through multi-nation HADR training exercises should be the basis for the RAN's domestic and regional response to natural disasters.

# INTRODUCTION

The year 2020 has been like no other. The year opened with fires raging across Australia and the commencement of Operation BUSHFIRE ASSIST 2019–2020 (OP BA). OP BA, saw the Australian Defence Force (ADF) support state fire and emergency services in New South Wales, Victoria, Queensland, the Australian Capital Territory, South Australia and Tasmania. The Black Summer, as it has come to be known, saw Australia's largest coordinated interstate fire emergency operation. The Royal Australian Navy (RAN) was highly visible in the Defence response to the bushfire crisis, as Chief Joint Operations (CJOPS) Lieutenant General Greg Bilton, AO, CSC, remarked:

> "Navy has been at the forefront of the defence response to DACC since Sep19 and through OP Bushfire Assist, supporting our civil emergency services partners and the Australian community with vital rotary wing and amphibious manoeuvre options from the sea. The confident and capable presence and demeanour of Australia's navy has also played an important role in reassuring the public of the commitment of the full resources of the nation, and directly aided Australians in dire need."[1]

As the world watched the unfolding bushfire crisis in horror, Chinese scientists announced the discovery of a new coronavirus (SARS-CoV-2) linked to a wet market in Wuhan, China. Within two months, the World Health Organisation had declared a pandemic. On 1 April, with OP BA having ended less than a week prior, Operation COVID-19 ASSIST was established to oversee ADF personnel support in the whole-of-government response to COVID-19 across all states and territories.

From natural disasters to health crises to an increasingly unpredictable global order, 2020 has highlighted the utility and capability that the RAN – indeed the ADF as a whole – has in disaster management and recovery. The aim of this report is threefold. The first aim is a historical one, documenting the role of the RAN in OP BA for the sake of posterity and as a potential playbook for future humanitarian assistance and disaster relief (HADR) operations. The second aim is to reflect on past RAN operations and experiences, considering how these have informed doctrine and longer-term practices. Lastly, drawing on the findings of the Royal Commission into National Natural Disaster Arrangements, and tactical lessons and observations compiled by members of OP BA Joint Task Forces (JTF), this report identifies the broader challenges posed by the increasing severity and frequency of natural disasters, RAN vulnerabilities and contingency planning for future operations.

The avenues of inquiry taken up are in part informed by the concept of the Navy of the future and the themes of preparedness, mobilisation and cooperation in the face of increasing and unconventional threats. There has perhaps never been a more important moment to assess

the Navy's past performances, current capabilities and planning arrangements to ensure a resilient and self-reliant organisation going forward.

## DEFENCE ASSISTANCE TO THE CIVIL COMMUNITY

The RAN's core mission is to protect Australia, its people and interests against all manner of threats. OP BA underscored the transferability of RAN core capabilities to HADR operations and the protection of Australians at risk. To fully appreciate the coordination and deployment of RAN support during OP BA, it is useful to briefly consider the framework guiding the Department of Defence and the ADF. In the first instance, state and territory governments lead disaster relief and recovery efforts. When a situation is beyond the limits of state and territory resources, Defence is committed to assisting the civil community. The Defence Assistance to the Civil Community (DACC) arrangements provide a means to categorise a situation, the interface between Defence and crisis management agencies, and the delivery of Defence resources.

There are two classes of DACC, Emergency Assistance and Non-emergency Assistance, and each class has three discrete categories.

DACC Emergency Assistance: Where there is an immediate threat to life or property, the scale of which exceeds the capabilities (government, community and/or commercial) of the state or territory, or where resources cannot be mobilised in sufficient time. In this instance, the State or Territory may seek Commonwealth assistance.

Category 1: local emergency assistance
Category 2: significant emergency assistance
Category 3: emergency recovery assistance

DACC Non-emergency Assistance: Assistance which is not immediate, urgent or for the purpose of responding to or mitigating an emergency. Defence should only provide non-emergency assistance to the civil community where there are no alternatives for gaining the necessary support.

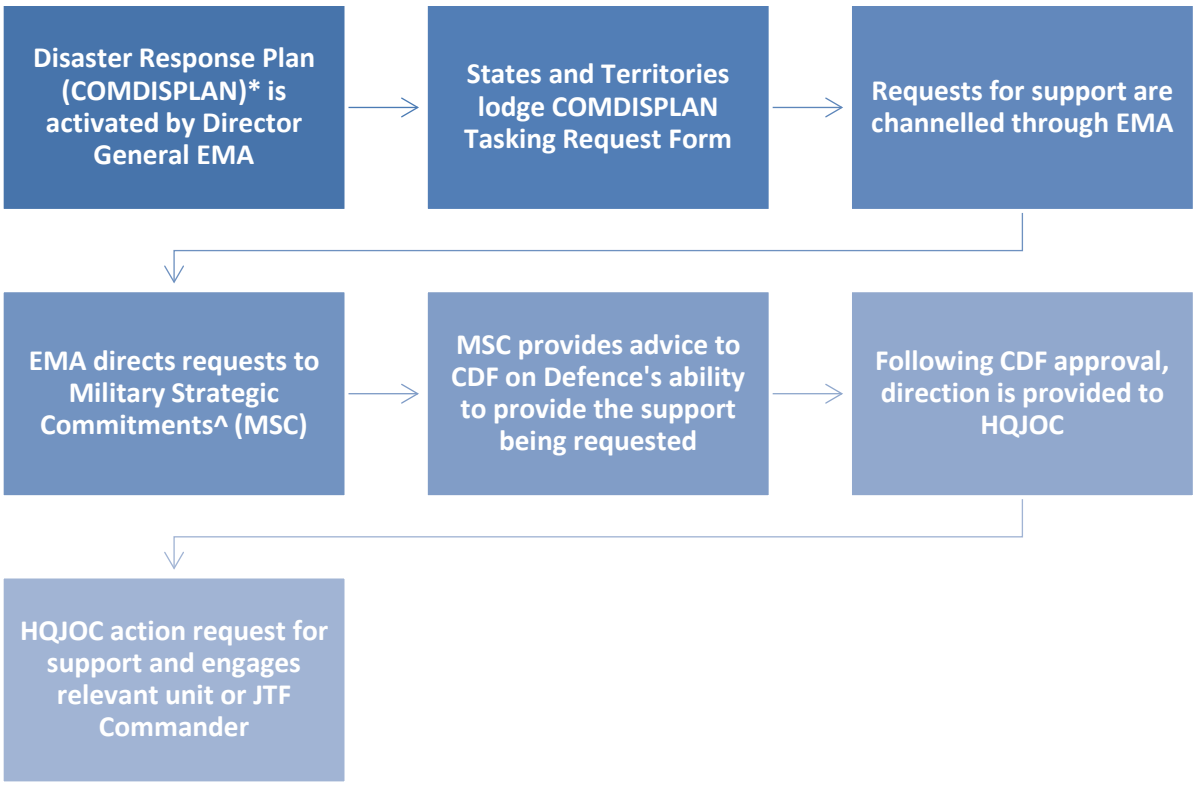
Category 4: significant non-emergency assistance
Category 5: local non-emergency assistance of a minor nature
Category 6: law enforcement assistance

Before DACC is provided, assistance must be formally requested, assessed and accepted. Requests for emergency assistance are formally requested through Emergency Management Australia (EMA). As detailed below, these requests are managed through a coordinated effort by EMA and Head Quarters Joint Operations Command (HQJOC).

There are limitations of the kinds of activities the ADF can undertake when providing DACC. In the context of a bushfire, for instance, the ADF is not trained, equipped or certified to undertake firefighting. Rather, ADF equipment and specialist capabilities such as logistics support, engineering and transport, can be provided to aid bushfire efforts. A JTF or DACC Commander will be appointed by the Chief of the Defence Force (CDF) in accordance with the scale, complexity and duration of the support required. In OP BA Defence deployed three minor JTFs to integrate with state, territory and local level agencies: JTF 646 in Victoria, JTF 1100 in NSW and the ACT, and JTF 1111 in South Australia and Tasmania.[2] While DACC support is directed and managed by the appropriate civil authority or community organisation, JTF personnel remain within the ADF chain of command at all times.[3]

The truly national scale of the bushfires brought into focus the limitations of DACC and the defined roles and responsibilities of the ADF. These limitations are returned to in greater detail in *Observations and Lessons Learnt.*

*Managing DACC Requests*




* The COMDISPLAN is the plan for the provision of Australian Government non-financial assistance to states and territories in an emergency or disaster.
^ MSC provides the strategic level management and situational awareness of potential and current ADF commitments.

*Members of HMA Ships Adelaide and Choules provide assistance to emergency service personnel*

*A RAN helicopter crew member obverses the Gippsland fire*

## OPERATION BUSHFIRE ASSIST 2019–2020

Australia's 2019–2020 bushfire season arrived early, with fires burning in Queensland and NSW in the first days of September. Neil Gallant, Deputy Commissioner of the Queensland Fire and Emergency Services, foreshadowed the crisis ahead when he remarked "if this is what it's like now, we really are concerned that over the next few months we're going to get no respite from these sorts of bushfire conditions."[4] The hottest and driest year on record saw fires burning in every state and territory. It was, in every sense of the phrase, a national emergency. In excess of 24 million hectares were burnt, 33 lives lost – including 7 Australian and 2 US firefighters – more than 3,000 homes were destroyed and thousands of other buildings and Indigenous cultural heritage sites damaged.[5] The secondary impact of smoke, which became synonymous with the Black Summer, was at least 445 deaths and thousands of hospitalisations.[6] Although fires affected every Australian state and territory, it was the scale and speed of the fires burning in NSW, Victoria and the ACT that truly came to define the 2019–2020 bushfire crisis. For this reason, this report primarily focuses on the Navy's efforts in these areas.

While OP BA officially commenced on 31 December, it was backdated to 6 September to cover the full scope of ADF support. OP BA was organised into two phases. Phase 1 took place from 6 September until 31 December when state and territory governments sought modest and localised support from ADF. These requests were coordinated by EMA. Phase 2 commenced when the state and territory governments required more significant emergency assistance, lasting from 31 December 2019 to 26 March 2020. During Phase 2, Defence adopted a slightly different approach when managing DACC requests. JTF commanders and staff worked directly with state and territory governments and emergency services to coordinate responses with a goal of streamlining decision making.[7] Over the course of these months, more than 8,200 ADF personnel, including 2,500 members of the ADF Reserves, provided their service. In addition to evacuations, fire mapping, and the delivery of vital stores and equipment, ADF personnel cleared more than 4,800 kilometres of road and 240 kilometres of fire breaks, delivered 77,000 meals to emergency service personnel and evacuees, and produced nearly 10 million litres of drinking water for fire affected communities. The contribution of the ADF in supporting response and recovery efforts during the 2019–2020 Black Summer is without parallel in peacetime.[8]

### THE 2019–2020 BUSHFIRE SEASON OVERWHELMS AUSTRALIAN FIREFIGHTERS AND EMERGENCY SERVICES

One of the defining moments of the Black Summer came on the afternoon of 26 October 2019, when lightning bolts made ground in Gospers Mountain, NSW. This would become the epicentre of the largest bushfire to have started from a single ignition point in Australia's

history, burning more than 512,000 hectares over the coming two and a half months.[9] In the weeks following the start of the Gospers Mountain fire, conditions worsened significantly in NSW. Out-of-control fires ripped through the Blue Mountains, the Hawkesbury, the Hunter, New England and Northern NSW. On 11 November, with Sydney under a blanket of smoke, more than 150 structures destroyed and 3 lives lost, NSW Premier Gladys Berejiklian declared a week-long State of Emergency under Section 33 of the *State of Emergency and Rescue Management Act (1989).* The State of Emergency declaration granted NSW Rural Fire Service (RFS) Commissioner Shane Fitzsimmons the power to:

- direct any government agency to conduct or refrain from conducting its functions;
- control and coordinate the allocation of government resources;
- evacuate people from property within the declared area;
- close roads and thoroughfares to traffic;
- pull down or shore up infrastructure at risk of collapse;
- order the shutdown of essential utilities in the declared area including electricity, gas, oil and water; and
- enter or take possession of property in the course of the emergency response.[10]

The RFS also issued a catastrophic fire warning for the Greater Sydney, Hunter and Illawarra/Shoalhaven areas. This was the first time this rating level had been used.[11] Fires were also burning just north of the Queensland border and in Central and North Queensland. On 9 November, with more than 50 fires burning across the state, a State of Emergency was declared and residents were urged to evacuate.[12]

Australian firefighters and emergency Services were overwhelmed in December. The Gospers Mountain fire had joined with the smaller Three Mile Creek and Little L Complex fires on 6 December. This 'mega fire', along with fires in the Blue Mountains, was burning at the fringes of the Sydney metropolitan area. There were new threats further south, with the Currowan and North Black Range fires on the NSW South Coast reaching 50,000 and nearly 400,000 hectares respectively.[13] On 7 December, the RFS was joined by specialist firefighting personnel from the US and Canada. These were the first of the more than 1,000 international firefighters and fire management specialists that were sent to support Australian firefighting operations in the coming months.[14] On 19 December, Premier Berejiklian declared a second weeklong State of Emergency.[15] The following day, with hot and gusty conditions forecast, a catastrophic fire danger was again issued for Greater Sydney, the Illawarra-Shoalhaven region and Southern Ranges.[16] That same day, Melbourne was under a cloud of smoke from fires across NSW and Victoria, and the state recorded its hottest ever December day at 47.9°C. There were spot fires throughout the state's west and residents in Lexton, 50 kilometres north-west of Ballarat, were urged to evacuate as fires came within four kilometres of the tiny town. The unpredictable and fast moving East Gippsland fire reached 37,000 hectares

and residents in the towns of Stirling, Tambo Crossing and Wattle Circle were being told it was too late to leave and to seek shelter indoors.[17]

From the Gold Coast to Ballarat, residents and firefighters braced for an uncertain Christmas period. Blessedly, cooler conditions were welcomed over Christmas, allowing fire fighters and emergency services a slight respite in which to prepare strategies for the worsening conditions predicted for the coming week.

New Year's Eve and New Year's Day devastated the NSW South Coast and Victoria's Gippsland and Alpine regions. Fires continued to blaze in the Illawarra-Shoalhaven area spreading to the Bega Valley, leaving residents without power and drinking water after ash contaminated the water supply and fires destroyed disinfection facilities.[18] The East Gippsland fire had by then exceeded 200,000 hectares and on the afternoon of 30 December, an emergency warning was issued for the coastal town of Mallacoota. Australia woke on New Year's Eve to the news that Mallacoota was entirely hemmed by fire and around 4,000 residents and holiday makers were gathered on the beach unable to leave the town. Astonishing images and video footage taken by those stranded on the beach showed the town in complete darkness at 0800. At around 0830, Victoria's Country Fire Authority (CFA) issued a warning that the fire front was expected to enter Mallacoota within half-an-hour and instructed those on the beach to get into the water should the fire reach them. By mid-afternoon, a number of houses and other structures had been lost but a wind change saw the fire bypass the town centre and those stranded on the beach.[19]

On the afternoon of 31 December, with a fire still active in the area, and the road and air routes to the town still inaccessible, Defence Minister, Senator the Hon Linda Reynolds, CSC, announced the commencement of OP BA, including the immediate dispatch of HMAS *Choules* (Commander Scott Houlihan, RAN) and MV *Sycamore* to Victoria. Such was the scale of the crisis that on 4 January, Prime Minister Scott Morrison invoked the first ever compulsory call out of ADF Reservists to assist in OP BA (Section 28 of the *Defence Act 1903*).[20]

*HMAS Choules departing FBE for OP BA*

*MV Sycamore conducts a personnel transfer with HMAS Choules*

## THE EVACUATION OF MALLACOOTA

*Choules* assumed responsibilities as the HADR response vessel on 6 December. The coming weeks saw *Choules* conduct a shakedown, engineering trials and amphibious training with LLC and LCVP operations. The ship also embarked HADR equipment and an MRH-90 Taipan, providing the opportunity to conduct wet winching and deck landing practice.[21] The readiness of the ship's company was tested on New Year's Eve when Commander Houlihan was directed to proceed to Mallacoota to conduct a civilian evacuation. Within 17 hours of being activated, the ship and its 170 strong ships company had departed Fleet Base East (FBE).[22]

*Sycamore* was also directed to provide support for DACC operations in Victoria soon after *Choules* was activated. The ship was underway at 0700 the following day, proceeding to Jervis Bay where the flight deck team, which was under contract from OPSTAR, was embarked. *Sycamore* and *Choules* met off Jervis Bay at 1730 for the transit south to Mallacoota, arriving off the coast of the town at 0600 on 2 January. Upon arrival, both ships began making preparations for imminent evacuation operations and *Choules* prepared to commence landing relief stores and equipment.[23]

## MAINTAINING SEAWORTHINESS AND UNIT READINESS

On 4 January, HMAS *Canberra* (Captain Terry Morrison, RAN), the lead ship of the *Canberra* Class LHD, saw its reduced activity period (RAP) brought to an end two weeks early as the ship's company was recalled to prepare the ship for OP BA. During January, *Canberra* completed a unit readiness (UR) work-up program, including undertaking maintenance, sea qualification trials (SQTs) and mariner skills evaluation (MSE) exercises. These activities ensured an ease of transfer when *Canberra* assumed the role of HADR response vessel on 11 February.[24] Equally importantly, the UR program ensured operational readiness and reliability of weapons systems in the unlikely event that Australia was required to respond to an external threat even as the bushfires raged on the shore.

Both *Canberra*'s preparations to assume the role of the HADR response vessel and the rapid mobilisation of *Choules* are a testament to the RAN's attention to seaworthiness. Seaworthiness assumed a central focus for the RAN in the wake of Cyclone Yasi and the inability to deploy HMA Ships *Manoora*, *Kanimbla* or *Tobruk* due to disrepair.[25] This episode and scathing public commentary forced an internal review of ship repair and management practices. The review, headed by Paul J. Rizzo, identified a "hollowed out" Navy engineering function and a failure to consider maintenance planning as an enabler of operations.[26]

The Rizzo report saw Defence and the RAN prioritise sustainment methodologies, engineering capabilities and technical integrity of the fleet. In the years since, there has been

more regular and detailed shakedown procedures with a focus on meeting standards of seaworthiness.[27] The outcome has been a Navy that is highly trained and ready for any contingency.

At 0830, a party led by Commander Houlihan went ashore to liaise with authorities. While ashore, it became apparent that an evacuation was not an immediate requirement. Among the most pressing needs of the Mallacoota community was delivering diesel to service stations in the town for use by emergency service vehicles. Moreover, evacuees required time to ready themselves for departure.

HADR operations are, by their very nature, ever-changing and RAN decision makers must be adaptive to these changes and the manner in which on the ground priorities shift accordingly. Commander Houlihan was attentive to this need for flexibility. In his own words, as documented in the Post Activity Report,

> "taking a bit of extra time … to allow people to thoroughly prepare for the evacuation will make the subsequent evacuation and passage to a safe port much smoother and pleasant for all concerned."

While Commander Houlihan acknowledged that this was "at odds" with the initial evacuation tasking, *Choules* was able to "reconfigure and reprioritise efforts", simultaneously preparing for the delivery of fuel and the evacuation. "Convincing Higher HQ [presumably JCOPS and/or JTF 646 Commander] that an evacuation was not an immediate necessity took further effort", but a timeline for the delivery of stores and evacuation was eventually agreed upon. By 1400 on 2 January, the ship-shore C2 node necessary for amphibious operations had been established at the Mallacoota boat ramp, allowing the first transfer of stores to begin. In coordination with the supply vessel MV *Far Saracen* – which had arrived off Mallacoota on New Year's Eve to lend support to Victorian emergency services – *Choules* transferred 2000 litres of diesel ashore. A LARC-V came along side *Far Saracen* and fuel was transferred directly into two portable storage tanks embarked in the LARC-V. The LARC-V would then proceed ashore to transfer the fuel. *Choules'* LCVPs delivered medical supplies and medical personnel to support civilian medical services ashore and food for local fire fighters. In the late afternoon, the smoke that had restricted the use of the MRH-90, embarked on *Choules*, had cleared sufficiently to allow the delivery of supplies and medical evacuations to RAAF Base East Sale. Operations continued late into the night.

During his initial hours ashore, it became apparent to Commander Houlihan that the local police and CFA had reached their capacity dealing with the fire situation and had limited resources to manage an evacuation by sea. *Choules* was able to meet this challenge, embodying HADR *Australian Maritime Doctrine* by assuming responsibility for the planning, coordination and execution of the entire evacuation. Commander Houlihan observed that:

> "When conducting a HADR type activity it is critical that the unit tasked with the activity is able to take on tasks in their entirety. Creating an extra burden for the local emergency services must be avoided. Because *Choules* arrived with boats, vehicles and personnel we were completely self-sufficient for the task, and did not denude the town of critical assets during a time of need."

*Choules*' amphibious capabilities proved a key element in the successful and self-sufficient HADR operation at Mallacoota. At 0630 3 January, *Choules* assumed the Action State and commenced launching 2 LARC-Vs, 2 LCVPs and an LCM-8. An Evacuation Handling Centre was established to process those who had registered for evacuation and operations began at 0800. The first evacuation for the day was carried out by *Sycamore.* 58 people, 2 dogs and a cat were transferred by *Choules'* LCVP and *Sycamore* departed at 1100 for Western Port Bay, Victoria.[28] Once *Sycamore* had departed, *Choules* commenced the second evacuation for the day. The initial plan had been to use the LCM-8 to transport evacuees from the Mallacoota boat ramp, however, a large sandbar prevented this for much of the day. The plan was quickly modified, using the smaller and more manoeuvrable LARC-V and LCVP to ferry evacuees from Mallacoota to the LCM-8, which was waiting just beyond the breakwater. *Choules* cooperated with the Amphibious Beach Team (ABT) from Army's 35 Water Transport Squadron. The ABT specialises in rapid beaching, unloading of personnel and cargo, and turnaround of landing craft. The evacuation was an opportunity to test the two services' complimentary capabilities. Commander Houlihan later remarked that it demonstrated "how the two services can come together within a very short time and each provide their unique skills at sea and on land."[29] As civilians were being evacuated, Premier Daniel Andrews declared Victoria's first ever State of Disaster.[30]

Concurrent to the evacuation, *Choules* transferred additional medical supplies, victuals for the CFA and 8,000 litres of fuel. The MRH-90 performed an evacuation by air for two civilians with pre-existing medical conditions after *Choules'* Medical Officer, Commander Scott Squires, RAN, had determined that evacuation by sea would be unsafe. *Choules* departed Mallacoota at 1826 for Hastings, Western Port Bay. En route, *Choules* coordinated with JTF 646 and Emergency Management Victoria (EMV) State Control Centre for the disembarkation of the 1,025 people, 113 dogs, 3 cats, 1 rabbit and 1 parakeet on board. The evacuees arrived safely in Hastings on 4 January at 1600. Ready to receive the evacuees were personnel from HMAS *Cerberus* (Captain Michael Oborn), members of the State Emergency Service, Ambulance Victoria and RSPCA.

Upon completion of the evacuation operation, *Choules* embarked additional support equipment – mostly vehicles and generators – provided by the ADF, Victorian State Emergency Service and VicForests for the ongoing relief efforts in Mallacoota. *Choules* arrived back in Mallacoota on the morning of 6 January, and over the following days

transferred fuel and equipment ashore. Late in the afternoon of 7 January, *Choules* commenced a second evacuation operation, embarking 205 civilians, 68 CFA volunteers, 7 Red Cross volunteers and 49 dogs for relocation to *Cerberus*. Following the second evacuation, *Choules* remained in Mallacoota until 16 January, providing fuel transfers ashore, a resupply to Mallacoota hotel, and logistical support. The ship then returned to FBE for crew respite.

OP BA was an opportunity to develop people-to-people links among the Navy and the community it was serving. Empathy towards the evacuees was a "founding principal" in the management of the Mallacoota evacuation. Commander Houlihan, recognising the importance of communicating the realities of the situation and how the evacuation would be conducted, led several town hall meetings where he fielded questions. He described the mood at these meetings as "one of relief". During these meetings, it became apparent that there were a significant number of pets that would have to be evacuated. The ship's company created dog pens and off leash areas onboard to accommodate the evacuated pets. Commander Houlihan reflected that:

> "The caring approach taken by the Ship's Company to the pets lowered the anxiety levels of both the pet owners and the pets themselves. Both Ship's Company and evacuees spent countless hours on the vehicle deck with the pets. The calming effect that dogs have in these types of circumstances cannot be over stated."

This prioritising of communication with evacuees, and making them feel safe and welcome onboard no doubt contributed to the smoothness of the operation. Indeed, there was significant media coverage praising the efficiency and humanistic approach of the Navy. Along with providing an example of the humanistic support that Navy provides to the civil community, the Mallacoota evacuation offers clear evidence that training and doctrine effectively prepare RAN personnel to carry out HADR operations.[31]

*Evacuees from Mallacoota and their pets in one of HMAS Choules' landing craft*

## CYCLONE TRACY AND OPERATION NAVY HELP DARWIN

One of the most well-known instances of the RAN providing domestic HADR, and one with notable parallels with the evacuation of Mallacoota, is Operation NAVY HELP DARWIN. In the early hours of Christmas morning 1974, Cyclone Tracy devastated the City of Darwin. Power, water and sewage were all cut off, 71 people sadly lost their lives, and the 260 kilometre per hour winds left only 408 of the city's 10,000 buildings intact. The Navy did not escape unscathed. The Naval Headquarters and transmitting station were both destroyed. Three *Attack* Class patrol boats, HMA Ships *Attack*, *Advance* and *Assail,* were damaged and a fourth, HMAS *Arrow*, was sunk with the loss of two lives. Though *Arrow* was later re-floated and beached, she was damaged beyond repair. Survivors of *Arrow* recounted a "bloody horrifying" scene of boats and debris strewn along the harbour.[32]

Around 3,000 RAN personnel, thirteen vessels and nine embarked helicopters were involved in relief efforts in Darwin. The RAN was adequately prepared for the situation in Darwin, having completed a disaster simulation exercise the previous October. The experience gained in this exercise was applied directly to the situation in Darwin.[33]

As was the situation in Mallacoota, Navy's ability to operate independently and without placing a strain on scarce local resources was apparent. Hundreds of tons of building materials were transferred ashore, where naval working parties cleared almost 1,600 blocks of land, repaired buildings and restored essential services. More than 7,800 evacuees

transferred in HS748 aircraft to emergency accommodation at HMA Ships *Kuttabul*, *Penguin* and *Watson* in Sydney, and *Moreton* in Brisbane, underscoring the practicality of naval airlift capabilities.[34]

*The wreck of HMAS Arrow and view of the damaged Darwin Naval Headquarters*

## RAN SUPPORT TO NSW

In NSW, the Fleet Air Arm (FAA) flew hundreds of hours in support of JTF 1110 activities. 808 Squadron (Commander Paul Hannigan, RAN) and 816 Squadron (Commander Todd Glynn, RAN) were the two main response elements. Their activities were supported by 725 Squadron (Commander James Hawley) through the provision of maintenance, aircraft and personnel. Two EC135 helicopters and personnel from 723 Squadron (Lieutenant Colonel Richard Green) were also sent to RAAF Williamtown to support firefighting efforts in the Hunter region. FAA assets were initially made available from 12 November, facilitating RFS air observations and providing personnel transfers. These activities were coordinated by Navy Liaison Officers (NLO) Aviation embedded within the RFS State Operations Centre, ensuring air support was being deployed effectively and where it was needed most. By mid-late December, with extreme heatwave conditions forecast and RFS resources being rapidly depleted, 816 and 808 Squadrons prepared for a sustained and high tempo period of HADR activities. As Commander Glynn remarked, “the scale of this emergency was so vast, it was apparent that DACC would be our mission for some time to come.”[35]

*RFS and 723 Squadron personnel join forces to support the firefighting efforts in NSW*

*Pallets of fresh water being loaded in HMAS Adelaide*

The final day of 2019 came to a close with the Currowan fire moving in on HMAS *Albatross* (Captain Robyn Phillips), leaving the base "shrouded in darkness from 1600 hours."[36] Concurrently, 808 Squadron was responding to tasking requests, the "pace and intensity" of which was "ridiculous." 808 Squadron provided support in the Bega Valley and South Coast, contending with two pyrocumulonimbus storm cells and reduced visibility with "no way of flying upwind of the fire to find 'clear air'." Lieutenant Commander Johnathan Wadey

described this day and the flying conditions among the “most challenging and emotional” in his thirteen year flying career.[37]

The first days of the New Year saw 816 and 808 Squadrons carrying out impact assessments, welfare checks and search and rescue operations. Of one particularly “daring” rescue performed by 816 Squadron just outside Moruya on 1 January, RFS officials noted that the civilian "would not have survived without this timely extraction.”[38] Each evening, 816 Squadron was joined by RFS specialists for night flights. The two MH-60R Seahawks used for night flights are the Navy’s next generation submarine hunter and anti-surface warfare helicopters, but the aircraft’s advanced Intelligence, Surveillance and Reconnaissance (ISR) sensors readily adapted to night surveillance and fire mapping operations.[39] RAN capabilities paired exceptionally well with the skills and knowledge of RFS crewmen, who were often locals and their area of knowledge was a “significant mission enhancer”.[40]

While the FAA provided support inland, on the South Coast, HMAS *Adelaide* (Captain Jonathan Ley, RAN), was assisting with recovery efforts. On the afternoon of 2 January, *Adelaide*, docked at FBE, was directed to begin preparations to sail at 1600 on 4 January. At 27,800 tonnes and 230 metres in length, the *Canberra* Class LHD is the largest class of ship ever built for the RAN. Delivering a ship of this size to operational readiness is an immense undertaking. *Adelaide* immediately commenced coordination with Joint Logistics Command in order to prepare land force elements, equipment and supplies for embarkation. The ship’s company prepared for three possible scenarios: the evacuation and relocation of civilians and emergency service personnel; support to fire services through the provision of fuel, water and power; and support to the community through the distribution of essential supplies including food, fuel and medical supplies. While these supplies and equipment were being embarked, personnel were returning from “all corners of Australia and overseas”. This included personnel from the 9th Force Support Battalion (9 FSB) and Amphibious Task Group (ATG). As had been the case in Mallacoota, 9 FSB and ATG would cooperate with the Ship’s Company to leverage complementary capabilities.

As *Adelaide* was preparing to sail, major maintenance was undertaken on board. A defective generator within *Adelaide*’s gas turbine required a change out of major components. This work had begun in December 2019 following the ship’s return from the South West Pacific Enhanced Regional Engagement deployment. This was a complex task that had never previously been undertaken in an LHD. A team of specialist contractors and *Adelaide*’s marine technicians quickly and safely reassembled the gas turbine and installed soft-patches within the hull. The gas turbine was started en route in order to conduct testing, a task that would not have been possible without the specialist contractors who generously volunteered to proceed to sea with the ship in order to test the turbine and ensure the integrity of the repairs carried out. The preparation of *Adelaide* is an example of the Navy operating as an integrated system, with RAN personnel and civilian specialists – the dockyard workers,

private contractors and engineers – acting together to deliver efficient and maximised support. Without this strong industry relationship, the RAN simply could not have delivered support to OP BA.

In a matter of just 48 hours, the ship and its crew of 400 had cleared Sydney Heads and was on course for the NSW South Coast. Captain Ley reflected that "to prepare a Capital Warship to sail is never an easy task, but to do so with little notice, during a designated leave and maintenance period, whilst concurrently embarking stores and equipment for an operation is a remarkable achievement." While conducting the transit south, the embarked forces completed damage control exercises, and flight deck and landing craft training to ensure UR.

As *Adelaide* travelled south, fire conditions continued to worsen. In Kangaroo Valley and Wingello the Currowan fire crossed the Shoalhaven River, elsewhere houses were lost in Batlow in the Snowy Mountain foothills, and in Eden an uncontained fire bore down on the town as emergency service personnel implored residents and holidaymakers to seek safety in the nearby towns of Merimbula and Bega.[41] *Adelaide* was ordered to proceed to Eden as swiftly as possible, arriving in Twofold Bay off the coast of Eden on the morning of 6 January. Captain Ley described the "remarkable" conditions as the ship approached Eden, with thick smoke and "an ever-present orange haze." These conditions presented considerable challenges for *Adelaide*. The lack of visibility required particular attention from the Officer of the Watch and air traffic and aircraft controllers. This was particularly critical when ensuring "*Adelaide* remained navigationally safe as she closed into restricted waters." Upon arrival, two NLOs were deployed to Moruya and Merimbula, just north of Eden, to gain insight into the situation and immediate needs of the community. The situational awareness provided by the NLOs allowed JTF 1110 to tailor asset allocation and prioritisation. The NLOs also assisted local councils and the RFS with requests for logistic, personnel and medical support.

*Adelaide* zig-zagged between Twofold Bay, Jervis Bay and Batemans Bay for the remainder of January. The ship landed supplies, personnel and vehicles, enabling reconnaissance, medical triage and mobile water transportation in the surrounding areas. The RAN ammunition wharf in Eden was a particularly useful piece of infrastructure enabling the rapid refilling of FRS fire tenders. *Adelaide* received visits from senior defence leaders while on deployment. On 8 January, the Chief of Navy (CN) Vice Admiral Michael Noonan, AO, RAN, and Warrant Officer of the Navy Deb Butterworth, OAM, CSM*, embarked, and two days later Minister Reynolds and General Angus Campbell, AO, DSC, were embarked. These visits provided a valuable opportunity for an operations update and for Australia's senior defence leaders to convey their gratitude to the ship's company.

A great deal of *Adelaide*'s utility during OP BA was the facilitation of Lilypad operations, providing fuel and maintenance for the helicopters supporting vital tasking ashore. On the morning of 11 January, *Adelaide* departed Twofold Bay and proceeded to Jervis Bay where it

embarked an MH-60R from 816 Squadron. The embarkation of the MH-60R combined the mass mobility of a ship with the manoeuvrability and speed of aircraft, increasing the Navy's ability to support operations ashore. Captain Ley reflected that throughout OP BA, *Adelaide* demonstrated its "ability to provide the capability of a fully operating military airfield anywhere on the coastline", highlighting "the operational flexibility and utility of the LHD platform, particularly when operating in a HADR role." On 15 January, during a return trip from Batemans Bay to Twofold Bay, *Adelaide* carried out deck landings and vertical replenishment drills with a Royal New Zealand Air Force (RNZAF) NH-90 helicopter and aircrew that had been deployed to assist with OP BA. This embarkation of the HN-90 demonstrated the value of "the interoperability of the LHD and the significant capability it is able to bare when operating with our regional partners."

## INTERNATIONAL COOPERATION

Australia's bushfire response and recovery efforts were aided by 469 international military personnel from Indonesia, Papua New Guinea, Fiji, New Zealand, Singapore, Japan, and the United States of America.[42] These personnel were integrated into one of the three JTFs, where they were briefed on the circumstances and taskings they were required to undertake. During the Royal Commission into National Natural Disaster Arrangements, Lieutenant General Bilton commented on the ease with which international forces were able to support OP BA. "We regularly exercise with each of these nations; we have a relationship with all of them. We have worked together with the particular capabilities that they brought to Australia to help respond to the bushfires."[43]

The utility of cooperative naval activities – which contribute to trust, maritime confidence building and interoperability – within HADR contexts is not without precedent in Australia's naval history. On Boxing Day 2004, the *Mw* 9.1 Indian Ocean earthquake and subsequent tsunami devastated Southeast Asia. HMAS *Kanimbla* (Commander Steve Woodall, RAN) deployed under the auspices of Operation SUMATRA ASSIST I and II as part of the ADF's contribution to the Indonesian relief effort. *Kanimbla* spent more than three months on deployment and under particularly trying circumstances. Fatigue management was imperative in sustaining support efforts. Operation Dry Out saw Australian and New Zealand personnel rotate every two weeks to *Kanimbla* for a 36 hour period. Commander Woodall spoke to the value of this practice:

> "This allowed them adequate rest, hot meals, showers and an opportunity to remove them from the environment ashore. Additionally, it allowed the embarked Chaplain, CHAP [Mark] Burton, RAN and Defence Psychologist, LCDR [Greg] Currie, RANR to provide spiritual and personal support to those who operated in particularly arduous conditions."[44]

The history of maritime cooperation shared by the Australian and New Zealand navies contributed to seamless interoperability and the effective management of fatigue during Operation SUMATRA ASSIST I and II.

*RNZAF NH-90 aircraft conducts deck landing qualifications on HMAS Adelaide*

*The view from HMAS Adelaide off the coast of Eden, NSW*

After completing her tasking, *Adelaide* was directed to return to FBE, arriving at midday on 23 January. The ship's company was granted leave until 28 January to recuperate from the busy period at sea. This leave period was caveated by the fact that the ship remained at 48 hours' notice to move in the event that further support was required in the ongoing OP BA.[45]

## THE RAN FACES ITS OWN BUSHFIRE THREATS

The RAN was both part of the support response to the 2019–2020 bushfires and itself directly impacted by the fires. *Albatross* on the NSW South Coast was threatened by the fire and in two consecutive incidences, HMAS *Harman* (Commander Amanda Howard, RAN) in the ACT was evacuated as an uncontrolled fire approached the base.

On the morning of New Year's Eve, strong north-westerly winds pushed the Currowan fire to the edge of *Albatross.* Spot fires ahead of the main fire front travelled along the base's western perimeter, burning the grass around the northern side of the airfield and nearby FAA Museum. *Albatross* was supporting firefighting efforts, including the provision of food and accommodation, acting as a staging point for trucks and assisting with water and fire retardant reloading. RFS and contracted fire teams at *Albatross* were able to aid in protecting what they considered "their base" from the approaching fire.[46] As firefighters drove around the base extinguishing spot fires, "no sunlight penetrated the black smoke surrounding Albatross". Fortuitously, the wind direction change in the late afternoon pushed the fire back on itself and away from Albatross.[47]

Throughout January and into early-February fires burnt in Cooma and Brindabella, NSW, and Pialligo Estate and Namadgi National Park, ACT. *Harman* supported RFS and JTF 1110 operations, providing base support and hosting Army personnel who were preparing meals for NSW and ACT RFS (up to 1000 hot meals per day). Several civilian families displaced by fires were also hosted at Harman. On 22 January, *Harman* itself came under threat. Just after 1700, Commander Howard was advised of the Canberra Airport/Beard fire in the vicinity of the base. Within 20 minutes, the fire was updated to Emergency Warning – Out of Control and was rapidly approaching the base. Commander Howard immediately assumed command as Senior ADF Officer (SADFO). All non-essential personnel were evacuated to the Royal Military College, and DNOC was closed and re-established at Alternative Network Operations Centre (ANOC) at the Russell Offices. The base remained evacuated until 2030 that evening, at which point personnel were permitted to return. DNOC remained at ANOC until the morning watch changeover.

*HMAS Harman has a unique administrative and communications role. The largest resident unit at Harman is the Defence Network Operations Centre (DNOC), which provides support to tri-service military operations, the APS and contracted personnel. During a national disaster and coordinated ADF response, the utility of communications and administrative function of Harman cannot be overstated.*

*Tiffany Bragg celebrates her twelfth birthday at HMAS Harman, where she and her family sought refuge after bushfires force the Bragg family to evacuate from Bega Valley*

At 1130 the following day, Commander Howard again took command as SADFO following advice that high winds were pushing the Canberra Airport/Beard fire towards *Harman.* All non-essential personal were again evacuated and the DNOC was relocated to the Russell Offices. The base was reopened to all personnel at 1850, although this was not the end to the day's ordeal, with no power in some areas. Power was fully restored by 2100 and *Harman* was able to return to normal operations.

While the two evacuations at *Harman* were carried out safely and successfully, they did highlight "some deficiencies of procedures" and base susceptibilities. These included incorrect implementation of the Emergency Plan and the single access route to the base via Canberra Avenue, which is susceptible to closure, high traffic and bottlenecks. Ultimately, the evacuations were a major learning point for *Harman* staff and an opportunity to improve procedures going forward.[48]

## RECOVERY

As the bushfire conditions improved, the compulsory call out of ADF Reserves was revoked, effective 7 February, and the focus shifted to support that would help communities recover and rebuild in the months and years ahead. ADF recovery support took the form of clearing

and reopening roads, restoring essential services, repairing fences and delivering fodder to high-risk farmers. The Navy's helicopter capabilities were particularly useful in conducting forage drops for native wildlife whose food sources had been critically depleted.[49] The bushfires were not the only natural disaster Australia faced, with flooding and hail storms in the weeks that followed. Recovery will take many years to come.

## OBSERVATIONS AND LESSONS LEARNT

Throughout OP BA, members of the ADF captured lessons and operational analysis. The purpose of these observations was to inform short-term command level considerations and longer-term decisions concerning DACC and doctrine. A major public inquiry concerning the bushfires and natural disasters more broadly was also held during 2020, the Royal Commission into National Natural Disaster Arrangements.

OP BA highlighted the utility and capability of ADF skills and resources in HADR operations. These operations also made clear that disaster management is a national and human security issue, in turn, contributing to an expectation among the Australian public and government that the ADF will go on to assume a greater role in responding to domestic disasters.[50] Indeed, in his first major address for the year 2020, Prime Minister Morrison spoke of

> "a clear community expectation that the Commonwealth should have the ability to respond in times of national emergency and disasters, particularly through deployment of our defence forces in circumstances where the life and property of Australians has been assessed to be under threat at that scale."[51]

This expectation is further complicated by the changing climatic conditions and the effect this will have on Navy's mission. A changing climate increases the likelihood and intensity of extreme weather events such as floods, cyclones and fires. The effects of a changing climate will in all likelihood have cascading health, political and strategic risks. Increasing resources scarcity, damage to critical infrastructure, and climate refugees will act as threat multipliers, exacerbating marginal living standards and political instability. These conditions are open to exploitation by extremists and hostile foreign actors.[52] This is particularly pertinent to Australia's immediate neighbourhood, which is both disaster prone and under political stress.[53] This future not only puts pressure on Australia to lead in regional HADR, but also anticipate and prepare for increased tension and competition for resources.

## CHRISTMAS STAND-DOWN AND THE PEAK NATURAL DISASTER PERIOD

Natural disasters in Australia and its immediate region regularly coincide with the Navy's Christmas RAP. The limited personnel numbers invariably contributes to slower responses.[54] It is not inconceivable that Australia and its region may face overlapping natural or health disasters in the midst of the stand-down period, leaving the HADR response vessel attending to one disaster and a scarcity of available personnel to attend concurrent crises. Aside from protecting human life, HADR is a valuable tool in naval diplomacy and force projection. If the RAN is unable to respond to a regional disaster, there is the possibility that a hostile foreign power would step in to provide support, displacing Australia as the partner of choice. A resolution would be for the Navy to adopt a partial stand-down over Christmas. A pre-deployment and work-up period scheduled for the peak disaster season would also ensure operational preparedness. These are likely to be unpopular measures, yet in the face of cumulative environmental and geopolitical threats to national and human security, they are necessary ones.

*An LCM-8 ferries evacuees from HMAS Choules to HMAS Cerberus*

## THE EXPANDING ROLE OF THE ROYAL AUSTRALIAN NAVY RESERVES

Reserves have a role to play in managing the ADF's expanding remit. OP BA underscored the value of Reservists in providing surge capability in times of national emergency. Importantly, the call-up of the Royal Australian Navy Reserves (RANR) during national emergencies removes pressure on permanent RAN members, allowing Australia to "project offshore while at the same time not compromise domestic HADR response."[55] As the propensity and severity of disasters increases, it would be useful to consider making HADR a greater focus

for RANR. Creating a more tailored role for Reservists would require forces to be "appropriately led, manned and funded with real capability for individual/small team reinforcement, HADR and/or HRWS [High Risk Weather Season] support."[56] This highly trained and flexible pool of RANR would effectively contribute to Navy's preparedness to meet the expanding expectations of the RAN and its mission.

The new security risks posed by climate change are generally acknowledged within Defence, as is the expanding mission of the ADF.[57] At the doctrine level, however, little attention has been given to how the Navy, indeed the broader ADF should adapt. The *Australian Maritime Doctrine* and *Australian Maritime Operations* documents dedicate a few lines each to HADR operations, while nothing is said of climatic changes.[58] The *Future Maritime Operations Concept 2025* gives more, albeit still slight, attention to the implications of a changing climate for future maritime operations:

> "[The RAN will need to] respond to environmentally driven security and humanitarian issues in urbanised, littoral areas, particularly where infrastructure is poor, the FMF [Future Maritime Force] must be able to deliver security and assistance capabilities from a sea base … In particular, the maritime force is likely to have to provide mobility, logistic support and hospital services."[59]

Currently, Defence does not pre-allocate funding for HADR tasks "due to the unpredictability of these events", leaving costs to be absorbed within existing budgets.[60] This practice, coupled with the increasing severity of natural disasters and likelihood of compound events, may contribute to budgetary stress. Given that HADR serves to foster diplomatic and strategic goodwill, while also maintaining operational readiness, this failure to adequately address HADR is a disconcerting reality.

The *2020 Strategic Update* acknowledges the threat to human security posed by climate change and extreme weather events, conceding HADR will take on greater significance.[61] Reflecting this demand for enhanced HADR capabilities, the *2020 Force Structure Plan* commits to the ongoing acquisition of two *Supply* Class replenishment vessels and the upgrading of the RAN's amphibious ships. An additional two multi-role sealift and replenishment vessels will add to the RAN's ability to sustain operations.[62]

Both HADR capabilities and Defence's core role of preparing for conflict must be considered within the context of an increasingly uncertain and fractious international situation. The *2020 Strategic Update* and *2020 Force Structure Plan* recognised that the international situation and nature of warfare has changed so fundamentally as to undermine many of the assumptions upon which the *2016 Defence White Paper* was based. There is a tacit acknowledgement that Australia no longer has the comfort of previous assumptions that it will take a potential adversary a decade or more to prepare and mobilise for conflict. This

situation can only be complicated by the material threats posed by natural and health disasters and the pressure this will invariably place on naval resources.
ADF preparedness was raised during the Royal Commission into National Natural Disaster Arrangements. When giving evidence, Peter Jennings of the Australian Strategic Policy Institute noted that the *2020 Strategic Update* and *2020 Force Structure Plan* and other doctrine remain inadequate, failing to provide the necessary modelling for future preparedness and the elevation of HADR to a core Defence mission. While Jennings emphasised the importance of preparedness for a changing climate, he also cautioned that future arrangements could not compromise Defence's "ability to prepare for conflict, even at the same time as government might have higher expectations for it to be doing more in terms of disaster preparation." He made the frank assessment that the only realistic way to meet these two objectives is increased spending, concluding that "spending two per cent or thereabouts of gross domestic product on Defence is not sufficient to deal with the range of risks that we are dealing with, both geopolitical and of a natural nature."[63] For this level of spending to be politically acceptable, the Australian public must appreciate both the scale of the looming security challenges and the specialist skills that the RAN and broader ADF can bring. The people-to-people links and capabilities on display during OP BA have made considerable headway in demonstrating this.

A final point to be made, and one that is echoed in the Royal Commission findings, although HADR will likely be elevated to a core Navy mission, neither the Navy nor the broader ADF can be seen as an infinite and transient workforce or assume the role of emergency services.[64] That is to say, that although the Navy has skills and resources that can be brought to HADR operations, this should be done so in the company of specialist and fully-funded emergency services.

"With the Navy … we all hear about the Army and what they do, obviously behind the scenes we don't get to see what the Navy does but we've got obviously a lot better understanding and appreciation of what you guys do. So can't thank you guys enough."

Footage submitted to the Royal Commission into National Natural Disaster Arrangements OP BA demonstrated a highly focused and coordinated system in which RAN and civilian specialists worked together to deliver disaster relief capabilities. The bushfire crisis also saw high level cooperation between the Navy and state and territory emergency services to provide much needed support to civil communities. One tactical lesson and observation recorded during the crisis commended the synergies between the ADF and emergency services, noting that past experience of cooperation and shared service history – with a number of emergency service personnel having previously served in the ADF – facilitated the efficient delivery of support.[65]

Unfortunately, cohesion was not a universal experience throughout OP BA. The tactical lessons and observations told of emergency service personnel being uncertain as to what capabilities and resources Defence could offer. The Royal Commission found that this contributed to unnecessary delays and uncertainty as to how best to interact with ADF personnel once they had been deployed. This situation contributes to inefficiencies and, in a worst case scenario, may undermine the success of HADR operations and put lives at risk.[66]

Defence regularly collaborates with state and territory agencies and governments to build an understanding of ADF capabilities. At the local level, however, this understanding is far more rudimentary. When giving evidence to the Royal Commission, Lieutenant General Bilton acknowledged a "chicken and egg" situation in which the onus is on the state and territory governments to disseminate advice on available Defence capabilities and assets to emergency agencies and local governments. Ineffectual information dissemination and a lack of experience in working with the ADF hindered this process. "It's not really until we deploy", Lieutenant General Bilton explained, "that we're able to give visibility … right down at the local level, or the regional level."[67] The final report of the Royal Commission recommended that Defence engage in increased liaison with emergency services and state, territory and local governments to improve understanding of ADF capabilities.[68]

The challenges of military and civilian cooperation were also partly the result of the constraints the DACC framework. As detailed in Section 1, the DACC framework sets out the strict parameters within which Defence assets can be used to provide assistance to the Australian community. Requests for support must be formally lodged – including precise details on the support required – and be approved before Defence assets are committed. This prescriptive procedure was tested during OP BA in the face of changing circumstances and the need for rapid decision making.[69] Commissioner Fitzsimmons reflected on uncertainty among ADF personnel in the face of DACC guidelines, wherein military officers were resourced to undertake urgent tasking, yet lacked the formal approval:

> "military officers would say, 'We're not sure why we're not allowed to clear some of the roads with our chainsaws and our gear.' And then, when it was raised with us, we asked the question, and they hadn't been tasked to do chainsaw work. They had only been tasked to do logistics, transport and catering and those sorts of things. So, even [though] they had all the gear… they were professionally trained and accredited … We then had to do different requests back through the DACC arrangements to get a variation on that request to then say, 'Yes, you've got permission as part of your logistics work. If you need to clear some trees and gain access to all areas then you're authorised to use that equipment.' So it's that unnecessary process or that particularly restrictive task-specific process where I think there can be greater opportunities … for having embedded ADF officers that can actually commit ADF resources and be dynamic with the adjustments or amendments or reconfiguration of that commitment in the

> field without having to go through very specific DACC requests all the time, and then if we do make adjustments, having to follow that up with another DACC request so that it's on the record".[70]

The final report of the Royal Commission recommended that the authority to approve DACC requests should be devolved in certain prescribed circumstances to JTF commanders, as was the practice in Stage 2 of OP BA.[71] Another option, and one that has been exercised in the past, is shaping the nature of DACC requests to ensure they are broad enough to respond to ad hoc tasking.

## CONCLUSION

During the 2019–2020 bushfire crisis, the Navy proved itself ready and able to be deployed quickly, providing much needed support to Australian emergency services and communities at risk. OP BA underscored the Navy's strengths and raised pertinent questions about its vulnerabilities and areas for improvement going forward.

The Navy's primary strengths lay in the characteristics and attributes of sea power, applied to an HADR context: mobility, operational flexibility and access. Warships are uniquely mobile in mass, with *Choules* and *Adelaide* able to deliver personnel and assets and move a large number of evacuees to safety. Furthermore, warships are continuously mobile and can operate anywhere there is sufficient depth of water to float. As was the case with *Adelaide*, this access is significantly expanded through the embarkation of aircraft.

The Navy, particularly in the evacuation of Mallacoota, proved itself both a practical and caring organisation. From the start to finish of its tasking, the company of *Choules* had two priorities: compassion and self-sufficiency. On the ground in Mallacoota, RAN personnel were patient, empathetic and effective communicators, all with "the overarching intent … to treat the evacuees as family, and make them feel safe and welcome."[72] Able to operate independently of local support, thus having no impact on the scarce resources of the overwhelmed emergency services, *Choules* carried out a self-sufficient and practical operation. Arguably, the compassion and practicality with which the ship's company approached the situation in Mallacoota is emblematic of the distinct characteristics of the RAN and the enduring relationship with the Australian community that inspires the Navy.

The vulnerabilities revealed throughout OP BA are primarily structural and longer-term ones. Australia faces a future in which it and its region will experience more severe and frequent natural disasters. This will invariably expand the Navy's mission. For the RAN to continue making sustainable and effective contributions to HADR operations, questions around

doctrine, force structure, the DACC framework and military-civilian cooperation must be addressed. The answers to these questions are beyond the ambit of this report, yet the observations and recommendations recorded seek to stimulate discussion in this pressing area. There has perhaps never been a more significant moment to reflect on the Navy's performance, capabilities and planning to ensure a resilient, functional and sustainable organisation going forward.

Endnotes:

[1] CJOPS TASKORD 20/090 – HMAS *Adelaide* cease CJOP TCOMD, 22 January 2020.

[2] "Operation Bushfire Assist," *National Bushfire Recovery Agency*, 28 January 2020, https://www.bushfirerecovery.gov.au/news/operation-bushfire-assist; Royal Commission into National Natural Disaster Arrangements, EXHIBIT 5-004.006 - DEF.0001.0002.0031, Noting Brief for Secretary and CDF, Review of OP Bushfire Assist 19-20 – Initial Departmental Insights, 4 February 2020.

[3] *Defence Assistance to the Civil Community Policy*, Department of Defence, 2020.

[4] "Heavy winds fan Australian bushfires, disrupt flights," 9 September 2019, *Reuters*, https://www.reuters.com/article/us-australia-bushfire/heavy-winds-fan-australian-bushfires-disrupt-flights-idUSKCN1VU0DU.

[5] Lisa Richards, Nigel Brew and Lizzie Smith, "2019–20 Australian bushfires–frequently asked questions: a quick guide," 12 March 2020, Parliamentary Library of Australian, Research Paper Series, 2019–20, pp 1–2; Royal Commission into National Disaster Arrangements, Interim Observations, 31 August 2020, https://naturaldisaster.royalcommission.gov.au/publications/interim-observations-31-august-2020; "Experts Review Bushfire Damage to Heritage Sites," Media Release, Minister Sussan Ley, 13 February 2020, https://minister.awe.gov.au/ley/media-releases/experts-review-bushfire-damage-to-heritage-sites.

[6] Royal Commission into National Disaster Arrangements, Hearing Block 1, 26 May 2020.

[7] Royal Commission into National Natural Disaster Arrangements, EXHIBIT 5-002.001 - DEF.8002.0001.0001 Witness Statement, Lieutenant General Greg Bilton, 27 May 2020; *Royal Commission into National Natural Disaster Arrangements – Report*, Commonwealth of Australia, 2020, pp 196–7.

[8] Royal Commission into National Natural Disaster Arrangements, EXHIBIT 30-023.008 - DEF.500.001.0001 – Response to Notice to Give Information; "Operation Bushfire Assist concludes," Joint Media Release, Prime Minister Scott Morrison and Minister Linda Reynolds, 26 March 2020, https://www.minister.defence.gov.au/minister/lreynolds/media-releases/operation-bushfire-assist-concludes.

[9] Richards, Brew and Smith, "2019–20 Australian bushfires–frequently asked questions: a quick guide," p 2.

[10] "State of emergency declared for NSW," 12 November 2019, https://www.nsw.gov.au/news/state-of-emergency-declared-for-nsw.

[11] "RFS raises Sydney fire warning to catastrophic," 10 November 2019, *Sydney Morning Herald,* https://www.smh.com.au/national/rfs-raises-sydney-fire-warning-to-catastrophic-20191110-p5397q.html.

[12] "Declaration of state of fire emergency for Queensland," 9 November 2019, *Queensland Government Gazette* vol. 382, no. 74.

[13] Matt Bungard, "A timeline of the ring of fire around NSW, Victoria and the ACT," 7 January 2020, *Sydney Morning Herald*, https://www.smh.com.au/environment/weather/a-timeline-of-the-ring-of-fire-around-nsw-victoria-and-the-act-20200107-p53pj9.html.

[14] Richards, Brew and Smith, "2019–20 Australian Bushfires–frequently asked questions: a quick guide," p.5. Jenny Noyes, "'Smells like it's time to go to work': American firefighters arrive in Sydney," 8 December 2020, *Sydney Morning Herald*, https://www.smh.com.au/national/nsw/it-smells-like-it-s-time-to-go-to-work-american-firefighters-arrive-in-sydney-20191208-p53hxt.html.

[15] "NSW Government declares state of emergency," 19 December 2020, https://www.nsw.gov.au/news/nsw-government-declares-state-of-emergency.

[16] Emma Elsworthy, "NSW bushfires see catastrophic fire danger issued for Greater Sydney, Illawarra and Southern Ranges," 20 December 2019, *ABC*, https://www.abc.net.au/news/2019-12-20/nsw-bushfire-catastrophic-fire-danger-forecast-for-saturday/11818896.

[17]Ashleigh McMillan and Rachel Wells, "Gippsland fires downgraded after residents told it's too late to leave," 21 December 2019, *Sydney Morning Herald*, https://www.smh.com.au/national/victoria/residents-told-it-s-too-late-to-leave-as-gippsland-fire-creates-its-own-weather-20191221-p53m1t.html.

[18] Matt Bungard, "A timeline of the ring of fire around NSW, Victoria and the ACT," 7 January 2020, *Sydney Morning Herald*, https://www.smh.com.au/environment/weather/a-timeline-of-the-ring-of-fire-around-nsw-victoria-and-the-act-20200107-p53pj9.html.

[19] Amelia McGuire and Craig Butt, "Cut off: how the crisis at Mallacoota unfolded," 19 January 2020, *The Age,* https://www.theage.com.au/national/victoria/cut-off-how-the-crisis-at-mallacoota-unfolded-20200117-p53sdn.html; Post Activity Report Mallacoota Evacuation Operations 1–8 January 2020, HMAS *Choules*, SPC-A.

[20] "Bushfire relief and recovery," Joint Media Release, Prime Minister Scott Morrison, Minister David Littleproud and Minister Linda Reynolds, 4 January 2020, https://www.pm.gov.au/media/bushfire-relief-and-recovery.

[21] Reports of Proceedings December 2019, HMAS *Choules*, SPC-A.

[22] Post Activity Report Mallacoota Evacuation Operations 1–8 January 2020, HMAS *Choules,* SPC-A.

[23] Reports of Proceedings OP Bushfire Assist 19-20, MV *Sycamore,* SPC-A.

[24] Reports of Proceedings January 2020, HMAS *Canberra*, SPC-A; Reports of Proceedings February 2020, HMAS *Canberra*, SPC-A.

[25] Reports of Proceedings February 2011, HMAS *Tobruk*, SPC-A; Reports of Proceedings February 2011, HMAS *Kanimbla*, SPC-A; Reports of Proceedings February 2011, HMAS *Manoora*, SPC-A.

[26] Paul J. Rizzo, *Plan to Reform Support Ship Repair and Management Practices*, July 2011.

[27] *Final Report: Implications of Climate Change for Australia's National Security,* Foreign Affairs, Defence and Trade Committee, Department of the Senate, 2018, p 66.

[28] Reports of Proceedings OP Bushfire Assist 19-20, MV *Sycamore,* SPC-A.

[29] "Army's amphibious beach team extends Choules' capabilities on land," 7 February 2020, N*avy Daily,* https://news.navy.gov.au/en/Feb2020/Operations/5721.

[30] "State of disaster declared in Victoria," 3 January 2020, https://www.emv.vic.gov.au/news/state-of-disaster-declared-in-victoria.

[31] Unless otherwise indicated the source material for this section is Post Activity Report Mallacoota Evacuation Operations 1–8 January 2020, HMAS *Choules,* SPC-A.

[32] "Operation Navy Help Darwin," 17 January 1975, *Navy News,* vol. 18, no. 1, p 1.

[33] "RAN launches its greatest peacetime operation 'Operation Navy Help Darwin'," 17 January 1975, *Navy News,* vol. 18, no. 1, p 3.

[34] Brett Mitchell, "Disaster relief – Cyclone Tracy and Tasman bridge," *Semaphore*, 14, 2004, https://www.navy.gov.au/media-room/publications/semaphore-disaster-relief-cyclone-tracy-and-tasman-bridge.

[35] Reports of Proceedings December 2019, 816 Squadron, SPC-A; Reports of Proceedings December 2019, 808 Squadron, SPC-A.

[36] Reports of Proceedings December 2019, 816 Squadron, SPC-A.

[37] Enclosure L Operation Bushfire Assist 2019/2020 Mission Report, 31 December 2019, Reports of Proceedings December 2019, 808 Squadron, SPC-A.

[38] Reports of Proceedings January 2020, 816 Squadron, SPC-A.

[39] "Fleet Air Arm's firefighting support caps off busy 2019," 30 December 2020, *Navy News*, https://news.navy.gov.au/en/Dec2019/Fleet/5659.

[40] Enclosure K Operation Bushfire Assist 2019/2020 Mission Report, 31 December 2019, Reports of Proceedings December 2019, 808 Squadron, SPC-A.

[41] Nick Wiggins, "Fire forces evacuation of Eden, on NSW's South Coast," 5 January 2020, *ABC,* https://www.abc.net.au/news/2020-01-05/fires-nsw-eden-evacuation-ordered-as-blaze-poses-imminent-risk/11841864.
[42] Royal Commission into National Natural Disaster Arrangements, EXHIBIT 30-023.008 - DEF.500.001.0001 – Response to Notice to Give Information.
[43] Royal Commission into National Disaster Arrangements, Transcript, Hearing Block 1, 3 June 2020.
[44] Reports of Proceedings, 1–30 January 2005, HMAS *Kanimbla,* SPC-A.
[45] Reports of Proceedings, 1–30 January 2010, HMAS *Adelaide,* SPC-A.
[46] 2016/1244771 "Our Navy – Operation Bushfire Assist," Message from the Chief of Navy, Vice Admiral Michael Noonan, 9 January 2020.
[47] Max Bree, "Too Close for Comfort at Albatross," 6 February 2020, *Navy News,* p 9.
[48] Post Incident Report 6 February 2020, HMAS Harman, SPC-A; Reports of Proceedings – 1 January 2020 to 31 March 2020, HMAS *Harman*, SPC-A.
[49] "Operation Bushfire Assist," *National Bushfire Recovery Agency*, 28 January 2020, https://www.bushfirerecovery.gov.au/news/operation-bushfire-assist; "Navy Helicopter Crew Helps Sustain Wildlife as Burnt-out Bush Regenerates," 28 March 2020, https://news.navy.gov.au/en/Mar2020/Fleet/5802.
[50] Lessons and Observations, "Future use of ADF in emergency response," 10 January 2020; Anthony Bergin and Paul Barnes, "Bushfire crisis demands a rethink on Defence's role in national disasters,"22 December 2019, *Australian Strategic Policy Institute*, https://www.aspi.org.au/opinion/bushfire-crisis-demands-rethink-defences-role-national-disasters#:~:text=Bushfire%20crisis%20demands%20a%20rethink%20on%20defence%27s%20role,this%20nation%20is%20now%20a%20national%20security%20issue; John Blaxland, "Developing a new plan b for the ADF: implications from a geostrategic SWOT analysis for Australia," *Security Challenges* 16, no. 2 (2020): pp 13-23.
[51] Address, National Press Club, Prime Minister Scott Morrison, 29 January 2020, https://www.pm.gov.au/media/address-national-press-club.
[52] Joanne Wallis, "Framing the Indo-Pacific – 21st Century Geopolitics," Royal Australian Navy Sea Power Conference, 9 October 2019; Centre for Naval Analysis, *National Security and the Threat of Climate Change* (CNA Corporation: Virginia, 2007), p 6.
[53] Antony Press, Antony Bergin and Eliza Garnsey, "Heavy weather: climate and Australia's Defence force," *ASPI Special Report,* 49 (2013): pp.6-8; Michael Thomas, "Climate change and the ADF," *Australian Defence Force Journal,* 185 (2011): pp 36–8.
[54] "Alignment of posting cycle, Christmas Stand-down and Peak Natural Disaster Period," 13 October 2019.
[55] Lessons and Observations, "The Reserve component will become much more important," 08/05/2020; See also, Lessons and Observations, "Suitability of Navy Reservists for domestic operations," 7 August 2020.
[56] Lessons and Observations, "The Reserve component will become much more important," 8 May 2020.
[57] Evidence of this acknowledgement included the Senate Foreign Affairs, Defence and Trade References Committee inquiry concerning the national security implications of climate change.
[58] *Australian Maritime Doctrine: RAN Doctrine 1,* Sea Power Centre – Australia, Royal Australian Navy, 2010, p 110; *Australian Maritime Operations,* Sea Power Centre – Australia, Royal Australian Navy, 2017, p 137.
[59] *Future Maritime Operations Concept 2025: Maritime Force Projection and Control*, https://www.navy.gov.au/media-room/publications/future-maritime-operating-concept-2025.
[60] *Final Report*, p 66.
[61] *2020 Defence Strategic Update*, Department of Defence, 2020, pp 16, 29.
[62] *2020 Force Structure Plan*, Department of Defence, 2020, p 12.

[63] Royal Commission into National Natural Disaster Arrangements, Transcript, Hearing Block 4, 22 September 2020.
[64] *Royal Commission – Report*, p 189.
[65] Lessons and Observations, "Build on existing ADF/emergency service synergies," 13 January 2020.
[66] *Royal Commission – Report*, p 24; Lessons and Observations, "Civil and military cooperation," 19 January 2020; Lessons and Observations, "Exceeding state emergency request for support," 13 January 2020.
[67] Royal Commission into National Natural Disaster Arrangements, Transcript, Hearing Block 1, 3 June 2020.
[68] *Royal Commission – Report*, p 194.
[69] Royal Commission into National Natural Disaster Arrangements, EXHIBIT 5-004.006 - DEF.0001.0002.0031, Department of Defence: Noting Brief for Secretary and CDF, Review of OP Bushfire Assist 19-20 – Initial Departmental Insights, 4 February 2020.
[70] Royal Commission into National Natural Disaster Arrangements, Transcript, Hearing Block 3, 5 August 2020.
[71] *Royal Commission – Report*, pp 196–7, 199.
[72] Post Activity Report Mallacoota Evacuation Operations 1–8 January 2020, HMAS *Choules,* SPC-A.