United Nations Educational, Scientific and Cultural Organization

The Protection of the Underwater Cultural Heritage

Sustainable Development Goals

# SAFEGUARDING UNDERWATER CULTURAL HERITAGE IN THE PACIFIC

## REPORT ON GOOD PRACTICE IN THE **PROTECTION** AND **MANAGEMENT** OF WORLD WAR II-RELATED **UNDERWATER CULTURAL HERITAGE**

# 6. PROTECTION AND MANAGEMENT OF AUSTRALIA'S SECOND WORLD WAR UNDERWATER CULTURAL HERITAGE

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## GOOD PRACTICE

### Shared heritage management

Most, if not all, Australian states have limited human and financial resources to protect, document or practically manage UCH on a day-by day basis. Recognizing these constraints in Australia, early UCH management activities focused on developing community groups within each jurisdiction as one of a series of public engagement mechanisms to protect UCH sites. In many jurisdictions, successful site management and protection is directly related to local community groups' active engagement and knowledge. Recognizing that facilitating safe public access is best practice in UCH management, a focus of management activity should be on fostering the development of community-based advocacy groups who become knowledgable 'archaeologists' capable of supporting heritage management agencies in their activities. With the availability of the open source UNESCO or proprietary NAS-based UCH training courses, the capacity exists for SIDS to foster appropriate community engagement within an established international framework and standard.

## Introduction

The protection of underwater cultural heritage in Australia begins in 1964. That year the West Australian Government legislated to vest control of shipwrecks off the coast of Western Australia in the Western Australian Museum (Henderson, 1986). In 1976 the Australian High Court found the Western Australian legislation invalid as a consequence of the introduction of the Commonwealth Seas and Submerged Lands Act 1973 (O'Keefe and Prott, 1978). The same year the Commonwealth Government of Australia introduced the Historic Shipwrecks Act 1976 (the Act) to protect all declared historic shipwrecks from the lowest astronomical tide along Australia's coastline out to the end of the exclusive economic zone, or continental shelf, whichever was further (Ryan, 1977).

Initially shipwrecks were individually assessed to be declared historic. Once declared a historic shipwreck, protection includes both the shipwreck and its associated relics from disturbance, damage or interference (Viduka, 2012). However, the process (of case by case assessment) was soon overwhelmed when more incidents of looting and interference were reported (Nutley, 2006) than could be processed by the number of officials involved. Recognizing the need for broader protection, on 1 April 1993 a blanket protection provision amendment (from 1985) was enacted (Cassidy, 1991). This protects all shipwrecks older than 75 years, whether located or un-located in jurisdictional waters, from damage, disturbance or interference without permit. Shipwrecks less than 75 years of age can still be protected by individual assessment and declaration. Today all

shipwrecks sunk before 1941 are protected by the Act. From 2016 until 2022, the entire assemblage of shipwrecks associated with WWII in Australian waters will be automatically protected (also including HMAS *Warrnambool* in 1947 who, while no longer on active duty, sunk as a result of WWII mine clearance operations).

## Second World War heritage in Australian waters

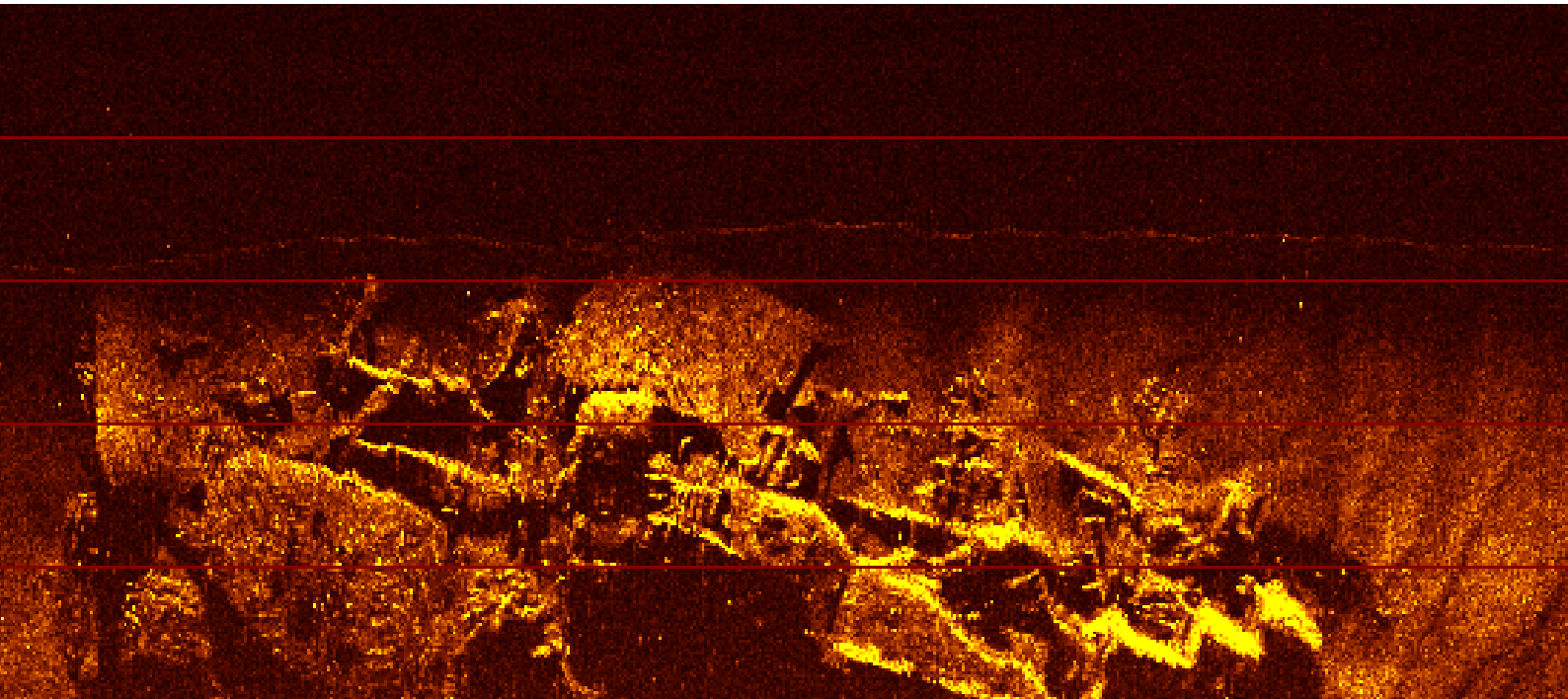
Unlike WWI (1914–1918) heritage, which is now beginning to fall under the framework of the 100-year date included within the UNESCO (2001) Convention on the Protection of the Underwater Cultural Heritage (the Convention), globally WWII underwater cultural heritage assemblage remains largely unprotected. In the Australian context, this is also true particularly because of the Act's inability to protect other types of underwater cultural heritage, apart from shipwrecks.

Since 1976 a number of WWII shipwrecks have been individually declared and are actively managed. In 1976 the first shipwreck ever to be individually declared under the Act was the Japanese submarine *I-124* (1942). Other sovereign vessels declared protected include the Japanese midget submarine *M24* (1942), the German raider HSK *Kormoran* (1941), US warships USS *Lexington* (1942), USS *Neosho* (1942) and USS *Sims* (1942).

Numerous vessels around the coastline sunk by mines, torpedoes, aerial bombardment and collision during WWII have been individually declared. While the most notable loss was the torpedoed Australian Hospital Ship (AHS) *Centaur* (1942), the vast majority of these ships were merchant vessels such as: MS *Don Isidro* (1942); SS *Florence D* (1942) (Figures 6.1 and 6.2); MV *City of Rayville* (1941); and SS *Cambridge* (1940) to name a few (Miles, 1999). Most of these have a shared heritage value which needs to be considered in their day-to-day management.

German raiders, Japanese warships and submarines operated around the Australian coastline from circa 1940. Wartime activity in or around Australia reached its height circa 1942–1943 with Japanese air raids on northern Australia, a midget submarine attack on Sydney Harbour and the torpedoing of numerous merchant vessels. However, one of Australia's most significant losses occurred in 1941 with the sinking of HMAS *Sydney* (II) by the German raider HSK *Kormoran*. As a consequence of the 1942–1943 period of intense WWII activity around Australia, the vast majority of WWII-related shipwrecks in Australian waters will become protected under the 75-year rolling date blanket protection provision from 2017–2018.

**Figure 6-1.** Side scan sonar image of the SS *Florence D* (1942). ©Heritage, Northern Territory Department of Lands, Planning and the Environment



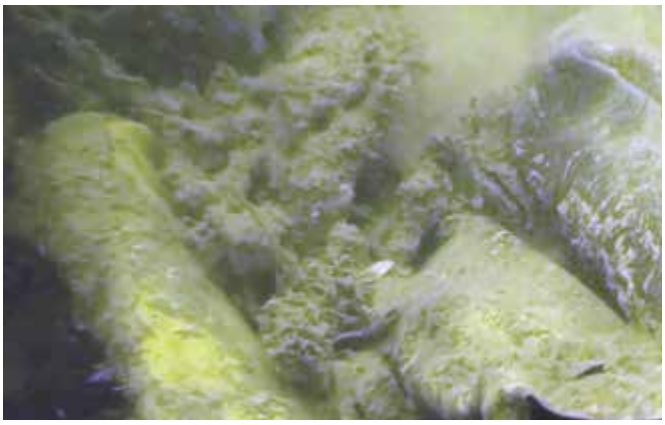


**Figure 6-2.** Three-inch artillery shells from the SS *Florence D* (1942). ©Heritage, Northern Territory Department of Lands, Planning and the Environment

The Australian National Shipwrecks Database (ANSDB) has recorded 251 shipwrecks and 164 aircraft as lost in Australian or New Zealand waters from 1939 to 1945. Certainly 117 vessels will become protected by the Act in 2017–2018, seven from the 19 February 1942 Bombing of Darwin. This assemblage includes another sovereign vessel the USS Peary (1942). The ANSDB records that 139 aircraft were lost over the same 1941–1943 period.

Australia has many other types of UCH associated with WWII. The accoutrements of war are liberally sprinkled across the north of Australia. Recent changes to the ANSDB allows for the recording of other UCH, however this section within the database remains largely unpopulated to date.

## Australia's Historic Shipwrecks Program

Australia is a federation of states collectively known as the Commonwealth of Australia. To facilitate management of the Historic Shipwrecks Act, a cooperative management regime with the states was considered integral from the start (Ryan, 1977). Since 1976 the Commonwealth Government has worked in partnership with the states, Northern Territory and Norfolk Island to deliver the day-to-day management outcomes of the Act. The states have similar legislation protecting historic shipwrecks in their state/internal waters, and are the most appropriate body to manage the Commonwealth's day-to-day administration in their jurisdiction. In each jurisdiction, the Minister delegates certain powers to enable the day-to-day operation of the Act to proceed. Activities conducted by the delegates have been partially funded and coordinated by the Commonwealth Government under the banner of the Historic Shipwrecks Program. This includes biannual meetings of delegates and annual meetings of historic shipwrecks practitioners, usually the senior maritime archaeologist in each jurisdiction.

Approximately 8,000 Australian shipwrecks are recorded in the ANSDB. The ANSDB is a relational database with a public interface and separate secure login for statutory management. It enables all statutory management functions of the Act to be performed online (Luckman and Viduka, 2013). This gives greater accountability and ensures uniform, transparent and timely decision-making in the delivery of statutory and management decisions. Since 2014 the ANSDB has also been used by New Zealand as its register of underwater cultural heritage sites. As of April 2016, New Zealand has entered 2,195 site records. The use of the ANSDB as an online register of shipwrecks, relics, aircraft and other UCH is offered to small island developing States (SIDS) in the southern Pacific, as well as Papua New Guinea and Timor-Leste.

## The Historic Shipwrecks Act 1976

The Act is now 40 years old. It is no longer in line with world's best practice as outlined in the Annex Rules of the Convention nor is it effectively linked into planning processes at the Commonwealth Government level. In 2010 an Australian Underwater Cultural Heritage Intergovernmental Agreement was put into place to enable Australia to consider ratification of the Convention (AUCH IGA, 2010). This consideration is ongoing. Issues associated with the Act and WWII heritage particularly revolve around the inability to declare classes of places other than shipwrecks protected and to specifically protect or identify human remains from other aspects of a site's assemblage.

**Figure 6-3.** ROV filming HMAS *Sydney II* (1941) at approximately 2.5 km depth during the 2015 Two Ships Project. ©Curtin University and the Western Australia Museum

## Management of shipwrecks in Australia

The management of shipwrecks in Australia is guided through the Historic Shipwrecks Program, statutory requirements of the Act and policy documents. As noted above, state legislation protecting shipwrecks within internal waters is similar to the Act. This provides a high level of regulatory consistency and actual day-to-day management approaches to underwater sites around the country (Henderson, 1994; Australian Government, 1996; Viduka, 2012, 2014, 2015a, 2015b, 2015c).

The next section comprises a series of vignettes to elucidate particular approaches to WWII heritage, sites, issues or problems utilized by one or more jurisdiction.

## Searching for shipwrecks

As with any major event that has happened within living memory, there is usually strong community sentiment about the event and often community and political support for activities that commemorate certain events. In Australia, community support translated to significant Commonwealth Government funding for two searches to locate HMAS *Sydney* II and HSK *Kormoran* in 2008 (solving one of Australia's most enduring maritime mysteries) (McCarthy, 2009a, 2009b, 2011; Mearns, 2009); and AHS *Centaur* in 2009 (AAP, 2009). The searches themselves became major national stories with enormous media coverage and resulted in the location of all three wrecks at depths between 1,950–2,500 m.

HMAS *Sydney* II and the German raider HSK *Kormoran* both sank after a battle on 19 November 1941. It was Australia's worst naval disaster with the loss of all 645 crew of the HMAS *Sydney* II. Around 80 German sailors also died in the battle. Following the discovery of the *Sydney* and *Kormoran* in 2008, field research was conducted in 2015 led by Curtin University and the Western Australian Museum (Curtin University, 2015; Pawsey Supercomputing Centre, 2015). Planning for the Two Ships Project involved extensive consultation with stakeholder groups particularly as the project included collecting scientific data from both wrecks to assist with informing the long-term management of the sites and understanding the local ecology. To assist with stakeholder consultation and to

mitigate any concerns of site interference by those groups, who perceive the sites as primarily a 'maritime military grave', a Cultural and Natural Heritage Sampling Protocol was drafted by the author. The guiding principle of this document was that any sampling to be carried out should avoid any physical contact with the main wreck. The exception to this was the corrosion science component which required minimal contact with discrete areas of the site (focused around the bow section) and debris field; and collection of bacterial growth 'rusticles' from metal surfaces. The natural science research required sampling the seabed and animals living on and around the wreck sites. All efforts were made not to inadvertently move cultural material for any type of physical sampling.

A primary outcome of the Two Ships Project was to conduct comprehensive photogrammetry of both sites with the intent to produce a virtual 3D immersive display. This display is proposed to be shown at the Western Australian Museum and at the Australian War Memorial, making Australia's most remote and inaccessible 2011 National Heritage listed sites publicly accessible (Figure 6.3).

One value noted in the National Heritage listing announcement was that the shipwreck sites of HMAS *Sydney II* and HSK *Kormoran* have a special association with the Australian community. This association is particularly strong for family and friends of the naval, air force and civilian personnel who died as a result of the battle as the sites are their final resting places and a tangible link to their memory.

More recently a search was proposed to locate the three US warships (USS *Lexington*, USS *Neosho* and US *Sims*) lost during the Battle of the Coral Sea in 1942 (Figure 6.4). This joint initiative of the Australian and United States Governments, universities and not-for-profit research institutions successfully secured sea time on the Australian Research Vessel (RV) *Investigator* (Viduka and Luckman, 2013) but failed to secure sufficient operational funding. The project has been delayed while other funding opportunities are sought.

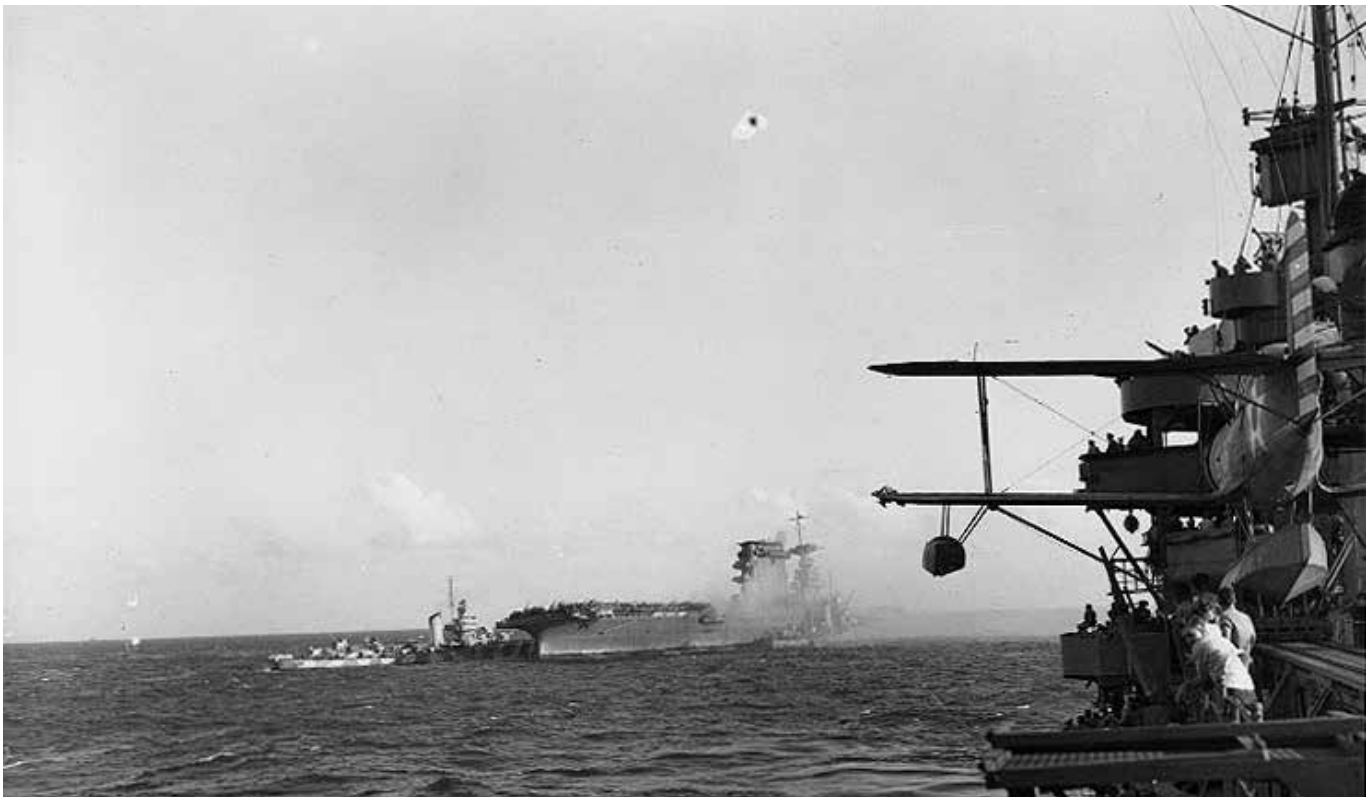


**Figure 6-4.** Abandonment of USS *Lexington* (1942) during the Battle of the Coral Sea. ©US Navy, National Archives

**Figure 6-5.** Tea ceremony being conducted over the remains of the Japanese midget submarine *M24*. ©Heritage Division, New South Wales Department of Environment and Planning

## Commemoration

Commemorative events occur at numerous sites around Australia and often on ANZAC Day (25 April), Australia's national day of remembrance for those who served or died in war and on operational service. Commemorative events also occur at other times and these are usually linked to the specific day of an event. Most ceremonies incorporate wreath-laying near memorials or from vessels over a site, such as the at sea remembrance service for the 332 victims and survivors of the sinking of the *Centaur* on 24 September 2010. A commemorative plaque was also placed on site in 2009 when the *Centaur* wreck was discovered.

For Japanese wrecks, commemorative remembrance has taken the form of tea ceremonies such as the one held at the Japanese midget submarine *M24* site off Sydney on 7 May 2013 by the Japanese Tea Masters Association (Chado Urasenke Tankokai Inc) (Figure 6.5). All commemorative events conducted within designated protected zones that exclude access without permit are actively managed to reduce any possible impact with sites or contamination of the site.

## Shared heritage management

A fundamental underpinning of the Act is the shared heritage management of the four Dutch shipwrecks located off Western Australia: *Batavia* (1629), *Vergulde Draeck* (1656), *Zuytdorp* (1712) and *Zeewyk* (1727). The bilateral agreement between Australia and the Netherlands concerning old Dutch shipwrecks (Australian and Netherlands Committee on Old Dutch Shipwrecks ANCODS) is included as a schedule to the Act. While the ANCODS agreement is considered by both parties a very successful model for shared heritage management, and a basis for shared heritage management in the Convention (Henderson and Viduka, 2014), more recent efforts to protect the Japanese submarine *M24* shared heritage site *in situ* have also been recognized. In 2009 those underwater cultural heritage management activities were given an award of distinction by UNESCO Asia-Pacific Heritage Awards for cultural heritage conservation. The award stated:

> The project is to be commended for setting a new global benchmark in the application of heritage law and conservation practice to protect shipwreck sites and demonstrating best practice in the application of UNESCO's guidelines for the protection of underwater cultural heritage.

A Commonwealth Government aspect of shared heritage management in Australia has been the development of bilateral memorandums of agreement with relevant state parties to underpin future fieldwork, site protection and day-to-day management. Australia's National Heritage-

listed site the British Sovereign vessel HMS *Sirius* (1791), as well as the other six British Admiralty wrecks in Australian waters have been managed in conjunction with the United Kingdom on the basis of a series of agreements culminating in the 1992 agreement detailing ownership of sites and recovered relics. In 2010, and renewed in 2014, the US National Oceanic and Atmospheric Administration (NOAA), Office of Marine Sanctuaries and the Department entered into a Memorandum of Agreement (MoA) for the Purpose of Collaboration in Underwater Cultural Heritage Resource Management Activities in the Pacific Region. A focus of this MoA is facilitating the discovery of the US ships lost in the Battle of the Coral Sea to commemorate the sacrifice of those engaged in the defence of Australia. The three US shipwrecks (*Lexington*, *Neosho* and *Sims*) were declared protected historic shipwrecks on the 70th anniversary of their loss on 7 May 1942. In 2015 the Australian Government entered into a MoU with the Indonesian National Center for Archaeology (ARKENAS) to assist in the protection of HMAS *Perth* (I) (1942) sunk in Indonesian territorial waters. A permit is currently being pursued by the Australian National Maritime Museum to conduct fieldwork.

## Second World War regional surveys and site documentation

Though a comparatively small portion of the overall Australian shipwreck heritage assemblage, WWII shipwrecks and aircraft have been the focus of considerable study led by researchers such as Mack McCarthy (Western Australian Museum), Silvano Jung (Ellengowan Enterprises, Northern Territory), David Steinberg (Northern Territory Heritage Branch), Cos Coroneos (Cosmos Archaeology) and Tim Smith (Heritage Victoria, ex NSW Heritage).

Through the efforts of David Steinberg and colleagues, the seven WWII shipwrecks of Darwin Harbour have been archaeologically inspected and assessed as a precursor to their protection under the blanket protection rolling date provision of the Act in 2017 (Steinberg, 2009, 2015, 2016).

In Australia, one person stands out for the recognition of WWII aircraft. Silvano Jung has specialized in aircraft archaeology and documented sites in the Cocos Keeling Islands, Broome Western Australia, and Darwin Harbour. Other authors have also contributed to the growing canon of knowledge (Jung, 1996, 2004, 2006, 2007, 2009, 2013a, 2013b; Smith, 2004; Wilkinson, 2012; Souter, 2003; McCarthy, 2004).

Similarly, with submarines, one person stands out in their study: Tim Smith who led the survey, documentation, stakeholder engagement and commemoration ceremonies associated with the *M24* in conjunction with the Department of the Environment (Smith, 2006, 2008; McCarthy, 1998).

Other prominent practitioners include Mack McCarthy who led the enormous stakeholder engagement and archaeology of the *Sydney* II and *Kormoran;* as well the Japanese submarine *I-124* (McCarthy, 1990, 1998, 2009a, 2009b, 2011; McCarthy *et al*, 2010) and Cos Coroneos whose work in Darwin Harbour, documenting, and where required, recovering and reburying predominantly WWII heritage, remains the largest maritime archaeological consultancy job in Australia (Cosmos Archaeology, 2012; INPEX, 2011).

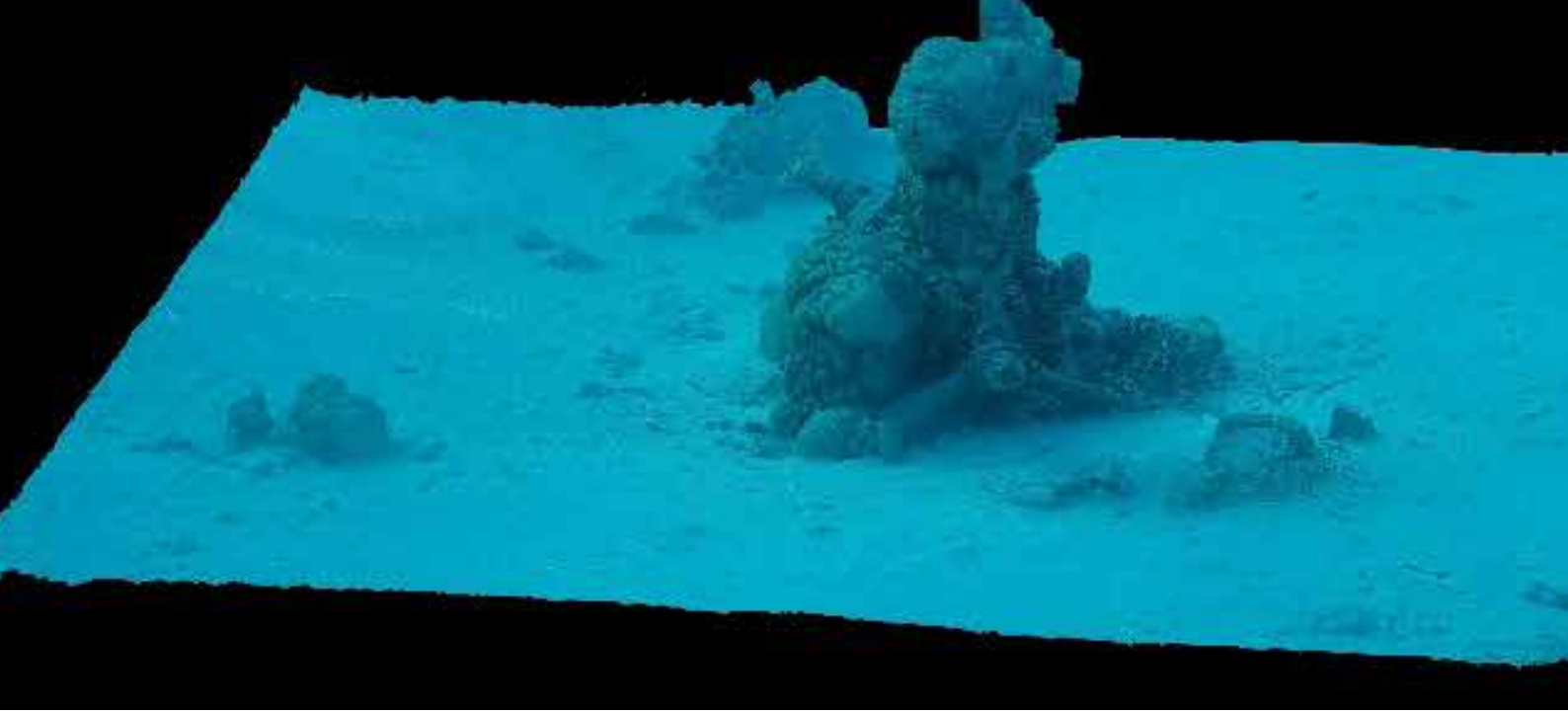


**Figure 6-6.** Remains of Catalina *JX435* (1945) wrecked within the lagoon at Cocos Keeling Islands. ©Wreck Check Inc.

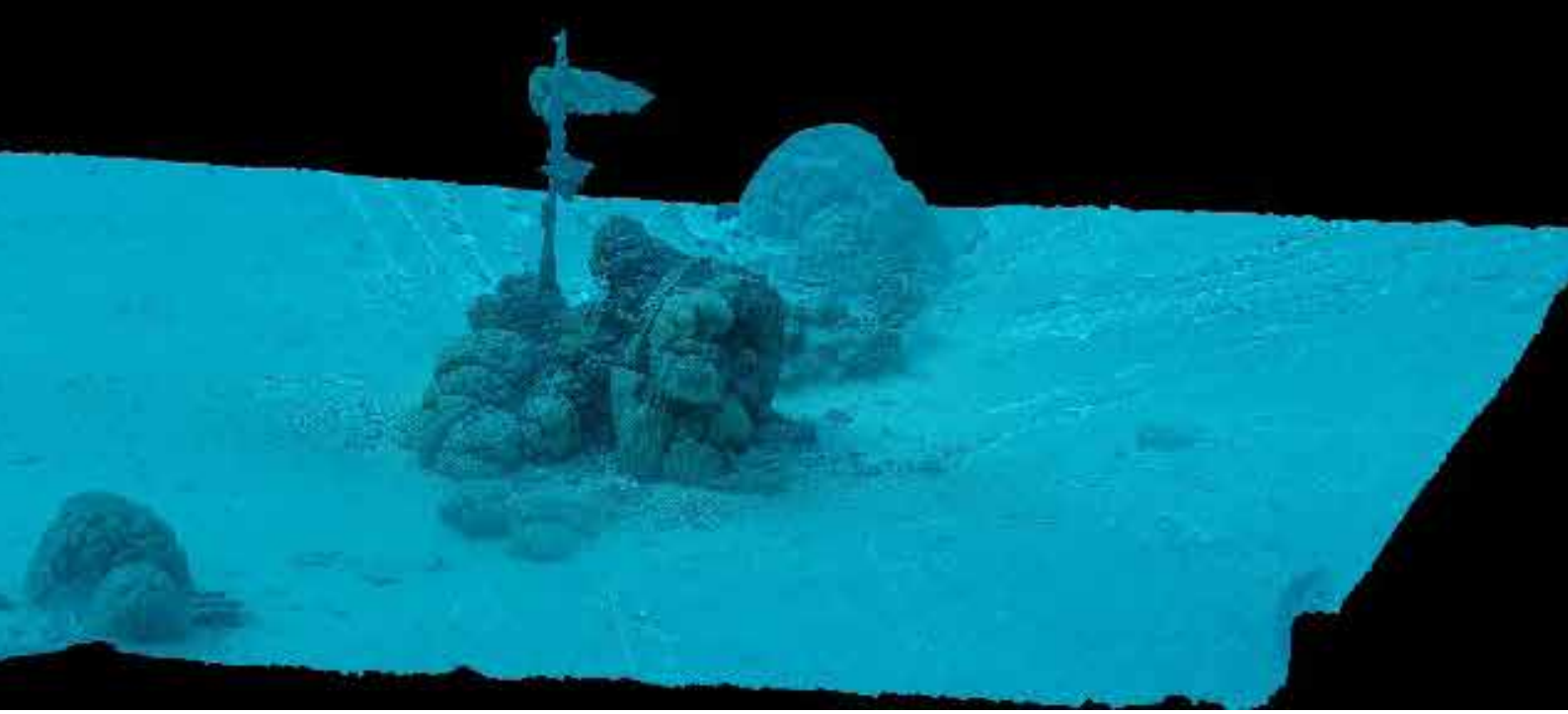
## Tourism and site documentation

As a cultural heritage manager, it is intrinsically important to facilitate public access and engagement with heritage (Hosty, 1987; McCarthy and Garrett, 1998; Nutley, 1998; Smith, 2006; Steyne, 2010; Viduka and Raupp, 2008; Viduka, 2015a, 2015b). Of the approximately 8,000 shipwrecks in Australia, only 22 are located within protected zones requiring a permit to access the site. All the rest can be dived without permit. Included within the 22 sites limited to public access is a world-famous dive site SS *Yongala* (1911) (Viduka, 2006a, 2006b) and six WWII shipwrecks (HSK *Kormoran*, HMAS *Sydney II*, AHS *Centaur*, *I-124*, *Florence D* and *M24*) (Historic Shipwrecks Protected Zones, 2016). Protected zones have been declared around these WWII sites because of the danger of unexploded ordnance; or the site is managed principally as a maritime grave; and/or to enable cultural heritage managers better control over what happens on or near that site.

In Australia, we recognize the significant contribution that the public can make to documenting, monitoring and protecting heritage, and have taken a number of approaches to understand diver behaviour (Edney, 2011; Jewell, 2002) and engage the history buff and/or capture the citizen scientist. Various community engagement models have included developing maritime archaeological associations in Queensland, New South Wales (NSW), Victoria, Tasmania, South Australia, Western Australia and Norfolk Island; the Wreckspotter Program in NSW; shipwreck dive trails in Western Australia, Queensland, NSW, Tasmania and South Australia (Historic Shipwrecks Trails, 2016); and maritime archaeologists working with dive charter tourism in Queensland.

While not all these public engagement models have specifically focused on WWII heritage, most do or have included sites from this period. Only one location, Darwin Harbour, lends itself to a WWII-themed dive trail, however issues of water turbidity and the presence of crocodiles somewhat diminish the viability of this activity.

Dive tourism operators have a vested interest in protecting sites and supporting operators with information and advice is a long-established practice in Australian UCH management (Viduka, 2008). Going beyond desktop assistance, archaeologists have also worked on dive charter vessels engaging the public in shipwreck monitoring and encouraging them as citizen scientists (Viduka and Raupp, 2008). Remote sites such as HMAS *Warrnambool* (1947) have been dived, inspected and monitored over the years through this model of public engagement. Without aligning with tourism, sites like the *Warrnambool* would be largely inaccessible to cultural heritage



managers due to their remoteness and cost of access. Another type of tourism programme trialled to engage the public with WWII heritage is controlled diver access on the *M24* (NSW).

Community groups play an important role in Australia's maritime heritage management. Many groups have led the search for and discovery of shipwrecks around Australia, including a number of WWII wrecks. The Maritime Archaeological Association of Victoria (MAAV, 2016) led the documentation of HMAS *Goorgangai*, the first Royal Australian Navy vessel lost in WWII, which was subsequently declared a protected historic shipwreck under Victorian legislation on 16 November 1995 (Australian Government Department of Environment and Energy, 2016b; MAAV, 2016). The Sydney Project with its passion for technical diving led to the discovery of several wrecks lost during WWII, SS *Coast Farmer* (1942) at 130 m depth and SS *Wear* (1944) at 120 m depth (Sydney Project, 2016).

More recently, Wreck Check Inc (2016) completed documentation and corrosion surveys of several WWII sites: Catalina wreck *JX 435* at Cocos Island, and the *Eidsvold* (1942) and *Nissi Maru* (1942) sunk at Christmas Island. Wreck Check Inc (who is currently searching for a WWII Sunderland flying boat reported scuttled off Christmas Island) also undertook the first ever archaeological survey of the WWI SMS *Emden* (1914) wrecked at North Keeling Island.

For the non-diving public, management of sites includes researching or assisting research that will result in the dissemination of information in public exhibitions. The recent Two Ships Project with its focus on creating an immersive 3D experience of the *Sydney* II and *Kormoran* is an excellent example of this.

## Archaeological conservation

A fundamental underpinning to Australia's protection and management of UCH has been the high standard of maritime archaeological conservation research and *in situ* practice. Excellence in research and practice is typified by the efforts of conservators and conservation scientists located at the Western Australian Museum.

As much of the WWII UCH assemblage is metallic, conservation of metal artefacts and their stabilization and monitoring is of critical importance for effective day-to-day management. Neil North, Colin Pearson and Ian MacLeod were, or in the case of MacLeod still are, significant contributors to the development of maritime archaeological metal conservation globally (North, 1982, 1989; Pearson, 1987). In the case of MacLeod, his efforts have led to the broad use of *in situ* corrosion potential measurements for the purposes of site management, conservation and documentation

with a large number of WWII vessels and aircraft included in his research (MacLeod, 1987, 1989a, 1989b, 1991, 1992, 1995, 1996a, 1996b, 1998, 2002, 2010). Sacrificial anodes have also been used to assist metallic objects to come into equilibrium with a new marine environment or to initiate their conservation *in situ* prior to recovery and full conservation (MacLeod, 1992, 1996a, 2010; MacLeod and Steyne, 2011; Steyne and MacLeod, 2011). The use of sacrificial anodes has also been used to protect sites, including the *M24* (Smith, 2008) amongst others.

**Figure 6-7.** Divers conducting a corrosion survey on the remains of the *Nissei Maru* (1942) in Flying Fish Cove, Christmas Island. ©Wreck Check Inc

Ian Godfrey and Vicki Richards have led Australia's wet organic object conservation and, in the case of Vicki Richards, *in situ* site stabilization, reburial trials and testing (Richards, 2001, 2011; Richards *et al,* 2014). Both MacLeod and Richards were key scientific contributors to the recently concluded Australian Historic Shipwreck Preservation Project (Veth *et al,* 2011, 2013, 2016). One of the aims of this project was to help develop policy and a national standard on the reburial and monitoring of wet archaeological artefacts. The need to develop a practice guideline underpinned by science was demonstrated when development in the Northern Territory required the removal and reburial of a large amount of WWII UCH, and other cultural heritage, from an area that was going to be dredged (INPEX, 2011).

## Common issues around WWII shipwrecks

Three management issues are often linked with WWII sites: human remains and repatriation, UXO and potentially polluting wrecks.

## Potentially polluting wrecks

As a party to the Convention for the Protection of Natural Resources and Environment of the South Pacific Region, 1986 (also known as the *Noumea Convention*) and the Agreement Establishing the South Pacific Regional Environment Programme, 1993 (SPREP), Australia has a responsibility in the Pacific in relation to the 21 Pacific Island States. Under the Pacific Islands Regional Marine Spill Contingency Plan (PACPLAN), a framework for co-operative regional responses to oil spills, Australia is the primary source of assistance for Papua New Guinea, Solomon Islands, Nauru, Tuvalu, Vanuatu and Kiribati. Along with the other non-island members (US, New Zealand and France), Australia is a 'secondary source of assistance' for the remaining island members.

While the Convention was ratified primarily to mitigate the ongoing danger of modern ships running aground and polluting the environment, a potentially significant role exists for the signatories to this Convention to assess and proactively mitigate any oil spill threat from WWII shipwrecks that would have a significant effect on tourism and fishing, key livelihoods in the Pacific.

In the Australian context, only one WWII vessel has so far been found to be leaking oil, the MV *Limerick* (1943). This spill was reported in 2012 off northern NSW by a fisherman. Follow-up research indicated that the spill was predominantly diesel; the site posed little environmental threat and remained substantially intact.

While the scale and potential threat to the environment posed by the Australian WWII assemblage currently appears limited, Papua New Guinea and the Solomon Islands (the location of Australia's flagship HMAS *Canberra* (I) (1942) sunk during the Battle of Savo Island) are identified as

two of the four Pacific Island States most threatened by the pollution risk from WWII shipwrecks. The number of WWII vessels in Australia's primary response area is reported to contain 449 wrecks, including five tankers or oilers. The amount of oil remaining in these wrecks is unknown. While not a pressing policy issue for the domestic front, input to protect the heritage values of these sites while mitigating the threat of oil pollution needs more active consideration.

## Human remains and repatriation

Human remains are not referred to in the Act. They are, however, protected as associated relics. In line with the AUCH IGA, the Commonwealth Government is committed to world's best practice in relation to underwater cultural heritage management (recognized as the Annex rules to the Convention). In line with Article 2(9) of the Convention, State Parties shall ensure that proper respect is given to all human remains located in maritime waters. While a formal policy for human remains has not yet been drafted or approved by delegates, to meet the IGA requirements, delegates are asked to ensure that prior to permitting excavation and recovery of relics proponents consider:

- the presence or likelihood of human remains on a shipwreck/aircraft site;
- a contact list of relevant stakeholders and appropriate agencies (relatives, police, coroner and, if applicable, the Royal Australian Air Force or Royal Australian Navy);
- evidence of initial communication with the relevant appropriate agencies and their response has been incorporated into a submitted project plan;
- a strategy for physically dealing with the human remains if discovered and their subsequent storage is articulated; and
- that cultural sensitivities to human remains have been considered.

## Unexploded ordnance

A significant quantity of UXO has been located in Australian waters. While there is no specific national shipwrecks policy, a national framework exists and involves personnel from the Australian Government Department of Defence and officers from the Australian Federal Police (Australian Government Department of Defence, 2016).

Three WWII shipwreck sites are actively managed for UXO, the *I-124*, *M24* and *Florence D*. The *I-124* is believed to contain sea mines (McCarthy, 1990) and is managed as a maritime military grave. No permits are issued for recreational diving on this site. NSW is currently completing an unexploded ordnance report for *M24* and dive access is restricted, in part for public protection.

The wreck of the *Florence D* was located in late 2008 in 10 m of water. The 2,600 tonne *Florence D* was a US vessel requisitioned during the war to take ammunition and supplies to US forces in Manila, but was sunk by Japanese bombers returning from the first of two air attacks on Darwin on 19 February 1942. The site includes a large amount of 75 mm artillery shell casings amongst other relics. Permits are issued to enter the protected zone but individuals are advised not to anchor.

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