



NAVY

Challenges of Future Submarine Project

The demanding nature of the Royal Australian Navy's 12-vessel future submarine project would require all of the scientific, technological and industrial capacity that Australia could muster.

The Minister for Defence Materiel, Personnel and Science, Mr Greg Combet, told the Sydney Institute on 4 November that the project was probably at the margins of Australia's present scientific and technological capacity and would inevitably require assistance from our allies to succeed.

But he emphasised that Australia's ability to conduct successful defence operations in theatres distant from our shores would be enormously strengthened by the surveillance, intelligence and strike capabilities of a long-range submarine.

Speaking on the topic of "From Collins to Force 2030 – the Challenge of the Future Submarine", Mr Combet told the institute that submarines represented incredibly challenging demands in the combined fields of personnel, acquisition and procurement, and science.



The Federal Government says Australia's ability to conduct successful defence operations in theatres far from our shores would be enormously strengthened by the surveillance, intelligence and strike capabilities of a long-range submarine.

Explaining why the Rudd Government had decided to acquire a new submarine force of 12 vessels, he said the recent Defence White Paper reaffirmed the long-held view that the primary task of the Australian Defence Force was to deter and defeat armed attacks against Australia.

"To this end, the White Paper recognises that the aim of establishing sea and air control in our primary operating environment does not entail a purely defensive or reactive approach. Rather, we must be able to conduct proactive combat operations at a distance from our shores," Mr Combet said.

"This demands a mix of intelligence, defensive and strike assets to ensure both deterrence and, if that were to fail, an ability to impose unacceptably high costs on any potential adversary. Put simply, we need to be able to take warfare to an adversary's front door.

"The White Paper identified the need for Australia to develop and maintain a force that has a capability advantage and can provide protection against strategic uncertainty." [continued on page 10]

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PIRACY

IMO to Support Somalia to Repress Piracy

The International Maritime Organization (IMO) is to help the transitional government of Somalia set up a coastguard organisation and says it stands ready to help the country repress piracy off its coast and in the Gulf of Aden.

IMO Secretary-General, Admiral Efthimios Mitropoulos gave the undertakings to the Prime Minister of the Transitional Federal Government (TFG) of Somalia, Mr Omar Abdirashid Sharmarke, following a meeting at IMO Headquarters in London on 27 October.

Also present at the meeting were the TFG's Minister of Planning and International Communication, Mr Abdirahman Abdishukur Warsame; and the Minister of Post and Telecommunications, Mr Abdirizak Osman Hassan.

Mr Mitropoulos emphasised the importance of the effective implementation of the *Code of Conduct concerning the Repression of Piracy and Armed Robbery against Ships in the Western Indian Ocean and the Gulf of Aden*, which was adopted in Djibouti in January 2009. [continued on page 2]

PIRACY

[continued from page 1]

IMO to Support Somalia to Repress Piracy

The code was aimed mainly at ensuring co-operation among signatories for:

- the investigation, arrest and prosecution of pirates;
- the interdiction and seizure of suspect ships and property on board such ships;
- the rescue of ships, people and property subject to acts of piracy and armed robbery; and
- the conduct of shared operations – both among signatory States and also with navies from outside the region.

Somalia was one of the countries to sign the Code.

Prime Minister Abdirashid Sharmarke observed that piracy off his country’s coast needed to be tackled from the land side as well as from the sea.

He requested assistance to halt attacks from the two main piracy networks (one in the central region of Somalia and one in Puntland) through the establishment of information-sharing centres on how the pirates operate and analysing their money flow.

The Prime Minister and the Secretary-General agreed to pursue Somalia’s capacity-building needs through a Somali delegation visiting IMO to specify such needs in the near future.

Further information is available at www.imo.org under the heading of Briefing 32 of 2 November 2009, or contact Lee Adamson or Natasha Brown (IMO), email media@imo.org.

SHIPBUILDING

New \$88m Shipbuilding Facility

Austal has officially opened its new state-of-the-art Modular Manufacturing Facility (MMF), equipping its US shipyard with the ability to build up to three 100 metre-plus vessels each year.

Phase One of the new \$88 million facility boasts 35,000m² of manufacturing space under one roof, including a 7900m² warehouse, as well as paved parking for more than 2000 vehicles.

An official ribbon-cutting ceremony celebrating the completion of Phase One was held at Austal’s Mobile, Alabama shipyard on 10 November. The event was attended by more than 300 dignitaries, including Alabama Governor, Mr Bob Riley, US Navy Program Executive Officer RADM Bill Landay, US Representative Jo Bonner and City of Mobile Mayor Sam Jones.

Austal Managing Director, Mr Bob Browning said the new facility meant Austal was ideally positioned to accommodate the concurrent construction of major multi-vessel programs.

Mr Browning said modular manufacturing formed a key part of Austal’s Advanced Shipbuilding (ASB) program, which has been proven at the company’s Australian facilities over recent years.

The MMF will increase Austal USA’s capacity to assemble and outfit unit modules before consolidating them into the full vessel, spreading demands for specific trades more evenly and streamlining the integrated design and production process.



More than 300 dignitaries attended the Austal ribbon-cutting ceremony in Alabama on 10 November.
Austal photo

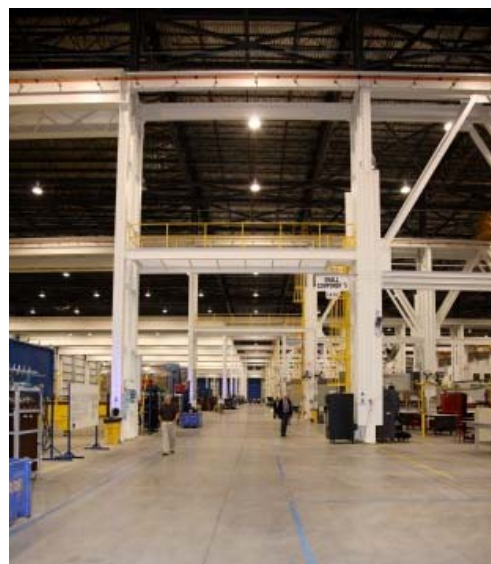
Test constructions are currently underway at the new facility, with work on the US Department of Defense’s first 103 metre Joint High Speed Support Vessels (JHSV) scheduled to commence before the end of the year.

As prime contractor, Austal will design and build up to 10 JHSVs between FY09 and FY13.

Austal USA is also preparing for US Navy acceptance trials of its 127 metre Littoral Combat Ship, LCS 2 “Independence”, which successfully completed builder’s trials in October.

The vessel is scheduled for commissioning in January 2010. The LCS 2 sea frame is based on Austal’s innovative 127 metre high-speed trimaran hullform, which reached a sustained speed of 44 knots and a top speed in excess of 45 knots during trials.

Construction of a second Austal designed and built LCS is already underway at the company’s Mobile, Alabama shipyard, with an ongoing commitment from the US Navy for a 55-vessel LCS program as part of its 313 ship fleet.



Inside the new facility which will provide additional capacity for major future US Navy construction projects.
Austal photo

Subject to Austal being awarded the 10-ship FY10 LCS contract, the construction of Phase Two will see the size of the MMF double to 70,000m², eventually allowing for up to six 100 metre-plus vessels to be built each year. The facility will also accommodate an additional 1200 workers.

For further information contact Austal, phone (08) 9410 1111, email pubrel@austal.com.

CLIMATE CHANGE

Politicians Urged to Save Great Barrier Reef

To have even a chance of saving the world's coral reefs from extensive damage caused by global warming, carbon emissions in industrialised countries need to be cut by 25 per cent below their year 2000 levels by 2020 – and by 80-90 per cent by 2050.

That was the uncompromising warning delivered on 17 November by some of Australia's most eminent marine and environmental scientists in a briefing to Australian Members of Parliament and Senators, in Parliament House, Canberra.

“The Great Barrier Reef (GBR) contributes \$5.4 billion annually to the Australian economy – \$5.1 billion from the tourism industry; \$153 million from recreational activity; and \$139 million from commercial fishing,” Professor Terry Hughes, Director of the ARC Centre of Excellence for Coral Reef Studies at James Cook University told the briefing.

“The ‘outstanding universal values’ of the GBR, recognised by its inclusion on the World Heritage List in 1981, are now threatened by rapid climate change,” he said.

Professor Hughes emphasised the consensus among reef scientists in Australia about the impacts of climate change on valuable environmental assets such as the Great Barrier Reef: “We’ve seen the evidence with our own eyes. Climate change is already impacting the Great Barrier Reef and reefs in Western Australia.”

According to Western Australian Premier's Fellow, Professor Malcolm McCulloch: “Coral reefs are in the front line of the effects of climate change because of their sensitivity to both relatively small temperature rises *and* to acidification of the oceans due to increased levels of dissolved CO₂. To date, atmospheric CO₂ has risen to 390 parts per million, resulting in an increase in temperature of 0.7°C and a rise in ocean acidity of 0.1 unit of pH.”

Other leading scientists were equally concerned.

“Unprecedented coral bleaching and extensive mortality due to thermal stress affected over 50 per cent of the GBR in 1998 and 2002, when summer maximum water temperatures were elevated by only 1-2°C. Some parts of the GBR have still not fully recovered,” said Professor Ove Hoegh-Guldberg of the ARC Centre and the University of Queensland.

“Ocean acidification is accelerating and, in combination with thermal stress, has already detrimentally affected the growth and skeletal strength of corals on the GBR,” he says. “Ocean acidification will impact all marine calcifying organisms, potentially disrupting the entire ecology of the world's oceans, resulting in severe socio-economic impacts on fisheries and other marine industries.”

“Coral cover is already declining on the GBR and globally, even on the most remote and best-managed reefs. Loss of coral cover reduces biodiversity, ultimately affecting fishing, tourism, coastal protection and World Heritage values,” Professor Ove Hoegh-Guldberg says.

Professor Hughes and colleagues advised the parliamentarians that the effects of atmospheric concentrations above 450 parts per million CO₂ equivalent (currently seen as the most likely target to emerge from Copenhagen) and the consequent likely

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temperature increase of more than 2°C on the GBR “will be devastating, particularly given the impacts observed so far with only one-third this amount of warming.”

“To have a realistic chance of achieving this target, emissions from industrialised countries in 2020 need to be reduced by at least 25 per cent relative to their 2000 levels.”

The briefing, organised by the Federation of Australian Scientific and Technological Societies (FASTS), was accompanied by a statement signed by 13 leading Australian researchers. The statement is available at www.fastso.org.

For further information contact Professor Terry Hughes (CoECSRS and JCU), mobile 0400 720 164, email Terry.Hughes@jcu.edu.au; Professor Ove Hoegh-Guldberg (CoECSRS and UQ), phone (07) 3365 1156, mobile 0401 106 604, email oveh@uq.edu.au; or Jenny Lappin (CoECSRS), phone (07) 4781 4222, email Jennifer.Lappin@jcu.edu.au. Web site www.coralcoe.org.au.

SOMETHING TO SAY?

The *Australian Maritime Digest* circulates to thousands of key people across a wide range of maritime interests in Australia and overseas

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MARITIME LAW

Australia Must Back New Shipping Convention

The Australian government must give serious consideration to signing up to a new international convention on the carriage of goods by sea or face being stuck with an antiquated regime of maritime law which is likely to be inconsistent with its major trading partners, a leading maritime lawyer says.

The United Nations (UN) "Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea" also known as the "Rotterdam Rules" has now been signed by 21 nations including the United States, France, Greece, Denmark, Switzerland and the Netherlands. The current signatories are said to make up over 25 per cent of world trade by volume.

According to Mr Stuart Hetherington, partner at Colin Biggers & Paisley lawyers, it is in Australia's interests as a modern trading nation, to back the new convention which seeks to consolidate and modernise a patchwork of piecemeal rules first conceived in the nineteenth century.

"Eighty per cent of world trade is now conducted by sea. Supporting a uniform framework that clarifies the rights and responsibilities of marine cargo carriers and shippers promotes international trade and is in turn good for Australia," Mr Hetherington said.

"Australia's regime has been grafted on to the original archaic rules which hark back to a time when cargo was shipped in bags or boxes rather than containers, and communication technology was still in its infancy.

"It is generally considered out of date and cumbersome. By contrast, the new convention brings the maritime sector into the 21st century. It reflects current shipping practices and recognises the impact of e-commerce and electronic communications on shipping transactions."

Mr Hetherington also noted that the new convention made sensible changes to legal rights and liabilities that reflected the business community's current expectations.

For instance, the period during which carriers are responsible for the safety of another's cargo has been extended from the "tackle to tackle" period to include the period from when cargo is received by the carrier to when it is delivered to the consignee at its destination, including at any agreed inland locations.

"This extension of responsibility acknowledges that today, carriers are often part of a larger logistics supply chain and therefore, it is appropriate for their liability to match their delivery obligations".

"Similarly, the new convention aims to apply modern duty of care concepts more consistently. For example, carriers are made responsible for ensuring the ship is seaworthy and properly crewed throughout the voyage and not just at the port of departure.

"The so-called 'nautical fault defence' has also been scrapped so that ship's masters and crew who have been negligent in navigating or managing the ship can no longer escape liability".

Mr Hetherington noted that overall, Australia had more to gain from joining up with the new regime than staying put with the old one.

For further information contact CallidusPR – Viv Hardy, phone (02) 9283 4113, mobile 0411 208 951 or Su Lin Ho phone (02) 9262 9295, mobile 0421 616 617.

DEFENCE

Recognition of Australian Service in US Army Small Ships

The Federal Government has accepted the recommendations of the independent Defence Honours and Awards Tribunal *Inquiry into Recognition for Service with the United States Army Small Ships Section*.

The Parliamentary Secretary for Defence Support, Dr Mike Kelly, said on 9 November that the Report recommended that Australian civilian personnel who served in ships operated by the US Army Small Ships Section between 1942 and 1945 be recognised as eligible for Australian or Imperial recognition on the same basis as members of the Merchant Navy.

He said the report also recommended that there should be no requirement for those personnel to relinquish any US awards they may have been awarded before receiving Australian recognition for that service.



The Parliamentary Secretary for Defence Support, Dr Mike Kelly.
Defence photo

Application forms can be obtained from www.defence.gov.au/medals or by calling the Directorate of Honours and Awards, toll free, on 1800 111 321.

Completed applications with supporting documents should be sent to:

Directorate of Honours and Awards
Department of Defence
PO Box 7952
CANBERRA BUSINESS CENTRE ACT 2610

The Tribunal's report is available at www.defence-honours-tribunal.gov.au. Further information on Defence honours and awards is available at www.defence.gov.au/medals or contact Mark Sjolander (Office of the Parliamentary Secretary for Defence Support), phone (02) 6277 4840, mobile 0407 102 220, or Defence Media Liaison, phone (02) 6127 1999, mobile 0408 498 664.

MARINE SCIENCE

New Era for Marine Research in NT

Understanding of northern Australia's rich tropical marine endowment was enhanced last month following the signing of a landmark Memorandum of Understanding between Charles Darwin University, the Australian Institute of Marine Science (AIMS), the Australian National University and the Northern Territory Government.

The Memorandum details a framework of cooperative research, academic and training activities, and expanded research infrastructure, helping to ensure sustainable and community-friendly development of tropical marine resources.

Announcing the agreement, the Federal Minister for Innovation, Industry, Science and Research, Senator Kim Carr



The Federal Minister for Innovation, Industry, Science and Research, Senator Kim Carr, inspects a laboratory at the Arafura Timor Research Facility, Charles Darwin University photo

said: “This is an innovative partnership which will provide real benefit to northern Australia.

“The MoU is a milestone agreement that unites the research efforts of three distinct institutions and the Northern Territory Government. By combining their efforts, these organisations will be able to focus their attention on critical issues like sustainable development, protecting biodiversity, and mitigating the impact of climate change.”

The Australian Government’s Super Science Marine and Climate initiative includes \$387.7 million for marine

research and climate change research, including \$55 million for tropical marine science infrastructure at AIMS.

“This includes \$5.5 million for the Arafura Timor Research Facility – an investment that will provide new infrastructure and provide some of the tools needed to fill knowledge gaps,” Senator Carr said.

“Australia has the third largest ocean territory in the world, but too little is known about Australia’s marine estate and this new partnership will help close that gap.

“The Australian Government has made marine science one of the nation’s innovation priorities for the next decade.”

The CEO of AIMS, Dr Ian Poiner, speaking on behalf of the memorandum parties, said it was critical to work together to understand the unique ecosystems of the Arafura and Timor Seas.

“This memorandum of understanding between AIMS, CDU, the ANU and the Northern Territory Government is about demonstrating the links and connections between organisations, levels of government and communities,” he said.

For further information contact Robyn McDougall (Charles Darwin University Public Relations & Media Manager), phone (08) 8946 6551, mobile 0439 675 567, email robyn.mcdougall@cdu.edu.au.

* * * * *

Mass of Icebergs Drifting North From Macquarie Island

A large mass of icebergs is drifting north from Antarctica, past the sub-Antarctic Australian territory of Macquarie Island.

In one 24 hour period last month at least four icebergs were spotted off the east and west coasts of the island, ranging in size from 50 metres up to an estimated two kilometres in length. There was also a 500 metre long iceberg sighted a week earlier.

Australian Antarctic Division glaciologist, Dr Neal Young, said it looked like there were at least 20 icebergs in the region around the island.

“From satellite images we can see there is a whole group of icebergs, roughly spread over an area of 1000 kilometres by



Photo: Tessa Bickford

One of the larger icebergs photographed from Macquarie Island last month.

Photo: Tessa Bickford, Australian Antarctic Division, Tasmania

700 kilometres, moving with the ocean current away from Antarctica,” Dr Young said.

“The larger icebergs seen from Macquarie Island are tabular in shape, which indicates they have calved relatively recently, probably from one of the massive icebergs which originally calved from the Ross Ice Shelf nearly nine years ago.”

The icebergs were likely to continue heading to the north and east in the general direction of New Zealand

Scientists believed it was likely the iceberg would break up and melt rapidly as they head further north.

For further information see www.aad.gov.au under “News” – “Icebergs continue march north”, or contact Neal Young (AAD glaciologist), phone (03) 6226 2955, email Neal.Young@utas.edu.au.

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Census Project Finds New Species in the Deep

Census of Marine Life scientists have inventoried an astonishing abundance, diversity and distribution of deep sea species which have never known sunlight – including many species new to science.

Latest news from the project – which involves scientists from 34 countries, including Australia – includes photographs and information on creatures which manage to live in a frigid black world down to 5000 metres (more than three miles) below the ocean surface.

“Revealed via deep-towed cameras, sonar and other vanguard technologies, animals known to thrive in an eternal watery darkness now number 17,650, a diverse collection of species ranging from crabs to shrimp to worms,” the latest news release from the project says.

“Most have adapted to diets based on meagre droppings from the sunlit layer above, others to diets of bacteria that break down oil, sulphur and methane, the sunken bones of dead whales and other implausible foods.”

Five of the Census’ 14 field projects plumb the ocean beyond light, each dedicated to the study of life in progressively deeper realms – from the continental margins (COMARGE: Continental Margins Ecosystems) to the spine-like ridge running down the mid-Atlantic (MAR-ECO: Mid-Atlantic Ridge Ecosystem Project), the submerged mountains rising from the seafloor (CenSeam: Global Census of Marine Life on Seamounts), the muddy floor of ocean plains (CeDAMar: Census of Diversity of Abyssal Marine Life), and the vents, seeps, whale falls and chemically-driven ecosystems found on the margins of midocean ridges and in the deepest ocean



A deep-sea creature, known as a "Jumbo Dumbo" which is new to science, was discovered by Census of Marine Life scientists in the Mid Atlantic Ridge.

Photo by David Shale, courtesy of Census of Marine Life project

trenches (ChEss: Biogeography of Deep-Water Chemosynthetic Systems).

Edward Vanden Berghe, who manages OBIS (Ocean Biogeographic Information System), the Census' inventory of marine life observations, says that, unsurprisingly, the number of records in the database falls off dramatically at deeper depths – a function of the dearth of sampling done in the deep sea. However, he reports that OBIS today records 5722 species for which all recorded observations are deeper than 1000 metres and 17,650 species for which all recorded observations are deeper than 200 metres, the depth where darkness stops photosynthesis.

There are 344 scientists working on the deep-sea Census from 34 countries.

By the time the 10-year Census concludes in October, 2010, the five deep-sea projects will have collectively fielded more than 210 expeditions, including the first ever MARECO voyage in October-November this year, to explore the Mid-Atlantic Ridge south of the Equator, a scientific collaboration between Russia, Brazil, South Africa and Uruguay.

“At 1,000 to 3000 metres NOAA researchers led by Mike Vecchione of the Smithsonian Institution collected a very large specimen of a rare, primitive animal known as cirrate or finned octopod, commonly called ‘Dumbos’ because they flap a pair of large ear-like fins to swim, akin to the cartoon flying elephant.

“The Jumbo Dumbo netted by Census explorers was estimated to be nearly two metres long and, at 6 kg, the largest of only a few specimens of the species ever obtained.

“Altogether, nine species of gelatinous ‘Dumbos’ were collected on the Mid-Atlantic Ridge, including one that may be new to science. Scientists were surprised to find such a plentiful and diverse assemblage of these animals, which rank among the largest in the deep sea.”

For further information and contacts see www.coml.org/press-releases-2009.

Naval Sonar May Not Affect Whale Strandings

New research by US Navy scientists has thrown doubt on the theory that sonar from naval vessels may have something to do with whale strandings.

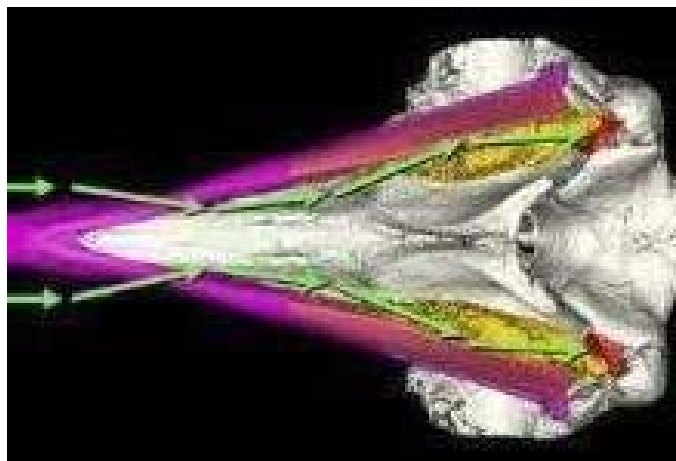
The US Office of Naval Research at Arlington, Virginia, is using rocket science to open new doors to understanding how sounds associated with Navy sonar might affect the hearing of some marine mammals – or if they hear it at all.

The same type of large industrial sized X-ray scanners that NASA uses to detect flaws in the space shuttle's behemoth solid fuel rockets is now allowing scientists to peek inside the giant head of a whale.

The scans are providing detailed three-dimensional replicas of a whale's hearing anatomy using a breakthrough method developed by Dr Ted Cranford, a marine biologist sponsored by the Office of Naval Research (ONR) and the Chief of Naval Operations Environmental Readiness Division.

Using a simulated model of a male beaked whale's head, Cranford's team at San Diego State University and the University of California at San Diego (UCSD) has unveiled data that suggests mid-frequency active sonar sounds are largely filtered, or “muffled”, before reaching the animal's ears.

The findings also suggest that higher frequencies used by whales to hunt prey are heard at amplified levels without any dampening.



CT scan showing the inner ear of a whale.
Photo courtesy US Office of Naval Research

“Even though these findings are promising, our next step is to reproduce the study with a similar species for which hearing tests are available, such as the bottlenose dolphin,” Dr Cranford said.

“If we obtain like results, it will help to validate this new discovery.”

The innovative approach integrates advanced computing, outsized X-ray CT scanners, and modern computational methods (developed by Dr Petr Krysl at UCSD) to generate the reproductions in minute detail.

The development is gaining widespread attention throughout the scientific community as a credible and highly useful tool.

For further information contact US Office of Naval Research Corporate Communications Office, email onrcc@onr.navy.mil.

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ENVIRONMENT

Commission of Inquiry into Montara Incident

The Federal Government has established a Commission of Inquiry into the uncontrolled release of oil and gas from the Montara Wellhead Platform in the Timor Sea.

The Minister for Resources and Energy, Mr Martin Ferguson, said Mr David Borthwick, a widely respected leader in government and community circles, has been appointed as a Commissioner to conduct the Inquiry.

He has been given authority to appoint experts in relevant fields to help him as well as personnel from Mr Ferguson's department and the Department of the Environment, Water, Heritage and the Arts.

Mr Borthwick has had a distinguished career as a senior officer of the Commonwealth public service, most recently as Secretary of the Department of the Environment, Water, Heritage and the Arts, a position from which he retired earlier this year. He has also served within the Treasury, Health, and Prime Minister and Cabinet portfolios.

Mr Ferguson said: "The Montara Commission of Inquiry is established under amendments to the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* I introduced, and which received the support of all parties in the Parliament, in September."

This Inquiry possesses the powers and authority of a Royal Commission. It will have power to summon witnesses, take evidence on oath and require individuals and corporations to give the Commission documents relevant to its terms of reference.



The Montara oil rig on fire on 2 November.
Photo courtesy PTTEP Aust

The Inquiry will also receive public submissions. The Commissioner will determine further details of how the Inquiry will be conducted.

Consistent with the proven approach taken by the Australian Transport Safety Bureau the Commission of Inquiry will receive evidence on a "no blame basis". Independent of the Commission of Inquiry, the relevant regulatory processes will determine whether any non-compliance with the law has occurred and whether any measures to seek penalties and other sanctions should be pursued.

Minister Ferguson said he had asked Mr Borthwick to make recommendations to Ministers, regulators and the industry on measures which might mitigate against similar incidents

occurring in the future and alleviate the safety, environmental and resource impacts arising from such an incident.

The Commissioner will present his report to Mr Ferguson before the end of April 2010.

Mr Ferguson said the Montara Commission of Inquiry would, to the extent practicable, take into account these investigations and reviews.

"The outcomes will enable lessons to be learnt and improvements to be made by all stakeholders, including Government and industry," he said. "It is vital that we learn from this incident and take any necessary steps to stop it happening again."

Information from PTTEP, operators of the Montara rig, is available at www.au.pttep.com. Information about the impact on Indonesian waters is available at: www.amsa.gov.au/Marine_Environment_Protection/Montara_Well_Head_Platform/media/4-Nov-09-Montara-oil-leak.pdf. For further information contact Michael Bradley (Office of the Minister for Resources & Energy), mobile 0420 371 744.

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Threatened Marine Areas Being Assessed for Listing Under National Environment Law

The Federal Government is exploring the potential technical issues associated with assessing threatened marine protected areas (MECs) for future listing under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The assessment is being guided by recent public nominations of two MECs, and a recognition that marine environments are under-represented in the list of threatened ecological communities.

To start the process the Threatened Species Scientific Committee (TSSC), an independent scientific body which advises the Minister for the Environment on the conservation status of native species and ecological communities and the Department of the Environment, Water, Heritage and the Arts held a high level expert technical workshop in Canberra from 7-8 September.

The workshop attracted a delegation of some 36 marine scientists and other experts from a wide range of disciplines and organisations.

The workshop sought to address a range of issues relating to the assessment of MECs under the EPBC Act. These included identifying key aspects of defining MECs, determining the applicability of the current listing criteria and guidelines for assessing MECs, identifying specific examples of high priority MECs and general data availability to enable assessment.

"Three focus groups based upon different broad marine environment types were used to explore each of these issues. A session was also held to specifically explore how the listing criteria might be applied to the nominated *Giant Kelp Forests of the East and South Coasts of Tasmania* ecological community," a spokesperson said.

"The workshop demonstrated that assessing marine ecological communities under the EPBC Act will be a complex task and it highlighted some future challenges. The Department and the TSSC are currently examining the workshop outcomes with a view to identifying areas of policy and/or process that may need amendment to ensure the threatened MECs can be adequately assessed for national protection.

“In the meantime, nominations for threatened marine based ecological communities are encouraged, particularly where they are not adequately protected by existing conservation measures and where good data on threat impacts are available.”

The Federal Government identifies and protects threatened ecological communities, along with threatened species, under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) – Australia’s national environment law. Ecological communities listed as Endangered or Critically Endangered receive protection as Matters of National Environmental Significance under the EPBC Act.

The decision to list an ecological community as nationally threatened is made by the Minister for the Environment. It follows a rigorous process of consultation with stakeholders, the public and scientific experts, and advice from the TSSC.

Listing of threatened ecological communities under the EPBC Act has, to date, primarily focussed on terrestrial, largely vegetation based, ecological communities. Currently there are no marine ecological communities (MECs) listed as threatened. The absence of MECs on the EPBC Act threatened ecological community list means that the criteria used to determine if an ecological community is eligible for listing, and the guidelines for how the criteria are interpreted, have not been tested and applied to the marine environment.

The call for nominations period is currently open and closes on 25 March 2010. To find out more about the nominations process please visit the Department’s website: www.environment.gov.au/biodiversity/threatened/nominations-make.html.

ANTARCTIC RESEARCH

Old Ice May Contain Clues to Climate Change

Australian, British, American and French scientists have teamed up to learn more about the East Antarctic ice sheet to better predict sea level rise and search for the continent’s oldest ice, predicted to be up to 1.3 million years old.

The ICECAP (Investigating the Cryospheric Evolution of the Central Antarctic Plate) project is using a radar equipped plane to fly over East Antarctica this summer to map the thickness of the ice sheet and explore the underlying bedrock.

Australian Antarctic Division glaciologist, Dr Tas van Ommen, said the team was hoping to identify where the oldest ice may be found and with it, an ancient climate record.



Basler aircraft used for ICECAP research, shown at Casey skiway. Photo by Paul Helleman, courtesy Australian Antarctic Division

“We think the oldest ice will be somewhere in the Australian Antarctic Territory because that’s where the ice sheet is the thickest and where snowfall rate is smallest in Antarctica,” Dr van Ommen said.

“It’s reasonable to think we might find ice that’s well over a million years old and extracting it by deep ice drilling would help us understand why the natural pacing of the ice ages experienced a major shift at that time,” Dr van Ommen said.

He said understanding the role of carbon dioxide in past climate changes would provide important insights into how increasingly elevated levels of carbon dioxide would impact our climate today.

The ICECAP flights would also provide crucial information to help better predict loss of continental ice and sea level rise.

The scientists will undertake about 15 flights over Totten Glacier and the East Antarctic coastline in December.

ICECAP is a joint project between Australian Antarctic Division, University of Texas, University of Edinburgh and the French Antarctic Program, with support from the US National Science Foundation, NASA and UK National Environment Research Council.

Further information is available at www.aad.gov.au under “News”, or contact Australian Antarctic Division Communications, phone (03) 6232 3209.

FISHERIES

Progress Towards Ban on Gillnet Fishing in South Pacific

The Australian Government has made significant progress towards an agreement to introduce a ban of deepwater gillnet fishing in the high seas of the South Pacific Ocean from February 2010.

The issue was on the agenda at the eighth international consultation on the establishment of the South Pacific Regional Fisheries Management Organisation in Auckland in mid-November.

Delegates from some 20 countries showed overwhelming support for the ban and had a short time to consider their participation.

The Minister for Agriculture, Fisheries and Forestry, Mr Tony Burke said it was vital for nations to continue to work together to ensure fish stocks were managed sustainably in the South Pacific.

“This significant progress on deepwater gillnet fishing is the result of Australia’s close collaboration with our regional partners,” Mr Burke said.

For further information contact Andrew Bourke (Office of the Minister for Agriculture, Fisheries & Forestry), mobile 0400 117 570.



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PORTS

Online Auction System for WA Ports

In a world-first, the CBH Group, a Perth-based operator of the four main Western Australian grain export ports, has implemented a high-tech online auction system to manage port capacity allocation, fluctuating demurrage costs and demand spikes.

Developed by auction technology company Tradeslot, a Microsoft partner and government auction operator (VicForests), the leading-edge auction approach has received ACCC approval in what it says is a significant step for the grain industry.

The site provides equitable access and manages the high demand from the grain export industry over its busiest period, the company said in a news release on 12 November.

For further information contact Jesco d'Alquen (Tradeslot), phone (03) 9015 9318, email jesco.dalquen@tradeslot.com.

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Report on Competition in Container Ports

The Australian Competition and Consumer Commission (ACCC) has noted encouraging signs of growing opportunities for new entry in the larger Australian container ports in its eleventh annual monitoring report on container stevedoring issued on 10 November.

The ACCC monitors prices, costs and profits of container terminal operators at the largest container ports – Brisbane, Fremantle, Melbourne and Sydney. Container stevedoring at these ports is provided by two firms – Patrick and DP World. The ACCC also monitors two, single operator container terminals at the smaller ports of Adelaide and Burnie. Container stevedoring involves the lifting of cargo in shipping containers on and off ships.

“The ACCC’s report shows that performance of the stevedores was affected in 2008-09 by the global economic slowdown,” ACCC chairman Mr Graeme Samuel said. “The number of containers handled fell in 2008-09 which impacted the stevedores’ profits.

The report is available on the ACCC’s website at www.accc.gov.au under Publications – For Regulated Industries – Waterfront and Shipping. For further information contact Graeme Samuel (ACCC Chairman), mobile 0408 335 555, or Lin Enright (ACCC Media Unit), mobile 0414 613 520.

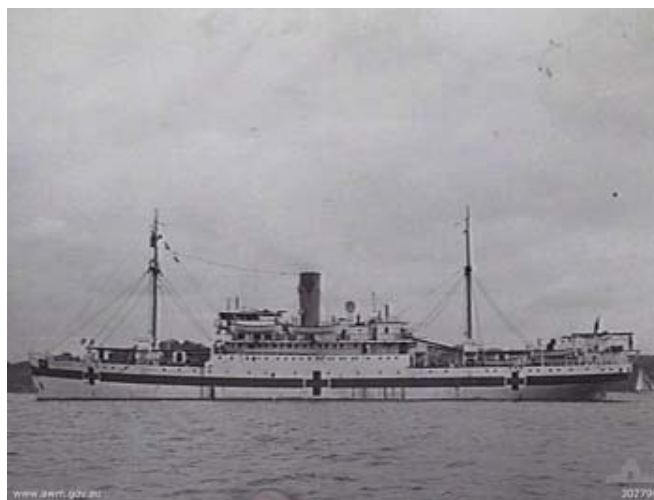
MARITIME HERITAGE

Centaur Search to Begin Next Month

Deep-sea search equipment to be used in the hunt for the WWII hospital ship *Centaur*, sunk by a Japanese submarine off the Queensland coast in 1943, is on its way to Australia.

The Prime Minister, Mr Rudd, and Queensland Premier, Ms Anna Bligh, said the project team was in the final stages of planing for the search, which was expected to begin in mid-December.

Premier Bligh said on 23 November that the search would be a big step forward in the attempt to resolve the mystery of the *Centaur*.



Australian WWII hospital ship, *Centaur*, sunk by Japanese in 1943.
Australian War Memorial photo

“A total of 268 people lost their lives when the World War II hospital ship was sunk by a Japanese submarine off the South-East Queensland coast in May 1943,” she said.

“The discovery of this vessel would allow us to honour those people who were killed, and hopefully better understand what happened on that very sad day.”

Mr Rudd said the *Centaur* was is an important part of the history of Queensland, and the history of the nation, and finding it would offer peace to the families and loved ones of those who were lost.

“The loss of a clearly marked hospital ship during World War II struck deeply at the heart of our nation, and became a symbol of our determination to fight on against a brutal enemy,” he said.

“I hope the search is successful, that all Australians may finally know and commemorate the resting place of the brave nurses and crew who died on that terrible day.”

For further information contact the Prime Minister’s Office, phone (02) 6277 7744, email K.Rudd.MP@aph.gov.au, or the Qld Premier’s Office, phone (07) 3224 4500, email premier@ministerial.qld.gov.au.

APPOINTMENTS

New CEO for ASC

The Federal Minister for Finance and Deregulation, Mr Lindsay Tanner, has announced the appointment of Mr Stephen Ludlam to the board of Australia’s submarine and shipbuilding company, ASC Pty Ltd.

Mr Tanner said Mr Ludlam had been appointed to the role of Managing Director and Chief Executive Officer (CEO) and was ideally suited to lead ASC in continuing to provide a high level of service to the Defence Materiel Organisation and the Royal Australian Navy.

“Mr Ludlam has extensive experience in the construction and maintenance of both submarines and surface ships. This experience will hold Mr Ludlam in good stead to lead ASC into a new period,” he said.

Mr Ludlam is expected to take up his position in January 2010 and has been appointed for a five year term.

For further information contact Nardia Dazkiw (Office of the Minister for Finance & Deregulation), mobile 0418 144 690, or Imogen Hume (ASC), mobile 0403 322 302.

NAVY

[continued from page 1]

Challenges of Future Submarine Project

He said submarines were able to stop an adversary from deploying its' fleet by maintaining sea denial. By imposing disproportionate costs on an adversary, submarines represent an asymmetric threat well suited to Australia's defence.

"The Rudd Government has announced its decision to acquire 12 next generation submarines. The future submarine builds on our experience with the Collins class, aims to offer greater range, endurance and payload," he said.



**Defence Science Minister,
Mr Greg Combet.**

"As I noted earlier, this is an extraordinarily complex task, imposing ground-breaking demands on both science and industry. But the Rudd government is confident that Australian industry can again rise to the occasion, as it did with the Collins Project 25 years ago.

"But it is important to recognise that the future submarine's development and delivery is intimately dependent on our continuing ability to manage, crew and operate the Collins class.

"As they approach middle age, the Collins submarines are throwing up a series of engineering and operational problems that impose real demands on the Navy, the DMO and the ASC. The Government is working together with each of these to address these problems."

Mr Combet said the Navy was currently examining ways of building up the submarine personnel force in order to ensure that the future submarine was properly crewed.

It was a matter of "very considerable regret" that public confidence in the Collins class was undermined in the late 1990s, just as the submarine was proving its formidable war fighting abilities in international combined exercises coordinated by the US.

"Given the fundamental importance of our submarine force this has been very damaging," he said.

He outlined how the submarines which competed with the Collins all ran into problems and delays and emphasised that "none of these submarines matched the Collins in terms of performance, then or now."

"In planning for the future submarine, we need to consider a range of engineering and production solutions, ranging from the acquisition of a Military Off The Shelf (MOTS) design, options consistent with the Kinnaird/Mortimer reforms, to a developmental solution designed indigenously," he said.

Another issue for the Collins was the failure to adequately consider through life support issues in concept, design and construction phases.

"Some commentators have begun to estimate costs in excess of \$30 billion for the project. It is too early for this. However these estimates give some idea of the potential scale of the project depending on what choices are made," Mr Combet said.

"To put this in perspective, the entire Snowy Mountains Scheme cost around \$7 billion in today's dollars. This project will be among the largest industrial project ever contemplated in Australia. If managed properly, in addition to providing the Navy with 12 highly capable submarines, it will contribute to the modernisation of the Australian manufacturing industry.

"Submarines are extraordinarily complex systems. For example, each Collins Class Submarine has over 3,800,000 parts, 75 kilometres of cable, 200,000 on-board connections, 23.5 kilometres of pipe, 14,000 pipe welds and 34.5 kilometres of pipe welding. This complexity is akin to building a space shuttle.

"The construction of the Collins Class submarines in Australia provided the catalyst for the rapid modernisation of significant sections of our manufacturing industry.

"Australia's ability to conduct successful defence operations in theatres distant from our shores will be enormously strengthened by the surveillance, intelligence and strike capabilities of a long-range submarine."

"That is what we plan to deliver."

The full text of Mr Combet's Sydney Institute speech is available at: www.minister.defence.gov.au/gregCombetSpeechtpl.cfm?CurrentId=9670. For further information contact Rod Hilton (Office of the Minister for Defence Science), phone (02) 6277 4771, mobile 0458 276 619, or Defence Media Liaison, phone (02) 6127 1999, mobile 0408 498 664.

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RAN Helps in Samoan Recovery

The Royal Australian Navy's heavy landing ship HMAS *Tobruk* arrived in Apia, the capital of Samoa, on 10 November to deliver humanitarian aid coordinated by AusAID as part of the ongoing support to Samoa and Tonga following the tsunami that devastated parts of both island nations on 30 September.

The Samoan Prime Minister and Minister for Foreign Affairs, the Honourable Tuilaepa Lufega, and members of his cabinet were at the wharf yesterday to greet the Australians.

"We have received enormous help from Australia and New Zealand; \$10 million Australian dollars. That's a lot of money



HMAS *Tobruk* delivered vital aid to Samoa.
Defence photo

considering the present crisis that every country is having to face and we are extremely grateful," the Prime Minister said in a Defence news release.

"We thank the Australian Government and people for their generosity."

HMAS *Tobruk's* Commanding Officer, Commander Peter Thompson, says the ship was loaded with over 500 tonnes of equipment and donations from Australia to assist Samoa and Tonga rebuild essential services damaged in the tsunami.

The Australian High Commissioner to Samoa, Matt Anderson, says the donation of relief aid including a fire truck from the Melbourne Metropolitan Fire Brigade would help the communities greatly.

The AusAID relief package delivered by *Tobruk* also contains heavy earthmoving equipment and construction supplies to assist with the rebuilding operation, humanitarian aid and other items donated by non-government organisations in Australia. It also includes a large consignment of donated goods from the Australian community that was coordinated by the Samoan and Tongan High Commissions in Australia.

For further information contact Defence Media Liaison, phone (02) 6127 1999, mobile 0408 498 664.

Future Submarine Design Capability Study

A contract has been signed with the United States RAND Corporation to complete a Domestic Design Study for the Future Submarine Project, SEA 1000.

The Acting Minister for Defence, Mr Greg Combet, said that, as outlined in the recent Defence White Paper, the Government has decided to acquire 12 new Future Submarines, to be assembled in South Australia. This project would be the largest and most complex defence procurement undertaken in Australia's history.

"The Domestic Design Study will examine Australia's submarine design capability and capacity. Investigations by the Project to date have aimed at developing an understanding of the capability of the international submarine industry," he said.

"The results of the Domestic Design Study will inform project strategy options for consideration by Government during 2010 and is an example of the Government's careful planning for Australia's next generation of submarines."

The Defence Materiel Organisation is undertaking a number of studies to identify and explore all the options to ensure we have the appropriate design capability to support our submarines throughout their life. The information collected through this process will help to develop strategic options for the Government's consideration.

The report is to be completed by February 2010.

For further information contact Rod Hilton (Office of the Acting Minister for Defence), phone (02) 6277 7620, mobile 0458 276 619, or Defence Public Affairs, phone (02) 6127 1999, mobile 0408 498 664.

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CONFERENCES AND SEMINARS

27-29 January 2010**PACIFIC 2010 International Maritime Conference (IMC)**
“Maritime Industry – Challenges, Opportunities and Imperatives”**Sydney Convention and Exhibition Centre, Darling Harbour, Sydney, Australia**

Pacific 2010 IMC will be held in association with the Pacific 2010 International Maritime Exposition, and follows the success of the International Maritime Conference held in January 2008.

Pacific 2010 IMC provides a unique opportunity for people involved in maritime and naval affairs around the world to discuss the latest developments in design, naval architecture, engineering, science and technology. With the concurrent Maritime Exposition, the event will provide a meeting place for industry representatives to exchange ideas and to establish personal and business contacts.

Registration is now open via the Conference Website.

Further information: Conference Managers, phone (02) 9265 0700, email pacific2010imc@arinex.com.au.
Web site at www.pacific2010imc.com.**27-29 January 2010****Sixth biennial RAN Sea Power Conference: “Combined and Joint Operations from the Sea”****Sydney Convention and Exhibition Centre, Darling Harbour, Sydney, Australia**

The conference is an integral part of the Pacific Maritime Congress and Pacific 2010 International Maritime Exposition. The 2010 theme is aimed at informing how Australia’s new expeditionary capabilities may be best introduced into service and used to advantage.

Further information: email seapower.conferences@defence.gov.au, phone (02) 6127 6514.**28-29 January 2010****4th Intermodal Asia 2010 Exhibition and Conference****Hilton Hotel, Sydney**

Hosted by the Sydney Ports Corporation and the NSW Government and designed to promote transportation in Australia and the Asia Pacific region, this event will feature 30 world class speakers in global logistics and transport and will be attended by more than 300 senior executive decision makers from the world’s leading ports, shippers, cargo owners, shipping lines, freight forwarders, logistics companies, terminal operators, railway operators and port-rail equipment services suppliers.

Further information: phone +60 87 426 022, email enquiries@transportevents.com.
Web site: www.transportevents.com.**16-18 March 2010****China Maritime: third China maritime conference & exhibition****Hong Kong Convention and Exhibition Centre**

Returning once again to cosmopolitan Hong Kong, China Maritime 2010 will offer a program full of innovative conferences and seminars that will be a source of invaluable information for all those in the maritime industry.

Further information: Kishore Navani, phone (03) 9645 0411 email marinfo@baird.com.au.
Web site www.bairdmaritime.com.**22-23 March 2010****Keep Alive, Go Thrive: Maritime 2010:****Melbourne**

The future face of safety & security in ports, maritime and supply chains

Further information: Esther Wong, email estherw@marcusevanskl.com, phone +603 2723 6736.
Web site www.marcusevans.com**22-24 March 2010****APAC Port Security Forum 2010 (22 + 23 March)****Workshops (24 March): “Leading Cultural Change in a Port Safety and Security Environment” and “Risk Assessment in a Changing Port Environment”****Bayview Boulevard, Sydney**

This interactive forum will critically examine the key emerging risk areas in port security, but most importantly it examines how ports are responding to issues as they arise. Speakers will delve into the implementation of effective security strategies including the development of port security infrastructure, reform in regulatory standards and the ongoing issues of compliance, securing the supply chain and keeping up with the rapidly changing world of technology within security.

Further information: Austin D’Mello, phone (02) 9437 1311, email info@liquidlearning.com.au. Web site www.liquidlearning.com.au/llg08 under “Events”.**12-16 April 2010****‘Spillcon 2010’: 14th International Oil Spill Prevention & Preparedness Conference****Grand Hyatt, Melbourne**

Organised by the Australian Maritime Safety Authority (AMSA) and the Australian Institute of Petroleum (AIP). Bringing together local, regional and global environmental and shipping representatives across industry, government and non-government organisations to discuss issues including cause and prevention, preparedness, response management and environmental issues.

Further information: Rhianne Philip (AMSA), email spillcon@amsa.gov.au, phone (02) 6279 5032.Web site www.spillcon.com.**20-22 May 2010****Tuna 2010****Centara Grand & Bangkok Convention Centre**To be held in conjunction with the 11th biennial INFOFISH World Tuna Trade Conference.Further information: Kishore Navani, phone (03) 9645 0411 email marinfo@baird.com.au.Web site www.bairdmaritime.com.**22-26 May 2010****Ship & Port Dubai 2010: 4th International Maritime Exhibition and Conference****Dubai International Convention & Exhibition Centre, Dubai, UAE**

The 4th edition of Ship & Port Dubai promises to address key challenges faced by the major players in the industry.

An opportunity to gain insight to the progress report of completed and ongoing port and other maritime projects. Service providers will be benefited from the information on new developments and opportunities in this sector.

Further information: email jeen@alfajer.netWeb site: www.shipport.info.**23-26 May 2010****Australasian Aquaculture 2010 International Conference and Trade Show Hotel Grand Chancellor, Hobart**

Some of aquaculture’s finest products are produced in the waters of this clean, un-spoilt and pristine state. The 2010 event will be an opportunity to showcase the premium products on offer in Tasmania .

Further information: Roy Palmer, phone 0419 528 733, email sarah-jane.day@aquaculture.org.au.Web site www.australian-aquacultureportal.com.**24-27 May 2010****OCEANS ‘10 IEEE Sydney Conference and Exhibition Sydney Convention and Exhibition Centre, Darling Harbour**

Showcasing advances in Marine Science and Engineering

Further information: phone (02) 9254 5000, email info@oceans10ieeesydney.org.Web site www.oceans10ieeesydney.org/home.cfm.

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