



BORDER PROTECTION

New Command Centre Opened

The Customs and Border Protection Command's 24 hour Integrated Operations Centre (IOC) – which uses state of the art technology to protect Australia's waters – has been officially opened.

The Minister for Home Affairs, Mr Bob Debus, said the IOC would play an important role in developing and maintaining awareness of offshore activities as well as identifying and assessing security threats and estimating the potential consequences and control response activity.



The new Operations Centre has world-leading maritime information and threat analysis capabilities to assist Customs/RAN vessels involved in border protection.

Photo courtesy Customs

“The IOC is a vital part of the Government's efforts to prevent and disrupt potential threats and involves multiple agencies assessing and responding to those threats,” he said on 27 November.

The IOC combines elements of Customs, the Department of Defence, the Australian Fisheries Management Authority and the Australian Quarantine and Inspection Service to manage and coordinate the Government's response to maritime incidents.

It will access information from surveillance aircraft, Customs and

Royal Australian Navy patrol boats, satellite surveillance and other sources, including commercial parties and a range of Government agencies.

Mr Debus said data collected by the IOC would be shared across a number of Government agencies and would assist Border Protection Command and Customs in making operational decisions vital to protecting Australia's borders.

“This new Centre has world-leading maritime information and threat analysis capabilities to meet the challenges facing Australia's maritime environment,” he said.

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NATIONAL INFRASTRUCTURE

Ports Nominated as Priority for Future Development

The Federal Government has nominated Australian ports and associated land transport links as a possible priority for future development following the recent audit of national infrastructure.

This follows the completion late last year of the preliminary audit of the nation's vital economic assets which included a compilation of infrastructure proposals for prioritisation.

The Minister for Infrastructure, Transport, Regional Development and Local Government, Mr Anthony Albanese, received the report from the Chair of Infrastructure Australia, Sir Rod Eddington, on 19 December.

“In less than nine months, *Infrastructure Australia* has completed the first ever audit of the condition and adequacy of the nation's transport, water, energy and communications infrastructure,” Mr Albanese said. “In addition, they've listed 94 infrastructure proposals for prioritisation from the more than 1000 put forward in over 600 submissions received from State and Territory governments as well as councils, business organisations and members of the public.

“This provides the community with an insight into Infrastructure Australia's deliberations and the projects that warrant further considered examination at this time.

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NATIONAL INFRASTRUCTURE

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Ports Nominated as Priority for Future Development

“Much more work still needs to be done to determine the relative merits of the projects and whether they should be included on the final Priority List scheduled to be handed to government in the first quarter of 2009.”

Infrastructure Australia's analysis has concluded that future public and private investment needs to be directed towards:

- developing a more competitive broadband system;
- extending the national energy grids so there's greater flexibility and competition in our power and gas markets, whilst creating new opportunities for renewables;
- improving port productivity and associated land transport links;
- lifting the amount of freight shifted by rail;
- preparing for the impact of climate change on water supplies;
- expanding public transport services within cities; and
- improving services to Indigenous communities.

Editors Note: On 12 December 2008, the Prime Minister, Mr Kevin Rudd, announced a \$4.7 billion 'nation building' package to strengthen the economy and create Australian jobs.

The full report is available at

www.infrastructureaustralia.gov.au/publications.aspx.

The full text of that news release is available at:

www.pm.gov.au/media/Release/2008/media_release_0687.cfm.

For further information contact Jeff Singleton (Office of the Minister for Infrastructure, Transport, Regional Development & Local Government), mobile 0410 476 890.

OFFSHORE OIL AND GAS PRODUCTION

New Catamaran-Style Gas Processing Vessel Being Tested

Researchers at the Australian Maritime College have been testing a model floating gas processing facility based on a catamaran-style platform consisting of two 330-metre tankers joined together.

The innovative new project could provide a new direction for the gas industry and according to the AMC the results so far are promising.

An AMC spokesman said the vessel would be fitted out as a gas processing facility to be used in offshore gas fields, replacing pipelines and onshore facilities.

At around 640,000 tonnes, it would be the largest operational vessel in the world.

A fully-painted, four-metre “visualisation model” underwent testing at AMC's Model Test Basin from 24-28 November last year to see how the vessel performed in a range of weather condition, including 20 metre waves and 100 knot winds.



The gas-cat visualisation model being tested at the Australian Maritime College (AMC).

Photo courtesy AMC

A research project between WA: Energy Research Alliance, Woodside Energy and the Australian Maritime College, the gas cat first underwent testing in July and more testing is planned over the next three years.

Originally the idea of WA: ERA chief executive Dr Ian Finnie, the project was taken on by fourth year maritime engineering students Landon Kibby and Alexandra Ford.

Things have moved ahead and the project has now been joined by Professor Andrew Deeks, a structural mechanics specialist from the University of Western Australia who will have major involvement in the next phase.

“Being able to link the structures together with the behaviour of the vessel ... I think there are some unique challenges there,” Professor Deeks said at AMC's Model Test Basin.

According to Dr Finnie, the project has already been successful on two major fronts – student engagement and awareness of AMC's facilities.

“Woodside sponsors the project not so much because of the technology but because of the engagement with AMC and its students. So the project is already a success because it's made people over in the West aware of this facility and it's also made students here aware of the oil and gas companies over there and vice versa,” he said.

Woodside's original plan to engage students in some problematic engineering projects has now developed a life of its own.

“The project lives on. The reason, I think, why these obvious ideas don't exist in reality is because people reach the too hard basket and it doesn't go further. But what we're doing is just getting the fundamentals there and just doing some reality checks.

The next critical one for us is structure and that's where Andrew comes in,” Dr Finnie said. Senior lecturer Dr Giles Thomas from AMC's National Centre for Maritime Engineering and Hydrodynamics also believes the project has been a fantastic vehicle for students.

“It's an amazing project and an incredible opportunity for our students to be involved in something like this,” he said.

For further information contact Patrick Cranny (Media Office, AMC), phone: (03) 6335 4484, mobile: 0429 117 000.

CUSTOMS

Australian Customs and Border Protection Service Formed

The Australian Customs Service has been renamed the Australian Customs and Border Protection Service and some of its capabilities have been upgraded.

The Prime Minister, Mr Kevin Rudd, said on 4 December that the new name recognised the agency's important border protection responsibilities, including its new role in ensuring a coordinated response to the resurgent threat to our borders of maritime people smuggling.

"The enhanced Australian Customs and Border Protection Service is set to meet the complex border security challenges of the future by providing unified control and direction, and a single point of accountability," he said.

"The planning framework aims to bring together all agencies involved in border management in an attempt to ensure consistent and complementary functions.

"Additional capabilities given to Customs and Border Protection under the new arrangement include analysing and coordinating the gathering of intelligence, coordinating surveillance and on-water response, and engaging internationally to deter maritime people smugglers.

"The transition of capability will involve the transfer of some responsibilities, functions and resources from the Department of Immigration and Citizenship."

The full statement announcing the change and details of the new structure are available at: www.customs.gov.au/site/page.cfm?u=4222. For further information contact Samantha Wills (Office of the Minister for Home Affairs), mobile 0448 721 372.

MARITIME SEARCH AND RESCUE

Analogue Rescue Beacons Replaced

Analogue 121.5 MHz emergency positioning indicating radio beacons used across the global shipping and small boating communities can no longer be detected by satellite following the switch to digital technology on 1 February.

Internationally-owned satellites which monitor the distress frequency have now been switched off.

The Australian Maritime Safety Authority (AMSA), which coordinates all aviation and maritime search and rescue across Australia's 53 million square kilometre search and rescue region, no longer has the ability to detect an analogue distress beacon via satellite.

Australia had no capacity to delay the switch off date of the satellites, however, AMSA and State/NT agencies had been informing the public of the move since the announcement was made in 2000.

AMSA warned that anyone who had not yet done so should switch to a 406 MHz distress beacon immediately.

All 406 MHz beacons must be registered with AMSA. Registration is free and can be done on-line at the AMSA web site (www.amsa.gov.au).

When upgrading to a 406 MHz distress beacon it is essential that old analogue models are appropriately disabled and



Anyone who hasn't already done so should switch to a 406 MHz distress beacon immediately.

Photo courtesy AMSA.

disposed of responsibly so that they do not trigger false alarms. Battery World shops provide free disposal.

More advice about distress beacons is available from the AMSA web site: www.amsa.gov.au/beacons or by calling 1800 406 406. For further information contact Tracey Jiggins, mobile 0418 164 901.

NAVY

2010 Sea Power Conference: Call for Papers

The sixth biennial RAN Sea Power Conference will be held at the Sydney Convention and Exhibition Centre from 27-29 January 2010 as part of the Pacific Maritime Congress and Pacific 2010 International Maritime Exposition.

The RAN Sea Power Conference has become a significant event in the national and international maritime and security communities for its discussion on topical naval and maritime strategic issues. Around 800 delegates are expected to attend.

The RAN's Sea Power Centre said the broad theme of the 2010 Conference would be *Combined and Joint Operations from the Sea*, and was aimed at informing how Australia's new expeditionary capabilities may be best introduced into service and used to advantage.

"Combined and joint operations from the sea are generally well defined doctrinally but in practice the understanding of maritime expeditionary operations often varies widely between countries," the Centre said.

"The British joint definition for an 'expeditionary operation' probably best describes Australia's operational reality: *'the projection of military power over extended lines of communications into a distant operational area to accomplish a specific objective.'*

"A military operation from the sea is generally much more complicated than is implied by amphibious operations alone, where the principal task is *'landing forces ashore tactically'*."

"Combined and joint operations from the sea often involve significant political, social and cultural aspects that may directly impact command decisions at the strategic, operational and tactical levels. They are often described as the most complex of all military operations.

"The planned acquisition of three AEGIS-equipped destroyers and two Landing Helicopter Dock (LHD) ships over the period 2012-17 will allow the Australian Defence Force (ADF) to provide the Australian Government with much more sophisticated amphibious and expeditionary capabilities than currently exist.

“How these new capabilities will be integrated into the ADF order of battle, joint and naval doctrine, future joint and maritime operational concepts and military culture will be critical to their effective use.

Proposals for papers, providing an initial title and one-page outline, should be submitted before 6 March 2009 to: Captain G.A. Andrew, RAN, Director, Sea Power Centre – Australia, Department of Defence, CANBERRA ACT 2600.

Proposals for papers may also be submitted by e-mail to gordon.andrew@defence.gov.au. An information copy should be sent to seapower.conferences@defence.gov.au. For further information contact Andrew Forbes (Deputy Director Research, Sea Power Centre – Australia), phone (02) 6127 6507, e-mail andrew.forbes1@defence.gov.au.

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Defence Accepts Upgraded Frigates

The Defence Materiel Organisation (DMO) has agreed to contractual acceptance from the prime contractor Thales Australia of two upgraded guided missile frigates, HMA Ships Sydney and Darwin.

The Minister for Defence, Mr Joel Fitzgibbon said: “Upon coming to office a year ago, the Adelaide Class Frigate Upgrade Program was one of several projects we had inherited from the previous Government, which had serious difficulties, running over four years behind schedule, and a \$150 million over budget.



Mal Adams from Defence and Thales FFG Vice President Chris Lloyd.
Photo courtesy Thales.

“We have now managed a significant milestone in this program, and come one step closer to having these ships on operational activities. This demonstrates this Government’s commitment to working with Defence and industry to resolve the outstanding issues associated with this project to ensure the Australian Defence Force receives high quality equipment and that Australian taxpayers receive value for money.”

Upgraded software for the Australian Distributed Architecture Combat System has now been delivered. The Acceptance milestone also includes the new FFG Warfare Systems Support Centre at Garden Island.

Contractual acceptance of HMAS *Melbourne* is expected by the end of the year, and provisional acceptance of the fourth FFG to be upgraded, HMAS *Newcastle*, is now expected by June 2009.

For further information contact Jack Smith (Office of the Minister for Defence), phone (02) 6277 7800, mobile 0408 116 423, or Defence Media Liaison, phone (02) 6265 3343, mobile 0408 498 664.

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New Test Tank for Future Submarines

A new underwater test facility for submarines was launched late last year at the Defence Science and Technology Organisation (DSTO) in Melbourne.

The Minister for Defence Science and Personnel, Mr Warren Snowdon, said the new facility would assist research into Australia’s next generation of submarines.

“The Government has invested one million dollars in this new facility to ensure our scientists are able to bring their expertise to the development of the new class of Australian submarines,” he said. “Submarines offer a unique and powerful strategic impact to the maritime domain, particularly for a nation so heavily reliant upon seagoing trade and security.

“A key Defence commitment for this Government is carefully planning for our next generation of submarine, and that means getting the science right.

“The new water tank will primarily be used for experiments to control underwater noise. Noise radiation problems can be tested and evaluated in the tank before remediation measures are implemented with actual submarines. This work would not be possible without this test facility.”

The new facility also allows unmanned underwater vehicles to be tested in the laboratory. A winged autonomous glider was released into the water tank to demonstrate the collection of data in the maritime environment.

“Autonomous systems are becoming a cost-effective option for handling difficult operational situations and this DSTO facility makes it possible to conduct a range of underwater experiments involving such robots before they enter service,” Mr Snowdon said.

“This is yet another example that this Government is committed to ensuring that Australia’s future Defence capabilities are carefully considered and well-planned.”

For further information contact Kate Sieper (Office of the Minister for Defence Science & Personnel), phone (02) 6277 7620, mobile 0488 484 689, Justine O’Brien (DSTO), phone (02) 6128 6384, mobile 0429 615 015, or Defence Media Liaison, phone (02) 6265 3343, mobile 0408 498 664.

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Warship Satellite Communications Contract

The Defence Materiel Organisation (DMO) has signed a contract with BAE Systems Australia Ltd for the joint supply of five maritime satellite communications terminals.

The Parliamentary Secretary for Defence Procurement, Mr Greg Combet, said the maritime satellite communications terminals contract for the Air Warfare Destroyer (AWD) and Landing Helicopter Dock (LHD) Amphibious Ships programs would result in an estimated direct saving of \$20m to the Commonwealth.

“The \$52.9m deal is an extension to an existing contract which has already seen the successful delivery of 14 satellite terminals on-time and on-budget,” he said.

The maritime satellite communications terminals, known as MASTIS provide a major enhancement to the Royal Australian Navy’s operations and life at sea through the delivery of vastly increased bandwidth.

For further information contact Rod Hilton (Office of the Parliamentary Secretary for Defence Procurement), phone (02) 6277 4771, mobile 0458 276 619, or Defence Media Liaison, phone (02) 6265 3343, mobile 0408 498 664.

MARITIME EDUCATION

Australian-Developed Network Gets IMO Consultancy Status

GlobalMET, the growing international network of maritime academies founded in Australia, had its application for Consultancy Status approved at the 100th Session of the IMO Council last June, subject to endorsement by the IMO Assembly in November this year.

A spokesman for GlobalMET, Mr Rod Short, a former head of the Australian Maritime College, said:

“As a first step in assisting IMO with the development of maritime education and training (MET), GlobalMET has submitted an expression of interest in reviewing and rewriting the IMO Model Courses to the February meeting (STW 40) of the Standards of Training and Watchkeeping Sub-Committee of the IMO Maritime Safety Committee.



Representatives from around the world attended the November 2008 GlobalMET annual general meeting in Hong Kong.
Photo courtesy Rod Short, GlobalMET.

“STW is reviewing and revising the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers. When completed in 2010, there will be need for the model courses to be brought up to date and reflect the changes to STCW.

“The initiative to form a regional association of maritime academies grew out of a series of informal gatherings, initiated by the meeting of Heads of Maritime Education and Training Institutions in Asia Pacific, convened and hosted by the Australian Maritime College in 1989.

“With funding support from the Federal Government for the export of Australian maritime training expertise, meetings were held in major maritime academies in Asia Pacific, resulting in the formation of the Association of Maritime Education and Training Institutions in Asia Pacific (AMETIAP) in 1996.

“In 2002 the growing network was registered in Australia as AMETIAP (Global) Limited, however further growth resulted in the name being changed in 2006 to Global Maritime Education and Training Association, registered as GlobalMET Limited. There are now 100 member academies in 34 countries.

“At the most recent AGM in Hong Kong in November, the following five Directors were elected:

- Capt Tim Wilson, Director, New Zealand Maritime School – Chair
- VADM Eduardo Santos, President, Maritime Academy for Asia Pacific – Vice Chair
- Capt John Lloyd, Director, Australian Maritime College – Secretary/Treasurer
- Capt Pradeep Chawla, Director, Anglo-Eastern Ship Management – Director
- Mr M A Ganesen, Principal, Malaysian Maritime Academy – Director

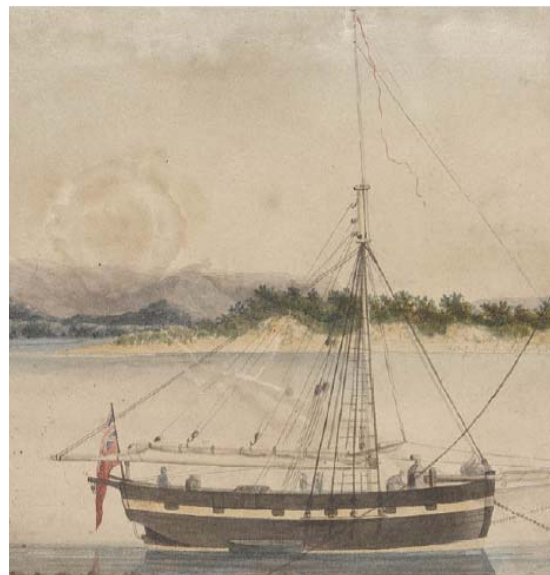
“Through forming GlobalMET, the MET providers themselves have, on their own initiative and using their own resources, created a facility which is already having a beneficial influence on the development of MET and with the potential to become a major actor in ensuring the competence the global shipping industry needs for operation as a safe, efficient, clean and secure industry.”

For further information contact Rod Short (Executive Secretary, GlobalMET), phone +64 4 905 6198, email: maritime.edu@paradise.net.nz Website: www.globalmet.org.

MARITIME HERITAGE

Mermaid Shipwreck Site Found on Reef

Australian National Maritime Museum (ANMM) archaeologists working off the coast of North Queensland are now convinced they have located the site where HM Colonial Schooner *Mermaid* ran aground and broke up on the Great Barrier Reef in 1829.



Artist's impression of HMCS Mermaid.
Picture courtesy Art Gallery of NSW.

Surveying the site on Flora Reef, some 20 km out from Cairns, they have found further metallic objects including heavy copper sheathing which they are convinced came from the ship's hull.

“We're now certain this is a discovery of major historical importance,” the leader of the museum team, curator and maritime archaeologist Kieran Hosty, said on 9 January

“There have been several attempts to find this site over the past 40 years or so, but it’s always proved elusive. There’s a sense of elation here now.”

The ANMM expedition, with scientists from James Cook University and the Museum of Tropical Queensland along with ANMM maritime archaeologists and divers, set out from Cairns on New Year’s Day to search for the *Mermaid* wreck site.

Flora Reef was one of several possibilities suggested in historical evidence.

Surveying Flora Reef on Sunday 4 January the museum team’s magnetometers (metal detectors) located a site “of interest” where divers subsequently identified promising clues including a pile of anchor chain and an anchor which corresponds in many ways to *Mermaid*’s.

Along with the copper sheathing, the latest finds include sheathing nails, ship’s fastenings and lead patches, all of which conform to documented information on the wooden schooner.



HMCS *Mermaid*’s kedge anchor

Photo courtesy Australian National Maritime Museum.

The divers have also found a quantity of canister or casement shot, ball-bearings of the type fired from the cannon known to be on board *Mermaid*, along with a pulley sheath stamped with a broad arrow, the 19th century mark of government ownership - and *Mermaid* was a government ship.

“All these things, along with the objects we found earlier have convinced us that these are indeed the traces of HMCS *Mermaid*,” Mr Hosty said.

The team was due to remain in the area for a few more days to determine the extent of the wreck site and help Commonwealth authorities determine the necessary safeguards to protect what was now identified as a heritage site.

Divers and archaeologists used the opportunity to record the site in detail with cameras and metal detectors. Most of the objects will be left in place, but a few will be removed for closer laboratory investigation.

“A lot of work remains to be done in interpreting the site,” Mr Hosty said. “It will be interesting to see if the physical evidence on the site accords with the historical accounts of what happened on the day the ship struck the reef.”

HMCS *Mermaid* ran aground and was wrecked on an unidentified reef on 13 June 1829. The captain and crew took to the ship’s boats and were rescued 11 days later by a passing merchant ship, the *Admiral Gifford*.

The 21-metre wooden vessel was already well known in Australian waters, having circumnavigated the continent on a voyage of exploration under the command of Lieutenant Philip Parker King RN.

For further information contact Bill Richards (ANMM), mobile 0418 403 472 or see earlier News Releases on the ANMM website at www.anmm.gov.au/site/page.cfm?u=403.

PIRACY

Navies Needed to Combat Unprecedented Rise in Ship Hijackings

As the Federal Government considers a bigger role for the Royal Australian Navy in combating piracy on the high seas, the International Maritime Bureau (IMB) reported an unprecedented rise in maritime hijackings in 2008.

The IMB’s Piracy Reporting Centre (PRC) said in its 2008 annual report on piracy that the year’s figures for hijacked vessels and hostages were the highest recorded by the PRC since it began its worldwide reporting function in 1992.

It urged governments to support naval intervention to halt the escalation, saying navies were the only ones strong enough to engage highly-armed pirates effectively.

“In 2008 there was a worldwide total of 293 incidents of piracy against ships, which is up more than 11 per cent from 2007 when there were 263 incidents reported. In 2008, 49 vessels were hijacked, 889 crew taken hostage and a further 46 vessels reported being fired upon.

A total of 32 crew members were injured, 11 were killed and 21 listed as missing, presumed dead. Guns were used in 139 incidents, up from 72 in 2007.

The increase is attributed to the number of attacks in the Gulf of Aden with 111 incidents reported on the east coast of Somalia and the Gulf of Aden.

The rise peaked in September with 19 attacks. In October and November there were 15 and 16 vessels attacked respectively. This is an increase of nearly 200 per cent from 2007.



Armed pirates were involved in 139 incidents in 2008, almost double the previous year.

Photo courtesy International Maritime Bureau.

In addition, 2008 saw the largest tanker ever being hijacked by Somali pirates, and successful attacks being carried out at greater distances from land than in previous years.

All types of vessels with varying freeboards and speeds were targeted. The pirates boarding the vessels were also better

armed than in previous years and prepared to assault and injure the crew.

“We are encouraged by recent efforts to tackle Somali piracy and hope that more governments will continue to devote more assets to the region.

“International navies are the only ones capable of effective response against piracy in the region and can help to secure the safety and security of this major maritime trade route,” said Captain Pottengal Mukundan, IMB Director.

His remarks followed media reports in Australia that the RAN could be tasked specifically to join other world navies in patrolling the troublespots off Africa.

On a trial basis, IMB is offering the Piracy Report free of charge. To request a PDF version of the report by email, please visit the following web site: www.icc-ccs.org/index.php?option=com_fabrik&view=form&fabrik=18&random=0&Itemid.

For further information contact: Captain Pottengal Mukundan (Director, IMB), email: pmukundan@icc-ccs.org.

SHIPPING

New Technologies Produce Cleaner Ships

Fuel cells will be a long-term sustainable energy solution for ships but, for immediate fuel savings, reduced environmental impact and reduced operational costs, many options are available now for incorporation in new designs.

At the SMM shipbuilding machinery and marine technology fair, Istanbul, Lloyd’s Register explored in detail the potential use of new technologies to help in reducing both marine fuel consumption and greenhouse gas (GHG) emissions.



Dr. Zabi Bazari, Ship Energy Services Manager for Lloyd's Register Marine Consultancy Services.
Photo courtesy Lloyds Register.

The Ship Energy Services Manager for Lloyd’s Register Marine Consultancy Services, Dr Zabi Bazari, said on 21 January that energy savings as high as 40 per cent could be achieved by incorporating new systems and approaches into the design of new ships.

Looking ahead, he said that fuel cells could eventually become the main energy unit in commercial ships when low-carbon technologies and renewable sources of energy are firmly in place.

In a reference to current IMO initiatives on ship’s “energy efficiency design index”, Dr Zabi said regulatory changes would be the main driver for use of energy-efficient and clean technologies.

For further information contact Nicholas A K Brown (Marine Communications, Lloyd’s Register), email nicholasAK.brown@lr.org. Web site www.lr.org.

MARINE SCIENCE

Ocean Observations Help Climate Science

Long-term observations of the oceans around Australia are providing the nation’s climate scientists with significant benchmarks for seasonal forecasts and monitoring future climate change.

Initiated near the end of a two-year *El Niño* event in May 1983, the program involves the deployment of simple “expendable instruments” (XBTs) from commercial shipping that measure temperature and currents to a depth of 800m along routes in the Indian, Pacific and Southern Oceans.

“There is so much ocean around Australia influencing our daily weather and longer term climate that it made sense to begin a record from which we could connect ocean change to shifts in rainfall patterns across southern Australia,” says Dr Gary Meyers who, with colleagues at CSIRO, the Bureau of Meteorology (BoM) and the Scripps Institute of Oceanography in the US, established the ocean monitoring system.

“The 1982/83 *El Niño* came as a big surprise when we saw all kinds of changes around Australia but didn’t understand them. Now these ocean temperature data contribute to the BoM’s routine seasonal climate forecast.”

At 25 years the system stands as one of the longest sustained ocean observing networks in the world, and is a rare long-term record of ocean change in the huge and poorly monitored Southern Hemisphere ocean domain.

Based on the records, CSIRO’s Dr Susan Wijffels and co-authors will publish a landmark paper on the mean currents flowing between Australia and Indonesia in the *Journal of Physical Oceanography*. These currents form a critical ocean interconnection – the so-called Indonesian Throughflow – in the distribution of heat in the global climate system.

“Today, we have over 60,000 measurements of temperature around Australia that scientists regularly use to assess past long-term trends – test models used to predict future climate or forecast ocean behaviour,” says Dr Meyers, who leads Australia’s Integrated Marine Observing System (IMOS). “More than 50 scientific publications and books have been published using the Australian data.”

Bureau of Meteorology Seasonal Forecasts (December, 2008) – Temperatures: www.bom.gov.au/announcements/media_releases/climate/ahead/20081126T.shtml. Rainfall: www.bom.gov.au/announcements/media_releases/climate/ahead/20081126R.shtml. Integrated Marine Observing System (IMOS) web site: www.imos.org.au. (IMOS is an Australian Government Initiative through the National Collaborative Research Infrastructure Strategy.) The Centre for Australian Weather and Climate Research (CAWCR) web site: www.cawcr.gov.au. (The Centre for Australian Weather and Climate Research is a partnership between CSIRO and the Bureau of Meteorology.)

For further information contact Dr Gary Meyers (Leader, IMOS), phone (04) 3804 2744, email Gary.Meyers@imos.org.au or Craig Macaulay (Science Journalist, CSIRO Marine & Atmospheric Research), phone (03) 6232 5219, mobile 0419 966 465, email: Craig.Macaulay@csiro.au.

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Many New Species Discovered off Tasmania

A four-week expedition to explore the deep ocean south-west of Tasmania has revealed new species of animals and more evidence of impacts of increasing carbon dioxide on deep-sea corals.

The collaborative voyage of US and Australian researchers was led by chief scientists Dr Jess Adkins from the California Institute of Technology and Dr Ron Thresher from CSIRO's Climate Adaptation and Wealth from Oceans Flagships.



A "gorgon's head" coral found at 1700 metres deep off South East Tasmania.

Photo courtesy Advanced Imaging and Visualisation Laboratory

The survey through the Tasman Fracture Commonwealth Marine Reserve, south-west of Tasmania, explored the near vertical slice in the earth's crust, known as the Tasman Fracture Zone, which drops from approximately 2000 metres to over 4000 metres.

"Our sampling documented the deepest known Australian fauna, including a bizarre carnivorous sea squirt, sea spiders and giant sponges, and previously unknown marine communities dominated by gooseneck barnacles and millions of round, purple-spotted sea anemones," said Dr Thresher.

"All of these new species are located more than 2000 metres below the surface."

Vast fields of fossil corals were discovered below 1400 metres, and dated to more than 10,000 years old. The samples collected will be used to determine the periods over the last millions of years when reefs have existed south of Tasmania.

They will also provide ancient climate data that contribute to models of regional and global climate change, based on historical circulation patterns in the Southern Ocean.

"Our sampling documented the deepest known Australian fauna, including a bizarre carnivorous sea squirt, sea spiders and giant sponges, and previously unknown marine communities dominated by gooseneck barnacles and millions of round, purple-spotted sea anemones."

For further information contact Dr Ron Thresher (CSIRO Marine & Atmospheric Research), phone: (03) 6232 5378, email Ron.Thresher@csiro.au. The full statement from CSIRO is available at www.csiro.au/news/Deep-Sea-Expedition.html.

Index of Marine Industry

The Australian Institute of Marine Science (AIMS) watershed publication, the *AIMS Index of Marine Industry*, which values the output of Australia's marine industries at \$38 billion a year – is to be updated annually from now on. The *Index* had given the first detailed picture of marine industry in Australia and its value to the economy.

The Minister for Innovation, Industry and Research, Senator Kim Carr, said in a speech on 25 November that the decision reflected the fact that Australia was a maritime nation, with the third largest marine jurisdiction in the world.

"The sea and its resources have brought enormous wealth to Australia, and they will continue to do so," he said. "With great wealth comes great responsibility. It is essential that we protect our marine assets and use them in sustainable ways.

"Australia's standard of living, our way of life, and our ongoing security all hinge on how well we manage our relationship with the sea."

"It's great to hear that AIMS will update the *Index* each year to ensure that we have reliable data on an area of activity that is already immensely important to Australia, and can only become more important in the years ahead," Senator Carr said at the launch of the *AIMS Index* in Canberra.

Climate change is a huge challenge, but was far from being the only reason we needed quality scientific investigation of the kind AIMS excelled in.

"Marine science can help us identify and manage new oil, gas and mineral resources," he said. "It can help us manage rapid population growth and environmental strains on the Australian seaboard – including the predicted migration of agriculture to the wetter north. It can help us understand the role our oceans play in shaping the climate. It can help us improve national security.

"And, as the *AIMS Index of Marine Industry* demonstrates so well, it can help us understand the myriad economic opportunities our oceans create for us."

For further information contact Catriona Jackson (Office of the Minister for Innovation, Industry, Science & Research), mobile 0417 142 238.

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Fish Breeding Research

Researchers from the ARC Centre of Excellence for Coral Reef Studies and James Cook University have helped to resolve one of the major problems confronting fisheries biologists in determining the sustainability of fish populations – not knowing exactly when fish undergo a sex change.

Their paper "Fish ears are sensitive to sex-change" is in the latest issue of *Biology Letters of the Royal Society Journal*.

For further information contact Stefan Walker (CoE CRS + JCU), phone (07) 4781 5775, mobile 0419 422 815, Mark McCormick (CoE CRS + JCU), phone (07) 4781 4048, Jenny Lappin (CoE CRS), phone (07) 4781 4222. 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. Do you have stories, news releases or other material you would like to see published at no cost in the general news pages or the "Conferences and Seminars" section of the Digest? Or why not write a letter to the Editor? Email acmarst@bigpond.com, fax (02) 6295 3367, or mail to PO Box 55, Red Hill ACT 2603. Editor: Ernie Davitt.

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OFFSHORE PETROLEUM EXPLORATION

\$500 million in New Projects Approved

The Federal Government has announced the granting of 13 new offshore petroleum exploration permits in Commonwealth waters, representing \$500 million of investment in Australia's offshore petroleum sector.

The Minister for Resources and Energy, Mr Martin Ferguson, said on 24 November that, in the current economic climate, it was encouraging that so many companies wanted to invest in the future of Australia's petroleum industry. Exploration was vital to prove up new reserves and maintain a pipeline of new developments for the nation's ongoing energy security and future exports.

"Continued investment in our offshore petroleum resources enhances Australia's international reputation as a geologically attractive province and a safe, attractive destination for capital," he said.

"The Australian Government welcomes this \$500 million investment and will continue working to encourage exploration to unlock the enormous potential of our offshore basins. Most of Australia's more than 50 offshore basins remain largely unexplored so there is plenty of opportunity remaining."

New permits are located in Commonwealth waters off Western Australia and the Northern Territory and include four permits eligible for the Designated Frontier Area (DFA) tax incentive.

A total of 24 bids were received for 13 areas of the 2007 release.

The new permits will be jointly administered by the Australian Government and the respective State and Territory Governments. Maps and full descriptions of the areas can be found at: www.ret.gov.au/resources/Documents/acreage_releases/2007/html.

For further information contact Michael Bradley (Office of the Minister for Resources & Energy), mobile 0420 371 744.

* * * * *

Inquiry to Ensure Australia's Safety Regulation is World's Best

The Minister for Resources, Energy and Tourism, Mr Martin Ferguson, has announced a joint inquiry with the Western Australian Government into the Varanus Island gas explosion in June last year.

Previous investigations have focussed on the technical causes of the incident rather than the underlying regulatory regime and the performance of the regulators.

Mr Ferguson said: "It is vital that we also look at the effectiveness of the regulatory regime and the role of the regulators to ensure Australia's offshore petroleum safety regulation is world's best practice.

A two-member expert panel will be appointed to conduct the inquiry.

Mr Kym Bills of the Australian Transport Safety Bureau has agreed to Mr Ferguson's request to undertake the inquiry.

Work will start in mid-January and the inquiry is expected to report by mid-April this year. The Commonwealth will fund the inquiry up to \$1 million.

For further information contact Michael Bradley (Office of the Minister for Resources & Energy), mobile 0420 371 744.

MARITIME SAFETY

Public Comment Period Extended

The National Marine Safety Committee (NMSC) announced in mid-November that the draft revised standard for AS1799.1 Small Craft – General Requirements for Power Boats released by Standards Australia is now available for public comment.

Industry has since requested an extension to the public comment period because of shutdowns over the summer season.

NMSC's then Acting CEO, Mr John Henry, announced on 25 November that he agreed that the dates originally proposed by Standards Australia for the comment period were inadequate and stated that NMSC had taken the decision to continue to accept comment on behalf of Standards Australia up until 1 March 2009.

In response to queries regarding potential costs to the industry in times of economic downturn, Mr Henry stressed that the draft standard simply proposed an update of an existing technical standard and nobody was suggesting any additional regulation.

Have Your Say

The draft standard for AS 1799.1 Small Craft – General Requirements for Power Boats can be obtained directly from Standards Australia's publisher SAI Global via www.standards.org.au, click on Drafts for Public Comment and follow leads to document reference DR 08224. Or contact the NMSC Secretariat, phone (02) 9247 2124, email secretariat@nmsc.gov.au. Comment can be emailed direct to jhenry@nmsc.gov.au or returned to the NMSC Secretariat.

Comments now close on 1 March 2009.

NAVIGATION

Tougher Coastal Pilotage Rules Urged

A review of coastal pilotage services in the Torres Strait and Great Barrier Reef has recommended tougher rules for pilots and improved navigational services to help protect the local environment.

When transiting through the northern Inner Route of the Great Barrier Reef and the Torres Strait, all vessels 70 metres or longer as well as all loaded tankers, chemical tankers and liquefied gas carriers – except defence force vessels – must have a licensed coastal pilot on board.

This requirement has operated for the northern Inner Route of the Great Barrier Reef since 1993 and for the Torres Strait since 2006.

A report from the expert panel appointed by the Australian Maritime Safety Authority (AMSA) to conclude the review of this service supports the continuation of the current open competitive arrangements for the delivery of coastal pilotage services, but recommends stronger regulation of providers and the adoption of measures to build a better safety culture.

The Board of AMSA has endorsed the panel's findings. They are now reviewing industry regulations and moving to put in place additional resources to monitor compliance.

The new measures include:

- increasing the requirement for pilotage providers to report and document safety standards they find aboard ships such as the adequacy of charts, passage plans and the number of watch-keeping crew;
- strengthened requirements for safety management systems;
- greater emphasis on the quality of fatigue management plans;
- expecting pilot operators to report regularly on the training of pilots and status of medical assessments; and
- AMSA will provide additional resources for more rigorous performance audits of pilotage providers.

Twelve months after their implementation, AMSA will assess the new measures to make sure they have addressed the concerns that prompted the review and to determine whether further regulatory action is required.

The report and AMSA's response are available at www.amsa.gov.au/Shipping_Safety/Coastal_Pilotage. For further information contact Jeff Singleton (Office of the Minister for Infrastructure, Transport, Regional Development & Local Government), mobile 0410 476 890.

MARINE ENGINEERING

Reduced Regulation

The Federal Government has announced streamlined licensing requirements for marine engineers working on refrigeration and air conditioning equipment.

Environment Minister Mr Peter Garrett and Transport Minister Mr Anthony Albanese said that from 1 March 2009 marine engineers who hold an Engineer Class 1, Engineer Class 2 or Watchkeeper (Engineer) certificate issued by the Australian Maritime Safety Authority (AMSA) will no longer be required to hold a separate refrigerant handling licence from the Australian Refrigeration Council (ARC).

The Ministers said the removal of the duplicate licence requirement was possible because of the compatibility of the training and assessment provided to Marine Engineers with the requirements for the full refrigeration and air conditioning licence issued by the ARC, which issues licences under the Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995.

For further information contact Jeff Singleton (Office of the Minister for Infrastructure, Transport, Regional Development & Local Government), mobile 0410 476 890.

SHIPBUILDING

ASC Maintains Profit

ASC Pty Ltd – the company responsible for maintaining and enhancing Australia's Collins Class submarines and building the new Hobart Class air warfare destroyers (AWD) – has announced net earnings of \$29.7 million – maintaining its profit from last financial year.

ASC Managing Director, Mr Greg Tunny, attributed the company's success to continued operational improvements, improved productivity, and an unwavering commitment to both safety and customer outcomes.

For further information contact Jayne Flaherty (Corporate Communications Manager, ASC), mobile 0423 029 307, email Jayne.Flaherty@asc.com.au.

ENVIRONMENT

\$22.5 million in Grants for Coastcare Projects

As part of Coastcare week in December, the Federal Government announced \$22.5 million in funds to benefit more than 400 local and community groups on the nation's coastline.

The funding comes under the Government's \$2.25 billion Caring for our Country Community Coastcare program and will support projects including:

- surveying the coastal and underwater marine environments of south-eastern Australia;
- reducing threats to fish habitats in Queensland's Burdekin Dry Tropics;
- protecting and rehabilitating the habitat of migratory shorebirds in Victoria;
- protecting at-risk species from the impact of increased human activity along Western Australia's Kimberley coast; and
- supporting Indigenous communities as they undertake scientific monitoring of threatened sea turtles off the Northern Territory coast.

Minister for the Environment, Mr Peter Garrett and Agriculture, Fisheries and Forestry Minister, Mr Tony Burke, said the package included more than \$10 million for 349 small grants worth up to \$50,000 each and more than \$12.5 million for 72 larger-scale projects targeted to national environmental priorities.

Further information and a full listing of successful Community Coastcare grants is available at www.nrm.gov.au. Or contact Ben Pratt (Office of the Minister for the Environment, Heritage & the Arts), mobile 0419 968 734, or Ann-Marie Wilcock (Office of the Minister for Agriculture, Fisheries & Forestry), mobile 0413 872 275.

* * * * *

New marine laws for PNG

Marine resources are of utmost importance to Australia's closest neighbour Papua New Guinea (PNG), which hosts some of the last remaining pristine coral reefs of the world, where coastal peoples are still reliant on subsistence fishing for day-to-day survival, and where ongoing development of commercial fisheries forms a vital part of the country's economic future.

These resources face a number of significant threats, including pollution from ships. The country hosts a number of international shipping lanes, including the main transit routes between the major east coast ports of Australia and commodity markets in north Asia. There have been several incidents in PNG resulting in pollution in recent years.

As part of efforts to address this threat, in 2008 Cairns-based EcoStrategic consultants was engaged by the PNG National Maritime Safety Authority (NMSA), through maritime law firm BWA, to develop new marine pollution legislation for PNG.

The new laws will implement all of the relevant Conventions of the International Maritime Organization (IMO), and provide PNG with a 21st Century legal regime for marine environment protection. The drafting phase of the project was completed in Nov 08, producing five new Bills with four supporting Regulations.



The project involved a comprehensive stakeholder consultation process, and cabinet and parliamentary submission papers have been prepared for both passing of the Bills, and accession to those IMO marine environment protection Conventions that PNG has not yet ratified.

If passed and implemented, the new Bills will significantly increase protection of PNG's vital coastal and marine resources from sea-based sources of pollution and related impacts, while allowing the sustainable development of the maritime sector in PNG.

They will also assist in the protection for the vital sealane through Torres Strait, which PNG shares with Australia, and which is now part of the Great Barrier Reef Particularly Sensitive Sea Area as declared by IMO.

For further information contact steve@eco-strategic.com. Web site www.eco-strategic.com.

MARINE SAFETY

Review of Marine Safety Equipment Standard

The National Marine Safety Committee (NMSC) is preparing to review the National Standard for Commercial Vessels (NSCV) Part C, Subsection 7A – Safety Equipment.

This standard hasn't been updated since 2004 and there have been several developments in the area of marine safety equipment since that time.

NMSC's Acting CEO, Mr John Henry, said on 4 December that the review was already taking into account:

- the referencing of other relevant standards – e.g. lifejackets and liferafts, and
- clarification of text in some sections – e.g. requirements for medical supplies

BORDER PROTECTION

[continued from page 1]

New Command Centre Opened

“Border Protection Command has responsibility for co-ordinating a whole of government response to critical maritime threats, in particular unauthorised maritime arrivals and illegal foreign fishing. It also undertakes surveillance and responds to issues such as maritime pollution, prohibited imports and exports, piracy and violence at sea.

Have Your Say

The process for feedback is informal – simply send a brief email with the issues or areas of reference to Project Manager Terry Ehret, tehret@nmsc.gov.au by Friday 30 January 2009. To discuss the review generally, phone Mr Ehret on (02) 9247 2124.

The current standard NSCV C7A (Edition 2) can be found at www.nmsc.gov.au. Click on Publications/National Standards/National Standard for Commercial Vessels.

APPOINTMENTS

New CEO for NMSC

The Independent Chairman of the National Marine Safety Committee (NMSC), Mr Neil Aplin, has announced the appointment of new Chief Executive Officer, Ms Margie O'Tarpey.

Mr Aplin said Ms O'Tarpey brings to the role a wealth of experience in the public sector with past management roles in fields as diverse as health, community justice and local government – and from her most recent role as CEO of the Institute of Public Administration Australia (IPAA) NSW.



Austal's new Chief Operating Officer, Mr Peter Hogan.
Austal photo

For further information contact Rosemary Pryor (NMSC Communications Officer), phone (02) 9247 2124, email secretariat@nmsc.gov.au. Web site www.nmsc.gov.au.

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New Chief Operating Officer for Austal

Former Boral Limited Divisional General Manager, Mr Peter Hogan, has been appointed to the position of Chief Operating Officer – Australian Operations at Austal.

Mr Hogan brings to the position a strong background in business growth and operational improvement as well as proven success at all levels of management, both in Australia and overseas. He has previously held senior management positions with Hanson Israel Limited, Pioneer International Limited, and most recently with Midland Brick, a subsidiary of Boral Limited and the largest clay brick manufacturing facility in the world. Mr Hogan's new job started on 1 February.

“Last year Border Protection Command's surveillance program covered 154 million square miles and is a key element in preventing and deterring illegal activity in Australia's territorial waters.”

In the last few months of 2008 Border Protection Command successfully responded to three incidents of unauthorised maritime arrivals, with all three vessels intercepted at sea.

For further information contact Samantha Wills (Office of the Minister for Home Affairs), mobile 0448 721 372

CONFERENCES AND SEMINARS

23-25 February 2009

Maritime Economics Seminar

Bonhill House, London

Speakers from maritime commerce and academia will analyse the current situation in various sectors of industry. Presentations consist of the global trade and effects of the emerging markets; the costs of operating ships and the effect of various outside influences; the economics of the shipping markets with emphasis on the different sectors; capital for shipping and the various risk management tools available.

Further information: Laura Tavergnier, phone +44 (0) 20 7017 4657, email laura.tavergnier@informa.com. Web site www.lloydsmaritimeacademy.com/lw1006

22-23 April 2009

Offshore Support Vessels (OSV) Asia-Pacific

Raffles City convention Centre, Singapore

23 speakers including senior managers from Bourbon Offshore, Neste Shipping Oy, DNV, Rolls Royce Marine, Standard Chartered Bank, Inchcape Shipping Services, Swire Pacific Offshore, Farstad Shipping and Damen Shipyards will discuss commercial trends in the OSV sector and their implications on design, operations and logistics.

For registration phone +65-6514-3180. Web site: www.abc-asia.com/osv-asiapacific.

21-22 May 2009

Summit Down Under

Gold Coast, Queensland

The National Marine Safety Committee (NMSC)'s Summit on recreational boat standards will provide an insight into how the standards used in the world market are changing to meet today's challenges.

Further information: For more details go to www.nmsc.gov.au or phone (02) 9247 2124.

5-9 July 2009

AMSA2009 Marine Connectivity – 46th Annual Conference of the Australian Marine Sciences Association

Adelaide, South Australia

An international conference which will provide a forum to discuss the state of the art for investigating marine connectivity, novel approaches and technical advances, and the meaning of connectivity in the oceans and coastal seas. Proposed themes listed on the web site.

Call for Symposia and Workshops now open.

Further information: Maylene Loo (Loo.Maylene@saugov.sa.gov.au) or Narelle Hall (amsaconf@amsa.asn.au). Web site: www.amsa.asn.au/conference/amsa2009.

There is no charge for entries under "CONFERENCES & SEMINARS" on page 12. Email details to acmarst@bigpond.com.

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