

# Newstreams

News, research, on-ground works, innovation and events with a focus on improving fish habitat

## AUSTRALIAN NEWS

### 2012 Riverprize a winner for fish

The Condamine Alliance has won the 2012 Australian Riverprize worth \$200,000. The Alliance has been working with as many people as possible including landholders, anglers, community groups, schools, businesses and government agencies. The Oakey Freshwater Fish Stocking Association has been one of the project's biggest supporters. Their rehabilitation work has concentrated on the Dewfish Demonstration Reach, which is 110 km long and incorporates parts of Myall Creek, Oakey Creek and the Condamine River in south-east Queensland. Their biggest achievement is the tremendous increase in native fish numbers along the Reach. Golden perch have increased by 1000%, Dewfish (eel tailed catfish) by 300% and Bony Bream by 200%. The Hyrtl's tandan has also returned for the first time in 15 years. For more about their work, go to:

[www.condaminealliance.com.au/dewfish-demonstration-reach](http://www.condaminealliance.com.au/dewfish-demonstration-reach)



Oakey Creek Freshwater Fish Stocking Association member, Noel Kuhn, with one of the tangible results of investment in habitat rehabilitation. Photo: Condamine Alliance.

### Historic benefits flowing for 'Bidgee fish

A delivery of environmental water in the Murrumbidgee system is the most significant environmental flow aimed specifically at fish in the history of the Murray-Darling Basin. This dedicated 'fish flow' is delivering a minimum 6,000 ML/day to stimulate Murray Cod breeding activity, maintain nest inundation for a period of 40 days and aid the dispersal of juveniles throughout the Murrumbidgee system. The total volume of the event is approximately 250, 000 ML and coincides with the closure of the fishery for the Murray Cod breeding season. For more information, contact [Cameron Lay](#), Fisheries NSW, on 02 6738 8520 or visit:

Media release link



The environmental flow will provide enough water to protect the nests for the time it takes for the male Murray Cod to build the nest, attract the female, guard the eggs until they hatch - about 9 days - and protect the larvae for another 7 days, after which the juveniles head out on their own. Photo: Sascha Schultz.

### More natural flows for Lower Murrumbidgee wetlands

Newly installed regulators, pipes and culverts mean the environmental water released into the Murrumbidgee system will flow into the long-stranded Lower Murrumbidgee Wetlands. The areas from Redbank Weir to Cherax Swamp, Hobblers Lake and Penarie Creek will benefit, as will the landholders on Cherax Swamp and Hobblers Lake who have been actively involved in rehabilitating these habitats. These areas are fenced off from stock and replanted with wetland plants native to the local area. Carp screens have been fitted at key locations to prevent adult carp moving into the wetland areas, benefiting native fish populations. For more information, visit:

[www.environment.nsw.gov.au/media/OEHmedia12092502.htm](http://www.environment.nsw.gov.au/media/OEHmedia12092502.htm)

## Thinking like a fish

Imagine being a Murray Cod travelling the rivers of the Murray-Darling Basin. Paul Humphries did and asks how 'Mac', a Murray cod, would return the Murray-Darling Basin's rivers to a state that would make him, his families and friends happy and healthy. Read this fish-eye view of the Basin at:

<http://theconversation.edu.au/looking-at-the-murray-darling-through-a-native-fish-eye-lens-8873?>

## Trout Cod recovery in the Murray River

A report in the *Victorian Naturalist* confirms that Trout Cod have extended their range in the Murray River at Gunbower Island, near Cohuna. This species' range had, in recent times, only extended to around Barmah. This improvement in the contemporary distribution of the Murray River population is thought to be the result of recruitment and expansion in the natural population, rather than immigration of stocked Trout Cod. To read more of the report by Douglass and others, see issue 129 of the *Victorian Naturalist*, which will be available at:

[www.fncv.org.au/vicnat.htm](http://www.fncv.org.au/vicnat.htm)

## Blue carbon

The importance of wetlands for supporting healthy fisheries is well recognised. What is generally underestimated is the role of wetlands in carbon sequestration and storage. An Issues Paper developed by the Department of Sustainability, Environment, Water, Population and Communities considers the role of wetlands in carbon cycling, the potential of various types of wetlands to sequester carbon, the implications of climate change for wetland services and mechanisms to promote protection and restoration of wetlands. To download a copy:

[www.environment.gov.au/water/publications/environmental/wetlands/wetlands-role-in-carbon-cycle.html](http://www.environment.gov.au/water/publications/environmental/wetlands/wetlands-role-in-carbon-cycle.html)

In related research from the USA, the important role saltmarsh plays in capturing carbon is reviewed. Saltmarshes are an ecosystem that depends on building its root system to keep the plant above the water, thereby accumulating carbon. These ecosystems store enormous quantities of carbon, which is trapped in the sediments once the plants die. Read more of this work by Kirwan and Mudd in *Nature*:

<http://dx.doi.org/10.1038/nature11440>

## Seagrass-friendly boat ramp at Bonna Point

The Bonna Point Boat Ramp, on Sydney's Botany Bay, has been upgraded to improve boating and minimise damage to seagrass. Seagrass is vital habitat for many fish species and slow to recover from damage caused by propellers. The new facility, installed by Sutherland Council, has an extra lane and improved launching over a wider tidal range than what was previously available. In addition, navigation aids, including a designated approach lane over the shallow water, and signage will improve the protection of a significant area of the threatened seagrass, *Posidonia australis*. The upgrade was jointly funded by Sutherland Shire Council and NSW Roads & Maritime Services Better Boating Program. The protection measures were negotiated as part of Fisheries NSW authorisation of the upgraded ramp. For more information, contact [Carla Ganassin](#), Fisheries NSW, on 02 9527 8552.



Wetlands cover only about six to nine per cent of the Earth's surface, but contain about 35 per cent of global terrestrial carbon. Photo: Charlie Carruthers.



The upgraded boat ramp and other improvements at Bonna Point will help minimise damage to the seagrass nearby. Photo: Carla Ganassin.

## Removing culverts means different things for different creeks

Researchers have monitored how the community of fish changes in response to the removal of culverts in the Kooragang Wetlands, in the Hunter region of NSW. The installation of these barriers to fish passage many decades ago significantly changed the upstream assemblage of fish in tidal creeks, reducing the richness and abundance of estuarine–marine species in particular. Monitoring over a 16 year period showed that the creeks do not respond in the same way to culvert removal. One creek showed an immediate response but took many years to return to a natural condition. The other creek showed a completely different sequence of changes, indicating that rehabilitated wetlands and creeks can develop along complex paths that may be difficult to predict. Find more on this research by Boys and Williams in *Ecological Engineering*:

<http://dx.doi.org/10.1016/j.ecoleng.2012.08.006>

## Riparian rehab good for rivers and for landholders

An evaluation of riparian area protection and improvement work in Victoria shows landholders believed waterway health had improved since the work and they would recommend other landholders get involved. Riparian rehabilitation usually requires achieving a balance between river health and water for stock. Each year in Victoria hundreds of kilometres of waterway are fenced and great work has been done with landholders to provide alternative water sources for stock, plant native vegetation and control weeds. The evaluation showed that 74% of landholders indicated they considered the condition of the waterway had improved as a result of the riparian works and 76% of landholders indicated there had been no loss of productivity across the property as a result of the works. For more information:

[www.dse.vic.gov.au/about-dse/media-releases/landholders-and-river-health-reap-rewards-from-river-frontage-work](http://www.dse.vic.gov.au/about-dse/media-releases/landholders-and-river-health-reap-rewards-from-river-frontage-work)

To view the report:

[www.water.vic.gov.au/\\_data/assets/pdf\\_file/0004/143248/Final-Riparian-Works-Evaluation-report-2011.pdf](http://www.water.vic.gov.au/_data/assets/pdf_file/0004/143248/Final-Riparian-Works-Evaluation-report-2011.pdf)



Riparian rehabilitation provides benefits for both the landholders and the river. Image: Victoria DPI.

## Half-time for coral in the Great Barrier Reef

The Great Barrier Reef (GBR) has lost half its coral cover in the last 27 years. The loss was due to storm damage (48%), crown of thorns starfish (42%), and bleaching (10%). Researchers from the Australian Institute of Marine Science and the University of Wollongong started broad surveillance of more than 100 reefs in 1985 and since 1993 have conducted more detailed annual surveys of 47 reefs. They found that intense tropical cyclones have caused massive damage, primarily to the central and southern parts of the GBR, while population explosions of the coral-consuming Crown-of-thorns starfish have affected coral throughout the GBR. Two severe coral bleaching events, caused primarily by ocean warming, have also had major impacts in northern and central parts of the GBR. In the absence of crown of thorns, coral cover increases at 0.89% per year, enabling a slow recovery from losses due to cyclones and bleaching. Water quality is one factor important to the periodic population explosions of crown of thorns. Read more at:

[www.scienceinpublic.com.au/marine](http://www.scienceinpublic.com.au/marine)



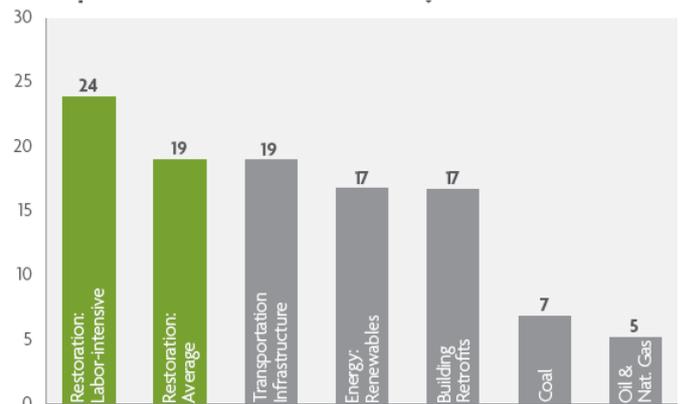
Horseshoe reef, part of the Great Barrier Reef, when provided healthy habitat for fish (left) until a Crown-of-Thorns starfish infestation (right). Photos: AIMS Long-term Monitoring Team.



## INTERNATIONAL NEWS

### Want jobs? Boost habitat works!

An analysis of the impact of investment in watershed and fish habitat restoration on job creation found that restoration projects just in the State of Oregon, USA, generated \$977.5 million in economic activity and as many as 6,483 jobs between 2001 and 2010. A National study found that an average of 17 jobs were created for each \$1 million invested. The report notes that rate of job creation is significantly higher than other industries, including coal, natural gas, or road and bridge construction. To download the report: [www.ecotrust.org/wwri/downloads/WWRI\\_OR\\_brochure.pdf](http://www.ecotrust.org/wwri/downloads/WWRI_OR_brochure.pdf)



Average number of jobs US\$1 million invested, by sector. Source: [http://www.ecotrust.org/wwri/downloads/WWRI\\_OR\\_brochure.pdf](http://www.ecotrust.org/wwri/downloads/WWRI_OR_brochure.pdf)

### Converted by a fish

When Valer Austin, a New Yorker who never noticed weather, explains how she became a 'harvester of rain', she says, 'I was converted by this little fish'. The little fish in question was the Yaqui chub, a small, silvery minnow that had been collected from the creek on their property by a government biologist in 1895 but had since disappeared. Over the past 40 years, Valer and her husband Josiah, have transformed degraded, rock landscapes in the border lands between the US and Mexico into landscapes with flowing waterways and productive fish habitat. The Mexican government is considering one property, Los Ojos, for a national fish preserve because of its lush waterway, abundance of aquatic vegetation and diversity of fish, yet when the Austins bought Los Ojos, this waterway was a dry, rocky wash, so deeply incised that buses used it for a road. The Austins' aim is not to resurrect a past landscape but to create a variety of habitats, so as many native species as possible can benefit. To read their story:

[www.oprah.com/world/Valer-Austin-Transforming-Dead-Land-in-Mexico/2#ixzz28rZthjwo](http://www.oprah.com/world/Valer-Austin-Transforming-Dead-Land-in-Mexico/2#ixzz28rZthjwo)



The Yaqui chub (*Gila purpurea*), the small fish that put Valer Austin on a path of habitat restoration. Yaqui chub prefer living in deep pools of smaller streams with dense vegetation in the water. Image: William R. Radke, US Fish and Wildlife Service.

### Whanganui River: a river with a voice

For the first time in New Zealand a river has been given a legal identity. The Whanganui River becomes a legal entity with a legal voice under a preliminary agreement signed between Whanganui River iwi (Maori group) and the New Zealand Government. This means that river effectively becomes recognised as a person when it comes to the law, in the way a company is, which will give it rights and interests. Under the agreement the river is given legal status under the name *Te Awa Tupua* and two guardians, one from the Government and one from a Whanganui River iwi, will be given the role of protecting the river. Read more:

[www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=10830586](http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10830586)



The Whanganui River. The Whanganui River iwi have sought to protect the river since 1873. Photo source: [www.ronmertons.com](http://www.ronmertons.com).

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## HABITAT DATES

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October 20	<b>Narrandera Fish Festival</b> Free, with a focus on native fish, and the 50th Anniversary of the Narrandera Fisheries Centre. <a href="http://www.trade.nsw.gov.au/events/fisheries/fish-festival">www.trade.nsw.gov.au/events/fisheries/fish-festival</a>
October 20 - 24	<b>6th National Conference on Coastal and Estuarine Habitat Restoration, Tampa, Florida, USA</b> <a href="http://www.estuaries.org/conference/">www.estuaries.org/conference/</a>
November 6 – 9	<b>21st NSW Coastal Conference – ‘NSW Coastal Management - Coming of Age’, Kiama.</b> <a href="http://www.coastalconference.com/default.asp">www.coastalconference.com/default.asp</a>
November 28 – 30	<b>The inaugural conference of the Society for Ecological Restoration Australasia, Perth</b> <a href="http://www.seraustralasia.com/pages/conference.html">www.seraustralasia.com/pages/conference.html</a>
February 2, 2013	<b>World Wetlands Day</b> <a href="http://www.ramsar.org/cda/en/ramsar-activities-wwds-wwd2013index/main/ramsar/1-63-78%5E25913_4000_0">www.ramsar.org/cda/en/ramsar-activities-wwds-wwd2013index/main/ramsar/1-63-78%5E25913_4000_0</a>

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## ENGAGEMENT AND FUNDING OPPORTUNITIES

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### Recreational Fishing Large Grants Program 2012/13 (Victoria)

The Large Grants Program provides grants from \$5 001 up to \$100 000 (GST excl.) for projects, including recreational fisheries' sustainability and habitat improvement projects. Applications close 28 Feb 2013.

More information and application forms are available from:

[www.dpi.vic.gov.au/fisheries/about-fisheries/fishing-grants-program/large-grants-program](http://www.dpi.vic.gov.au/fisheries/about-fisheries/fishing-grants-program/large-grants-program).

### Funding to help fishy friends in the Namoi (NSW)

Applications for funding from the Australian Government's Clean Energy Future Biodiversity Fund are invited from landholders adjacent to the Namoi River and associated tributaries, local councils, community groups and fishing clubs, along the 150 kilometre strip from Gunnedah to downstream of Narrabri. Contact

[Milly Hobson](mailto:Milly.Hobson@dpi.nsw.gov.au) on 02 6763 1206 or visit:

[www.dpi.nsw.gov.au/fisheries/habitat/your-catchment/namoi/eoi-namoi](http://www.dpi.nsw.gov.au/fisheries/habitat/your-catchment/namoi/eoi-namoi)

### Funding for wetland protection in Goulburn-Broken (Victoria)

The Goulburn Broken CMA (Victoria) is running an incentive program for wetland and remnant protection on private land in the catchment's northern plains. The funding aims to help landholders deliver on ground actions. Contact Jim Castles, Goulburn Broken CMA Shepparton, on 5820 1100 or visit:

[www.gbcma.vic.gov.au/default.asp?ID=news\\_events&post=328&tpl=news\\_full](http://www.gbcma.vic.gov.au/default.asp?ID=news_events&post=328&tpl=news_full)

### Rhondda Alexander Memorial Education Grant 2013

Each year the Australian Marine Environmental Protection Association (AUSMEPA) awards a grant of up to \$3 000 towards a school marine education project that leads to students actively improve the marine environment. This can include educating their local community and other behaviour change activities. The grant is open now and closes on the 1st of March 2013. For more information or an application form

contact [info@ausmepa.org.au](mailto:info@ausmepa.org.au) or visit:

[www.ausmepa.org.au/other.asp?pageld=34](http://www.ausmepa.org.au/other.asp?pageld=34)

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## HABITAT RESOURCES

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### **RipRap is back!**

Now published by the Australian River Restoration Centre, this 'bringing back native fish' edition is sponsored by the Murray–Darling Basin Authority's Native Fish Program. This edition contains 60 pages of articles featuring fish related science, on-ground works, oral history and community engagement projects from across Australia. To order copies, subscribe or download:

<http://australianriverrestorationcentre.com.au/riprap-magazine/>

### **Wetlands Australia, 21<sup>st</sup> Edition**

This twice-a-year publication brings together stories, information and updates about wetlands conservation, management and education from around the country. The 21st edition of Wetlands Australia is now available online:

[www.environment.gov.au/water/publications/environmental/wetlands/wetlands-australia/index.html](http://www.environment.gov.au/water/publications/environmental/wetlands/wetlands-australia/index.html)

### **Watching the fish, live.**

The Montrose Settlements Restoration Program has installed a webcam in Talbert Marsh within the Huntington Beach Wetlands, California, USA. Marshes that are connected to Talbert Marsh were recently restored, providing critical habitat for many fish species. Live views of many different fish and invertebrate species can be seen from this webcam.

[www.montroserestoration.gov/multimedia/fish-webcams/](http://www.montroserestoration.gov/multimedia/fish-webcams/)

### **Aboriginal Fishing Strategy (Vic)**

For Aboriginal people, cultural values are intertwined around traditional uses, spiritual connection, ancestral ties and respect for waterways, land, sea and the resources these provide. The Victorian Government's Aboriginal Fishing Strategy seeks to shape the approach to addressing Native Title, customary fishing and economic development opportunities as well as increasing Aboriginal participation in fisheries management. For more:

[www.dpi.vic.gov.au/fisheries/aboriginal-fishing/aboriginal-fishing-strategy2](http://www.dpi.vic.gov.au/fisheries/aboriginal-fishing/aboriginal-fishing-strategy2)

### **Aquatic Ecosystems Toolkit**

The Aquatic Ecosystems Toolkit provides a nationally consistent framework for mapping and classifying aquatic ecosystems and identifying high ecological value aquatic ecosystems. It also aims to assist jurisdictions in benchmarking approaches to meeting commitments under the National Water Initiative. The tools have broader applicability in achieving natural resource management outcomes.

[www.environment.gov.au/water/topics/aquatic-ecosystems.html](http://www.environment.gov.au/water/topics/aquatic-ecosystems.html)

### **Groundwater atlas**

The Groundwater Dependent Ecosystems Atlas, funded by the National Water Commission and hosted by the Bureau of Meteorology, presents the first-ever comprehensive picture of Australia's groundwater-dependent ecosystems. Increased groundwater use is placing pressure on those wetlands and ecosystems that depend on groundwater for their survival. The GDE Atlas is a tool to assist the consideration of ecosystem groundwater requirements in natural resource management, including water planning and environmental impact assessment. The atlas can be accessed at:

[www.bom.gov.au/water/groundwater/gde/index.shtml](http://www.bom.gov.au/water/groundwater/gde/index.shtml)

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## FROM THE ARCHIVES – THE MURRUMBIDGEE RIVER

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### From the diary of Hume and Hovell, 1824–1825

21st October, 1824: 'This river, as well as those streams which they have already crossed, abounds with excellent fish ... . These are in shape like the cod-fish, and of a fine flavour. ... These fish weigh in general from five to twenty pounds; some of them even exceed the latter weight. They take bait readily.'

### From the Journal of George Bennett, 1832, vol. 1

'Large numbers of native perch are caught in the Yas [sic] and Murrumbidgee rivers; their flavour is delicious: their average length is nineteen inches, and the weight from three to six pounds: they have however been taken from two and a half to three feet in length, and weighing seventy pounds; and some even of the enormous size of one hundred, and one hundred and twenty pounds ... . Another fish ... called the 'perch' by the colonists ... caught in the Murrumbidgee, measuring seventeen inches in length, and six inches at its greatest breadth, containing a fine roe: twenty inches was the greatest length they had as yet been taken in this river ... .

'In the river, besides the quantity of fish there is a small and new species of lobster, which is also procured in large quantities ... . In the Murrumbidgee ... and other large rivers, there is a different and larger species of lobster which is frequently found in the stomachs of the 'river cod'. This kind ... measuring a foot and a foot and a half in length, and weighing three or four pounds.

### John Gale, *An Alpine Excursion*, 1903

'What a contrast fishing in the Murrumbidgee presents to the days of auld lang syne! Some of us old residents can look back to the period when an evening's fishing in the big river was invariably rewarded with a haul of heavy fish, varying in size from 7lb to 20lb or even more, whose aggregate weight was enough for a pack-horse to carry.'

### A Note in *The Fisherman of Spring* 1962

(*The Fisherman* was the official journal of State Fisheries of New South Wales)

'For months on end the Murrumbidgee River has presented a sparkling, clear face to the angler, camper and picknicker, says [Fisheries] Inspector R. Sharrock in a report from Griffith. The past 12 months has probably been on the best seasons the Murrumbidgee has known for some years. From Maude to Hay good hauls of Murray Cod were taken closely followed by Silver Perch.'

### Upper Murrumbidgee: Talking fish – making connections with the rivers of the Murray-Darling Basin, 2010

Interview with Adrian Brown.

'[At] the right time the sliver perch would be just roaring up the river. ... [All] you had to do was throw the hook in the water and bang they'd just hit the hook.'

### The Murrumbidgee River.



Photo: Milly Hobson.



Photo: Charlie Carruthers

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## ABOUT NEWSTREAMS

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*Newstreams* is an email newsletter to keep people up to date about fish habitat activities and important developments in fish ecology and habitat. It is free by email subscription. To **subscribe** or send in your habitat news, email the editor, Liz Baker ([newstreams@industry.nsw.gov.au](mailto:newstreams@industry.nsw.gov.au)). Back issues can be accessed from [www.dpi.nsw.gov.au/aboutus/resources/periodicals/newsletters/newstreams](http://www.dpi.nsw.gov.au/aboutus/resources/periodicals/newsletters/newstreams).

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*Newstreams* is published electronically every two months by the Conservation Action Unit within Fisheries NSW on behalf of the Fish Habitat Network, a partnership of organisations working on fish habitat and a network of fishers engaged in fish habitat issues.

### FHN Partners

- Fisheries NSW [www.dpi.nsw.gov.au/fisheries/habitat](http://www.dpi.nsw.gov.au/fisheries/habitat)
- NSW Council of Freshwater Anglers [www.freshwateranglers.com.au](http://www.freshwateranglers.com.au)
- Recreational Fishing Alliance of NSW [www.rfansw.com.au](http://www.rfansw.com.au)
- Australian National Sportfishing Association [www.ansansw.com.au](http://www.ansansw.com.au)
- ECOfishers [www.ecofishers.com](http://www.ecofishers.com)
- NSW Fishing Clubs Association [www.nswfca.com.au](http://www.nswfca.com.au)
- SUNFISH [www.sunfishqld.com.au](http://www.sunfishqld.com.au)
- VRFish [www.vrfish.com.au](http://www.vrfish.com.au)
- Fisheries Victoria [www.dpi.vic.gov.au/fisheries](http://www.dpi.vic.gov.au/fisheries)
- VIC Department of Sustainability and Environment [www.dse.gov.au](http://www.dse.gov.au)
- Primary Industries and Regions SA (PIRSA) Fisheries and Aquaculture [www.pir.sa.gov.au/fisheries](http://www.pir.sa.gov.au/fisheries)
- Australian Fishing Trades Association <http://afta.net.au>

**Website** [www.fishhabitatnetwork.com.au](http://www.fishhabitatnetwork.com.au)



Department of  
Primary Industries

