



**House of Representatives Standing  
Committee on Regional Australia**

**Inquiry into the impact of the Murray-Darling  
Basin Plan in Regional Australia**

**Supplementary Submission by the National Irrigators' Council**

**February 2011**

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## **Supplementary Submission**

NIC provides this supplementary submission ahead of its appearance at the Committee on March 4.

### *Attachment 1 – Environmental Works and Measures*

The NIC in its December submission outlined the importance of the Government and the MDBA considering options other than just buyback to recover the water required for the environment. The use of environmental works and measures to recover water is critical to ensuring that not only are our rivers healthy, but that our communities are strong and we maintain production of quality food and fibre.

At many of the Inquiry hearings thus far the Chair has requested that any witness with suggestions for engineering solutions to allow efficient environmental watering or to improve the efficiency of water use submit them to the Committee. To assist the Committee, NIC has collated a list of Environmental Works and Measures projects and, where possible, the water savings they will achieve (see Attachment 1). These vary from being in the initial planning stages to completion. The list is provided to give the Committee an understanding of the types of projects that have been and can be completed.

NIC has sourced this information primarily from State Governments and we strongly urge the Committee and the Commonwealth to engage with those governments to further develop a list of possible projects.

### *Attachment 2 – Evidence of Environmental Recovery*

In our submission, the bulk of the environmental problems in the Basin in recent times have been caused by the worst drought in recorded history. Australian river systems are highly variable and therefore evolutionarily adapted to coping with long periods of both wet and dry conditions.

This adaptive nature has been well highlighted in recent months with the return and flourishing of the ecosystems in response to increased rainfall and flooding. NIC has contacted various experts in the ecological health of the Basin but they have indicated that published evidence to quantify and qualify the environmental recovery is not yet available.

In lieu of published scientific evidence, the NIC has attached several news reports that provide anecdotal evidence of the ability of flora and fauna to regenerate and thrive after long periods of dry conditions.

The NIC submits that this regeneration of the ecosystem is evidence of its adaption to long term climate variability and that the Basin is not at 'crisis' point.

**ATTACHMENT 1**

	<b>Project Name</b>	<b>Description</b>	<b>Proponent/ Funded By</b>	<b>Cost (\$)</b>	<b>Water Savings</b>	<b>Other Benefits/comments</b>
<b>C o m p l e t e d</b>	Lake Brewster Water Efficiency Project <sup>(a)</sup>	Earthworks and structural modifications to divide lake into 2 cells including inflow and outflow wetlands	Aus Govt, Lachlan Valley Water, Lachlan CMA, Office of Water and Statewater	13m	10GL	Improve GS reliability, reduce evaporative losses and improve water flow and delivery, reduce water ordering time lags below Lake Brewster by up to 18 days, managed wetlands to improve water quality and habitat.
	Marebone Fishway (50km NW from Warren) <sup>(a)</sup>	Construction of a fishway and regulator	NSW Rivers Environmental Restoration Program	3.5m	nil	Allows fish to travel through weir, new regulator provides water flow to attract and allow fish to travel through the fishway, allows fish to have a larger habitat to inhabit and breed.
	Koondrook-Perricoota Flood Enhancement Work <sup>(a &amp; b)</sup>	Install engineering structures and channels to divert and control flows from the Murray River through the forest, to mimic natural flooding events and improve and protect forest health.	The Living Murray (TLM)	59m		Provide environmental watering of the forest, restore health to this part of the Murray River, improve the mgt and timing of floodwaters, 30% Red Gum Trees in healthy condition, healthy populations of resident native fish in wetlands, 80% of permanent/semi permanent wetlands in healthy condition, allow successful breeding of thousands of colonial waterbirds.
	The Darling Anabranh pipeline and environmental flow project <sup>(e)</sup>	Stage 1 - construction of a stock and domestic water supply pipeline, pump stations and associated on-farm works to supply landholder needs. Stage 2 - Modification and removal of in-stream structures to allow the free passage of environmental water. Stage 3 - reinstating an adaptively managed ephemeral flow regime	TLM	54m	47GL (pipeline phase)	Aims to return 460km of degraded water course along the Anabranh to a more natural ephemeral system. Not only provides water efficiency savings but also improves water supply to landholders (supply security and quality) and enhanced environmental outcomes.

U n d e r w a y	Chowilla Floodplain <sup>(b)</sup>	Construction of a large regulator on Chowilla Creek to push water into wetlands and onto floodplains across the Chowilla anabranch system, install smaller secondary regulators to control flows into and out of the anabranch system and install fishways to provide fish passage into and out of the anabranch system	TLM	40m		
	Lindsay-Wallpolla Floodplain and Islands <sup>(b)</sup>	Construction of a regulator on Potterwalkagee Creek to push water into wetlands and onto floodplains across the Mulcra Island system. Construction of smaller secondary regulators to control flows into and out of the anabranch system.	TLM	6.1m		
	Lake Mokoan Decommissioning <sup>(c)</sup>	Construct a system to maintain delivery of a reliable water supply to users reliant on the lake and rehabilitation of the site following the decommissioning of dam infrastructure.	GMW, Goulburn Broken CMA, DSE.	60m	44GL annually	Aims to allow the reinstatement of a more natural water regime to the area. Water saved from Lake evaporation will go to the Broken, Goulburn, Snowy and Murray Rivers.
	NSW Murray Pilot Metering Project <sup>(a &amp; f)</sup>	Pilot of the NSW metering scheme which involves upgrading or replacing up to 12,000 water meters in the Murray Darling Basin. This 2 year trial will involve up to 1200 water meters upgraded or replaced in the upper Murray.	Australian Govt	\$221m (for entire NSW Water Metering Scheme) and 22m (for pilot)	Approx 10.2GL annual (pilot)	60% of water savings to commonwealth and 40% retained in the Murray

P r o p o s e d	Hattah Lakes <sup>(b)</sup>	Construction of a pumping station to supplement natural flows from the Murray River into the lakes, 3 regulators and 3 levees to manage flows within the lakes, excavation of small sections of the natural creek beds to increase the frequency of natural inflows	Mallee CMA, DSE, MDBA, GMW and Parks Victoria	20m		Will allow restoration of a natural flooding regime with small floods every 2-3 yrs and larger floods every 8 (when water is available). This will restore the role of the lakes as a drought refuge for water birds and other water dependent species, provide breeding habitat for waterbirds and support threatened flora and fauna species.
	Gunbower Forest <sup>(b)</sup>	Installation and refurbishment of regulators and levees, widening and deepening of channels, erosion control works to increase the frequency of flooding.	North Central CMA, DSE, MDBA, GMW and Parks Victoria	7.5m		Allows the structures to be operated at smaller volumes of water and for a considerable proportion of water to be returned to the Murray River after the required flooding period.
	Murrumbidgee River Efficiency Project <sup>(a)</sup>	Project to improve water delivery service and efficiency to users. Generate water savings, create increased farm productivity by more closely matched irrigations delivery with crop water demand; and improve the health of wetlands and the riparian environment of the river system	Water for Rivers	approx 55m	not yet known	Currently only in investigation stage. Water savings returned to Snowy and Murray Rivers.
	The Murrumbidgee Computer Aided River Management Project (CARM) <sup>(a &amp; d)</sup>		Water for Rivers	80m	80GL (40GL to Snowy)	Aims to increase water delivery, security and efficiency, increase farm productivity and increase river health.
	Lock 15 Euston Weir and Fishway Upgrade <sup>(a)</sup>	Upgrade Lock 15 weir navigable pass and fishway to comply with the latest flood safety and operational requirements	MDBA and TLM	12.5m	nil	Protect structure from erosion, improve structural integrity of the weir, upgraded fishway will enable small aquatic species to pass through the weir
	Lower Goulburn Floodplain <sup>(g)</sup>	Development of levied floodway of approx 10,500ha and buy up of 9,700ha of floodplain	Victorian Government	30m	nil	prevents intentional flooding of private land, enables provision of

	land				water to floodplains
Red Gum Forests along the River Murray Floodplain <sup>(g)</sup>	Various works (most still in feasibility or proposal stage) along Murray River	Victorian Government	Possibly up to 155m	nil	Planning in conjunction with local CMA's. Will protect Red Gums, provide habitat and provide connectivity between large floodplain forests
Kerang Wetlands <sup>(g)</sup>	Build channels to divert Torrumbarry IA water around 4 of the lakes.	Victorian Government	15m	not yet known	Aims to deliver water savings, improve system operation and provide significant environmental improvements through a more natural wetting and drying cycle in the Kerang Lakes
Campaspe River <sup>(g)</sup>	Construction of fishways to give connectivity from Lake Eppalock to the Murray River. Provide an alternative pathway to deliver high environment flow rates to the Murray River concurrently from both the Campaspe and Goulburn systems	Victorian Government	6m	not yet known	Irrigator led project. More than 70% Campaspe IA farmers (who control more than 90% of irrigation entitlement) have decided to sell
40 priority wetlands in Northern Victoria <sup>(g)</sup>	Capitalise on environmental opportunities from irrigation modernisation. Extensive upgrade of existing or construct new infrastructure to deliver water to 40 sites. Complements NVIRP & provides mechanism to deliver water recovered for environment	Victorian Government	36m	nil - utilising existing savings & improving their delivery	Developed in consultation with CMS's, NVIRP, water authorities and Parks Victoria. Some sites have been designed and are ready for construction, others are still in feasibility stage.
Broken River <sup>(g)</sup>	Provide fish passage at the last remaining fish barrier in the Broken system, from Lake Nillahcootie to the Murray River	Victorian Government	5m		Capitalise environmental outcomes from modernisation of irrigation infrastructure on the Broken River. 285km made available for fish migration. Last remaining large infrastructure project required in the Broken River to improve ecological outcomes of decommissioning Lake

					Mokoan
Barmah Forest <sup>(g)</sup>	Construction of a fishway, removal of a levee and construction of a regulator on the Gulf and Kynmer Creeks	TLM and Victorian Government	3.5m	nil	Aims to reduce the inflow threshold required and enable management of inflows for flooding and to prevent fish stranding behind an existing regulator. Detailed designs are complete but due to budget constraints in the EWMP, there is no funding available to complete this project
Loddon River <sup>(g)</sup>	Provide fish passage at the last remaining fish barriers in the Loddon System. Modification of GMW weirs to enable delivery of environmental water to priority sites in the Loddon system	Victorian Government	4m	nil	Provide 340km of connectivity for fish below Lake Laanecoorie to the Murray River. Significant increase in the benefits of existing and future water recovery in the Loddon system
Ovens River <sup>(g)</sup>	Provide fish passage at the last remaining manmade fish barrier in the Ovens River. Will also improve the OHS issues associated with the weirs operation by modernising the infrastructure.	Victorian Government	2m	nil	Provide 795km of connectivity for fish below Lake William Hovell and Lake Buffalo.

Ref:

(a) [www.statewater.com.au/Current+Projects](http://www.statewater.com.au/Current+Projects)

(b) [www.mdba.gov.au/programs/tlm/programs\\_to\\_deliver/works\\_measures](http://www.mdba.gov.au/programs/tlm/programs_to_deliver/works_measures)

(c) [www.lakemokoan.com](http://www.lakemokoan.com)

(d) Making the Murrumbidgee Work Better for Everyone - Statewater Publication

(e) <http://www.environment.nsw.gov.au/environmentalwater/TLM.htm>

(f)

<http://www.statewater.com.au/Customer+Service/Metering/NSW+Metering+Sche+me>

(g) Priority works to increase the effectiveness and efficiency of environmental water delivery in northern Victoria - DSE Information Sheet (Draft) prepared for the MDBA

### Recovery in full flow for Murray

Rebecca Puddy, [The Australian](#) February 19, 2011

LEAVES are sprouting from century-old river red gums long thought dead as the River Murray - the lifeblood of South Australia - returns to its former glory.

After a decade of crippling drought, water flows are peaking at levels not seen since 1993. The denuded grey gum tree graveyards that lined the edge of the river for the past 10 years are now metres deep in the Murray, vibrant with ochre bark and deep green leaves.

Riverland district ranger Phil Strachan said the river was completely transformed.

"It looked like Agent Orange had been through here at one stage," Mr Strachan said. "The whole floodplain now gets a clean-out and a recharge, and we will see the benefits as the waters recede.

"There will be seed dispersal and salt removal, and the aquifers that the trees rely on will be filled with fresh water."

Among the gum trees were tea trees in flower -- an event Mr Strachan said he had not seen in his 10 years as a ranger.

The chorus of bird calls and croaking frogs are proof that wildlife along the river has come alive in recent weeks.

"The floods mean that colonial nesting birds, like the cormorant and ibis, will breed twice, and we will also see some interesting things coming down from Queensland," Mr Strachan said. "I think we will probably see some cane toads and tropical fish."

The flow peaked this week at a rate of 94,000 megalitres a day but is anticipated to start receding to 80,000ML over the next six weeks.

Murray River environmental scientist Tony Sharley said it was the most significant event in the Murray in 130 years.

Flooding in the Macquarie River late last year, the Queensland floods and high rainfall in Victorian catchments had seen an enormous amount of water flow into the Murray-Darling Basin.

"The Murray is being fuelled by several high rainfall events," Mr Sharley said. "It will take another two weeks to get to the lower lakes of the Murray and, as it goes, it is filling up all the wetlands in South Australia."

Mr Sharley said regular floods were crucial to the future health of the river.

"What the river needs to maintain healthy vegetation and wildlife is small to medium flood events above 50,000ML a day," he said. "We need this if we are going to save the Murray."

While the river has overflowed into creeks and tributaries, flooding Riverland campsites, carparks and completely covering weirs, Mr Strachan said the next month would be perfect for visiting the region. "Now is the time to come and see the Murray at its finest," Mr Sharley said.

## **Rare frogs found after flooding rains**

By Melinda Hayter

Updated Wed Dec 22, 2010 9:57am AEDT

The endangered southern bell frog has been discovered in wetlands near Darlington Point in the New South Wales Riverina.

Department of Environment Conservation Officer James Maguire said the frogs were thought to be locally extinct from the middle Murrumbidgee.

Mr Maguire said Charles Sturt University researchers recently discovered around a dozen of the frogs calling to each other in two different River Redgum billabongs.

He said the flooding of the Murrumbidgee River is the most likely cause of the frog's resurgence and said there is really only one way to ensure the frogs do not disappear again.

"It's all about the water really," he said.

"If we can get environmental water back into these wetland systems annually or every second year, then we'd be looking pretty good to their population there.

"Also vegetation wise, we need to be managing the systems so they're well vegetated so the frogs have a good habitat to hide and lay eggs in."

Mr Maguire said monitoring of the Murrumbidgee's wetlands will be stepped up, following the discovery.

He said it was important now to look at some of the Murrumbidgee's other wetlands to see if more frogs can be found.

"The frogs have been heard calling so we're assuming that they'll be breeding and that's something that's occurred during the last few months," he said.

"This big flood that's come down the system now has re-flooded the areas where they've been recorded so there's several opportunities for them to breed.

"Now they'll need somewhere in the range of three to four months for their tadpoles to develop into small frogs and become independent and disperse around the wetland areas."

First posted Wed Dec 22, 2010 9:23am AEDT

<http://www.abc.net.au/news/stories/2010/12/22/3099079.htm>

## **Thousands of birds flock to flooded Murrumbidgee**

Sarah Clarke reported this story on [Thursday, December 2, 2010 08:26:00](#)

TONY EASTLEY: With forecasts that Sydney might have the wettest December in 20 years and emergency services on standby because of flooding in the central west of New South Wales, water is a bit of a torment for some people.

But it's welcome in the wetlands across the Murray-Darling Basin which is seeing a wildlife boom after ten years of drought.

The wet weather and good natural flows are translating to a mass bird breeding event.

Environment reporter Sarah Clarke travelled to the Low Bidgee wetlands on the Murrumbidgee River where at least 20,000 birds have set up home.

SARAH CLARKE: It's a spectacular sight, thousands of water birds in flight, and scattered below are thousands more.

They've taken over the Lowbidgee wetlands and this year is a mega breeding event.

KATE BRANDIS: It's pretty special and it's a good reflection that the conditions are really good for them here yeah.

SARAH CLARKE: Kate Brandis from the University of NSW is keeping a close watch on this rookery. And this breeding event is the best one in a decade.

Straw necked and glossy ibis, cormorants, herons, royal spoonbills are all nesting here and some chicks that have hatched are already taking flight.

KATE BRANDIS: This year they've been fortunate across the basin there's lots of breeding events going on. If they're as successful as this one's looking like it will be, then that will give them a good boost in the overall population.

SARAH CLARKE: Sharon Ryall from the University of NSW spends the day navigating her way through the wetlands in a motor boat doing egg counts watching this wildlife boom.

SHARON RYALL: Oh that it is, it's wonderful. It's wonderful to see the number of species you also have the herons and the fish eating birds, they're in with the fish and the frogs eating the tadpoles and so we've got the night herons that are breeding in here and we have got cormorants.

That's another unusual thing about this colony over on the other side of this rookery are cormorants, pied cormorants, which are normally tree nesters and they're actually nesting in below the white ibis and that's unusual.

SARAH CLARKE: And what makes the Lowbidgee wetlands unique is the landholders who've become bird lovers. And they've helped make this mega breeding event happen.

Farmer Steve Blore and a couple of his neighbours have given up some of their water allocation even diverted the flows through channels to deliver what the birds need to breed.

STEVE BLORE: And it's fantastic. You'd have to go to Kakadu or somewhere similar, to see something, especially as healthy as what it is here. We run water, reticulate the water through. We're able to micro manage the water here for best outcome for birds. Everybody gets a buzz out of it.

We're showing lots of people through, you can see we've got a line up of boats here and fuel cans on the levy banks, there's a lot of interest in it and we get a lot of enjoyment out of it.

TONY EASTLEY: Farmer and bird lover Steve Blore ending that report from Sarah Clarke.

<http://www.abc.net.au/am/content/2010/s3082271.htm?site=rural&microsite=murraydarling&section=article&date=%28none%29>

## **Murray mouth dredging ends as flows rise**

Updated Tue Dec 7, 2010 10:19am AEDT

So much water is now flowing out to sea from the Murray that dredging has ended at the mouth for the foreseeable future.

Dredging has been needed for more than eight years to shift millions of tonnes of sand and create an artificial mouth.

Up to 48,000 megalitres of water per day are now flowing into the Coorong wetlands and out the Murray mouth.

South Australia's Water Minister Paul Caica says dredging has stopped.

"The projections are looking good that there'll be a significant amount of water coming through over the next few months, so we will continue to monitor the water level fluctuations of the Coorong," he said.

"Dredging would only be reinstated if there were significant changes in the channel profiles.

"The way the rains are still continuing into the upper reaches of the Murray that it may well be the best amount of water we've had for a couple of decades."

Di Bell from the River Lakes and Coorong Action Group hopes there will be no further need for dredging.

"We do have it in our hands with the possible planning that we can do through the Murray-Darling Basin Authority plan," she said.

"It's going to be hard, it will require difficult decisions, but what we do know is that rivers die from the bottom up and this is our opportunity to get it right."

<http://www.abc.net.au/news/stories/2010/12/07/3086454.htm>

## **Flood waters 'terrific news' for Murray Darling**

17/01/2011 | 11:14 AM

An environmental expert says flooding in Queensland and NSW is good news for the health of the Murray-Darling river system.

Australian National University environmental economics expert Jeff Bennett says recent floods will give the river system a much needed boost.

"This is terrific news for the Murray Darling Basin in terms of the environment of the Darling River," he says.

He says the lower Darling can expect to see "a lot of bird breeding events".

"Another pulse of water coming down will probably see another breeding event for this season and flow through to the Coorong and Murray mouth," Prof Bennett says.

He says the Gwydir wetlands, Macquarie marshes, low country on the Murray and the Murrumbidgee would also benefit.

Prof Bennett says it's important that authorities dealing with a new Murray Darling management plan take into account the variability in seasonal conditions.

"The bottom line is: 'Don't panic'," he says of the plan, which is the subject of public hearings in South Australia on Monday.

"You can't make plans on the basis of just 10 years of history."

<http://kalgoorlie.igwn.com.au/index.php/news/prime-news/flood-waters-terrific-news-for-murray-darling>

## **Flooding expected to be beneficial to river ecosystem**

By Khama Reid (Cross media reporter)

25 January, 2011 10:02AM ACDT

Flooding which has caused extensive damage to property and infrastructure in the country's east is expected to have a positive environmental impact on the Murray River system.

Wetland ecologist and South Australian Murray-Darling Basin Natural Resources Management Board member Kelly Marsland told Suzy Ramone from 891 Evenings there are environmental benefits to floods.

"All species within the river ecosystem are dependent on this flooding cycle and the dry cycle," she said.

"River red gums, for example, are adapted to quite long periods of dry, but they do require the flood waters to germinate and to sustain the adult," Ms Marsland said.

"The nutrients that come with this water are essential for feeding back into the soil just like you would put fertilizer on your garden," she said.

During the drought, ecologists have had to pump water into wetlands to get red gums to germinate.

Apart from sustaining the plant life, Ms Marsland said native fauna also relies on floods to survive.

"As far as birds, frogs, fish; their populations would continue to decline if floods didn't happen and subsequent and regular flooding needs to happen to maintain these populations," she said.

Ms Marsland also said the repopulation of native fish stocks should help reduce numbers of carp in the river as they reclaim nutrients and resources.

Although the flooding happened quickly, senior meteorologist from The Weather Channel Dick Whitaker explained to 891 Evenings why it happened.

"Rainfall tends to follow the warmest ocean waters and when you get warm water over the equatorial Pacific Ocean, when it's near Australia, that tends to promote rainfall across eastern Australia," Mr Whitaker said.

This is known as La Niña, which has coincided with a similar weather pattern in the Indian Ocean, exacerbating the effect on Australia's weather.

"It's been said that in many parts of Australia the average rainfall is a drought, plus a flood divided by two, there's somewhat tongue in cheek in that, but there's certainly somewhat truth in that," Mr Whitaker said.

Flooding in Queensland, New South Wales, Victoria and Queensland have created an as yet uncalculated damage bill expected to be several billion dollars.

<http://www.abc.net.au/local/stories/2011/01/25/3121051.htm?site=rural&microsite=murraydarling&section=latest&date=%28none%29>

## **Rising Murray brings bumper yabby catch**

By James Hancock

They are small, dark brown and some have been burrowed in the moist soil of dry backwaters for years.

But as flows rise in the Murray, yabbies are emerging from hibernation and providing a bumper catch for commercial and recreational anglers.

Garry Warrick has held a commercial yabby fishing licence for more than 20 years but during that time has only been able to fish the river for a few seasons because of drought.

He last fished properly for yabbies in 2001 and says current conditions are the best he has seen since 1993.

"The backwaters all flood and the yabbies are mainly in the backwaters, [you] do get them in the mainstream as well but they tend to be in the backwaters and come out of their hibernation and move around," he explained.

"They can survive several years in drought conditions ... and they come out and the ones that are left that haven't died come out and start breeding and back in the cycle again but they need the backwaters to flood to get them back out and moving around again."

Two large fridges in Mr Warrick's shed near Barmera in the South Australian Riverland are now well stocked with yabbies.

The bumper catch is packed into crates destined for markets in Adelaide, Melbourne and Sydney and he says demand for yabbies is on the rise.

"A lot of the markets haven't had many yabbies for the last few years, so sort of slowly build up your markets again," he said.

"Once fishmongers see the yabbies in the market they'll tend to buy them and once they know they're around and they're consistent they (sales) hopefully should get better, [it's] been a slow start though."

There are just six commercial yabby fishing licences in South Australia.

<http://www.abc.net.au/news/stories/2011/02/02/3127494.htm>

## **Wetlands teeming with wildlife after surviving 18 year drought**

February 2, 2011

Formerly dry local wetlands and floodplains including Overland Corner floodplain and Whirlpool Corner are once again teeming with life after experiencing flows that have not been seen in the region for 18 years.

According to South Australian Murray-Darling Basin Natural Resources Management (SA MDB NRM) Board ecologist Kelly Marsland, the floodwaters have brought life back to wetlands and floodplains that have been dry for many years.

“Floodwaters are an essential part of the river/floodplain ecosystem as the rivers provide the floodplain with much needed water laden with nutrients, while the floodplains provide the rivers with a variety of creatures and carbon, which essentially gives the river life and food,” Ms Marsland said.

“Species within the ecosystem are dependent on this flooding and drying cycle such as river red gums which have adapted to periods of dry but require floodwaters to germinate and sustain adults.”

Ms Marsland said trees stressed during drought will produce an abundance of new shoots when they are inundated with the nutrient rich floodwaters.

“Some native fish such as golden and silver perch require flooding to breed, and without it their numbers may continue to decline,” Ms Marsland said.

“Increased food source and habitat within the river system will undoubtedly increase native fish numbers as well as other species such as yabbies, birds and frogs.

“Unfortunately many trees have not survived 18 years without water and while new germination is expected to occur as a result of the current flooding, it will take decades before these young trees are of the same size as their dead counterparts.”

Flooding along wetlands and floodplains along the River Murray has also brought back to life micro and macro invertebrates that live in sediments and can lie dormant for many years.

“It is thought these floodplains and wetlands have between 100 and 1000 times more species than rivers, therefore the floodwaters provide an essential source of food for fish and other organisms that reside in the river,” Ms Marsland added.

“However to maintain a healthy river into the future, successive and regular flood events will be required to undo the damage to the ecosystem that has occurred during the extended period of low flows.”

The SA MDB NRM Board will closely monitor species such as frogs, birds and flora in coming months to record the benefits of increased flows in local wetlands and floodplains.

## **Ibis revel in the wet season**

Monday, 14/02/2011

In the Booligal wetlands in NSW, about 120,000 young straw-necked ibis have just left their nests after one of the most successful breedings in the area's recent history.

The bird provides important ecological services such as eating locusts.

Paul Packard, wetlands and river conservations officer with the Department of Environment, Climate Change and Water, says Booligal has historically been one of the biggest breeding sites for the ibis in NSW.

"It couldn't have happened without the locals," he said.

"They are the eyes and ears on the ground, they alerted us, they noticed the birds were beginning to congregate, called us up and said 'look the water is also dropping', so then everyone comes into play and can do their bit.

"Some of the Booligal wetlands are national parks and some is privately owned, so no one party can do the whole job themselves."

<http://www.abc.net.au/rural/news/content/201102/s3137865.htm>