



A protester begins the long paddle at dawn from Vic Olsen Bridge to meet the main protest flotilla. www.razorsharp.smugmug.com

In April this year, against recommendations and protests, the Queensland Government announced the construction of a new mega-dam on the Mary River, some 16 km south of Gympie. While proponents see the project as a necessary investment in south-east Queensland's water supply, opponents are incensed about another dam project's seeming disregard for due process and independent findings of both its infeasibility and negative environmental impacts.

Queensland's dam strategy raises bigger questions

At 660 000 megalitres (ML) capacity and inundating 7600 hectares when complete, the Traveston Crossing Dam is being hailed by Premier Peter Beattie as an essential weapon in the battle against the state's worsening water shortage crisis.

The Queensland Government says the dam will help secure water for the next 50 years, as the south-east population burgeons at a rate of 1000 per week. However, the Coalition has labelled the dam proposal a 'panic plan' to a water shortage crisis, brought on by eight years of failing to progressively deliver strategies for a sustainable water supply.

The state's current estimated water supply capacity is 450 000 ML a year, and this is expected to grow to 750 000 ML a

year by 2050. Desalination and industrial recycling will meet some of the 300 000 ML shortfall, while the three-stage Traveston Crossing Dam will help deliver the rest.¹

Stage one, to be completed by the end of 2011, will involve construction of the dam and filling to 180 000 ML, delivering 70 000 ML a year at a cost of up to \$1.7 billion. Stage two involves a \$250 million raising of the Borumba Dam, for 40 000 ML a year. Stage three will only proceed if needed and will see the Traveston Crossing Dam filled to capacity by 2035, delivering a further 40 000 ML at a total cost of approximately \$2.5 billion.

'When all the factors such as potential yield, cost effectiveness, environmental, cultural and social impact, strategic value,

and reliability of the sources are taken into account, this is simply the best catchment area available,' Mr Beattie says.

In addition, a water grid – 'an interconnected set of pipelines and transfer mechanisms' – will enable sharing of water between dams and other water storages throughout south-east Queensland.

Deputy Premier and Minister for Infrastructure, Anna Bligh, says that in the short term the dam will provide significant employment and economic development opportunities for the local community, including some 500 jobs.

'In the longer term the Traveston Crossing Dam has the potential to stimulate business and industry growth in areas such as tourism and horticulture ... it will also result in flood mitigation benefits for parts of the region,' Ms Bligh says.

Protests and process concerns

But residents in the affected region, eight local councils, an international scientific community and even (former) members of Mr Beattie's own party,² see the dam as

¹ Ministerial Media Release, 5 July 2006. <http://statements.cabinet.qld.gov.au/MMS/StatementDisplaySingle.aspx?id=47038>
² Hansard. Queensland Parliament Record of Proceedings, 7 June 2006.

an environmental, economic and social disaster.

Not only will the dam consume prime agricultural land, endangered remnant rain-forest, some 1000 properties, a cemetery and part of the Bruce Highway, it will also destroy some of the last habitat for the Mary River Cod, the Mary River Turtle and the scientifically significant Australian Lungfish.

Despite growing public anger and disbelief, and independent scientific and economic opinion that the dam will be redundant, Labor is zealously pursuing the proposal, allegedly shredding³ and withholding information in the process, and buying up farms before a necessary federal submission of the proposal has been received. The seeming *fait accompli* has left many in the affected region questioning whether they live in a democracy that follows due process.

A 1994 report by the Department of Primary Industries titled 'An appraisal study of water supply sources for the Sunshine Coast and the Mary River Valley'⁴ advised that the Traveston site was 'unsuitable because of high capital cost, inundation of prime agricultural land and displacement of rural population'. Like the Burnett River Paradise Dam project before it, the dam was consistently dismissed as an option, until 27 April this year, when the Queensland Government announced that the project would proceed. Like many others, Noosa Mayor Bob Abbot was shocked by the news.

'I'd invited the Department of Natural Resources, Mines and Water to do a presentation on the Mary River Water Resource Strategy – and there was no mention of the dam,' he recalls. 'Two days later, at a meeting for Regional City Council Mayors,

the Premier walked in and announced that the dam would be constructed.'

The Save the Mary River Coordinating Group, which formed soon after the announcement, reported⁵ that the state government's 'South-east Queensland regional water supply strategy stage 2 interim report',⁶ dated January 2006, would safely meet water demand projections over the medium to long term – without the dam. So what changed?



Deputy Premier Bligh says the 1994 report looked only at water supply sources for the Sunshine Coast and Mary River Valley, and that the Traveston Crossing Dam was judged unnecessary for this purpose.

'Now we're talking about securing water supplies for the entire south-east corner, which is an entirely different matter. [The] dam has by far the greatest potential to meet the long-term water needs of south-east Queensland,' she says.

Save the Mary River Coordinating Group member and former agricultural scientist,

Mr Steve Burgess, says that fully tradeable water allocations on the Mary River will become available to the Australian investment public once a Resource Operations Plan (which establishes rules for water trading and how it will be managed in parallel with environmental needs) is in place.

'I believe that this is perhaps a major driver behind the political push for the dam on behalf of the Department of State Development,' Mr Burgess says.

'This will be the first time that a large pool of "new" tradeable water – on a separate title, not linked to a property title – will be available for sale right on the edge of one of Australia's largest urban water markets, and connected to it via the government's proposed water grid.'

Noosa Shire Council Engineer, Mr Alan Sheridan, says the dam's capital cost per megalitre is \$24 300 – the most expensive of any dam option considered and five times more than the government claimed when it was first announced. He says the real cost of the dam will be in excess of \$2 billion given the cost of acquiring at least 1000 properties, constructing saddle dams, relocating major roads, power and telecommunication infrastructure and protecting two historic towns from flood.

'Add to this the proposed water grid – with enormous energy costs involved in moving water around the state,' he says. 'How much greenhouse gas will this generate?'

Also of concern is the proposed inundation area – a wide, shallow, alluvial flood plain, peppered with fractures and faults; not the traditional deep, steep, rock walled location typically chosen for a dam. According to David Williams, Associate Professor of Geomechanics at the University of Queensland, the Traveston Crossing Dam could potentially lose some 1.4 m through evaporation and 0.3–3 m through seepage annually.⁷

Despite these warnings, Queensland Water Infrastructure Pty Ltd (QWIPL) has now been set up to 'fast-track' the engineering, economic and scientific studies required to license the dam and proceed with its construction. It will also undertake property acquisition planning.

Paradise revisited

Premier Peter Beattie has said the Traveston Crossing Dam will be built, 'feasible or not'.⁸ His determination, and the ensuing conflicts, echo events surrounding construction of the Paradise Dam on the Burnett River in 2003.

The Paradise Dam was apparently delivered as a result of a commitment made during the 2001 elections, despite being repeatedly rejected as unviable. At the time, former Queensland Minister for the



Opponents of the Traveston Crossing Dam protest on the Mary River. www.razorsharp.smugmug.com

3 Pers. comm., and 'Greens outraged at lungfish report destruction,' Queensland Greens Media Release, 25 August 2006.

4 'An appraisal study of water supply sources for the Sunshine Coast and the Mary River Valley' (1994). DPI Water Resources.

5 'A report on the Queensland State Government's proposal to dam the Mary River at Traveston'. Prepared by the Save the Mary River Coordinating Group. www.savethemaryriver.com

6 www.seqwaterstrategy.qld.gov.au

7 Green G (2006). 'For Beattie, it is dam trouble'. *Courier Mail* 1 July, p. 54.

8 The Bartlett Diaries, 20 July 2006. <http://www.andrewbartlett.com/blog/?p=287>



Left: A fish elevator and collection pool at Paradise Dam – there is considerable doubt as to its effectiveness. Right: Paradise Dam's backwaters at Mingo Crossing. The bridge suggests the full height of the dam, some 15 metres deeper than at present. Arkin Mackay, www.stoppress.com.au

Environment, Dean Wells, made the unguarded admission that an election undertaking overrides any studies' findings.⁹

At its naming ceremony in December 2005, Premier Beattie said that construction of the Paradise Dam had 'raised the bar for environmental construction of dams and land rehabilitation in Australia'. Particular initiatives included \$23 million spent on a fishway to allow passage of the Australian Lungfish, revegetation and regeneration of over 200 hectares of land to replace inundated habitat, and a hatchery for the Elseya Turtle.

But when measured against core values and strategic priorities established by the World Commission on Dams (WCD) in 2000,¹⁰ the dam has apparently failed. A World Wildlife Fund (WWF) Australia report¹¹ singled out the Paradise Dam's score for comment.

'In addition to economic concerns and a lack of transparency, there are also serious environmental impacts expected from the project, most notably on the Queensland Lungfish ... In WWF's view, this project fails to observe WCD Strategic Priorities: 1 for gaining public acceptance, 2 on comprehensive options assessment and 4 for sustaining rivers and livelihoods.'

'We refute these claims,' Deputy Premier Bligh says.

'The community provided feedback on the Paradise Dam during the Environmental Impact Statement (EIS) process with more than 90% of the 300 submissions received in favour of the project.

'The public were also kept well informed of the project prior to and

throughout its construction with regular newsletters and other public communications. The EIS also examined 11 different options for the dam. The 2003 Water Reform Assessment Report by the National Competition Council concluded that the project was both economically viable and ecologically sustainable.'

On the other hand, a least-cost planning study conducted by the Institute for Sustainable Futures for the Queensland Government,¹² prior to the Paradise Dam's construction, identified an alternative 'hybrid option' that included water use efficiency systems. The option fulfilled the same requirements as the Paradise Dam at

'The government encourages public participation during the development of the Terms of Reference and the Environmental Impact Statement assessment phases of the project,' she says.

Saving the lungfish

Like the Paradise Dam, the Traveston Crossing Dam will destroy the habitat of a range of species including the Mary River Cod and the Mary River Turtle, which only occur in the Mary River and which are listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as critically endangered and endangered, respectively. Joining them is



The Australian Lungfish (*Neoceratodus forsteri*) (left), and the Mary River Turtle (right).

Tannin/English Wikipedia, Craig Latta - Australian Freshwater Turtle Conservation & Research Association (AFTCRA Inc.)

similar cost, but with 'significant additional financial, social and environmental benefits'. The report was made a cabinet document, removing it from public scrutiny, but it has recently resurfaced on the Save the Mary River website.

Ms Bligh said it is anticipated that the draft Terms of Reference for the Environmental Impact Statement for the dam will be available for public consultation by late 2006.

the Australian Lungfish – a 'living fossil' that existed alongside the dinosaurs, and which is now listed as vulnerable under the EPBC Act. Impoundments on the Burnett River have removed some 65% of the lungfish's spawning habitat, making the Mary River the last, relatively pristine bastion for its survival.

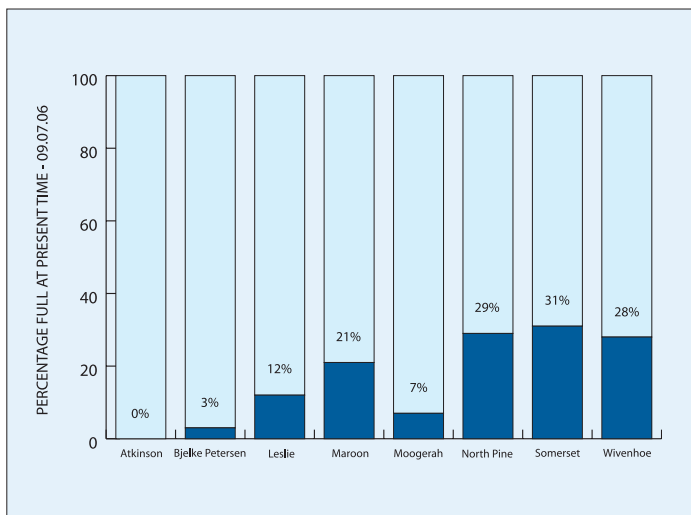
The threat to the lungfish (*Neoceratodus forsteri*) has raised the ire of the Australian and international scientific communities.

⁹ Armstrong G (2004). 'Where wild things are dammed'. *Ecos* 122, 18–19.

¹⁰ www.dams.org

¹¹ 'To dam or not to dam? Five years on from the World Commission on Dams.' WWF Australia (2004). <http://assets.panda.org/downloads/2045.pdf>

¹² Burnett Region Least Cost Planning Study. Institute for Sustainable Futures, March 2002. www.travestonswamp.info/downloads/pdfs/ParadiseDamLeastCostPlanningStudy.pdf



Left: This SunWater graph shows recent storage percentages of south-east Queensland dams, a picture of the water crisis. **Right:** With a large catchment which includes the Bunya Mountains, high hopes were held for the expensive Bjelke Petersen Dam. Arkin Mackay, www.stoppress.com.au

The lungfish is thought to have survived virtually unchanged for at least 100 million years, and is the closest living relative to the ancestral fish that gave rise to all land vertebrates, including humans. It occurs naturally only in the Burnett and Mary rivers.

Internationally respected expert, Professor Jean Joss of Macquarie University, spearheaded the lungfish's EPBC Act listing in 2003. She has repeatedly said the Traveston Crossing Dam could push the fish to brink of extinction.

'Lungfish will survive in dams but they won't spawn. They need shallow, slow-flowing riffles that encourage the growth of weeds and aquatic plants on which they can lay their eggs,' she says.

Her international colleagues are helping highlight the scientific importance of the lungfish to Premier Beattie and Federal Minister for the Environment and Heritage, Senator Ian Campbell. Palaeontologist and evolutionary developmental biologist, Professor Per Ahlberg of Uppsala University, Sweden, is coordinating the international response.

'The Australian Lungfish is irreplaceable, and the international community is appalled and dismayed that a wealthy and conservation-aware country such as Australia could be prepared to, in effect, deliberately drive such a scientifically important animal to extinction,' he says.

'There is a whole slew of important developmental genetics and morphological evolutionary biology questions relating to our anatomy – such as the origin of digits – that can only be answered with reference to the Australian Lungfish. If it dies out, these questions will remain unanswered forever.'

Premier Beattie says concerns about the

lungfish (and the Mary River Cod) will be addressed with a fishway, such as the 'successful' example on the Paradise Dam.

Opponents say that even if a fishway works, it won't replace lost spawning grounds. And Beattie's assurances fall amid claims that a report, stating that lungfish in the Walla Weir (a smaller impoundment built before the Paradise Dam) are no longer spawning, had been shredded.

'I was contacted by someone at the Department of Primary Industries who told me they had been directed to destroy any information they were holding on endangered species in the Mary River,' Professor Joss says.

The report,¹³ which resurfaced after the shredding claims became public, warns against any further water infrastructure being built before thorough studies into lungfish ecology are conducted.

Professor Joss has suggested that Premier Beattie set up a lungfish research and conservation centre, which would do the necessary research before the dam is built, provide a pool of animals to replenish wild populations, and act as a resource for international research.

The scientific community must now wait for Senator Campbell to review the dam proposal and its implications under the EPBC Act. Under the legislation the dam should not go ahead, but only four projects out of 1913 development proposals that have been reviewed under the EPBC Act have been knocked back.¹⁴

'The EPBC Act should stop this dam, but if it doesn't give us the results we need, then this will go to the High Court. It will be another Franklin Dam issue,' Noosa Mayor Bob Abbot warns.

Do we need dams?

At a protest on the Mary River in May, Greens Senator Bob Brown said, 'Dams are so last century; water efficiency and recycling are the way forward.'

As our climate and rainfall patterns change, other more reliable, efficient and environmentally sound methods of water storage and provision are needed.

Noosa Council Engineer, Alan Sheridan, says there is a range of more viable alternatives, which the state government has either failed to consider or dumped in favour of the mega-dam.

'[The government] should have started with the premise that we have a water supply problem and we need to identify new sources of water for the future. That would have resulted in a totally different assessment of what the alternatives were. Dams are just for votes. Destroying river systems is not the answer,' Sheridan says.

In response to the lack of options presented, the eight local councils affected by the dam are putting their own money into an independent study of alternatives that could also provide evidence for a High Court case.

But the seeming dismissal of sustainable practice principles, for the construction of costly and potentially unviable infrastructure, again casts a concerning shadow across current thinking and priorities. Will we look back in two decades and lament the lack of courage to choose less damaging options?

● Wendy Pyper

More information:

Traveston Dam information:
www.sd.qld.gov.au/dsdweb/v3/guis/templates/content/gui_cue_menu.cfm?id=40583

SCEC Overview:

www.scec.org.au/mary_river.php

Save the Mary River Coordinating Group:
www.savethemaryriver.com

¹³ Brooks SG and Kind PK (2002). Ecology and demography of the Queensland Lungfish in the Burnett River, Queensland: With reference to the impacts of the Walla Weir and future water infrastructure. Queensland Department of Primary Industries, May.

¹⁴ Macintosh A (2006). Environmental Protection and Biodiversity Conservation Act – An ongoing failure. The Australia Institute, July. www.tai.org.au