

What's so wrong with a dam on the Mary River at Traveston Crossing?

Not a solution to South East Queensland 'water crisis'.

If built, this dam would not be able to supply water until 2012 at the earliest. Brisbane's current water shortage needs to be solved by 2008 and there are viable alternatives that can come in to effect in this time frame. In the longer term, the projected demand for water to feed continued unsustainable growth in SE Qld simply cannot be met by building more ineffective dams in the south east corner.

Socially destructive and inequitable on an unprecedented scale.

The dam proposal involves the forced resumption of 'potentially more than 1000' freehold properties in closely-knit communities of the Mary Valley and the loss or relocation of all public infrastructure in the area. The dam footprint covers 77 square km (far larger than the electorates of Central and South Brisbane combined) of fertile, irrigated farmland, close to transport and population centres, which is a far more important resource for future generations than fresh water alone. The loss of these properties has negative flow-on economic effects on the businesses that service the region, and will also cause a number of these to leave the area. The Mary catchment is the main source of water for all the shires, towns and cities downstream of the dam from Gympie to Hervey Bay. Wasting precious water by storing it in an inefficient, shallow dam and redirecting large amounts of what remains out of the catchment to Brisbane steals water from downstream communities, impacting on a geographical area greater than the Pine, Brisbane, Ipswich, Logan, Redlands, Gold Coast and Tweed Shires combined. No compensation has been offered to downstream communities for this loss of water. The commercial fishing and tourism industries of the great Sandy Straits are also threatened by negative impacts of reduced river flows. It would be hard to find another single infrastructure decision in Australia's history that has such a deliberate and directly negative social impact on as many people as this proposal.

Ridiculously expensive water for South East Queensland

The dam proposal was originally based on a flawed economic analysis of annual yield of 160 GL (billion litres), no allowance for environmental flows and a total cost estimate of \$850 million. The latest official cost estimates have risen to more than \$1.7 billion for a stage one yield of only 70 GL per year. This is considerably more expensive than other water supply options, including the Tugan desalination plant (\$850 million for 45GL per year). The government still cannot give an answer on the full extent of properties that need to be resumed and infrastructure that will be affected, and so it can be expected that the costs will continue to rise. Under the government's incoming scheme of fully tradable, privately-owned water allocations distributed via a corporately controlled water grid this proposal would result in very expensive water at the tap in Brisbane households.

A willful act of environmental vandalism with global implications.

The Technical Advisory Panel appointed by the government to investigate the effects of the proposal identified major adverse environmental impacts of international significance, yet the Premier insists that he intends to proceed with the project regardless. The Mary River Cod and Mary River Turtle are both listed as endangered under the EPBC act and do not naturally occur anywhere else on earth. The Mary River turtle is recognised by the IUCN and the Mary is regarded as the only river remaining on earth where it can be restored and protected. The Mary River is also regarded as the best remaining option for the restoration and protection of the Queensland Lungfish and the Mary River Cod.

The Queensland Lungfish is regarded as a species of global significance because of its extraordinarily ancient genetic lineage that bridges the gap between prehistoric terrestrial and aquatic animals. The lungfish is also of high cultural importance as a totem of local indigenous cultures. In addition, the proposed dam would destroy 500 ha of endangered regional ecosystem 'protected' by the Queensland Vegetation Management Act, which also provides habitat for a number of endangered frog species. Changes to river flows will impact on the Great Sandy Straits marine park and RAMSAR treaty wetlands. It is hard to find another single decision by an Australian government that so directly and knowingly risks the extinction of this many vertebrate species in one action.

Fraught with many unsolved technical difficulties.

The dam site is on the alluvial floodplain of the Mary River, on very flat land, with very deep, fertile, well-farmed soils. This makes for a very shallow pondage, prone to extraordinarily high seepage and evaporation losses and subject to serious water quality problems of high nutrient loads, low oxygen, toxic metal contamination, algae and weed infestation, greenhouse gas production and sedimentation. If constructed, at stage one it will have an average depth of only approximately 6m, and at stage two an average depth of about 8m. Much of the dam would be less than 2m deep. At the proposed dam site, most of the water flows in brief flood events, and most of the time there is very little flow. This causes considerable trouble with designing a spillway that can handle the large flood flows and the flat nature of the terrain means that allowing for the effect of these flows results in flooding a large additional area of land upstream from the dam outside the normal storage level.

This combination also causes considerable structural problems with river bank stability and erosion downstream of the dam. No solution has yet been announced for how the river will be safely diverted while construction occurs. The dam site overlays a region of deep shattered rock which needs to be sealed by drilling it and pumping it with concrete to stop seepage. As well as being very expensive, this will seriously interfere with groundwater flows in the valley. The full implications of this on the dam and the valley downstream have not been studied. These technical difficulties contribute to the huge initial cost of the project, but also will contribute to very high ongoing running and maintenance costs.

Appalling lack of consultation within government and with the public.

Until the day the Premier announced the dam in the media, NRM&W official documentation made no mention of the dam, all public documents prepared the people of the Mary valley for a weir at Coles Crossing and raising Borumba Dam. No mention of a dam at Traveston Crossing had occurred throughout any of the public consultation process in the preparation of the Mary Basin Water Resource Plan. Anecdotal evidence suggests that local state government officers had no knowledge of the dam proposal up to the time of the Premier's announcement. For example, the Main Roads department had just called for tenders to replace a bridge on the Mary River that will be flooded, and were unaware that the dam proposal would require the re-location of the Bruce Highway! The secret GHD engineers report commissioned by the State Government to evaluate the dam proposal even stated that it did not source information from the Cooloola Shire Town Planning Scheme 'because of the confidential nature of this report'. As a result of this indefensible secrecy on behalf of some sectors of government, much accumulated wisdom about the Mary River within government and the local and scientific communities was not taken into account in the poorly-informed political decision-making process. The Premier even repeatedly referred to the township of 'Kadanga' during his infamous public meeting at Gympie, which was a misspelling of the word Kandanga found in the GHD report

Symptomatic of a failure of democracy within Queensland politics.

There are worrying signs that the lack of an effective opposition in Queensland Parliament for two terms has resulted in a style of leadership which places more power in the hands of a strong leader than is desirable in a robust democracy. One would have to question the attitude towards democracy of a leader who makes such notorious public statements as ‘people power will not stop this dam’, and ‘this dam will go ahead whether it is feasible or not’. The dismissal of the concerns of more than 20,000 petitioners across several formal petitions presented to parliament is also symptomatic of this worrying attitude.

Are there any viable alternatives to this dam proposal?

There are many viable options already identified by the State Government and some of these are listed in the Queensland Government report “Water for South East Queensland – a long term solution” published in June 2006. (All the yield and cost statistics used in this document come from that report). The obvious strategies in that report like demand reduction, compulsory use of rainwater tanks on all new developments, greywater re-use, reducing reticulation losses and industrial re-use have not been implemented. Current world best practice suggests that these strategies should be in place before a Government even considers the prospect of building expensive, inefficient and destructive new dams. Some of the other options available, such as groundwater extraction from the coastal plain north of Brisbane are yet to be adequately investigated, but have the potential to make significant contributions. (For example, Perth gets approximately 80% of its water from groundwater extraction from its coastal plain, and only 20% from dams).

The most obvious source of water is the greater Brisbane area itself – more than 1000 GL of fresh water is discharged from the Brisbane River each year (remember that the Traveston Crossing dam would only provide 70GL per year in stage one). Re-using a small proportion of the fresh water discharge from the Brisbane metropolitan catchment into Moreton Bay is far more accessible to Brisbane than the Traveston Crossing dam, and would have positive environmental benefits for Moreton Bay and the Mary Catchment- a win-win solution on all fronts.

One option to do this is by recycling water back into a storage (Indirect Potable Reuse). Currently, the amount of water supplied in SEQ is 480 GL per year. Half of this (240 GL per year) finds its way to Wastewater Treatment Plants and is available for recycling. At least 80% of this can be reclaimed yielding 200 GL per year. Wastewater is mostly water - a 200-litre drum of it contains only about 1 tablespoon of dirt. The dirt consists of organic molecules, inorganic molecules, microorganisms and fine particles that are suspended in the water. Water can be treated to six-star quality that is as pure as it is possible for water to be. The treatment train comprises of several barriers to each pollutant so that if the first barrier does not remove it, several others will follow. Two-stage membrane filtration, which includes reverse osmosis, is complemented by advanced oxidation and disinfection to produce the six-star water. If the pores in the reverse osmosis membrane were compared to a ping-pong ball, a water molecule would be of a similar size and be able to pass through. Chemical contaminants, such as hormones and drugs, would be the size of a football, a virus as big as a truck and a bacterium would be as big as a house. On-line monitoring is important and ensures the plant is working efficiently. The Australian Drinking Water Guidelines recommend a risk assessment and management approach that is based on sound science. There are many examples of this technology around the world and within Australia.

Even the Tugan desalination plant (with current relatively inefficient technology) will provide water at a lower price than the proposed dam on current Government figures. There may be scope for many other innovative technical options, but the main solution needs to come from rational long-term

planning and recognizing that unchecked continual growth in the taking of fresh water from the natural environment is simply impossible to satisfy in the medium and long terms. Re-allocating water from the environment further and further afield to avoid facing up to this reality is also unsustainable. The beauty of water is that it is the ultimate re-usable and recyclable resource – we should face the challenge of treating it as such.

How can you act for a better outcome?

Pass this information on to other people, think about the issue, check out the facts for yourself, email this page to a friend, lobby your local State and Federal member, exercise your rights at the ballot box. Start by investigating these sources of information.

Save The Mary River Coordinating Group www.savethemaryriver.com Detailed information and downloadable resources

Online Forum www.savethemaryriver.com/forum 5000+ posts and latest public comment in a searchable database