

Desalination Plants Not the Solution to World's Water Problems

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Phillippa Rayment has written an article outlining the drawbacks to using desalination plants as a solution to the world's water problems. Read on for the article, or go [HERE](#) for the original article that appeared in the *Epoch Times* in Australia Dec. 17, 2008.

Desalination Plants Increase – As do Concerns

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Desalination: "a very, very short sighted answer" UN advisor on water Maude Barlow



The control room of a desalination plant in Carboneras, near Almeria, southern Spain. The desalination process requires considerable energy. (Jose Luis Roca/AFP/Getty Images)

'Water, water everywhere but not a drop to drink;' Thus spoke the ancient marina in the 18th century. We are now in the 21st century and the cry goes out again. Man is looking to the oceans, not only as a supply for food, but also as a supply for

drinking water. It seems to be a viable solution for energy rich countries such as Dubai and Saudi Arabia but how is it for Australia? Is this a valid source of drinking water? What are the ramifications of desalination?

The desalination process removes salt and other minerals from water to make it drinkable. This is achieved by filtering using reverse osmosis. It sounds a good idea, just to take the salt out of the sea water and the result is water for us to drink; so why the fuss? And is it destructive to the oceans?

“Yes,” says Wal Grahame, “It is destructive. A desalination plant here will have a footprint bigger than the MCG [Melbourne Cricket Ground] and four stories high. To produce 50 gigs of water they will have to emit 1 million tonnes of CO₂ into the atmosphere.”

Wal is a concerned environmental observer who has been studying this issue since it was announced that a desalination plant would be constructed in Victoria.

“One of the major concerns is the disposal of waste,” Wal told The Epoch Times.

Around 11,000 litres of sea water per second are pumped into the desalination works resulting in between 25 to 60 tonnes of waste. This is sludge from the pretreatment process which uses chemicals to remove solid bits and to destroy any biological life such as, fish, plankton and biota. The chemicals used in the pre treatment process are chlorine, caustic soda, hydrochloric acid, and ferric chloride. Some of these chemicals get discharged back into the sea. Using the reverse osmosis process, the water is then pushed through a series of membranes which filters out everything except the water.

Dead zones

Much of the waste is trucked to a land fill site, while most of the salt is pumped back into the sea as brine, twice as salty as normal seawater and full of toxic chemicals.

Pollutants flowing into the sea are considered to be as big a danger to marine life as overfishing and habitat loss as they create 'dead zones',

'Dead zones' are de-oxygenated zones due to the discharge of phosphates and nutrients from around the world, Wal explains,

According to a study in Science magazine there are now 405 dead zones world wide, more than double since the 80's.

Energy intensive

Energy efficiency is another concern. According Victorian Government statistics, a 150 billion litre desalination plant would use 90mW of electricity per annum. Lobby group against desalination, 'Your Water, Your Say', say this would be enough to power 170,000 homes a year or equivalent to 280,000 cars on the road. Coal is the primary source to generate electricity in Victoria but it is highly greenhouse intensive.

Canadian Maude Barlow a senior advisor to the United Nations on water issues and author of Blue Covenant, a book on the global water crisis, noted that there are over 12,000 desalination plants in the world but they presently supply only three one thousandth of the total world's fresh water use.

Speaking at Sydney University's 'Ideas Forum' earlier in the year, Ms Barlow described desalination as "highly polluting" and . a "very, very short sighted answer" to the global water crisis .

“It is expensive, it’s energy-intensive, it creates more global warming of course because of emissions and so on.” she continued adding however that desalination was the “new shining light on the hill” as millions of dollars had been spent on the technology and governments were embracing it as a solution to increasing water concerns.

Ms Barlow’s words certainly ring true for Australia. Most state governments have committed to building desalination plants over the last year with Western Australia recently commissioning its second.

Environmentalists , however, continue to raise concerns. Executive Director of the Australia Institute, Dr Clive Hamilton, an economist and climate change expert, says desalination does not make economic sense..

“It seems odd to me that we should be responding to one of the consequences of climate change by building a plant that will emit a very large extra volume of greenhouse gases.”□Dr. Peter H. Gleick an American scientist working on issues related to the environment, economic development, and international security and author of The World’s Water says that desalination is survival technology and obscures the need for better management. Water resources around the globe are threatened by climate change, misuse, and pollution, he says, but there are solutions.

We can provide for people’s basic needs while protecting the environment, Dr Gleick said, by using innovative water efficiency and conservation strategies, community-scale projects, smart economics, and new technology.

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