Managing our future water – a plan for the Ballarat region

By René de Jong, Buninyong. 19th April, 2008

Introduction
I have an agricultural background (B AG Sc, LaTrobe University, Adv. Dip Business Management, Ballarat University) and extensive experience in agricultural systems including R&D and commercial potato background interspersed with environmental management activities with Dept Natural Resources and Environment before 1998.

I currently work with Elders Limited at Ballarat and manage a national potato cultivar commercialisation program.

A business approach to tackling the issue of water shortages would be a relatively sound model with drivers to invoke change in our community. Let me explain and put a model forward.

In any business, a manager would assess the situation and be responsible for developing a plan that covers costs and generates profits, brings the workers along through some consultation, awareness and education and gets to the business of making things happen. In any business, supply and demand are the drivers of business decisions and activities and have a large affect on pricing. Let me also highlight that today's business managers are very ethical and fair in their dealings.

So let's apply some basic business principles:
The situation – there is a need to conserve/increase/manage water resources;

The costs must be met and profits need to be generated – lets not get too narrow here as this concept can apply to the financial situation as well as the benefits of long term water security for the Ballarat area. Biting the bullet sooner rather than later on implementing water management changes will enable a greater degree of control and choice to everyone rather than if changes are enforced by necessity if/when water supply becomes desperate. This is the ethical part – managed control and choices for everyone.

Supply and demand is the real issue and several approaches can be taken here. My suggestions, based on no knowledge of actual water use volumes and charges by CHW include (in concept):

- Consult with a representative demographic of Ballarat to test the model below (it could be any model)
- Implement an immediate financial incentive and disincentive program to promote desirable water use (taking consultative results into consideration) – this can be in the form of a tiered pricing structure for water use. Assuming average household water use of 300,000 litres of water annually per household with a desirable water use level of 200,000 litres of water annually, a simple model may be (use whatever numbers work):
    - The first 100,000 litres priced at 100% of current pricing
    - The next 100,000 litre of water priced at 300% of current water pricing
    - The next 100,000 litres of water priced at 500% of current water pricing

    - Subsequent water usage charged at 500% of current pricing
    - Some adjustments for high numbers of residents in a household may be considered as well as pensioner and welfare concessions as appropriate with capped water use at lower water use levels.
    - A disincentive by penalty after adequate education could be imposed after 400,000 litres of water is consumed per household
- The above formula would return 3 times the current revenue if no one changed their water usage practices and anyone who reduced their water use by 1/3 would be paying 33% more than previously and if they didn't like that, then they should use less water. Anyone saving 2/3 of their water would actually then pay less at 83% of previous water use charges. Savings compared to water tank costs could be tabled as incentive for people to install water tanks.
- At $1.00 per 1000 litres, and based on say 30,000 households in the Ballarat area using an average of 300,000 litres, the gross revenue for water volume charges would be around $9 million dollars. An extra $18 million could be generated if no one changed. If everyone reduced water use by a third, an extra $3 million could be generated. If 10% of Ballarats' households installed a 10,000 litre tank at $3,000 each (= to $9 million), then a 25% or $750 rebate could be offered. Additional income beyond this could go into advertising and education programs, other infrastructure projects etc.
- The extra returns would also be used for education and awareness programs that would be timed to coincide with stages of the program. A long term additional water infrastructure project could also be funded by some of the extra money (in addition to loans, state and federal grants etc). You could get the public to act on higher pricing by education and provide a simple monitoring package of their water meters with tables to project the cost of say weekly water use over a 3 or 12 month billing period and provide previous water use data to reinforce obvious comparisons and savings potential.
- A well planned survey and professional modelling should be undertaken to ensure that the most appropriate formulas are selected
- The entire program above to be relaxed if adequate water is available - say 60% of full capacity of water available for 6 months of the year (or whatever is appropriate).
- Other initiatives could be explored including recycled water, dual pipelines for household, public space storage areas to utilise road and public building roof water discharge to also act as flood mitigation etc.

There would be several other things which would need to be considered and obviously the political implications would be one of them. My main comment here is that leaders are often known as leaders for tackling the harder issues and succeeding under adversity.

Whilst the economy is relatively robust and water shortage is looming as an extremely important issue, now would be an opportune time to get on with making robust and long term changes that would provide the Ballarat region with water security and prosperity in the immediate future.