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Notes in preparation for the 8th International RiverSymposium 2005
Thursday 8 September.

Session: Water scarcity – urban and rural tensions over sharing water resources

Topic: A Sustainable Water Balance for Sydney.

SETTING THE SCENE:

- Water sustainability is a global problem
- In Australia the debate has taken on a new urgency as urban and rural water supply from Gladstone in Qld to Perth in WA is under extreme pressure
- Ministers have agreed that the health of our river systems like the Murray and Snowy are declining
- But the heart of the issue is not, as popular belief will have it, a shortage of water, rather the shortfall is our management of water allocation, financing and demand, supply infrastructure and the failure to resolve competing needs.

A BLUE PRINT FOR ACTION – PROVIDING A SUSTAINABLE WATER BALANCE FOR SYDNEY:

- The current governance of water in Sydney is unclear. While we have legislative instruments that establish key accountabilities to implement water models, [Water Management Act 2000; Environment Planning and Assessment Act 1979; Protection of the Environment Operations Act and IPART Act]; application of the legislation confuses users
- Future of the Metropolitan Water Strategy [DIPNR] guiding urban land release and renewal in Sydney over the next 30 years?
 - Need to strip back framework to legislative core with a focus on demand management, stormwater and private sector participation
 - Appoint one body accountable for reducing demand for water in Sydney, with the brief to cover:
 - Policy setting and planning
 - Setting standards or targets
 - Implementing actions
 - Funding programs
 - Integrating restrictions to achieve equity between users
 - Monitoring and auditing results
- A sustainable water balance for Sydney needs to consider environmental, economic and social impacts of reform within the one package. Only then will we be able to secure proper allocation of different water resources to appropriate end users.
- The solution is an holistic approach, managing our rivers as single entities versus current divisional management practices.

WHAT WE NEED:

- ***Macro-economic targets for the demand and supply of water, reflecting equitable allocation of water products to markets, supported by supply and pricing regimes for each product and marketplace***
 - Marketplace has low level of understanding of value of water

- Ease and simplicity of turning on a tap mitigates against a purely educative approach
 - Potable water prices need to be high enough to make alternative water supplies, particularly effluent reuse, attractive
 - Need to provide incentives for people to seek alternative sources of water, perhaps a demand management fund or other subsidies which support the most effective reuse programs
 - Encouraging water sensitive urban design – structuring developer charges to provide discounts for developments that place lower demand on infrastructure
 - ‘Whole of water cycle’ approach, equitable sharing between the environment, irrigators and urban users – cost matching demand to ensure yield is passed on to users
 - Full cost recovery including internalised environmental and social costs through regulatory tools such as setting environmental flow regimes
 - Water prices should be structured to stimulate demand reduction and increased alternative supply
 - Stepped tariffs based on user pays
- ***Demand management through improved irrigation efficiencies that balance improvements in river health and productivity in primary industry***
 - Integrate river health and pollution management to improve river flows and the health of rivers
 - Discharges to environmental flows must mimic natural flows. This can be achieved by varying flows in accordance with rates of natural run-off into dams discharging less water in low flow and drought conditions.
- ***To change the way water is released from dams and control pollution from urban runoff, including the increased sewage effluent discharges caused by growth of the city***
 - We must stop discharging effluent into our waterways, replicating successful effluent recycling programs in areas like the Shoalhaven and Coffs Harbour
- ***To encourage agriculture and industry to utilise non-potable water for relevant activities e.g. cooling towers, market gardens, golf courses. Water resources that are presently under-utilised include waste-water from industry, sewage effluent, stormwater and groundwater***
 - Agriculture
 - Extend ‘Water-wise on the Farm’ beyond the Hawkesbury-Nepean catchment, targeting high agricultural water users, aiming for 6GL savings per annum by 2033
 - Encourage replacement of worn and wasteful sprinkler systems with water efficient devices to reduce over-watering. Provide funding assistance through subsidies, repayable loans supported by an awareness campaign, aiming to save 2GL per annum by 2033
 - To ensure these measures deliver real and ongoing benefits to water health and river flows the water saved must stay in the river system. If it is traded and used elsewhere it will not continue to closing the gap between demand and supply for potable water

- Recycling wastewater not only saves mains for potable uses it also reduces cost and environmental impact of dealing with the waste stream
- Current use of recycled water, especially grey water and stormwater is fragmented and most schemes are small-scale
- Recycled water is relatively expensive in comparison to town water supply because current policies don't estimate the cost to the environment of taking water from rivers for town use. Recycled water has the environmental cost built into its price structure.
- Wastewater:
 - We must vigorously promote the use of wastewater by business. Returns are considerable e.g. Blue Scope Steel in the Illawarra would generate 3.1 GL savings per annum by 2033.
 - If more farmers used wastewater instead of pumping from rivers less water would need to be released from dams for environmental flows. This would mean water stored in dams could be kept for potable uses. Farmers using wastewater would also benefit from a reliable source even in drought [proviso = safeguards to ensure treatment is sufficient to protect groundwater systems and rivers
 - Pricing reform to accelerate industry take-up
- Grey water
 - BASIX is encouraging developers to install grey water reuse systems, so their developments comply with new water conservation targets
 - Further work needed on regulatory arrangements, certification to meet health standards and incentives
 - Increasing evidence that homeowners have taken initiative to use grey water, with hardware outlets now selling appliances to fit onto washing machines so gardeners can rig up their own irrigation systems.
- Stormwater
 - BASIX will also facilitate installation of rainwater tanks
 - Sydney water subsidy exists for retrofitting, however projections show that retrofitting is not cost effective in generating large water savings
 - More efficient to use stormwater on larger scale projects
 - Urban stormwater can also be redirected to rivers for environmental flows to reduce the amount of water released to dams, however we have limited infrastructure or natural detention facilities to capture stormwater
- ***To introduce domestic pricing reform reflecting the true value of water.***
 - Increase Sydney Water's spending on leakage detection programs to eradicate major flaws in infrastructure
 - Govt to reduce domestic demand by implementing a scheme for appliance labelling and standards, promoting cost effectiveness and environmental benefits of water efficient appliances
 - Water restrictions for hard surface hosing and gardens to be continued

- Domestic water prices need to reflect social justice and equity by establishing a standard volume of water use per household with incentives and penalties for consuming more or less than that volume
- Defined amounts of water for essential use for each household could be established at a standard rate with consumption below that rate attracting pricing advantage
- ***Encouraging private sector participation***
 - Meeting Sydney's water supply needs over the next 30 years depends on harnessing the ideas, skills and financing capability of the private sector
 - Public/private partnerships can accelerate the delivery of programs, provide better value for money, help drive innovation, and promote competition to drive efficiency
 - Public and private sector proponents should compete to deliver cost-effective solutions when new infrastructure is required or they can develop new innovative ways of recycling and/or processing water
 - A Demand Management Fund is one mechanism that could enable private sector bidding
 - This could be supported by a 'top up' assistance program with government facilitating alternate financing to encourage private businesses to make water efficiency improvements
 - Another option is a capital assistance program where capital is provided at commercial rates with repayments from reduced water, wastewater and energy operating costs.
- ***Supported by community engagement to ensure shared ownership of problems and solutions***
 - Little understanding of value and scarcity of water
 - Political expediency through scare tactics, misinformation and quick fixes is not a solution [e.g. desalination]
 - Community confusion about real options for better water management
 - Best decisions of government are based on full and frank consultation supported by effective communication
 - Community is seeking assurances and guarantees that the quality of treated water we can provide is as good, or not better than, the water we currently use
 - Newspoll survey commissioned by CUA in July shows that the people of Sydney are ready and willing to accept recycled water with 71% prepared to use quality treated water in their homes right now and 67.4% accepting the option of using treated water from sewage plants to supplement future water needs
 - Lots of misinformation about water reuse in the community with people understandably leaning towards that they have most recently heard about [e.g. govt's desalination solution]
 - Call on government to conduct effective broad scale community awareness and education campaign, similar to those conducted in other countries where treated water effectively supplies the needs of the community