

# the world water crisis



Director, Prof Peter Cullen.

The world faces a looming water crisis. Throughout the world, waterborne disease takes more lives every year than would three 747 jets crashing each day. In 1991 alone, about 14,000 people died as a result of cholera. While the world's population is expected to rise to 8 billion in the next 25 years, many of our water systems are already overdeveloped or contaminated. Taking more water to sustain our increasing population is not an option in many places. How we handle the conflict between those wanting to use water for drinking, those wanting to irrigate food crops and those who want water retained to maintain the integrity of the rivers themselves, promises to be the biggest environmental issue confronting the next century.

This global conflict is reflected in the squabbling over property rights for water in Australia. Waterborne health problems are apparent to the world in our Aboriginal and remote communities.

We have absolutely no grounds for complacency. But we do have opportunities to provide global leadership. We have a strong water research sector, supported and linked to the water industry through CRCs and through university and CSIRO research groups. The Murray-Darling Basin Initiative, where States are prepared to sacrifice self interest to maintain and benefit the whole Basin is an international example

in organisational arrangements. If we can implement the cap on extraction and implement the other Council of Australian Governments (COAG) reforms in a manner which is both equitable to all interests and sustainable in the long term, we will be providing unequalled global leadership.

Australia is already at the forefront of developing a new paradigm for water management, but we must go further to explore and demonstrate the superiority of key principles, including:

- Water is scarce and valuable and must be treated as both a social and economic resource.
- Ignorance and greed have clearly been shown to degrade water systems. Any strategy for going forward needs to be knowledge driven. Knowledge needs to be widely available to all interests.
- Managing bits of a system normally fails. Management must be integrated across natural resources (forests and parks, agricultural and urban land) and jurisdictions (States and local governments) as well as integrated across the research-policy-implementation continuum.
- Effective management is based on strong community participation. It is clear that all interests have to be included if planning is to provide an agreed vision and management can be

focused to achieve desirable outcomes. We need effective bargaining arenas to allow dialogue to take place. We may need to build the skills of participants to operate effectively in such an environment.

- Ownership and accountability are important but often difficult to achieve in cross-cultural, upstream-downstream situations and across state and national boundaries.

- Evaluation, effective monitoring and assessment is fundamental to knowing if we are going forward. Australia has a number of mechanisms - State of the Environment reports, environmental impact analysis, Land and Water Audits - but none are yet providing the necessary feedback, and all need further development.

Achieving sustainable land and water management and improving the condition of our degraded waterways remains a challenge for the research community, water managers, consumers and our governments. We have made a promising start with the reforms of the last five years. We have many challenges remaining. If we are able to put this jigsaw together we will be the first country to do so and will be able to provide true leadership and perhaps help avert the looming water crisis.

- Peter Cullen