

## World rivers sound warning on climate change

Water, rivers and climate change are inextricably linked, and are ringing warning bells across the world. More than ever before, the global water situation is uniting people in hardship, with billions being spent to protect water supplies, livelihoods and, ultimately, lives.

In Australia, one of the driest continents, a growing population and drying climate is challenging environmental scientists, water managers and politicians to find short and long-term solutions to the growing crisis. And answers are not cheap or easy, often being social problems that require political action.

The statistics alone are frightening. Of the water available for Australians to use, one quarter of the rivers and lakes are already used for drinking, industry and agriculture, and one third of underground water is being pumped to the surface and used for the same purposes.

If you ask Australia's national science agency, the CSIRO, about climate change, the outlook is bleak. By 2030 rainfall on the major capitals (except Hobart) could drop by 15 per cent. According to the 2001 report, *Climate Change Projections for Australia*, Perth could lose up to 20 per cent of rainfall. At the same time, rising temperatures will increase evaporation, further reducing water supplies in dams, rivers and reservoirs.

In another recent scientific report by the same agency, which examines water price implications for each of Australia's main cities and regions in 25 years' time, the real price of water could skyrocket.

The 2006 report, *Without Water: The economics of supplying water to 5 million more Australians*, says if governments do not act to expand water trading and access 'new' sources of water such as building desalination plants, establishing large sewage recycling schemes and making use of storm water, the price of water would increase by between five and ten times in large cities to manage demand.

Internationally, the situation is not better, and in many areas is worse. The United Nations describes the global water situation as a "crisis... essentially caused by the way in which we mismanage water." The U.N. is so concerned about water, it has named 2005 to 2015 as the Decade of Water.

More than 2.7 billion people will face severe water shortages by the year 2025 if the world continues consuming water at the same rate, the United Nations has warned in its annual World Water Assessment Program report.

The looming crisis is being blamed on mismanagement of existing water resources, population growth and changing weather patterns. The areas most at risk from the growing water scarcity are in semi-arid regions of sub-Saharan Africa and Asia.

"Even where supplies are sufficient or plentiful, they are increasingly at risk from pollution and rising demand," says U.N. Secretary General Kofi Annan.

Extremes in water supply deliver unacceptable shocks to the developing world, explains World Bank Senior Water Advisor, David Grey. "Monsoons, droughts, depleted groundwater resources, and typhoons devastate poor countries because they're in too deep a hole economically to reduce their risk," he says.

Grey, soon to visit Australia as a keynote speaker for the International Rivers*symposium*, sees a strong link between the sophistication of a country's water management and its economic health. He says investors are avoiding countries with unpredictable food production, health problems related to poor water quality, and unreliable electricity supplies.

"Investment doesn't flow to places where catastrophic water events cause huge social and economic problems and large-scale losses of life," says Grey.

Like many international water experts, Grey believes Australia must take a lead role with international assistance, training and capacity building for river management, particularly in the Asian Pacific region. He's impressed by organisations such as the International Riverfoundation which has set up 'twinning' programs to help developing countries better manage their river catchments.

Partnerships and community action are critical to managing water and protecting rivers. Many will be highlighted at the coming International Rivers*symposium* in Brisbane in September.

The theme, '*Managing rivers with climate change and expanding populations*' will investigate the challenge of meeting human needs for water under changing climatic conditions. It's an opportunity for hundreds of people to share ideas, case studies and examples on how to tackle threats to rivers and catchments.

"Local communities can do amazing things," says Rivers*symposium* chair Professor Paul Greenfield of the University of Queensland. "There are many positive stories showing how science, public policy and community action are addressing river and global warming issues."

"For example, the Bulimba Creek Catchment Association, typical of many local conservation groups throughout Australia, has an outstanding record of revegetating bushland and improving water quality in a network of Brisbane creeks," says Professor Greenfield.

"The association coordinates Waterwatch, supports local Bushcare groups, provides training programs to volunteers, and involves community groups in practical conservation projects."

"Since 1999, the group has involved the community in rehabilitating 46 sites within the catchment, and four sites outside it with support from Landcare, the Natural Heritage Trust and local leaders."

Each year, the symposium highlights new international and Australian industry practices, government regulations, technology and community education programs to sustain river water supply and quality. The four-day event also includes the prestigious International and National Thies River*prize*.

The prize, regarded as the 'Noble prize for saving rivers', recognises outstanding achievements in river conservation and management. There are overseas finalists from U.S.A., China, and Canada vying for the \$225,000 International Thies River*prize*. There are also nominations from Australia competing for the \$75,000 National Thies River*prize*.

While Australia may not yet be experiencing some of the more dramatic and life threatening situations as many river systems overseas, the clock is ticking, particularly in relation to the current drought and low levels in large dams that supply water to major population centres.

The 9<sup>th</sup> International Rivers*symposium* will be held at Brisbane's Convention & Exhibition Centre from 4 -7 September as part of the city's annual River*festival*. Visit: [www.riversymposium.com](http://www.riversymposium.com) and [www.riverfestival.com.au](http://www.riverfestival.com.au)

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