

More reliable streamflow forecasts months ahead

Water managers and planners have a new tool to help them understand how much water is likely to flow into rivers and catchments up to three months in advance.

The Seasonal Streamflow Forecast Service has been developed by CSIRO and the Bureau of Meteorology in collaboration with water managers.

Dr Rob Vertessy, Bureau of Meteorology Deputy Director (Climate and Water), says the service should help water managers make decisions about seasonal water allocation outlooks, reservoir operations, environmental flow management and water markets.

‘Although there is a lot of water in some areas of Australia at the moment, water



The new streamflow forecasting service will allow planners to better manage water resources in wet and dry times. CSIRO

availability will continue to vary in the future as demand continues to grow and climate

inevitably varies,’ he says. ‘This poses major challenges for water resource management, so the need to accurately monitor, assess and forecast the availability of water resources is more vital than ever.’

The service will initially focus on 13 river sites and eight storages in the south-east Murray–Darling Basin, extending to other locations over the next 12–24 months.

The forecasting tool, which has been verified against observed streamflows, incorporates information on current catchment conditions, and how climate patterns such as El Niño cycles influence catchment runoff.

The free monthly Seasonal Streamflow forecasts will be posted on the Bureau’s website at www.bom.gov.au/water/ssf

Ceiling fans cut office aircon loads

Ceiling fans in office environments can reduce reliance on air-conditioning and considerably reduce energy consumption, according to Cairns-based engineering firm MGF Consultants.

‘Having ceiling fans on medium all day allows us to run our air-conditioning at a temperature of 25.5 degrees rather than the typical 23.5 degrees most office environments would favour,’ says Mr Carl Gray, the company’s lighting and sustainability consultant.

Mr Gray adds that ceiling fans are becoming popular in ‘green’ buildings, which often have higher ceilings to allow more natural light.

‘The sustainability message is really getting through and we are returning to many design concepts that can be traced back to the 1930s, with higher ceilings, more natural light and less fluorescent lighting,’ he says.

Mr Philip Allen, Managing Director at Hunter Pacific, an Australian fan and light designer, says ceiling fans reduce energy costs and improve comfort levels.

‘Ceiling fans act to de-stratify the air in a room and break up hot and cold pockets of air that form in corners and along ceilings and floors,’ he says. ‘As a result, air-conditioner thermostats can be set at a level requiring less cooling or heating, so less energy is used.’

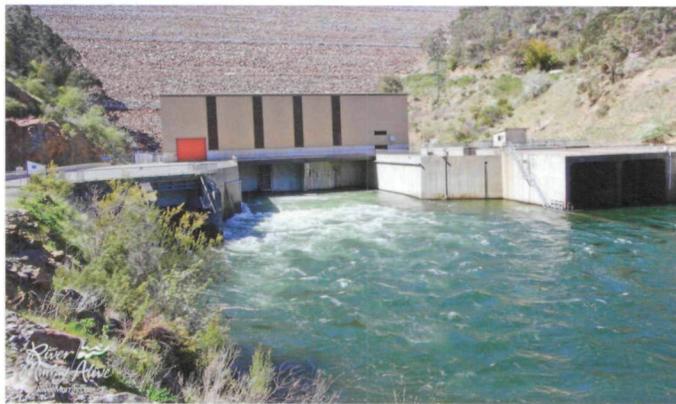
‘Ceiling fans are invaluable in winter also. When combined with heating, they keep the warm air circulating throughout the room rather than accumulating on the ceiling, resulting in lower energy consumption.’

Call for more sustainable water supply strategies

World experts at a recent UNESCO workshop on ‘Challenges and Solutions for Planning and Operating Dams for Optimised Benefits’ have called for better leadership and more investment in sustainable dam siting, design and operations around the world.

‘There are other ways of operating dams and planning for dams that are more sustainable than what we have done in the past and are still doing,’ says Assoc. Prof. Robyn Watts from Charles Sturt University’s Institute of Land, Water and Society. ‘For example, through the application of innovative management approaches, it is possible to optimise hydropower, flood risk management, ecosystem protection and food security objectives.’

Assoc. Prof. Watts adds that dams cannot be considered in isolation and solutions



The Murray–Darling Basin Authority has been working towards making the operation of Victoria’s Dartmouth Dam more sustainable. MurrayRiver.com.au

for improved water planning and management need to be implemented at the catchment scale.

‘An individual dam is only one component of a larger water management system,’ she says.

Mr Ross Young, Executive Director of the Water Services Association of Australia, says that while dams are currently

a valuable and relatively cheap source of water compared to recycling and desalination, ‘no water supply option should be automatically eliminated – or acted on – until the social implications and environmental consequences are considered and its merits assessed on a broad scale.’

‘A blanket ban on new dams is not good policy,’ he says.

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