

**The Australian - Bumper year for science**

Like Ald Lang Syne, alcoholic excess and New Year's resolutions, annual "best of" lists are a tradition when December races to January (writes Science editor Leigh Dayton). Not to be left out of the fun, I've a few suggestions for science. Now, this is a completely eccentric list, one based largely on my perception of science as a driver of current events. That's as opposed to the usual "so-and-so reported that..." kind of offering. Still, I doubt there'll be much dispute with my claim that in 2007 climate change was science's alpha and omega. And I literally mean alpha and omega. The alpha was the first volume of the fourth assessment report by the UN Intergovernmental Panel on Climate (IPCC) released in February. The Big News was, of course, the IPCC's conclusion that human activity is almost certainly turning up the global thermostat and that it's time to get serious about cutting emissions of carbon dioxide and other greenhouse gases. Omega? Why, the Bali conference which ended last weekend in spectacular style. The resulting "Bali road map" will guide the next two years of negotiation for a new global climate change agreement, post-2012 and post-Kyoto. The road map will undoubtedly undergo plenty of folding, scrunching and smudges. Embryonic stem (ES) cell science also went Big Time this year. There were the usual sprays from conservative religious and political thinkers opposed to the research, full stop. But things cranked up in June when The Australian reported that human therapeutic cloning was one step closer. US researchers announced at an international conference held in Cairns that they'd cloned primate embryos and harvested ES cells from them. They published their findings recently to a media frenzy. Then, in September, Australia's most famous stem cell scientist, Monash University's Alan Trounson, was appointed to head the California Institute for Regenerative Medicine, the state's \$US3 billion research effort. Australian scientists rubbed their hands in glee. Finally – drum roll – two separate teams, one from Japan and the other at Wisconsin, announced last month that they'd made ES cells without using human eggs or embryos. They added four genes to a Petri dish containing ordinary skin cells, and voila. If the technique pans out, it's a whole new world for stem cell science. Speaking of new worlds, sky watchers got hot and bothered this year when European astronomers announced they'd discovered a new piece of cosmic real estate suitable for life in the Milky Way galaxy. The so-called "super-Earth" is in the nearby constellation Libra. Of the 229 – and counting – planets found beyond our solar system GL581c is within the "Goldilocks Zone" where temperatures are "just right" for water. Where there's water there may be life, claim astrobiologists keen to locate ET or even a neighbourly green slime mould. Other small things hit the headlines in 2007, from viruses that give horses the flu to microbes supposedly ported to the US by Australian honeybees where they allegedly killed off zillions of Yankee bees. Our bees were proven innocent, but our beekeepers and scientists wait in vane for an apology. All up it was a bumper year for science. Picking the winners? Well, it was tough and my list is probably not your list. So what's on your list? "Best of" suggestions gratefully received right here.

**Greenpeace rebukes PM on diplomacy**

Greenpeace has joined the coalition in criticising Kevin Rudd's approach to anti-whaling monitoring. It also says Japan is planning a "super" whale hunting vessel. Greenpeace today agreed with the federal Opposition's contention that Mr Rudd should have spoken to his Japanese counterpart about his plans to monitor the Japanese whale hunt. Opposition environment spokesman Greg Hunt said Mr Rudd had been diplomatically remiss in not speaking to anyone in the Japanese government about his Southern Ocean plan. Mr Hunt said Mr Rudd should call Prime Minister Yasuo Fukuda to explain the move. Greenpeace Australia Pacific CEO Steve Shallhorn told reporters "head of government" communication was vital, as it appeared Japan was strengthening its whale hunting capacity. "It is appropriate for the Australian prime minister to pick up the phone and talk to the Japanese prime minister," he said. "I think that the point could be made even more forcefully about Australia's opposition to whaling in the Southern Ocean if it is a head of government to head of government communication." Mr Shallhorn said Japan was planning to build a new whaling factory ship, with three times the capacity of its current whale hunter, the Nisshin Maru. "Greenpeace has discovered that the Fisheries Agency of Japan plans to replace the aged and ailing Nisshin Maru factory ship with a proposed 'super' whaling factory ship," he said. Mr Shallhorn said the new ship, with a 6,000 tonne whalemeat payload, committed Japan to whaling for another 40 years. He remained cautious of reports Japan would abandon plans to kill up to 50 humpback whales in the Southern Ocean this summer. US Ambassador to Tokyo, John Thomas Schieffer, was reported overnight as saying Japan was on the verge of agreeing to abandon the humpback kill because of international concerns. "It is yet to be confirmed by the Japanese government," Mr Shallhorn said today before Tokyo harpooned the idea. Japan said later it had made no agreement to stop hunting humpback whales, denying the comments from the US ambassador. "There is no (new) written, diplomatic agreement between Japan and the United States over the current specific whaling mission ... and whaling in general," said Tomohiko Taniguchi, spokesman for the Japanese foreign ministry. *AAP*

### **Garrett ticks bay dredging**

Federal Environment Minister Peter Garrett has given the green light to the contentious dredging of Melbourne's Port Phillip Bay after ordering a number of new safeguards. In one of his first major decisions as a minister, Mr Garrett approved the \$763 million project just days after his Victorian counterpart, Gavin Jennings, gave the go-ahead, clearing the way for work to begin next month. As part of Mr Garrett's conditional approval, the manager of the project, the Port of Melbourne Corporation, must meet 16 additional requirements. Among them are demands that \$500,000 be put aside for the protection of sensitive wetlands and further amounts be reserved to protect migratory birds and fish common to the bay. The corporation will dredge 23 million cubic metres from the bay to allow access to bigger and heavier ships.

### **CSIRO cottons on to water damage**

Organic wheat farmer Bryce Woods has watched in despair as the wetlands that once flourished on his property in northern NSW have been reduced to a barren landscape, dotted with dead trees and almost devoid of bird life. The water from the Gwydir River that should be getting to his property, and flooding his wetlands, has failed to eventuate for the past four years. But the drought is only part of the story. The other part can be told through the figures in a report released yesterday, showing that more than 40 per cent of water is removed from the river for use in agricultural irrigation, mainly by the cotton industry. The reduction in the Gwydir's flow is potentially disastrous for environmentally significant wetlands, the CSIRO report says. Mr Woods has lived for most of his 31 years on the Gwydir, and said it had been "shockingly" over-allocated for as long as he could remember. "It's a free-for-all," he said. He said the consequences of the over-allocation had been devastating for farmers, for the environment and for the community. "Out here, water is money," he said. "But the natural water course has been diverted for decades now, and it is of benefit to a small few, rather than the farming community in general." Mr Woods said he recognised the importance of irrigators to the state's coffers, but said the farming balance had swung too far in their favour. "We have to find a better balance between irrigators and non-irrigators. At the moment there is no balance." Mr Woods welcomed the recognition that the over-allocation of the Gwydir had led to serious consequences. Asked if he thought a fairer outcome for the general farming communities on the river was possible, he was cautiously optimistic. "Yeah, things can be turned around, absolutely," he said. "It can never, ever be back to where it was but with levies and channels shut down correctly, and if the situation is properly policed, then the area can flourish again." The CSIRO study found that a "very high proportion of water", 41 per cent, was taken from the Gwydir River, hurting Gwydir wetlands and reducing flows downstream in the Murray-Darling system. The Murray-Darling Sustainable Yields project found climate change and increases in farm dams and the amount of ground water extracted could further reduce the Gwydir by 8 per cent by 2030. The project has found the average volume of water flowing into the Gwydir wetlands has been reduced by 42 per cent, resulting in "stressed ecological conditions of the wetland". The wetlands are an internationally important waterbird habitat for species such as the straw-necked ibis, rufous night heron, the magpie goose, blue-billed duck, brolga, painted snipe and jabiru. The project, which measures water flows into the Murray-Darling river system, found 37 per cent of the flow down the neighbouring Namoi River was used, and that climate change, farm dams and groundwater use could reduce the river by a further 11 per cent. The consequences would be felt through the river system: the Gwydir and the Namoi together contribute 35 per cent of the flow down the Darling River, which flows into the lower Murray. The water diverted is used for irrigated crops, mainly cotton.

### **Wong backs away from irrigator loans**

Climate Change Minister Penny Wong has refused to commit to providing low-interest loans to desperate irrigators in South Australia's Riverland. But in a visit to Renmark to meet irrigator groups and local government leaders, she said the federal Government would consider all options put to it. The South Australian senator's appearance in the Riverland, where fruit and winegrowers face water shortages, has buoyed the community. South Australian Murray Irrigators director Tim Whetstone said: "It's a breath of fresh air within the community and for the irrigators. We've had so little representation up here to look at our needs and the pressure that we're facing. "The last government announced a water plan and then did nothing about it. They put it on the mantelpiece, and that's where it stayed." Senator Wong told those she met yesterday her task was to find long-term solutions for the Murray-Darling Basin. She said her visit five days after the Bali greenhouse conference showed the priority she gave to hearing from the people who were directly affected. "I wanted to not just speak to the scientists and experts, but hear from the people," she said. The low-interest loan scheme for irrigators to buy water from upstream farmers was championed by South Australian Premier Mike Rann. He told the Howard government it needed to free up \$250million immediately for the scheme. "We're willing to consider any proposals put to us, but we need to ensure we take an approach that can be delivered nationally and we obviously want to make sure we don't do anything that's simply going to increase the price of water," Senator Wong said.

Mr Whetstone said irrigators sought to make the new Climate Change Minister aware of the strain the drought had placed on growers, families and communities. "Really, we're under siege at the moment with allocations that are not sustainable," Mr Whetstone said. "We're trying to highlight with the minister to let permanent plantings die is not only a huge loss to the economy, but it's a huge loss to communities and to the specialist industries that we support."

#### **Adelaide Advertiser - Wong in charge of Murray deal**

South Australia has assumed leadership of national water and climate change reforms in a symbolic move by Prime Minister Kevin Rudd, who also will seek to broker peace between SA and Victoria on the River Murray. At yesterday's historic all-Labor Council of Australian Governments meeting, new Climate Change and Water Minister, SA Senator Penny Wong, was announced as co-chairman of a national working group on climate change and water with Premier's Department chief Warren McCann. Acting Premier Kevin Foley said Mr Rudd would hold talks with Premier Mike Rann and Victorian Premier John Brumby. "Ten billion dollars that John Howard committed to the Murray has been adopted by the Rudd Labor Government but there's an impasse between Victoria and SA," he said. "Importantly, out of today, we're going to get the Prime Minister to meet with the respective premiers to break what has become an impasse and that's a good outcome for SA." Victoria has refused to join the \$10 billion national water plan giving the Commonwealth control of the Murray or to release a reserve supply of water for SA. Senator Wong, who already has emerged as a key senior figure in the Rudd Government, will attempt to steer the effort towards a comprehensive and co-operative approach to "long-term adaptation to climate change." The working group she will lead is one of seven set up by the meeting to look at ways to reform fundamental aspects of the Australian economy. There also was a new federal commitment yesterday of two parcels of \$50 million each for alleviating elective surgery waiting lists and to address drug and alcohol problems in the nation's indigenous community. The new money to address indigenous substance abuse problems could be coupled with tough new laws which could result in complete prohibition of alcohol in some communities in Queensland. The climate working group will manage competing interests in the contentious water reform area including irrigation infrastructure, the development of water markets, and a stocktake of urban water supply. Other groups will look at education, health, infrastructure, housing, business deregulation, indigenous affairs, and skills training. The emphasis is on building the productive capacity of the economy, addressing the inflationary threat, and on removing impediments to economic growth. Mr Rudd said COAG would meet four times next year rather than the usual once a year. The Melbourne meeting, the first COAG to be held outside of Canberra, failed to deliver immediate concrete outcomes or to live up to the expectations established by Mr Rudd during the election campaign. State and territory leaders emerged all smiles from the four-hour meeting at the Victorian Governor's official residence in Melbourne's leafy Botanic Garden. While Mr Rudd's election commitment to take over hospitals if the states failed to reach certain benchmarks remained in place, there was no discussion of it at the summit. "We're in the co-operation phase," Mr Rudd explained after the meeting. In other aspects of the meeting, states have agreed to conduct an immediate audit of schools to determine the most needy. That audit is to be completed by mid-February as a precursor to the roll-out of federal Labor's \$1 billion computers in schools policy. Mr Foley said the summit was productive and that for the first time, the Federal Government was prepared to discuss actual service delivery issues like hospital waiting lists. He denied that the lack of any formal attention to the Murray Darling Basin represented a snub for SA. "The important point here is that the Murray has been dealt with at previous COAG meetings," he said. However, Opposition Leader Martin Hamilton-Smith said it was a disappointing result. "I am very disappointed that the acting Premier has been unable to get the River Murray to the top of the agenda," he said. He told *The Advertiser* the summit had produced more talk and politics when urgent action was needed to save the river.

#### **Lights out to save planet**

Adelaide will join Sydney, Brisbane and Melbourne in turning out lights for an hour next year to raise awareness of climate change. Earth Hour was founded by WWF and is a global initiative in which street and building lights in major cities are turned off for 60 minutes to reduce greenhouse gas emissions. The energy associated with lighting can cause up to 50 per cent of household emissions and more for commercial buildings, which often leave lights on at night. "Council is now encouraging city businesses and residents to get behind this initiative and join with us in switching off their lights on March 29, 2008," said Lord Mayor Michael Harbison. He said simple things everyone can do around the house and at work could make a difference. "In switching off the lights in the city for an hour, we are hoping we might encourage individuals to turn off their lights and other electric equipment in their homes and businesses," he said. "Not just for Earth Hour, but every day we need to look at ways we can save energy. Other cities which have committed to Earth Hour next year include Copenhagen, Chicago and Manila.

### **Saving a fish on the edge**

Farmers are being recruited to save two fish species in danger of becoming extinct because of the drought. Fifty southern purple-spotted gudgeons have been taken from the lower reaches of the River Murray and its backwaters and are being stored by scientists in fish tanks to prevent them dying. Three wetland refuges for the Murray hardyhead are also drying out fast, leaving it at risk of being wiped out unless water levels can be restored. The scientists, from the Waterfind Environment Fund, need farmers to volunteer to house the gudgeons in dams. They also need donations of stock or domestic water to top up water levels in wetlands. Fund chief executive Dr Mark Siebentritt said the emergency plan was the last chance to save the species before water levels fell further during summer. He said the last remaining wetland refuge for the gudgeon in the Lower Murray had already dried out. "These populations are unlikely to survive this summer without urgent action," he said. "In the past, species could bounce back from drought because of the large number of wetland refuges but the wetlands are all disappearing and the picture is bleak. "We are pulling out all stops and thinking outside the square." The southern purple-spotted gudgeon was believed to have become extinct in 1973 until the small population was found in 2002. Less than 100 fish are believed to be alive. "Once we have successful breeding we can reintroduce these fish to the wild when the flows return, that's the ultimate aim," Dr Siebentritt said. Dams need to be fed by springs to ensure they do not dry out during summer and must not have any other fish species living in them. Farmers can also donate water from stock and domestic supplies to keep the Murray hardyhead alive in the wetlands. Dr Siebentritt said only small volumes of water were needed to keep the species alive. A Native Fish Recovery Fund is also being established to raise \$150,000 to fund a specialist breeding and return-to-the-wild program.

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### **FarmOnline**

#### **CSIRO catchment reports paint bleak picture for NSW cotton**

The CSIRO has released two more of its catchment reports as part of a project assessing the health and future of the Murray Darling Basin. It has found water in the Namoi and Gwydir catchments in northern NSW, home to major irrigation areas and the engine room of the cotton industry, is likely to become more scarce. The report says the best estimate presented for the future of the Namoi region indicated a 5pc reduction in water availability, with an 8pc reduction in end-of-system flows. Rainfall modeling for the region indicates falls are likely decrease in the future. The best estimate is for a 6pc reduction in annual runoff. But the result takes into account a wide possibility for future weather patterns to provide a range of estimates for annual runoff, ranging from 31pc less water to 39pc more. Meanwhile, to the north in the Gwydir catchment around Moree, the report painted the picture of a similar situation. "Under the best estimate 2030 climate there would be a 10pc reduction in average surface water availability, a 6pc reduction in end of system outflows and an 8pc reduction in diversions," the report states. Rainfall modeling likewise says runoff will more likely decrease than it will increase. "The best estimate 2030 climate scenario is a 9pc reduction in mean annual runoff," it says. "The extreme estimates from the high global warming scenario range from a 28pc reduction to a 31pc increase in mean annual runoff." SOURCE: CSIRO and *FarmOnline*.

#### **Rudd takes message control to new highs**

##### **Is this the death of democracy?**

Some of Australia's major institutions - including the CSIRO - will have their media releases vetted by the Rudd Government to make sure they reflect Labor's "key messages". A directive was issued this week by the Department of Innovation, Industry, Science and Research to about a dozen statutory agencies. Recipients include the CSIRO, the Australian Institute of Marine Science, the Australian Nuclear Science and Technology Organisation, the Australian Research Council, the Co-operative Research Centres and Invest Australia. Even the Questacon science museum in Canberra was sent the directive. It says the Prime Minister's office has instructed that "all strategic media releases which relate to the Government's key messages" must be forwarded to the department, which will then submit them to the office of Minister Kim Carr. If necessary, Senator Carr would send the release to the Prime Minister's office. The department would contact the agency "regarding required changes". The directive says releases "of a more pedestrian nature" need not be vetted but anything to do with climate change, industrial relations policy, education and science reform, tax policy, national security and health must be submitted. It has caused concerns within the statutory authorities, which were never subject to such conditions under the Howard Government. One former Liberal Minister called the Rudd Government "control freaks". "The CSIRO sent out a lot of things that were quite contrary to our position on climate change," he said. "We just gritted our teeth and wore it." A Government spokesman said vetting the releases was a temporary measure until ministerial staff were in place. The secretary of the department, Mark Paterson, said there was nothing unusual about the directive, especially in the early days of a new government.

Only 30pc of the public service had experienced a change of government and a number of agencies had sought "guidance on how to deal with media release issues", he said. Mr. Paterson said statutory authorities should not be immune. "There's a mindset with some that statutory authorities are independent for all purposes. They're not," he said. "They are created to undertake a particular task. That doesn't give them free range or nor should it." SOURCE: *Sydney Morning Herald*, a Fairfax Media publication.

#### **Old Govt to review its controversial land clearing laws**

The Queensland Government is asking landholders feedback on the administration of its controversial vegetation management laws, but it is not revisiting the clearing bans. Minister for Natural Resources and Water Craig Wallace this week announced the review, which will deliver on one of the government's Blueprint for the Bush commitments. The first phase of the review will involve a survey by an independent consultant, Lloyd Consulting. It will be distributed to a range of landholders, developers, local governments and conservation group members through peak organisations. "The review will investigate if the Vegetation Management Act is clear to people," Mr. Wallace said. "It also will help the department to streamline its processes, including vegetation clearing applications. "I want to ensure that, as far as the law allows, the Department of Natural Resources and Water is helping people to do things not telling them why they can't be done. "We want to provide a more efficient service that is more customer focused." But the Vegetation Management Act and its bans on broadscale land clearing are outside the scope of the review. The survey was developed in conjunction with a reference group comprising members from AgForce, the Queensland Farmers' Federation, Local Government Association of Queensland, Urban Development Institute and Queensland Conservation Council. SOURCE: A full report on the review will appear in *Queensland Country Life*.

#### **Vic Govt pumps \$1 billion into irrigation modernisation**

The Victorian Government has created a new State-owned entity to implement and manage its \$1 billion investment in modernising the Goulburn-Murray Irrigation System. Water Minister Tim Holding said the Northern Victoria Infrastructure Renewal Project would begin work immediately to undertake the biggest upgrade to the system's infrastructure in its 100-year history. "A world-class irrigation delivery system will be created, helping to reduce losses of around 800 billion litres of water each year through system inefficiencies and ensuring that the region will continue to be prosperous and competitive," Mr. Holding said. The Victorian Government has adopted 50 of the 52 recommendations from the Food Bowl Modernisation Steering Committee's final report, but the Victorian Farmers' Federation says the Government has not gone far enough. VFF president, Simon Ramsay, says the government's announcement will set the foundation for the rolling out of infrastructure funds in the Goulburn Murray Irrigation District, but is disappointed that the two recommendations not adopted were so significant. "The Steering Committee recommended that headworks, and where appropriate delivery charges, be applied to the environment's share of the water savings," Mr. Ramsay said. "The failure to adopt this recommendation maintains the inequity of irrigators facing higher charges than they should and paying for the costs of environmental water. "The government's failure to make recommendations on the distribution of savings in excess of 225 gegalitres will only raise suspicion in the minds of irrigators. "The issue is clear cut, and these savings should be distributed equally between the environment and irrigators. "At a minimum the Minister should rule out taking them out of the Murray Darling Basin." But Mr. Holding said the Government has made no decision on the distribution of savings in excess of 225GL long-term average and will only do so when the level of savings can be verified as exceeding 225 billion litres from Stage 1. SOURCE: *Stock & Land*.

#### **Heavy rains 'not drought-breaking'**

The recent heavy rains experienced across three states were not drought-breaking but were "very positive", chief executive of the Murray Darling Basin Commission Wendy Craik said. However, she said "well above average" rainfall was needed for some time to bring inflows into the Murray River back to average. "We've seen in the last month a bit of a change in weather patterns where we've been getting these storm events coming through and if we get that sticking around until autumn, well, they're not breaking the drought but they are putting a bit of rain on properties, they are filling tanks, it is filling dams and it reduces evaporation," she said. Dr Craik said a major problem at the moment was the extreme dryness of the catchment area, along with high temperatures which meant only a small amount of the rain that fell made it into the river system. "The catchment is like a very dry sponge," she said. "You need a lot of it [rain] before it actually starts flowing out of the sponge." There was widespread rain throughout South Australia, New South Wales and Victoria in the past few days, with between 25mm and 50mm falling in Adelaide. "We need lots more," Dr Craik said. "We need these sorts of events to continue for quite some time and to be sustained in terms of volume and timing. We really do need an incredible amount of inflow." SOURCE: AAP

### **Heavy rains prompts irrigation review for NSW farmers**

NSW farmers will feel the benefit of recent heavy rains as the State Government moves to review irrigation restrictions and water allocations. At the North West NSW town of Coonamble 171mm of rain fell during the 24 hours up to 9am Saturday, which the Bureau of Meteorology said was more than the town's three-month average. While the heavy rains caused the closure of some roads and left a handful of rural residents isolated, Water Utilities Minister Nathan Rees said the rain was a much welcomed Christmas present for farmers, graziers and other inland water users. "The heavy rains are expected to provide good flows in the Barwon-Darling River system, as well as the Gwydir, Namoi, Macquarie, Lachlan, Murrumbidgee and Murray valleys," Mr. Rees said yesterday. "These flows bring significant environmental benefits, allow extra water to be made available for irrigation and mean we will be able to relax some existing restrictions. "The flows will also boost the water supply to the towns, regional centres and industry along those rivers." Mr. Rees said the rains had guaranteed the water supply of Broken Hill in the State's far west until late 2009, with significant flows into the Menindee Lakes expected during the next five weeks. "Flows into the Menindee Lakes should mean releases can be made to the Darling River downstream of Weir 32 at Menindee, replenishing the river and providing water for stock and domestic users, as well as for high-security irrigation," he said. In the State's Central West, the Government will monitor flows into the Burrendong and Wyangla dams before deciding on the increase in allocations. More water is expected to be made available also to users in the Murray and Murrumbidgee valleys.

SOURCE: AAP

### **Salinity an increasing risk in SA's Murrayland**

Murraylands irrigators will stop watering if the Murray Darling Basin Commission's warning of an increased threat of high salinity in the State becomes a reality. High salinity will mainly affect South Australia, according to the MDBC River Murray System Drought Update No. 11. "There remains an elevated chance of algal blooms along the entire Murray River and an increased likelihood of high salinity in South Australia," the report states. At Murray Bridge the salinity level is already at 590EC (electrical conductivity), and the average since August has been 540EC. Lower Murray Irrigators chairman Richard Reedy said the salinity levels are predicted to hit 1200EC by early next year. He said if this happens many Murraylands irrigators would stop watering their pastures. "It (saline water) is too damaging to the pasture mixes, it would just compound the situation," he said. According to Mr. Reedy, the current salinity levels in the lower reaches of the River Murray are not affecting irrigators too much. However, in Lake Albert salinity levels are currently at 3100EC, which is well above the average since August of 2630EC. "The lakes are rather doomed ... sadly they can be looking at years (to recover)," Mr. Reedy said. SOURCE: *Murray Valley Standard*, Murray Bridge, SA.

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### **Adelaide Advertiser**

#### **Koala death trap**

Drought is forcing thirsty koalas deep into the suburbs and Adelaide backyards, exposing them to life-threatening risks. The Department for Environment and Heritage is warning residents the suburb-roaming koalas – more than ever before – enter a danger zone of pools, pets, cars and poisons in their search for much-needed water. One koala drowned in a swimming pool this month, while others have been spotted drinking from dog bowls and fish ponds. The department is warning people not to approach the native animals, saying they are likely to scratch and bite to protect themselves. The department's biodiversity conservation manager for Adelaide, Dr Adrian Stokes, said the number of reports of koalas found in the suburbs had increased significantly compared with previous years. The department has started a project to measure and investigate trends in the distribution and abundance of koalas in the Adelaide and Mount Lofty Ranges region. Dr Stokes said koalas were known to come down from the trees for a drink in hot weather, when they were not able to obtain enough moisture from gum leaves. "There's some evidence to suggest they will drink more in dry conditions," Dr Stokes said. "Whether that's actually because moisture content drops in gum leaves is hard to say, but there are other factors. In dry conditions they need to go further to find water." There may just be fewer waterholes in the foothills, areas on the edge of the suburbs, so koalas have to roam a bit further looking for a drink, he said. It was only when Belair resident Holger Kohler found a koala in his backyard that he understood how the netting over his fishpond had buckled. "Maybe there's not enough new green growth for them to get their moisture," he said. "From where I was standing, the koala looked big and healthy, just very, very thirsty." The koala was able to climb over the netting to reach the fresh water. It spent "a good half hour" drinking. Call the Koala Information Service on 8273 5110 for assistance with sick or injured koalas.

#### **Reuters - Beijing to switch to cleaner fuel:**

Beijing (Reuters) - China will phase in cleaner motor fuel in Beijing in the next two months while keeping pump prices unchanged, a local newspaper said on Tuesday, in a move to clean the capital's smoggy skies ahead of the Beijing Olympic Games.

Oil product wholesalers and retailers will be required to start supplying gasoline and diesel fuel conforming to the cleaner Euro IV standard from January 1, and complete a replenishing of their tanks with the new fuel by the end of February, the Beijing News said. The cost of Euro IV fuel, which permits 50 parts per million (ppm) of sulfur in gasoline, is 0.4 yuan per liter higher than Euro III fuel, which permits 150 ppm. The higher cost for Euro IV standard fuel will not be passed on to consumers in the form of higher prices, however, as the National Development and Reform Commission has not granted the necessary permit, the Beijing News said, quoting an official with the Beijing Administration for Industry and Commerce. (Reporting by Jim Bai; Editing by Edmund Klamann)

27<sup>th</sup>

### **Adelaidenow.com - Business alarm on water**

South Australian businesses say water infrastructure is a "major concern" for the state's economic future, preliminary findings from a survey show. Business SA, the state's foremost business lobby group, also believes public-private partnerships should be used to build a desalination plant for Adelaide, as government ownership "invites inefficiency and a waste of taxpayer dollars". Chief executive Peter Vaughan said almost 80 per cent of participants in Business SA's yet-to-be-released Survey of SA Business Expectations for the December quarter indicated increased concern about water issues. "A staggering number of businesses are seriously concerned about current water infrastructure and attention must continue to be placed on solving the looming water crisis," he said. "Improved infrastructure must support the growth of South Australia and the desalination plant should remain a priority. Business SA believes that concerns over the state's infrastructure should be primarily addressed by the private sector, because it is generally more efficient at developing and operating infrastructure." Business SA is nearing completion of a review of public-private partnerships in water, health and transport. The State Government has yet to settle on a funding solution for building a desalination plant for Adelaide, while it said recently that electrification of Adelaide's ageing diesel rail system was unlikely to be funded under a public private partnership. A report outlining the most appropriate procurement model for a desalination plant, prepared by business consultants KPMG, is understood to have been passed to the government but a decision was yet to be made on its recommendations. Mr Vaughan said SA's infrastructure had been neglected for decades because of the emphasis governments had placed on reducing debt. "A public private partnership is not privatisation and there are sound reasons for implementing them, including efficiency in development and operation and the ability to maintain good credit ratings, while involving comparatively little debt spending and risk taking," Mr Vaughan said.

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### **News.com.au – SA's Low Emissions Ranking**

South Australia has the second lowest greenhouse gas emissions per capita in the nation, Federal Government figures show. The Australian Greenhouse Office's most recent figures show the state produced the fewest emissions of any mainland state, of 28.1 million tonnes. On a per capita basis, South Australians each emitted 20 tonnes of greenhouse gases in 2005. Tasmania was the only state to generate fewer emissions than SA, of 11 million tonnes; the Northern Territory emitted 13.5 million tonnes and the Australian Capital Territory emitted 1.1 million tonnes. However, on a per capita basis, Tasmanians each produced 22.6 tonnes of greenhouse gases. Residents of the ACT produced the lowest level of greenhouse gases in Australia of 3.4 tonnes each. Conservation Council of South Australia campaigner Jamnes Danenberg said the state's position was a good sign, but SA could still go one position better. He said the proposed expansions of the Olympic Dam mine and Mount Bold reservoir would lead to a surge in greenhouse gas emissions in the near future, which would affect the state's standing. However, residents could help to offset that effect by reducing emissions around the home. "It's something all of us can aspire to and work towards – it would make a wonderful New Year's resolution." Despite the low level of Northern Territory emissions, the low population led to it's recording the highest emissions level per capita in Australia, of 66.5 tonnes each. Queenslanders emitted the second highest level of 38.9 tonnes and Western Australians the third highest of 33.1 tonnes. The high populations of Victoria and New South Wales helped to reduce the contribution per capita, despite their being in the top three worst greenhouse gas producers. The highest emissions level of 158.2 million tonnes was generated by New South Wales; Victoria was third with 121.9 million tonnes.

### **Heraldsun.com.au - Environmental Protection Authority alert on dirty Yarra**

The Yarra River is often seething with bacteria, making it unsafe for swimmers, rowers and kayakers, according to EPA data. And according to Environmental Protection Authority figures, the filthiest section of the river runs right through the city's premier tourist strip, from Federation Square to Docklands. EPA data shows E coli readings for the Yarra's city section were 25 times above safe levels at least three times this year. Even popular up-river swimming spots, including Warrandyte and Launching Place, exceeded safe levels for months at a time.

Leaking septic tanks and storm water flowing into the Yarra are among the causes of soaring bacteria levels in the river. Users exposed to contaminated water, which could contain other organisms in addition to E coli, risk contracting viruses and infections, including gastroenteritis, diarrhoea, vomiting, respiratory diseases and hepatitis A. The EPA warns the risk of infection is higher if the water is swallowed. Melbourne Water spokesman Ben Pratt said 29 sites identified as sources of faecal contamination had been fixed or were having further testing, and investigations had started at another 20 sites. State Opposition water spokeswoman Louise Asher said the Yarra was in a disgusting condition. "People will be enormously concerned . . . the river is iconic, but people are risking their lives," Ms Asher said. However the EPA and Environment Minister Gavin Jennings assured river users the Yarra was safe -- except when heavy rain flushed out dirty drains. EPA spokeswoman Ruth Ward said: "Water quality in the Yarra is generally suitable for recreational uses that are commonly undertaken, such as rowing, kayaking and canoeing, except in the days following heavy rain." Mr Jennings said that work was continuing to clean up the Yarra. "We are continuing to track down and fix sources of pollution as part of a long-term plan to improve the health of the Yarra River," he said. Last year the State Government announced a \$600 million Yarra Action Plan to clean up the river and its tributaries, and upgrade sewerage facilities in Melbourne's growth corridor. Last year Yarra Valley Water connected just 715 of 18,500 properties to sewerage services. Ms Asher said the Government had identified a solution to the problems and now needed to get on with the job. "The Government has blamed everyone but itself for the state of the Yarra," she said. "The minister needs to exercise his legislative power and direct the water authorities to expedite the program to fix the Yarra." E coli levels are tested weekly at 12 sites along the river. Weekly water quality ratings are based on a mean of the past five samples. EPA figures show continued elevated E coli readings for the city section of the river almost all year, including three readings above 5000 organisms per 100ml. The accepted safe swimming level is less than 200 organisms per 100ml. Weekly water quality ratings for the Yarra at Southgate show low quality seven out of 49 weeks and medium quality for 40 weeks. Low water quality ranges between 1001 and 5000 organisms per 100ml with a greater risk of health problems. Medium water quality ranges between 201 and 1000 organisms and is not safe for swimming but OK for boating. However EPA information warns of health risks for some people exposed to the water. Testing at Warrandyte showed E coli levels exceeded the acceptable safe swimming level 16 weeks out of 51. Launching Place was worse, with water classified as safe for swimming only five times in August-September.

#### **Adelaidenow.com - Floods to boost Murray**

The New South Wales floods will put 100 billion litres into the Menindee Lakes, raising the possibility of some relief for SA irrigators. The floodwaters are flowing downstream of Burke into the Darling River and should feed the lakes which store water for SA. But Murray-Darling Basin Commission chief executive Wendy Craik said the NSW government would decide how much water was released into the Murray River. "It's a decision for New South Wales about what happens with that water," Ms Craik said. "About 100 gegalitres is expected to flow into the lakes at Menindee in New South Wales." The extra flows result from 190mm of rain which drenched country NSW and flooded the Coonamble area. The river system is enduring the worst drought on record, with parts of the river bed drying out during the year. Ms Craik said the flows would soon reach the River Murray. "Overall in the Murray we anticipate that the rain will add probably about 100 to 200 gegalitres into the system in the next two weeks," Ms Craik said. "The river will be a bit higher than we otherwise thought it was going to be." But she said the floods were only a small amount of what was needed for the river system. "It doesn't change the overall situation but it is positive." "We normally have about 10,000 gegalitres of water coming through each day, this is about 200 gegalitres."

#### **FarmOnLine**

#### **Bush bard inspires hope**

In the midst of drought, Murray Hartin's *Rain From Nowhere* swept through the back paddocks of Australia like a dust storm this year. And like a dust storm it brought tears to the eyes of the toughest old cockies. It was a classic piece of bush poetry about drought and depression, but also about love, family and hope. It touched hearts and helped people hold on when they were doing it hard. And now that blessed "rain from nowhere" has started to fall for them as the long-awaited La Nina thunderstorms finally kick in. Hartin, 44, originally hails from Pallamallawa, a farming community east of Moree, northwestern NSW. He used to be a country journalist, but these days he makes a living performing his poems, jokes and yarns. He was previously best known for a hilarious poem called *Turbulence*, about a stockman catching his first plane. *Rain From Nowhere* was written in three hours in February, and "it just seems to have touched a chord", Hartin said. "You get an emotional response." It has been recited and reprinted from the baking plains back of Bourke to the frozen prairie of North Dakota, and the internet is littered with people singing its praises. When Hartin delivered it to the annual conference of the NSW Farmers Association there was not a dry eye in the room.



Last month Kevin Humphries, the Nationals MP for Barwon, recited *Rain From Nowhere* to State Parliament during a debate about the drought and the need for more rural mental health services. He declared Hartin "has become today's Henry Lawson" with his poem about a farmer driven to the brink of suicide. And he told MPs that the stresses caused by drought were killing his rural constituents at a horrifying rate. "In my home area of Moree the suicide rate is more than double the state average: 29 per 100,000 compared to 11 per 100,000. The trend shows farmers committing suicide far more often than the general population, with almost as many deaths from farming suicides as from farming accidents." Katrina Hodgkinson, the Nationals MP for Burrinjuck, said her local pharmacists were dispensing as many antidepressants as heart drugs. Dawn Fardell, Dubbo's independent MP, said: "We hear about numerous accidents involving trucks, and the truck drivers are blamed. However, in many cases people have driven into or walked in front of the truck. About three weeks ago in Dubbo a Queensland resident spent Saturday night being repeatedly rescued. Eventually he put his head under a truck's wheels. Terrible things like this are happening all the time. That Queenslander lost his farm and travelled until his fuel ran out in Dubbo, where he took his life." Last week the State Government announced \$2.1 million for improved mental health service to drought-stressed rural communities. John Tait, who farms at Garah, north of Moree, hopes rain from nowhere will eventually drag his property out of drought, but the weather is a fickle thing. "Our neighbour 10 kilometres away has had eight inches [20 centimetres] and we have had two inches," he said of recent storms. Mr. Tait, 48, bought Hillstead in 2002, just as the drought began. There was no wheat crop that year or the next, and he did not bother to plant a crop again this year. He has had one decent harvest in six seasons. The pressure of the drought contributed to Mr. Tait going into a deep depression, and just before Christmas 2002 he had to go to Brisbane for three months of psychiatric treatment. "It was pretty hard on my wife [Robyn], because she was out here on her own," he said. "If I didn't have a wife and two kids I could have done away with myself quite easily. [Depression] is just the most debilitating thing." But Mr. Tait tamed the black dog when he finally sought professional help. Now he stays positive by taking medication, seeing a psychiatrist every three months and resting properly when tired. Mrs. Tait said there had been bad times, but she had honoured her vow to stick with her husband in sickness and in health, and "we have survived it. There are plenty of fun times ahead. Once this drought is over it will be better. This is a good part of the country here. Once the rains come it's lovely." SOURCE: *Sydney Morning Herald*, a Fairfax Media publication.

#### **CSIRO rejects Rudd's demand to censor statements**

The CSIRO has flatly refused to comply with a request to clear all media statements with Prime Minister Kevin Rudd's office, forcing a back down on the directive. CSIRO scientists have also threatened to disclose any examples of interference or censorship by the Government. CSIRO and Government sources told *The Canberra Times* there had been "a bit of stand off" over the issue, with CSIRO executives reminding the Federal Government it had been a vocal critic of "science censorship and government spin" while in opposition. CSIRO management also told the Government the request was potentially at odds with the peak science organisation's communications policy, which specifically instructs scientists not to comment on government policies. The request to clear all media statements with the Prime Minister's office and Federal Science Minister Senator Kim Carr was first made during a brief telephone call to CSIRO's communications department by a staff member of the Department of Innovation, Industry, Science and Research. The caller claimed clearance was necessary to ensure media statements reflected the Government's "key messages" and organisations were "in step" with Government policies. The request was also made to the Australian Research Council, more than 50 Cooperative Research Centres, the Australian Nuclear Science and Technology Organisation, Australian Institute of Marine Science in Townsville, Invest Australia and Questacon science museum. CSIRO sources said the request was met with disbelief and hostility among senior staff. CSIRO's executive management demanded the directive be issued in writing. "They felt that after everything Kim Carr had put the organisation through at Senate Estimates sittings, no one was going to wear this for a second," a source said. There is a history of tension between CSIRO management and Senator Carr, who repeatedly targeted the organisation's chief, Dr Geoff Garrett during Estimates. Their most bitter tussle was over a previous CSIRO communications policy demanding all scientists' clear requests for media comment with the head of communications. The policy was dumped after strong criticism from the CSIRO Staff Association. Several days after querying the department's verbal directive, the CSIRO received written advice that the Prime Minister's office had instructed "all strategic media releases which relate to the Government's key messages" be forwarded to the Department of Innovation, Industry, Science and Research, which would submit them to Senator Carr's office for approval. If needed, he would send the statements to the Prime Minister's office, and the department would contact the CSIRO "regarding required changes". The directive says media statements "of a more pedestrian nature" need not be vetted but anything to do with climate change, industrial relations policy, education and science reform, tax policy, national security and health must be submitted. The Howard Government did not subject the CSIRO to these constraints.

CSIRO sources said the directive was vigorously challenged by CSIRO executive management, who emphasised the organisation's communication policy advised scientists not to comment either favourably or negatively on Government policy. The Government has since agreed most CSIRO statements, including those on climate change, are likely "to be pedestrian" and will not need vetting. Scientists told *The Canberra Times* they would make public "any substantial changes" requested by the Government to media statements or scientific reports. SOURCE: *The Canberra Times*, ACT.

#### **Salt drain construction starts in SA to keep Murray clean**

Construction has started on a new drain as part of the \$21 million Loxton Salt Interception Scheme in South Australia to help prevent saline groundwater from entering the Murray River. SA Minister for the River Murray, Karlene Maywald, says the Loxton Cliff Toe Interception Drain will be completed by April and will stop an average of four tonnes of salt from entering the river every day. "This is a drain at the 'toe' of the cliff face - right at the river's edge where saline water seeps out of the base of the cliff into the river," Ms Maywald said. "Work is progressing on other components of the Loxton Salt Interception Scheme, with the pipeline system connecting the Loxton floodplain bore fields to the Noora Basin nearing completion." The Loxton scheme is due for completion in 2009 when it will join other schemes operating at Waikerie, Woolpunda, Bookpurnong and Qualco. When complete, they will prevent 65t of salt entering the river per day.

#### **Couriermail.com.au - Little thirst for recycling**

Only about a third of Australians would willingly drink recycled water but most would be prepared to drink desalinated water, a poll has revealed. With recycled water due to be pumped into southeast Queensland's parched dams late next year, the survey found most Australians wanted recycled water restricted to non-drinking uses. More than 90 per cent supported the use of recycled water by industries such as mining and manufacturing, where the product is not for human consumption. Just as widely accepted was recycled water for parks and gardens. Even plumbing recycled water into homes for toilets and washing machines got the nod from four out of five of those surveyed. But on the question of drinking recycled water, pollsters Crosby/Textor found only 36 per cent of people approved. By contrast, 58 per cent were prepared to drink desalinated water. The results of the poll of 630 Australians, conducted for the health research lobby Research Australia, contrast with a survey earlier this year conducted for the Queensland Water Commission. That poll of 1000 southeast Queensland residents found 71 per cent would be "comfortable" drinking recycled water. Both recycled and desalinated water will be pumped into southeast Queensland's dams next year under a \$9 billion water grid plan for the drought-stricken region. The \$1.2 billion Gold Coast desalination plant is expected to be finished by November next year. It will deliver an estimated 125ML a day into the water grid. The \$2.4 billion Western Corridor recycled water pipeline is also due to come on line about November. That 200km pipeline network will link advanced water treatment plants at Luggage Point, Gibson Island and Bundamba with Wivenhoe Dam, power stations, businesses and farms. But the estimated daily volume of recycled water flowing through the pipeline has been revised down to 131ML, partly due to a successful campaign to reduce water use in southeast Queensland, cutting the amount of water available for reuse. After one of the driest years on record in the southeast, the region's three major dams yesterday were at a combined capacity of just 19.9 per cent. But weather forecasters say the dams could benefit from predicted rain in the next week associated with a potential cyclone off the Queensland coast.

#### **Mercury – Tasmania - Power price shock losers**

There is widespread concern that everyone will be a loser when electricity prices substantially rise on Tuesday. The Chamber of Commerce and Industry and the Tasmanian Council of Social Service say households will inevitably be hit by higher goods and services costs, passed on by businesses struggling to digest higher power prices. TasCOSS chief executive Tom Muller said a government effort was needed to ensure all Pensioner Concession Card and Healthcare Card holders were aware of entitlements. Among the hardest hit by the power price increases will be hotels and restaurants, which depend on electricity for refrigeration and lighting. Republic Bar and Cafe owner and licensee Tony Heath said finding an extra \$1100 to top-up his \$7000 quarterly bill would not be easy and would put pressure on prices. In September, the Energy Regulator approved a 15.7 per cent increase for residential users and 16.4 per cent for businesses from January 1. Additional 4 per cent hikes for all users are scheduled for next July and in July 2009. "That's a hell of an increase," Mr Heath said. "I have already done everything I can to reduce power costs, using natural gas." He had reduced his energy costs by about 20 per cent using natural gas for cooking and heating -- only to have the savings negated by 2009. Casablanca restaurant operator Dharmenera Kumar is less fortunate, saying his North Hobart business could not access natural gas and cylinder prices were up. "I have to take it with a grin," Mr Kumar said. He said there was little that small owner-operators could do about cost increases, except work longer hours. Mr Kumar also believed large companies had special treatment on power costs.

Tasmanian Chamber of Commerce and Industry economist Richard Dowling said energy efficiency had to be a priority for businesses. "The power costs will hit the wider economy and will flow through to prices of goods and services for everyone," he said. "When we consider higher electricity costs along with other essential expenditure, including petrol and interest payments, there is a real squeeze on discretionary spending." Households with a \$300 quarterly bill will pay about \$50 extra from January.

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### **heraldsun.com.au - Desalination plant go ahead**

A desalination plant will be built on Victoria's southeast coast, despite the State Government announcing it will conduct an environmental study of the project. Planning Minister Justin Madden yesterday announced the launch of an environmental effects statement for the \$3 billion plant at Wonthaggi. Mr Madden said he expected the EES would not change the project's time frame even though the study would take about a year to complete. He was also confident the project would be built on budget as the cost of the EES was considered at the outset of the planning process. The draft terms of reference will be released in February when public submissions will open. The final report is expected at the end of 2008. A group opposing the plant, Your Water Your Say, cautiously welcomed the EES decision, but spokeswoman Andrea Bolch said it seemed like a token effort from the Government. "It does concern me that Justin Madden doesn't think this (EES) will have any effect on the timing of the project," Ms Bolch said. "It makes me sceptical about how seriously he is going to consider the submissions. You're sort of setting it up with a predetermined outcome. "That's why we're concerned with the scope of the terms of reference." Deputy Opposition Leader Louise Asher said the Government should have announced the EES earlier. "This Government has failed Victorians on water, and a desalination plant should have been built years ago complete with an EES," she said. "The Government said in 2002 that water was the No.1 issue and it did nothing for that whole term of office." Nationals leader Peter Ryan criticised the Government for dragging its feet on the project. Mr Madden insisted the EES was a meaningful part of the project. "This (EES) will have an important role in determining how, when and where this project should proceed," he said. He also announced there would be no such study for the \$625 million pipeline to pump water to Melbourne from over the Great Dividing Range. "The flexible alignment of the pipeline means potential environmental effects can be avoided or mitigated as has been the case with the construction of other pipelines in Victoria." However, Mr Ryan said the Government should not build the north-south pipeline, but should provide an EES if it insisted on going ahead.

### **The Australian - Eco-study hurdle for desal plant**

The Brumby Government will announce a major environmental investigation into its planned \$3.1 billion desalination plant. The 150GL-a-year plant - one of the largest in the southern hemisphere - is to be built in a picturesque coastal region close to dinosaur fossils and a range of threatened creatures. The Kilcunda site, about 120km southeast of Melbourne, is also close to a feeding ground of the orange-bellied parrot, the endangered creature that was politically exploited to stop a wind farm elsewhere in Gippsland. The state Government has been under pressure to commission an environmental effects statement on the plan. Premier John Brumby refused yesterday to divulge the Government's decision. "If you look at projects of this type and scale, typically they would involve an EES," he said. "But every project is different, and the minister is required under the act to look at all of the circumstances and make his decision." However, The Australian understands an EES will be commissioned for the plant, with the announcement to be made today by Planning Minister Justin Madden. But the Government has decided no EES is required for its controversial north-south pipeline, because the project is significantly simpler and other pipelines have not required it. The 70km pipeline from the Goulburn River to the Sugarloaf Reservoir is the linchpin of the Government's Food Bowl Modernisation Project, intended to boost Melbourne's water supply by 75 billion litres in time for the 2010 election by lining and piping channels in the state's north. Mr Brumby yesterday defended the decision to choose the builder - John Holland in consortium with SKM and GHD - and approve the tender before making public its decision on the EES.

### **Climate puts squeeze on grape growers**

Grape growing is the canary in the coal mine of agriculture, the industry most sensitive to climate change. Snow Barlow, head of Melbourne University's school of agriculture and food systems and a grape grower, says: "If you look at an industry that is almost uniquely dependent on climate, it would be the grape industry." Every stage of a grapevine's life - from flowering to the quality of the grape - is linked to temperature. And the temperature is rising. Since 1950, temperatures in Australia have risen, on average, by 1C. This year, 2007, is set to be the warmest on record for southern Australia, and that means just about all the grape-growing areas. Barlow says the hot spring in 2006 led to the earliest vintage on record this year in many places. "We were a month early where our grapes are grown." With CSIRO researcher Leanne Webb, and CSIRO climate guru Penny Whetton, he has looked at every major winegrowing area in Australia, for the years 2030 and 2050. They found rising temperatures would lead to a shorter growing season.

Using price as a measure of quality, they established a relationship between mean January temperature, "which is just one climate measure, but it was probably the most robust one in our work", and price. They found a 20 per cent impact on quality (measured as price) for a 1.5C increase in temperature. "If it's warmer during the year, the grapes end up ripening a month earlier," Barlow says. "If you take Coonawarra, we predict conservatively it will be 1.5C warmer in 2050, which brings the harvest back by 35 days, into another month." But ripening in March, rather than April, also means ripening in a hotter month, an effective increase of 3.5C. Recently Barlow sent out the call for the full phenology, or the times of recurring natural phenomena, of grape growing: essentially the dates of budburst, flowering, fruit set, veraison and harvest, over the years. "We just didn't get anywhere," he says. But he was recently offered the Foster's data set of harvest dates, and interest is stirring in the industry. Harvest dates reflect more than the temperature. Stephen Doyle lists the picking dates for chardonnay, from his vineyard, Bloodwood, in central NSW. Since 2000, the date has come forward from March 29, to March 2, but he points out the sugar level in 2007 was lower than in 2000. "Last year was a big droughty year. I picked it early because I could see the acids dissipating, there was also rain happening and birds were moving in." Doyle points out that fashions in winemaking change, and the drive to lower-alcohol wines means picking earlier (at lower sugar levels). But he agrees warming is occurring. "It might bring vintage forward a week or so but the native birds, which are starving around us, could bring it forward two weeks, and the lack of labour could put it back two weeks. There are all these variables." Barlow says the data sets coming out of France show that in Champagne the harvest has come forward by one month. "What is happening now is they harvest the grapes, because they are looking for a sugar level, then the leaves hang around for another month. So next year, because there has been the carbohydrate infusion into the vines, the vines are more fruitful. The vine balance is changing." He suspects something similar is happening right now in Australia, after the early 2007 vintage. "It is only anecdotal, but what I hear from people around a number of regions is that there is a lot of fruit on the vine this year." The consequences of temperature rises, for the inland warmer areas - the Riverina, Sunraysia and the Riverland, the so-called engine room of Australian winemaking - are profound. Barlow says the most recent scenario is for a 2.5C-plus rise by 2050. Temperature rise also means more extreme events, like heatwaves, which are traditionally managed by heavier watering. "But if you don't have all the water you might need, that becomes a tricky management problem as well." Webb, in a paper on the impact of climate change on Australian grape growing, estimates it could cut wine grape quality by 7 to 23 per cent by 2030 and 12 to 57 per cent by 2050. By 2030, the area suitable for grape growing could be cut by 10 per cent, rising to as much as 44 per cent by 2050. Webb suggests the industry could either preserve its current wine styles by moving to a cooler region, or by growing warmer-climate grape varieties. Mark McKenzie, the executive director of Winegrape Growers Australia, says: "We're looking towards adaptive strategies that can handle a hotter environment, less water and in the lower reaches (of the Murray) higher salinity levels." The choice seems simple: adapt on site, or shift. But McKenzie points out: "We have also got to shift to where we have water resources." The water shortage gripping grape growers along the Murray this year is front of mind, and many fear lower river levels are here to stay. McKenzie says: "We still have a structural oversupply of vineyards in cool climate areas, but at the moment wine companies have been beating a path to their door." He says the question is whether they can produce grapes more cheaply in the longer term. "We have such uncertainty about future water supply, and about the likely temperature or climatic impacts on existing vineyard areas, let alone new areas," McKenzie says. Michael de Palma is a Mildura grape grower and chairman of Murray Valley Winegrowers. "How do we separate drought from climate change?" he asks. "I think the jury is still out on that". He says grapes are ripening earlier in most of the inland areas but points out the move to produce lower tonnages brings ripening forward. "Our viticultural practices have changed. In the last 10 years we definitely have seen an earlier ripening period, but how much of that is due to climate change and how much of that is due to viticultural practices is not proven yet." The real question, de Palma says, is how the industry can adapt to climate change and to drought. "If we're facing significant change, we probably need to change the style of product we are producing." But he worries that after two years of drought, many growers will not have the finances to manage necessary structural change. Barlow points out climate change is a global phenomenon and also affects Australia's competitors. "So it's about who adapts first and who responds first, as to who survives this," he says.

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#### **Perthnow.com - Sweating through blackouts**

At least 20,000 households lost power over Christmas, despite a \$100 million injection by Western Power to improve supplies. Just two days after Energy Minister Fran Logan announced WA's power grid was ready for summer, thousands of households were left cursing power cuts. Western Power this week blamed faulty transformers and other devices, as well as blown fuses for blackouts which started on Christmas Eve. Worst hit were homes in the northern suburbs, where about 15,000 households were without power on sweltering Boxing Day. Western Power said this had nothing to do with scorching temperatures. "This was the largest fault on the network over the break and was caused when a faulty device tripped a transformer in the Clarkson substation," a spokesman said. "This was not related to the hot weather." Two days earlier, on Christmas Eve, more than 3000 households in the same area lost power for up to five hours because of a damaged insulator on top of a power pole. In Gidgegannup, hundreds of residents spent Boxing Day without power because of a blown fuse. Residents said power problems in the Gidgegannup area were common. They often had to shut down various appliances just to keep essentials, such as refrigerators, going. "I know of people who have to turn their airconditioners off just to maintain power," Gidgegannup Progress Association member Chris Jackson said. "Everything keeps on shutting down and in the end the only way to keep things going is to turn other things off."

In Coogee, where a transformer broke, residents were left without power from 5am until 8.30pm on Christmas Day. This all happened after Mr Logan called a press conference last weekend to assure the public that the grid was in great shape. He said Western Power's \$100 million works program over the past 12 months had improved the grid's preparedness for the extremes of summer." Liberal deputy leader Troy Buswell said yesterday the electricity blackouts made a mockery of the State Government's estimated \$1.83 billion surplus announced this week. "Fran Logan comes out and declares Western Power is ready for summer," Mr Buswell said. "But within a few days the first real test comes along and 20,000 homes are left without electricity. "The government has been left with egg on its face. "Given the fact that Mr Logan was so quick to credit the Government with being ready for summer, maybe he should write to those householders and apologise for ruining their Christmas." Mr Logan said yesterday that despite record temperatures over Christmas the electricity system had stood up well. "The number of other outages was relatively low," he said. "While any outage is obviously unwelcome and can be frustrating, it must be remembered that WA's huge electricity infrastructure can be prone to unforeseen equipment faults, extremes of weather and human interference." Meanwhile, Western Power spokeswoman Marisa Chapman said: "While we understand that power outages at this time of the year are frustrating, overall the Western Power network operates at 99.9 per cent reliability."

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#### **FarmOnLine**

#### **Low pressure system 'no drought breaker' for Qld**

The Weather Bureau has warned against speculation that the approaching low pressure system off the Queensland coast will signal the end of the drought or bring heavy rainfalls to Brisbane. "Overnight we have seen the formation of a low 600km east of Yeppoon and with that low we have seen some strong winds around the south east coast area bringing with it increasing swells," Bureau of Meteorology Senior Forecaster Craig Mitchell said yesterday. Mr. Mitchell said shower activity had mainly been confined to Fraser Island and Wide Bay, with most other areas missing out on significant falls. Today the low has moved to within 500km of Fraser Island, prompting further evacuations as wild winds combined with king tides to whip up big waves. "[But] this is not a classic rain producing event - we are more likely to see the big waves and the winds on the coast," he said. "There will be strong gusty winds, big waves and generally dangerous boating and swimming conditions." Despite not believing that the low-pressure system will develop into a cyclone, Mr. Mitchell said conditions along the coast will be close to cyclonic. "The net effect of this big system will be probably similar to a cyclone," he said.

"Basically the actual structure of the low won't be a cyclone but due to the intensity of the low itself and the potential for gales, large waves and the features of a cyclone there will be similarities in the result.

"There's just not a classical cyclone structure." The speculation from earlier this week of the system moving over Fraser Island and onto Brisbane, dumping massive falls into the city's parched dam catchments seems to be unlikely, according to Mr. Mitchell. Over the next few days the low-pressure system is expected to keep moving south before it does an about face early next week, heading north again. "The storm is going to move south-east probably at the same latitude as Fraser Island but still well off the coast," Mr. Mitchell said. "Then it's going to turn around and head North West into Sunday and Monday and as it goes further north it should weaken. Rainfall for Brisbane will be light during the systems' progress. SOURCE: *The Brisbane Times*, a Fairfax Media publication.

#### **Water 'disappearing' from SA's Murray holiday spots**

Jetties, boats and moorings around Goolwa, SA, have been left high and dry as water levels in the River Murray continue to drop. The situation was even more pronounced last Saturday when a low tide and strong winds combined to further deplete the water flow. Many residents and holidaymakers have noticed over the past few months another significant drop in the water levels. One resident noticed that the water is so salty that coral can be seen growing on jetty pylons. "Water levels in some areas have dropped to the lowest levels seen since the completion of the barrages, locks and weirs in 1940," said Department for Environment and Heritage (DEH) spokesperson, Russell Seaman. Further evidence of the deterioration of the Murray river can be seen just 500 metres up-stream from the Hindmarsh Island bridge where an old steel hull, previously submerged is now clearly seen. Members of the Fleurieu Birdwatchers are also concerned, as they believe that although the variety of different species has not changed, the numbers of birds has decreased as a result of the drought. "The shortage of water affects plant life so it affects the birds feeding," said president of Fleurieu Birdwatchers Ray Laird. The birdhide used by the enthusiasts at Goolwa is now surrounded by dry, flat land, and is no longer useful as none of the birds that used to nest amongst the shallows in the swamp-like area can be seen. SOURCE: *The Times*, Victor Harbor, SA.

#### **Drought aid in demand in Tasmania**

Tasmanian farmers have been taking advantage of a joint State and Federal drought assistance package, with 54 applications currently submitted. An interest rate subsidy is available to farmers with businesses in the full Exceptional Circumstances declared areas of the Midlands, Central Highlands, East Coast, Flinders Island and the North East Coastal plain. Non-farming businesses in these areas are also eligible to apply but to date only two applications have been received. Tasmanian Minister for Primary Industries and Water, David Llewellyn, says his department has been processing applications within a month of receiving them, but reminded applicants to provide all the information requested on the application form as failure to do this results in processing delays. The first year of this subsidy ends on 28 October 2008, with applicants eligible to receive a subsidy equivalent to up to a 50pc of the interest payable on their loans until that date. "From 25 September 2008 to 28 April 2009, applicants are eligible to receive a subsidy equivalent to up to 80pc of the interest payable on their loans on a six month pro rata basis," Mr. Llewellyn said. A maximum limit of \$100,000 per business in each application period applies.

#### **The Australian - Pledge less energy use: Rann**

Using less energy to help combat climate change should be a new year resolution for all, South Australian Premier Mike Rann says. Mr Rann today launched a new state government climate change program, including a media campaign highlighting links between home energy use and greenhouse gas emissions. The average SA household produced about eight tonnes of greenhouse gas emissions annually through energy use, he said. "This campaign will illustrate that using less energy, and using green energy, in your home will reduce greenhouse gas emissions and go a long way to combating the impact of climate change," Mr Rann said in a statement. In July this year, SA became the first state in the country to legislate targets to reduce greenhouse gas emissions, setting a 20 per cent reduction target by the end of 2014.

#### **BBC - Attenborough calls for action on climate change**

Sir David Attenborough has called for the UK to adopt a "moral" stance on tackling climate change. The 81-year-old nature broadcaster, whose next series for the BBC, *Life in Cold Blood*, will begin in February, admitted that despite huge shifts in the perception of global warming recently, he can understand why people are reluctant to make change to their lifestyles. "To achieve an agreement in which the world promises, effectively, to lower our standards of living, is a very difficult thing to do, and of course a lot of people are outraged," he said. "And quite right too, because it is a serious thing, and anyone who thinks it will be easy is

not living in the real world.” But, likening the battle against global warming to the trials of World War II, Sir David was keen to emphasise that the actions of individuals can affect the course of climate change.

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“In the war, we ate up everything on our plates, because food was scarce, and you didn't think you would defeat Hitler tomorrow if you ate up that last little bit of whatever, but it was just wrong to waste food,” he said. “Well, now it is wrong to waste food and energy - in the end, in my view, it is a moral thing. “There are some who say 'I can't be bothered to turn out the lights', or 'what difference does that make anyway?', but you might as well say the same thing about voting. “If we all did it, it would make a huge difference.”

### **Global Warming - an Overview by Helen Willetts**

BBC Broadcast Meteorologist Helen Willetts explains the issue of global warming - what the problem is and how we've contributed to it. Like our day-to-day weather, climate change is a very complex subject. The media provides us with reports about global warming but it can be difficult to form an objective opinion when other scientists put forward what look like opposing views. What we need to understand is that these views are just other climate change scenarios and nothing is set in stone. The latest thinking is that the world is warming up, but how this will affect us in the future is difficult to qualify. All scientists agree that the world is warming- the debate is centred on how much is due to human activity. The weather elements at a given location will vary from day to day and from year to year, but generally are expected to remain within set limits over a long time period. This is known as our climate. This natural variability ensures we have cold and warm years. When we talk about global warming, we talk about the 'greenhouse effect'. This is actually a natural and essential feature of our atmosphere without which our planet would be uninhabitable. This process works by the principle that certain atmospheric gases, (or greenhouse gases) allow short wave radiation from the sun to pass through them unabsorbed, while at the same time absorbing some of the long wave radiation reflected back to space. The net result; more heat is received from the sun than is lost back to space, keeping the earth's surface some 30 to 35C warmer than it would otherwise be. The problem is that man is adding to and changing the levels of the gases responsible for the greenhouse effect and is therefore enhancing this warming. Globally 1998 was the warmest year ever recorded and eight of the ten warmest years fell in the last decade. Global ice sheets have decreased, so has global snow cover. During the earth's history there have been warmer periods, millions of years ago. However this is the most rapid rise in temperature since the end of the last ice age. So evidence is mounting that we, mankind are affecting the global climate, and the current warming has exceeded the natural fluctuations. Carbon dioxide (CO<sub>2</sub>) is the gas most significantly enhancing the greenhouse effect. Plant respiration and decomposition of organic material release more than 10 times the CO<sub>2</sub> than released by human activities, but these releases have generally been in balance during the centuries leading up to the industrial revolution. Since the industrial revolution amounts have increased by 30%. Other greenhouse gases include Methane, Nitrous oxide, CFC's (manmade) and Ozone. One major problem is that these gases can remain in the atmosphere for decades. The combustion of fossil fuel (oil, natural gas and coal) by heavy industry and other human activities, such as transport and deforestation, are the primary reasons for increased emissions of these gases. Other factors slow the warming, but not to the same degree. At the same time greenhouse gases such as CO<sub>2</sub> and methane are increasing, so too is aerosol in the atmosphere, from human made sulphur emission. These small particles reflect back some of the sunlight and hence act to slow down the cooling. However where carbon dioxide can remain in the atmosphere for 100 years, sulphate aerosols only last a few days and can be easily removed by rain (acid rain). Therefore they only temporarily mask the full effect of CO<sub>2</sub>. In order to try and predict possible consequences of this warming for the future, research institutes use climate modeling to simulate the climate and oceans over many decades. So far model simulations point to global temperature rises of approximately 3 degree C in the next 100 years, which doesn't sound much. Consider however that the difference between average global temperatures now and the last ice age (not strictly correct but sounds better!) some 20,000 years ago is only around 6 to 8C. Climate models also predict changes in rainfall and continued rise in sea level. Sea level rises will be due to thermal expansion of the ocean along with the melting glaciers and mountain snow and ice. The best estimate is 50cm by 2100, but this will vary considerably with location. Think about Bangladesh where 37% of the land lies below 3 metres and the effect of storm surges.

End of 2007 – Thankyou all, same drill if you wish to remain don't do nothing, if you wish to be deleted let me know or if a colleague of friend wants to be included supply me with the Email address.

Peter R. Smith OAM

Smithers

