

# NRM on farms

October 2010

## About NRM on farms

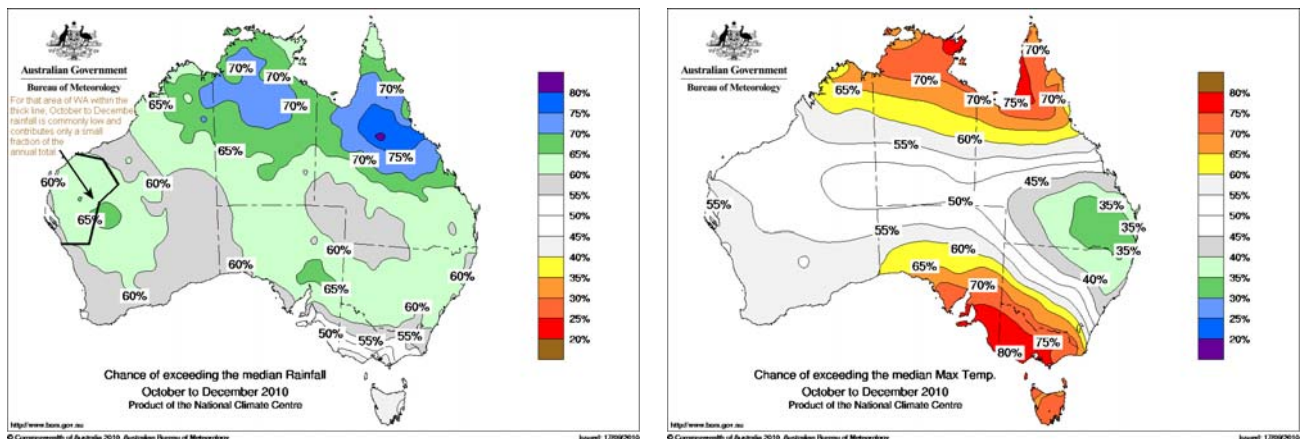
NRM on farms is a monthly email news summary about natural resource management in agriculture in NSW, Australia and overseas. News items are welcomed.

## CLIMATE

### Wetter outlook for NSW

The Australian rainfall outlook for October to December favours wetter than average conditions over large parts of the continent, due to warm conditions in the Indian Ocean and cool conditions in the equatorial Pacific Ocean, both associated with the current La Niña event. The chances of exceeding median rainfall are over 60% for most of NSW, and 55% for the south-eastern area and north coast. The temperature outlook favours warm daytime and night time temperatures in southern NSW and cooler daytime temperatures in north-eastern NSW.

**Above: October to December rainfall outlook (left), maximum temperature outlook (right)**



### BOM upgrades NSW weather services

The Bureau of Meteorology is implementing changes to weather services across NSW and the ACT from 1 September 2010. Detailed seven day forecasts are now available for many centres in NSW and ACT. In a few months the second phase of the upgrade will provide point and click seven day forecasts on a 6km grid, similar to Victoria's Forecast Explorer.

<http://www.bom.gov.au/nsw/forecasts/map7day.shtml>

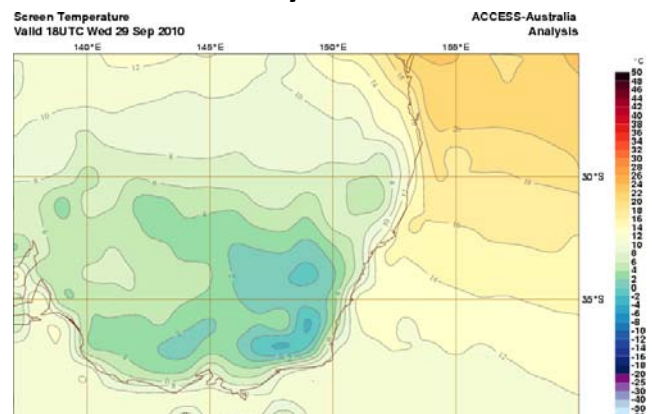
<http://www.bom.gov.au/forecasts/graphical/sectors/VIC.php>

### ACCESS weather models showing improved forecast accuracy

The Bureau of Meteorology has introduced a new suite of numerical weather and wave prediction models based on the UK Meteorological Office's Unified Model.

The new Australian Community Climate Earth-System Simulator (ACCESS) weather models have been tested by research staff from the Centre for Australian Weather and Climate Research (CAWCR) and show a significant improvement in accuracy over the Bureau's old weather model suite.

ACCESS is now routinely generating a range of new weather products including 7 day forecasts at 3 hourly intervals for precipitation, wind speed and

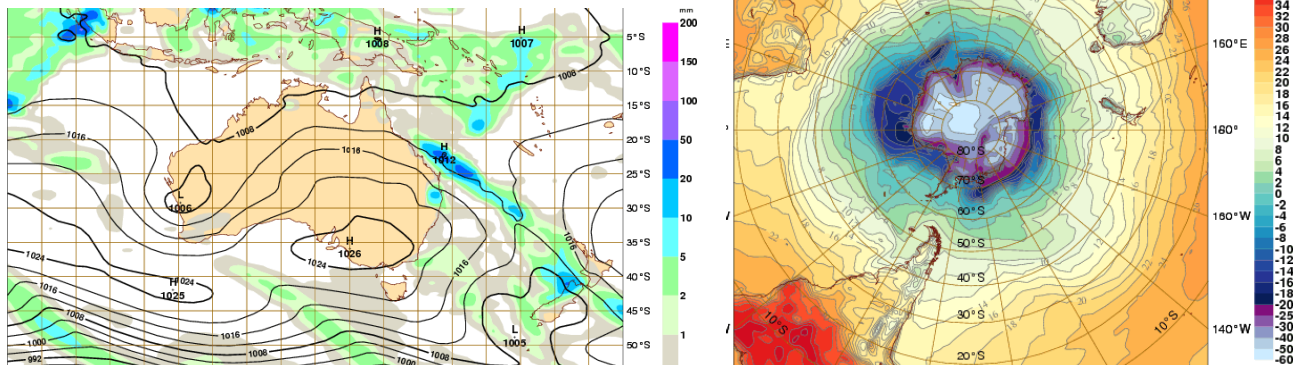


**Above: ACCESS temperature map for south-east Australia.**

direction, temperature, relative humidity and dewpoint. On the ACCESS website itself you can view three day computer model forecasts for areas covering Australian states, south-east Asia and the southern hemisphere.

<http://www.bom.gov.au/australia/charts/viewer/index.shtml>

**ACCESS maps for southern hemisphere temperature (right) and Australian region rainfall (below).**



## New Namoi radar

BOM commissioned its new Namoi weather radar on 13 September 2010. The new radar is located on Black Jack Mountain near Gunnedah. Regional centres within the radar's 100 km range include Tamworth, Gunnedah, Coonabarabran and Narrabri. The radar has improved short term rainfall forecasts and warnings of severe weather, including hail, damaging winds and tornadoes

<http://www.bom.gov.au/nsw/presentation/namoi-radar.shtml>

## National climate change committee established

The Federal Government has established a multi-party climate change committee to investigate options for implementing a carbon price and to help build consensus on how Australia will tackle climate change. Members of the committee appointed to date include treasurer Wayne Swan, climate change minister Greg Combet, Green senators Bob Brown and Christine Milne, independent MP Tony Windsor and independent experts Ross Garnaut, Will Steffen (executive director of the Climate Change Institute at ANU); Rod Sims (a director of Port Jackson Partners) and Patricia Faulkner (KPMG healthcare business leader). Two representatives from the Coalition will also be appointed.

<http://www.climatechange.gov.au/en/media/whats-new/climate-change-committee.aspx>

## Victoria passes Climate Change Act

The Victorian Parliament passed its Climate Change Act 2010 on 3 September 2010. Provisions include an emission reduction target of 20% of 2000 levels by 2020, regulation of greenhouse gases through licensing and approvals, incorporation of climate change in government decisions, four year adaptation plans, carbon offsets on Crown land, and new arrangements for ownership, registration and transfer of forestry and carbon sequestration rights.

[http://www.austlii.edu.au/au/legis/vic/num\\_act/cca201054o2010155/](http://www.austlii.edu.au/au/legis/vic/num_act/cca201054o2010155/)

## Senate report on bushfires in Australia

A Senate inquiry into the incidence and severity of bushfires across Australia has come up with 15 recommendations to help state agencies and at-risk communities reduce the incidence and effects of catastrophic bushfires. The Senate report covers the nature of bushfires in the Australian landscape, the organisations responsible for bushfire management in Australia, previous inquiries into bushfires, bushfire mitigation and risk management, co-ordination of activities during a bushfire emergency, and adequacy and priorities of resources for bushfire management.

[http://www.aph.gov.au/Senate/Committee/agric\\_ctte/bushfires/report/index.htm](http://www.aph.gov.au/Senate/Committee/agric_ctte/bushfires/report/index.htm)

## Rising night temperatures drop rice yields

US researchers have found that as daily minimum temperatures rise, rice yields drop. Rising temperatures during the past 25 years have cut yield growth rate by 10-20% in several locations.

<http://www.pnas.org/content/early/2010/07/26/1001222107.abstract>

## **Strategies to improve climate projections**

A new report by the National Academy of Science, 'Assessment of intraseasonal to interannual climate prediction and predictability', recommends strategies for improving climate projections.  
<http://nationalacademies.org/morenews/20100908.html>

## **CLIMATE RESOURCES**

### **NSW climate impact profile**

The NSW Climate Impact Profile produced by the Department of Environment and Climate Change earlier this year provides an integrated assessment of the biophysical changes projected for the state as a result of climate change. It outlines some of the risks NSW faces to help decision makers develop their planning and response strategies.

<http://www.environment.nsw.gov.au/climateChange/understanding.htm>

### **Labor's Carbon Farming Initiative**

Labor's Carbon Farming Initiative announced before the election promises legislation to provide clear rules for recognition of carbon credits that could be sold on domestic and international markets. It also promises to support further research and onfarm testing of biochar and to fast-track methodologies for soil carbon.

<http://www.alp.org.au/agenda/more---policies/carbon-farming-initiative/>

### **Economist says climate extension is unnecessary**

Governments should help develop new agricultural technologies adapted to projected climate rather than provide information to farmers about their adaptation to climate change says University of WA economist David Pannell. He says farmers will adapt to whatever climate change does occur even in the absence of a government program providing advice.

<http://cyllene.uwa.edu.au/~dpannell/pd/pd0168.htm>

### **Implications of climate change for global agriculture**

In the special food security issue of the Philosophical Transactions of the Royal Society, an overview of how climate change could potentially impact global-scale agricultural productivity, concludes that at present, the aggregate impacts of climate change on global-scale agricultural productivity cannot be reliably quantified.

<http://rstb.royalsocietypublishing.org/content/365/1554/2973.full.pdf+html>

### **Impact of climate change on China**

With only 7% of the world's arable land available to feed 22% of the world's population, China may be vulnerable to climate change itself. This Nature review looks at possible climate impacts on China's food production.

<http://www.nature.com/nature/journal/v467/n7311/pdf/nature09364.pdf>

### **Communicating the science of climate change**

The Australian Science Communicators Network has produced a booklet to help scientists frame and deliver climate change messages for different audiences.

<http://www.asc.asn.au/2010/08/hotair/>

### **The psychology of global warming**

This paper by UNSW climatologist Andy Pitman and psychologist Ben Newell outlines the ways that people deal with information about climate change and form their attitudes, to help scientists better disseminate their findings to the wider community.

<http://journals.ametsoc.org/doi/pdf/10.1175/2010BAMS2957.1>

### **Science, 'sceptics' and spin: framing the climate change debate**

This Ecos article looks at the reasons that the public are taking less interest in climate change while scientists show near-consensus on the need for action.

<http://www.ecosmagazine.com/?paper=EC156p28>

## **NCARF adaptation research conference presentations**

Presentations from the National Climate Adaptation Research Facility conference held on the Gold Coast in June are now available online. There are several presentations and posters on agricultural adaptation.

<http://www.nccarf.edu.au/conference2010/presentations>

## **New climate webpages for DPI Victoria**

DPI Victoria has created new streamlined webpages about climate change, climate variability and emissions relating to Victorian agriculture.

<http://new.dpi.vic.gov.au/agriculture/climate>

## **CSIRO report on organisational adaptation**

A new CSIRO report benchmarks the current level of climate change adaptation activities in public and private-sector organisations in Australia as part of a longitudinal study that will track changes in adaptation activities over time.

<http://www.csiro.au/files/files/px5a.pdf>

# **EMISSIONS**

## **Ozone layer has stopped thinning**

The protective ozone layer in the earth's upper atmosphere has stopped thinning and should largely be restored by mid-century thanks to the 1987 international treaty that phased out chlorofluorocarbons (CFC). However, the ozone-friendly substances that have replaced CFCs in plastics or as refrigerants - hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs) -- are powerful greenhouse gases, 14,000 times more powerful than carbon dioxide (CO<sub>2</sub>), and growing by 8 per cent a year.

[http://www.unep.org/PDF/PressReleases/898\\_ExecutiveSummary\\_EMB.pdf](http://www.unep.org/PDF/PressReleases/898_ExecutiveSummary_EMB.pdf)

## **State of the voluntary carbon markets**

In 2009 the voluntary carbon market contracted, mainly due to the global financial crisis and uncertain future of carbon legislation in the US. The total market value dropped 47%. Methane destruction projects (mainly landfill) were the most popular source of credits, followed by forestry and renewable energy projects.

[http://siteresources.worldbank.org/INTCARBONFINANCE/Resources/State\\_and\\_Trends\\_of\\_the\\_Carbon\\_Market\\_2010\\_low\\_res.pdf](http://siteresources.worldbank.org/INTCARBONFINANCE/Resources/State_and_Trends_of_the_Carbon_Market_2010_low_res.pdf)

[http://moderncms.ecosystemmarketplace.com/repository/moderncms\\_documents/state\\_of\\_v\\_carbon\\_summary.1.1.1.2.pdf](http://moderncms.ecosystemmarketplace.com/repository/moderncms_documents/state_of_v_carbon_summary.1.1.1.2.pdf)

## **Greenhouse gas emissions in a mixed grazing landscape**

A study into greenhouse gas emissions, flows and stores in the landscape of the Lower Apsley River Landcare Group on the northern tablelands estimates that the soil contains 3,700,000 tonnes of CO<sub>2</sub>-e, native remnant trees 432,000 tonnes, planted trees 84,000 tonnes and pastures 100,000 tonnes.

<http://www.snelandcare.org.au/linkedfiles/CarbonAudit.pdf>

## **Global survey of agricultural mitigation projects**

Earlier this year FAO conducted a survey of agricultural mitigation projects around the world. Most of the initiatives reported on are recent and under development. The entry points to the projects are all linked to unsustainable or low productivity land management practices that have caused land degradation.

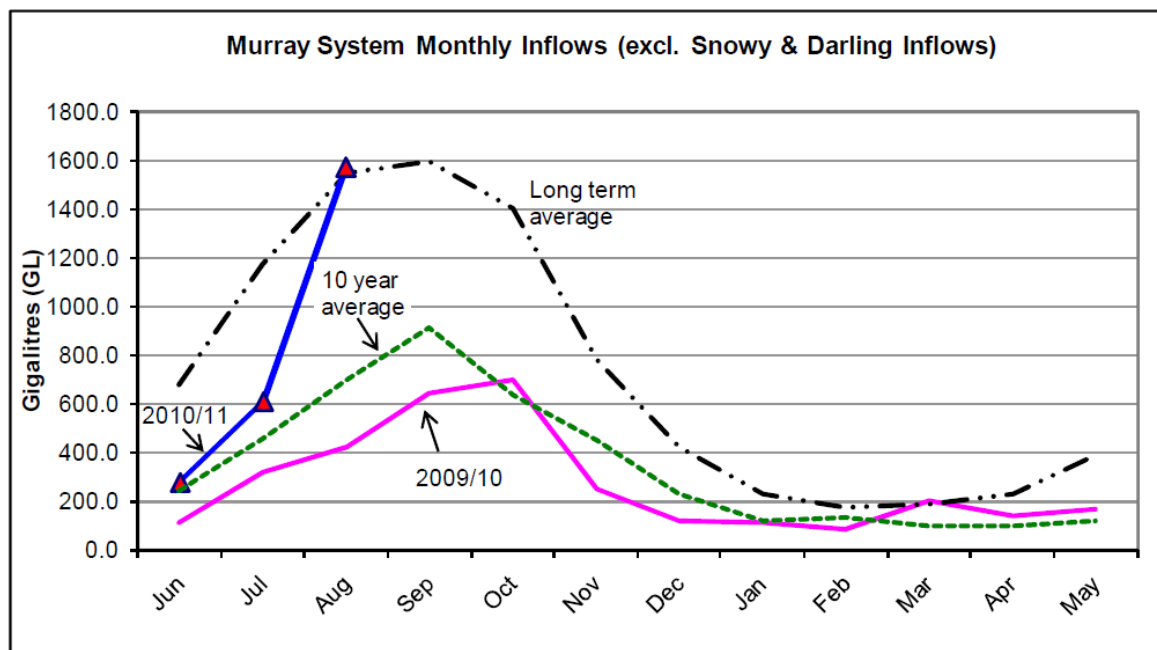
<http://www.fao.org/docrep/012/al388e/al388e00.pdf>

# WATER

## Rains replenish Murray Darling Basin

Recent rains have gone a long way to filling Murray Darling Basin storages. Hume Weir is now at 78% capacity, and the Menindee Lakes have filled. The Lower Lakes in SA are expected to reach full supply level in the next week or two.

<http://www.mdba.gov.au/files/weeklyreports/WR100924-River-Murray-Operations-Weekly-Report-22-September.pdf>



## Guide to proposed Basin Plan to be released on 8 October

The MDBA will release a guide to the proposed Basin Plan (the Guide) on 8 October 2010 to give stakeholders an overview of the proposed plan and an additional opportunity for feedback before the formal consultation and submission process begins. The guide's three volumes cover the key elements of the plan, technical information used to develop the plan, and regional information. MDBA is holding community meetings throughout the Basin from 12 October to 11 November.

<http://www.mdba.gov.au/>

## New web tool to calculate farm dam water loss

A new web-based tool, the Ready Reckoner, is now available to calculate water loss in small dams. Growers provide information about climate, soil category and dam size and type to calculate water loss from evaporation and seepage. The tool can also compare the cost and effectiveness of installing shade-cloths, floating dam covers or chemical monolayers to save this water.

<http://www.readyreckoner.ncea.biz>

## Global groundwater supplies shrinking

Groundwater represents about 30 percent of the available fresh water on the planet (surface water accounts for only one percent) and global supplies are shrinking, with highest rates of depletion in northwest India, northeastern China, northeast Pakistan, California's central valley, and midwestern US. Most water extracted from underground stocks ends up in the ocean, contributing an estimated 0.8 millimeters per year to sealevel rise.

<http://www.sciencedaily.com/releases/2010/09/100923142503.htm>

## Sustainable water strategies for Victoria

Victoria has developed four regional Sustainable Water Strategies (SWS) to provide a medium to long-term strategy for management of its water resources.

<http://www.ourwater.vic.gov.au/programs/sws>

## SOILS

### **Benefits and risks of soil carbon sequestration and trading**

A new Victorian Parliamentary committee report into soil carbon sequestration says while there are well recognised agricultural and environmental benefits, there are substantial challenges associated with measuring it, and risks in participating in carbon trading schemes. Some management practices used to sequester soil carbon may have adverse agricultural effects. The economic costs of soil carbon sequestration and the policy context are also uncertain throughout Australia and internationally. These issues have made many farmers cautious about soil carbon sequestration. Further research is needed to fill important gaps in scientific knowledge.

<http://www.parliament.vic.gov.au/images/stories/committees/enrc/20100902.enrc.scsv.FINREP.pdf>

### **Hurdles facing soil carbon trading**

'Farming carbon', an Ecos article reviewing the potential use of soil carbon in carbon trading, highlights three hurdles facing Australian farmers. There is no well-established, cost-effective method to accurately measure and monitor soil carbon, no surety that voluntary carbon trading will take off, and little data on how effectively 'carbon-friendly' management strategies actually increase soil carbon.

<http://www.ecomagazine.com/?paper=EC156p24>

### **Soil carbon in mid-north coast soils**

A study of soil carbon under mid-north coast pastures by former DPI staff Yin Chan and David McCoy found that levels under forests to 20 cm depth varied from 37 to 134 t/ha C, and levels under pastures varied from 44 to 96 t/ha C. The data suggest that soils under introduced perennial pastures can potentially store similar amounts of soil carbon as those under native forests. The paper 'Soil carbon storage potential under perennial pastures in the mid-north coast of New South Wales', is published in the September 2010 issue of Tropical Grasslands Journal.

### **AJSR special issue on biochar**

The September issue of the Australian Journal of Soil Research is a special issue featuring papers from the 1st Asia-Pacific Biochar Conference held last year. The papers look at biochar characterisation, application in the field and impacts on crop productivity, estimation of C sequestration potential, effect of biochar on contaminants, and processes occurring in the soil-biochar interface.

<http://www.publish.csiro.au/nid/84.htm>

### **Update on Australian biochar research**

A new leaflet from CSIRO, 'Biochar for agronomic improvement and greenhouse gas mitigation' updates progress on current Australian research into biochar use. It features biochar research being undertaken by Lukas van Zwieten's team at Wollongbar

<http://www.csiro.au/files/files/pxqb.pdf>

### **\$1.4 million to develop a portable pyrolysis kiln**

The Victorian government has provided \$1.4 million to develop a portable kiln to pyrolyse green waste into biochar. The pilot project is being developed by Victorian company Earth Systems in collaboration with the CSIRO for the North East CMA. The kiln will enable on-site pyrolysis of forest waste and woody weeds.

<http://www.premier.vic.gov.au/newsroom/11837.html>

### **Brazil biochar conference**

The third international biochar conference was held in Brazil in September. The program included presentations from I&I scientists Annette Cowie, Peter Slavich, Lukas Van Zwieten and David Waters. Conference presentations are being added gradually to the site below.

<http://www.ibi2010.org/agendaagenda>

## **NY Times article on potential of biochar**

The NY Times featured a long article on biochar in its 7 September issue. The article reviews current research, including I&I's work in Australia, and quotes I&I scientist Lukas Van Zwieten..

<http://www.nytimes.com/gwire/2010/09/07/07greenwire-once-lowly-charcoal-emerges-as-major-tool-for-c-4963.html>

## **Australia's phosphorus options**

This UTS paper looks at the implications for Australia of global phosphorus scarcity and possible solutions.

<http://www.isf.uts.edu.au/publications/whitecordellmoore2010phosphorusfuture.pdf>

## **Phosphorus as a limiting resource**

The September issue of Plant and Soil looks at phosphorus as a limiting resource for plant growth.

<http://www.springerlink.com/content/0032-079x/334/1-2/>

## **Farm management affects arbuscular mycorrhizal fungi**

A UK study has found human management has a major impact on microbial distribution patterns at both local and landscape scales. Diversity and spatial turnover of arbuscular mycorrhizal fungi was greater under organic farming systems relative to conventional farm management. There was no significant difference on other soil properties such as pH, organic matter, nitrogen or phosphorus.

<http://onlinelibrary.wiley.com/doi/10.1111/j.1462-2920.2010.02326.x/pdf>

## **Soil health for vegetable production in Australia**

This manual includes a guide to identifying soils, their constraints and techniques to manage them, techniques to assess standard soil analysis results and suggestions for additional soil measurements that could help track changes in soil health.

[http://www.dpi.qld.gov.au/documents/PlantIndustries\\_FruitAndVegetables/Soil-health-vegetable-production.pdf](http://www.dpi.qld.gov.au/documents/PlantIndustries_FruitAndVegetables/Soil-health-vegetable-production.pdf)

## **World Soils Congress papers available online**

The conference proceedings from the 19th World Congress of Soil Science held in August in Brisbane are now available online. The papers can be browsed by symposia, first author or title.

[http://www.iuss.org/19th%20WCSS/WCSS\\_Main\\_Page.html](http://www.iuss.org/19th%20WCSS/WCSS_Main_Page.html)

# ENERGY

## **Victoria establishes Office of Solar Energy**

The Victorian government has established an Office of Solar Energy as part of its program to develop cleaner energy in the state.

<http://new.dpi.vic.gov.au/energy/projects-research-development/solar>

## **\$100 million for Mallee solar park**

The Victorian Government has committed \$100 million to back a large-scale solar development south of Mildura by TRUenergy. Under the TRUenergy proposal a photovoltaic plant will be built on a 600 hectare site about 10 kilometres south of Mildura with construction to be undertaken by Bovis Lend Lease in four stages between 2012 and 2015. The Mallee Solar Park aims to create 200 new jobs in construction and 20 ongoing jobs, deliver 345 gigawatt hours of clean electricity each year and generate enough power to run 60,000 homes each year.

<http://www.premier.vic.gov.au/component/content/article/11956.html>

# BIODIVERSITY

## **Feral goat abatement plan**

The NSW Government is developing a Feral Goat Threat Abatement Plan to control goat numbers in Western NSW. The plan is expected to be complete by mid 2012 and will involve community consultation.

<http://www.environment.nsw.gov.au/resources/MinMedia/MinMedia10090701.pdf>

## **BMP for invasive scrub**

A best management guide on invasive native scrub is available from Central West CMA. The guide, 'Managing INS to rehabilitate pastures and open woodlands', includes latest information from the INS research program run by the Central West and Western CMAs, along with case studies. To obtain a copy contact Rodney Campbell on 6881 3430 or by email.

[rodney.campbell@cma.nsw.gov.au](mailto:rodney.campbell@cma.nsw.gov.au)

## **New wattle found at Gurley**

A new wattle species has been discovered growing in grassland near Gurley south of Moree. It will be known as *Acacia* sp. aff. *atrox* with a common name still to be decided. It is closely related to another endangered wattle *Acacia atrox* which is found only near Delungra east of Warialda.

<http://www.environment.nsw.gov.au/media/DecMedia10082402.htm>

## **Connectivity conservation and the Great Eastern Ranges corridor**

The proposed Great Eastern Ranges Corridor extends more than 2,800 kilometres from the Australian Alps near Melbourne to the Atherton Tablelands near Cairns and beyond in far north Queensland. A recent review of the corridor concept concludes that there is strong scientific basis for connectivity conservation based on theoretical and empirical findings in Australia and internationally.

<http://www.greasterranges.org.au/images/stories/s2s/mackeyreport.pdf>

## **FOOD**

### **Senate inquiry into food production**

A new Senate report into how to produce food that is affordable for consumers, economically viable for farmers and environmentally sustainable says Australia faces challenges in producing food for itself and the world. These challenges include land use, managed investment schemes, declining research and supply chain issues of rising input prices, declining water availability, transport inefficiencies, food waste, and food retailing practices. The committee has recommended that the Senate re-establish the inquiry to further examine issues relating to food production, including the implications of any proposed emissions trading scheme for affordable, sustainable food production and viable farmers.

[http://www.aph.gov.au/senate/committee/agric\\_ctte/food\\_production/report/index.htm](http://www.aph.gov.au/senate/committee/agric_ctte/food_production/report/index.htm)

### **Food security: Feeding the world in 2050**

The Royal Society has produced a special food security issue of its Philosophical Transactions that reviews the major drivers of change in the global food system looking out to 2050. The 21 articles in the issue are available free online.

<http://rstb.royalsocietypublishing.org/content/365/1554.toc>

## **SUSTAINABILITY**

### **Growing more with less**

The latest edition of the Australian Farm Institute's Farm Policy Journal, 'Growing more with less' examines the availability of farming resources such as phosphorus fertiliser, water and labour.

[http://farminstitute.org.au/catalog\\_61693/2010\\_August\\_-\\_Growing\\_more\\_with\\_less](http://farminstitute.org.au/catalog_61693/2010_August_-_Growing_more_with_less)

### **National land use map**

ABARE-BRS recently released a national scale land use map of Australia for the year 2005-06.

The next national scale dataset planned will be based on the 2010-11 agricultural commodity census.

[http://adl.brs.gov.au/anrdl/metadata\\_files/pa\\_luav4g9abl07811a00.xml](http://adl.brs.gov.au/anrdl/metadata_files/pa_luav4g9abl07811a00.xml)

### **UN sustainable lifestyles report**

A new report from the United Nations Taskforce for Sustainable Lifestyles says lifestyle choices play a key role in climate change, biodiversity loss and inequality.

<http://www.unep.fr/scp/marrakech/taskforces/pdf/SLT%20Report.pdf>

## EVENTS

October 11-12	Behaviour change for sustainability, Sydney <a href="http://www.3pillarsnetwork.com.au/events/web-brochure.pdf">http://www.3pillarsnetwork.com.au/events/web-brochure.pdf</a>
October 11-13	National EMS Conference, Geelong <a href="http://www.ems.asn.au/events/2010/index.htm">http://www.ems.asn.au/events/2010/index.htm</a>
October 11-13	Opening the gates on farmer health, Hamilton Vic <a href="http://www.farmerhealth.org.au/page/education-centre?q=node/1565">http://www.farmerhealth.org.au/page/education-centre?q=node/1565</a>
October 11-14	Riversymposium, Perth <a href="http://www.riversymposium.com/">http://www.riversymposium.com/</a>
October 13-15	ANZ climate forum, Hobart <a href="http://www.bom.gov.au/events/anzcf2010">www.bom.gov.au/events/anzcf2010</a>
October 26-29	Environment Institute A&NZ conference, Wellington NZ <a href="http://www.confer.co.nz/eianz2010/">http://www.confer.co.nz/eianz2010/</a>
October 27-28	Carbon Cockies Conference, Dubbo <a href="http://carboncoalitionoz.blogspot.com/">http://carboncoalitionoz.blogspot.com/</a>
October 31 – Nov 4	Groundwater 2010, Canberra <a href="http://www.groundwater2010.com/">http://www.groundwater2010.com/</a>
November 10-12	NSW coastal conference, Batemans Bay <a href="http://www.coastalconference.com/">http://www.coastalconference.com/</a>
November 15-16	National Water Governance Workshop, Canberra <a href="mailto:Phil.Wallis@monash.edu">Phil.Wallis@monash.edu</a>
December 9-10	First Australian earth system outlook conference, Canberra <a href="http://www.science.org.au/natcoms/nc-ess.html">http://www.science.org.au/natcoms/nc-ess.html</a>
December 16	International symposium on food production and consumption, Adelaide <a href="http://www.unisa.edu.au/hawkeinstitute/events/default.asp">http://www.unisa.edu.au/hawkeinstitute/events/default.asp</a>
February 9-11	Extreme weather, Wellington NZ <a href="http://www.extremeweather.co.nz/">http://www.extremeweather.co.nz/</a>
April 4-7 2011	Organic matter management and compost use in horticulture, Adelaide <a href="http://compost-for-horticulture.com/">http://compost-for-horticulture.com/</a>
April 4-8 2011	Greenhouse 2011: The science of climate change, Cairns <a href="http://www.greenhouse2011.com/">http://www.greenhouse2011.com/</a>
September 18-22	Soil science in a changing world, Wageningen, The Netherlands. <a href="http://www.wageningensoilmeeting.wur.nl">www.wageningensoilmeeting.wur.nl</a>

## Other NRM newsletters

ASSAY - acid sulfate soils  
<http://www.dpi.nsw.gov.au/aboutus/resources/periodicals/newsletters/assay>

Climate Institute newsletter  
<http://www.climateinstitute.org.au/>

Murray Darling Basin Commission e-letter  
[http://www.mdba.gov.au/media\\_centre/mdba\\_eletter](http://www.mdba.gov.au/media_centre/mdba_eletter)

National Water Commission e-letter  
<http://www.nwc.gov.au/www/html/171-subscribe.asp>

Newstreams- aquatic habitat  
<http://www.dpi.nsw.gov.au/aboutus/resources/periodicals/newsletters/newstreams>

NRM Notes (invasive animals)  
<http://www.invasiveanimals.com/research/goals/goal-11/11t1/>

Water matters  
[http://www.environment.gov.au/water/publications/water\\_matters/index.html](http://www.environment.gov.au/water/publications/water_matters/index.html)

## Past issues

Past issues of NRM on farms can be accessed at the Information and Library Services website  
<http://intranet.dpi.nsw.gov.au/library/awareness/nrm-on-farms>

## Mailing list

To subscribe to NRM on farms, email Rebecca Lines-Kelly at [rebecca.lines-kelly@industry.nsw.gov.au](mailto:rebecca.lines-kelly@industry.nsw.gov.au).