



## Climate change, the coast and agriculture forum

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**Over 250 people from the region attended two, one-day climate change forums organised by the NSW Department of Primary Industries (DPI) and SRCMA with funding provided by the NSW Greenhouse Office.**

The Climate Change, the Coast and Agriculture: Impacts and Adaptation in the Southern Rivers CMA region forums, held at Bega on 19 June and Nowra on 20 June, were organised to raise awareness of climate change impacts on agriculture and natural resources at a regional scale.

The forum featured experts on climate science including Dr John Williams from the Natural Resources Commission, NSW coastal specialist Professor Bruce Thom from the Wentworth Group, Clinton Rakich from the Bureau of Meteorology, Dr Ben Preston from CSIRO Marine and Atmospheric Research, and Paul Carberry and Gary Allan from NSW DPI.

Presentations were made on climate projections, observed evidence of climate change, impacts on water resources, trends in regional climate and challenges, opportunities for regional agriculture, and coastal impacts.

Participants at the forum could also attend sessions on adaptation strategies for agriculture, impacts on development,

fisheries and insurance and emerging markets and opportunities.

Current climate change predictions indicate that NSW will face greater extremes and variations in rainfall and temperature, which will affect the operation of many coastal and agricultural enterprises.

Head of NSW DPI's climate risk project, Gary Allan said forum speakers set the scene for lively discussion on how agriculture and coastal industries can adapt to climate change by being part of the solution.

"Local communities have a part to play in climate change. The coast and agriculture make up a significant part of regional communities and the economy, and they need a better understanding of the issues.

"The overall aim was to make coastal and farming businesses in the region sustainable in the long term, reducing their vulnerability to climate change through the development of timely and appropriate adaptation strategies."



NSW coastal specialist Professor Bruce Thom from the Wentworth Group discusses climate change impacts for the Southern Rivers

## CSIRO forecasts Southern Rivers region climate change impacts

**A new CSIRO research report into climate change within the Southern Rivers Catchment region was launched by SRCMA Chair, Pam Green at the Climate change and Agriculture forum.**

The CSIRO research into the Southern Rivers Catchment was commissioned by the NSW Government in order to gauge a clear picture of future impacts on the State's key farming regions.

The report highlights an uncertain future for local communities, industries and ecosystems.

The CSIRO found that the catchment faces serious challenges into the future, due in part to human activities that accelerate climate change.

Since 1950 the region has experienced warming of approximately 0.8 degrees. The future climate of the Southern Rivers Catchment is likely to be warmer and drier,

with average temperatures rising by as much as 5.6 degrees by 2070, and average rainfalls falling by as much as 40%.

The study also finds that, despite a trend toward drier conditions, the impacts of climate change are more likely to be felt through extreme weather events, such as increases in extreme rainfall events.

Projections suggest there will be more hot days, bushfires, droughts and intense storms.

Preliminary research suggests that temperate forests in Australia may increase in productivity with higher temperatures and increased concentrations of greenhouse gases.

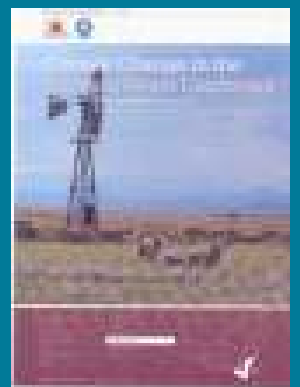
However, these benefits may be offset by decreased rainfall, changes in pests and invasive species and increased bushfire risk. The report finds that more "very high" and "extreme" fire warning days could increase

annually, up to 14-16 days by 2030.

Climate change will have both positive and negative impacts on the agricultural productivity and crop choice.

Warmer temperatures will increase heat stress for dairy cattle, unless measures such as shade sheds and sprinklers are adopted.

The report can be obtained by contact SRCMA, Wollongong on 4224 9700 or can be downloaded from: [http://www.greenhouse.nsw.gov.au/climate\\_change\\_in\\_nsw/climate\\_change\\_in\\_nsw\\_links](http://www.greenhouse.nsw.gov.au/climate_change_in_nsw/climate_change_in_nsw_links)



## Local Koori students get down to business

**Twelve Eurobodalla Koori students have undertaken projects that will sustain the region's unique natural environment and at the same time have gained hands-on experience of the principles of natural resource management (NRM).**

Southern Rivers Catchment Management Authority (SRCMA), which facilitates natural resource management on the NSW South Coast, has been supporting a Koori Indigenous Conservation and Land Management Course at Batemans Bay, Moruya and Narooma through Moruya TAFE.

The Koori students are all participants in the course, which commenced in September 2006 and concluded last month.

SRCMA Aboriginal Community Support Officer, Robert Slockee said the students focused their efforts on environmental projects in the Batemans Bay and Narooma areas.

"The team has completed erosion control and environmental restoration works at Moruya and have assisted in the establishment of an Aboriginal meeting area on the shores of the Wagonga Inlet at Narooma," Bob said.

"The group has completed works for Eurobodalla Shire Council, and SRCMA and the Marine Park Authority have plans to procure the team for environmental works in the Batemans Marine Park which will include the erection of Marine Park signage.

Since completing the TAFE course the students plan to continue working together - they have a vision to independently manage and operate an indigenous environmental works business.

"The students have a strong work ethic and are committed to achieving this goal," Bob said.

"SRCMA considers its support to be important in the process of developing long term partnerships with local Koori



Ten members of a Koori student work team which has undertaken NRM works to protect and restore the region's unique natural environment

communities in achieving improved land management.

"The project has also been important in terms of fostering cultural awareness and actively facilitating the reconciliation process."

Contact Robert Slockee, SRCMA Aboriginal Community Support Officer, Batemans Bay on (02) 4475 1007.



## Students lend far south coast farmers a helping hand

**Fifteen International Student Volunteers (ISVs) visited the Bega Valley in June to assist local dairy farmers in implementing natural resource management projects identified as high priorities by Bega cheese and SRCMA.**

Over four days the visiting American students, who are in Australia for four weeks, assisted nine dairy farmers from Jellat Jellat, Candelo, Bemboka, Verona and Bodalla in planting 3,000 trees and soil sampling farms with the aim of improving on farm nutrient management.

SRCMA Catchment Officer, Sue-Anne Nicol said the assistance from Conservation Volunteers Australia (CVA) and especially the efforts of the ISVs, was greatly appreciated by the dairy farmers who are already working hard at improving on farm environmental management.

"We have over sixty per cent of the local dairy industry involved in environmental management projects at the moment," Sue-Anne said.

"All of the farmers who were assisted by CVA have been involved in at least two initiatives funded by the Natural Heritage Trust and National Landcare Program.

"Project works being undertaken include improved effluent reuse, nutrient budgeting, laneway and stock crossing upgrades, improved water use efficiency, protection of remnant native vegetation and management of stock adjacent to rivers and wetlands.

"The assistance provided by CVA volunteers recognises that the work of the region's dairy farmers in improved environmental management takes considerable time and financial commitment—above and beyond standard farm operations."

CVA Team Leader, Ken Horsfaul said the ISV program combines educational, cultural and adventure programs giving students the ultimate experience in



ISVs and CVA team leaders lend a helping hand to Catherine, Robert and Philippa Russell (far left, without vests).

outdoor adventure travel.

"We are pleased Bega Cheese suppliers have provided this opportunity for overseas students to experience the Bega Valley and that CVA has been able to contribute to the region's longer term sustainability," he said.

Contact Sue-Anne Nicol, SRCMA Bega on (02) 6491 8206 for further information.

## Eurobodalla weed removers and pasture improvers

**Eurobodalla farmers have benefited from training provided in recent Weed Removers, Pasture Improvers workshops, which focus on pasture balance rather than simply spraying weeds.**

The two-day Weed Removers, Pasture Improvers workshop was developed by meat and Livestock Australia Limited as part of its "Towards Sustainable Grazing" focus.

The Eurobodalla workshop was organised for the Efarm group with funding from the Australian Government's National Landcare Program and Southern Rivers Catchment Management Authority.

Eurobodalla Landcare Community Support Officer and course coordinator, Peter Gow said effective weed control in pastures requires a "whole-of-pasture" approach.

"It's about suppressing weeds and strengthening the ability of pastures to compete against weeds."

The course concentrated on managing pasture composition to maximise opportunities for the desirable species, and to make life as difficult as possible for weeds.

Contact Peter Gow, Eurobodalla Landcare Community Support Officer on (02) 4474 1329 for further information.



Agronomist Stuart Burge (left) instructs course participants Colin Pretty, Alex McCreath, Bronwyn Le Strange, Ritchley Lynch and Quinten Warden in pasture assessment.

## REGISTER NOW! 2007 Partnerships Conference

**A reminder that registrations for SRCMA's 2007 Partnerships Conference close on Friday 27 July.**

The Conference will be held at Narooma from 7-9 August 2007.

Registrations can be completed on line at [www.southern.cma.nsw.gov.au](http://www.southern.cma.nsw.gov.au)

The conference will showcase the ways individuals, groups and organisations are working together for a more sustainable Southern Rivers region.

It will provide presenters and delegates with an opportunity to celebrate achievements and to generate responses to the challenges of sustaining partnerships in NRM.

All registration enquiries can be directed to Conference Logistics on (02) 6281 6624 or conference [@conlog.com.au](mailto:@conlog.com.au)

For general enquiries please contact Rebecca Hamilton, SRCMA Wollongong on (02) 4424 9711 or [Rebecca.hamilton@cma.nsw.gov.au](mailto:Rebecca.hamilton@cma.nsw.gov.au).

## Promoting protection of the potoroo

**A project has been initiated in the Gulaga area on the South Coast involving landholders, the Aboriginal community, NSW Department of Environment and Conservation (DEC) and Southern Rivers CMA to help conserve the long-nosed potoroo.**

The long-nosed potoroo is a small ground-dwelling marsupial that has had a tough time since Europeans arrived, and is now listed as being threatened with extinction in NSW.

Recent surveys have shown the potoroo is still widely distributed in forests in the Gulaga area, despite the threats it faces from habitat degradation and predation from foxes, cats and dogs.

DEC Threatened Species Recovery Project Officer, Mr Chris Allen said support from local landholders is being sought to assist the conservation of this small member of the kangaroo family.

"We are seeking information from landholders to assist our understanding of the current and historical distribution of the potoroo," Chris said.

"Surveys on landholders' properties where there is likely habitat are an important part of the project."

Aboriginal Project Officer, Lynne Thomas said a close working relationship with the Aboriginal community was being developed, involving the sharing of information and undertaking of joint surveys.

"Because the potoroo is a shy animal that hides in dense bush and only comes out to feed at night it is a difficult animal to survey," Lynne said.

"Searching for and identifying areas where they are digging is an important first step."

A large proportion of forested habitat sustaining the species is now being managed by the Aboriginal community, mainly in the Gulaga National Park and on Aboriginal-owned land.

"Evidence of potoroos has also recently been seen on Aboriginal land surrounding the Wallaga Lake Koori Village," Lynne said.

"We want to do what we can to help the potoroo survive, because they are culturally important to some South Coast Aboriginal families, and particularly Aboriginal women in the Gulaga area.

The animal is an important contributor to forest health. Their feeding activities spread



A project has been initiated on the Gulaga area to conserve the long-nosed potoroo.

the spores of many species of fungi which latch onto roots underground and assist nutrient uptake in plants.

"The demise of the potoroo would be a tragedy for our forests," Chris said.

This is a Natural Heritage Trust Program, jointly funded by the Australian and NSW Governments.

Contact Chris Allen or Lynne Thomas, DEC on (02) 6495 5008 for further information.

# Marine stakeholder forum hailed a success

**Over 55 people from the South Coast region and beyond who work in, manage or research the marine environment attended a forum at Murramarang Resort, South Durras in May to share knowledge and discuss common interests and issues.**

The event was organised by SRCMA which has the responsibility of facilitating natural resource management on the NSW South Coast—including beyond the low water mark to the three nautical mile limit of state waters from Stanwell Park to the Victorian border.

While similar forums have been held in the past on the South coast for coastal and estuarine environments, this event represented the first of its kind for individuals and groups directly involved in marine issues.

The forum generated significant interest from a broad range of stakeholders including:

- recreational and commercial fishers
- the marine tourism industry
- ports corporations
- universities and other research

- institutions, community groups
- non-government organisations, and
- government agencies.

There was a combination of presentations and small workshops around four key topics: managing marine pollution; managing marine pests; climate change issues and the implications for the marine environment; and ecological knowledge of the marine environment.

An expert on each topic led presentations which outlined the status of the issue and current state of knowledge in the Southern Rivers region.

Some excellent project ideas were generated by forum participants throughout the day, which SRCMA plans on progressing in consultation with the relevant stakeholder groups to develop future marine projects.



SRCMA considers the ongoing development of successful relationships between local and marine stakeholders as being fundamental in the process of improving the condition of coastal, estuary and marine environments.

Contact Jillian Keating, SRCMA Catchment Officer (Coast and Marine), Batemans Bay on (02) 4475 1004 for further information.

## Black wattles recover eroding bank

**Black wattles are currently being trailed to stabilise an eroding bank along the Bega River at Blackfellows Lagoon, in a project designed and supervised by SRCMA and jointly funded by the Australian Government's Natural Heritage Trust program, the NSW Government and landowners, Michael and Ruth Thomas.**

Concerned by active bank erosion, the Thomases approached SRCMA for advice and assistance to control active bank erosion along a 300 metre stretch of river frontage.

SRCMA Project Officer, Len Gazzard explained the 4 hectare river flat peninsular of the Bega River and Blackfellows Lagoon had been mostly cleared of trees and heavily grazed.

"These impacts had left the sandy bank exposed to erosion," Len said.



Exposed eroding bank of the Bega river at Blackfellows Lagoon.

Property Manager Ben Boller agreed with SRCMA's assessment that the most cost effective solution to the problem would be to fence out the site, reduce the wave action eroding the bank and replace cleared trees.

Len recognised the potential to place along the bank toe the large number of dead and dying black wattles on the river flat to slow down wave erosion, as he observed some year's earlier that fallen wattles along stream banks are effective in catching small debris and sand.

"Sand and silt dislodged from a bank is trapped behind the wattles, rather than being washed back into the channel," Len said.

"The gradual build-up of sand behind the wattles then provides protection for water plants, such as sea rush, to take hold.

"Wattle roots were trenched into the bank at water level to anchor them against movement in small flood events. This speeds up the accumulation of sand along the toe of the bank, which can take many decades to achieve by nature.

"Using wattles from the site has meant significant cost savings. The logistics of bringing in logs or rock to protect the bank was beyond the scope of the project funding," he said.

It is expected most of the wattles will break down in five years and enough sand and sediment will accumulate to allow planting of sea rush along the toe of the bank.



Wattles have been keyed into the eroding bank and planted out with shrubs and trees.

Michael and Ruth Thomas and Ben Boller erected the 300 metres of fencing across the peninsular and a further 500 metres along the river bank upstream. They also contributed to the planting of over 200 shrubs along the bank and 300 local trees on the flat.

The Thomases now have over 1.4 kilometres of riparian frontage and 9.5 hectares of river and lake front land under conservation management, including 2.5 hectares of adjoining State Environmental Planning Policy No. 14 listed salt marsh.

The environmental benefits of the works and placing the wattles is already being recognised as they are providing a fish shelter.

"Watching from the bank you often see small schools of bream sheltering under the branches," Len said.

Contact Len Gazzard, SRCMA Riparian Incentives Project Officer, Bega on (02) 6491 8210 for further information.

## Farmers excited by soil test results

**More than thirty-five far south coast farmers and agronomic advisors gathered in late May to improve their understanding of whole farm nutrient budgeting.**

Over 4,300 hectares of grazing land was sampled in late 2006 by farmers with the assistance of Bega Cheese, SRCMA and the National Landcare Program.

Soil samples for 620 paddocks were analysed and reported back to eager farmers using simple colour coded maps, fertility recommendation tables and a new software program developed specifically for balancing nutrients in the context of dairy operations.

Peter Abramowski from Bega Agricultural Services said the information presented to farmers was invaluable.

"It is a sensational initiative and the information is really going to assist farmers in recovering after the drought," Peter said.

"Some farmers have been driving salinity up and pH down by inappropriate fertiliser application.

"The information provided to farmers will help to improve fertiliser management - increasing productivity, saving money and

protecting the environment at the same time."

Cobargo dairy farmer, John Jessop knows that too little or too much of any one nutrient can have unwanted financial and environmental consequences for a farm's productivity and the health of the catchment.

"I now have a better understanding of the nutrients available on my farm," John said.

"Instead of broad scale application of fertiliser, I can start targeting individual soil deficiencies, such as potassium in the paddocks where I cut silage, and cutting back phosphorus in paddocks where levels are already high."

This is the second round of nutrient budgeting undertaken by Bega Cheese suppliers.

Based on the success of the project, another twenty farmers nominated to be involved in



Peter Abramowski (left) discusses soil test results with John Jessop during the nutrient budgeting workshop.

sampling held in the first week of June.

This brings the level of industry participation in improved nutrient budgeting in the region to over sixty per cent.

Contact Sue-Anne Nicol, SRCMA Catchment Officer (Sustainable Landuse Industry Partnerships), Bega on (02) 6491 8206 for further information.

## Southern Rivers bush incentives

### ROUND 4—NOW OPEN!

**SRCMA is encouraging landholders who are interested in bidding for Round 4 Southern Rivers Bush Incentives (SRBI) funding to contact their local SRCMA office.**

The SRBI program assists landholders in protecting and managing native vegetation. It recognises the important role landholders play in protecting and managing native vegetation across the Southern Rivers region.

During Round 4 a total of \$500,000 in funding from the Australian Government's Natural heritage Trust will be allocated to landholders.

Round 4 of the program will focus on landholders in the sub-catchments of Upper and Lower Shoalhaven and the Kiama Local Government Area.

The funding application process requires Landholders to participate in a bidding process to win financial incentives for conservation works.

An on-ground assessment of vegetation is carried out at each site. Sites are then scored for their conservation value in terms of site, regional and state/national significance. The more protective management actions landholders adopt, the higher their site is scored for conservation value.

Landholders then bid for funding, according to the amount of money that is required to carry out management actions. When bids are opened the conservation value of each site is divided by the landholder's bid.

Funds are allocated to those properties that provide the highest conservation value per dollar. This process allows SRCMA to direct public funds to the most significant conservation areas.

Contact David Curtis, SRCMA Wollongong on (02) 4224 9715 or Sandy Fritz, SRCMA Nowra on (02) 4429 4450 for further information.



## Small Farms and Rural Living Field Day

**The third Small Farms and Rural Living Field Day will be held at the Berry Showground on Sunday, 23 September between 10am and 3pm.**

The field day provides local landholders, businesses and government agencies with an opportunity to display their products and a variety of talks and demonstrations will be held throughout the day.

To date over 37 exhibitors have booked, and many organisations will be donating prizes for the major raffles worth over \$3,700. Agencies, businesses and contractors that support rural landholders are encouraged to participate.

All money raised from field day raffles will be donated to local charities. In the past two years the field day has raised over \$4,500 for charity.

If you are interested in exhibiting or would like to be involved in the field day by volunteering your services to help run the event, please contact Andrew Britton on (02) 4232 3200 or visit [www.smallfarms.net.au](http://www.smallfarms.net.au) for more information.

The field day is supported by NSW Department of Primary Industries, SRCMA, Dairy Farmers, Defeating the Weeds Menace Project, Bishops South Nowra and the *Good Life Magazine*.