



Avon Catchment Council Bi-monthly Newsletter

www.avonnrm.org.au

Issue 4, DJERAN April/May 2009

More funding crucial for NRM groups

The Avon Catchment Council says a report into the importance of natural resource management groups reinforces the need for ongoing funding. The State Government is expected to decide on future funding for NRM and the regional groups in the lead up to the budget announcement in May.

The study focused on catchment councils in the Avon, South Coast, South West, Northern Agricultural, Rangelands and Perth regions. It found substantial environmental, social and economic benefits from the six groups and their partnerships with community and governments at all levels.

The Avon Catchment Council's Chair Glenice Batchelor said the study was commissioned by the NRM groups.

"We needed to use an outside consultancy to find out if we really were making a difference," Glenice Batchelor said.

"The Report found this was the case, and that we were effective in combining science and current research with on-ground action, crucial when it came to looking after the environment."

An example of this is the Avon Catchment Council's work with the Saltland Pastures Association, Department of Agriculture and Food WA, the Catchment Demonstration Initiative and the CRC for Future Farm Industries.

"By working with these organisations and individual farmers we now have almost 300 sites in the Avon to demonstrate that saline land can be a productive part of a farming system."

Glenice Batchelor said the Avon Catchment Council was already facing a cut in its annual budget allocation from \$12 million to less than \$4 million for the 2009-2010 financial year.

"We've been earmarked for funding from the Australian Government through the Caring for our Country program to tackle wind erosion, pests and weeds, improve the natural reserve



Glenice Batchelor, ACC Chairperson

system and indigenous activities in the Avon," Glenice Batchelor said.

"We now need the State Government to help guarantee the future of community based natural resource management including important works on water management and salinity."

The State Government contributed \$250,000 to the Avon Catchment Council for the 2008-2009 financial year.

"Through proper planning and budgeting we have managed to carry over \$3 million of funding from the State Government from previous years, which will help continue the on-ground activity that is really starting to have an impact in our region" Glenice Batchelor said.

"But we have no other ongoing commitment for the 2009-2010 financial year, which is crucial when planning our projects.

"Without a firm financial commitment from the State Government, it makes continuing the good work very challenging."

A copy of the "Review of the Value of Regional NRM Groups in Delivering NRM" can be found at www.nrm.wa.gov.au/waRegionINrmGroups.htm

INSIDE THE ISSUE:

From the Chair	2
Spotlight on	
Oil Mallee plantings as a strategic tool	2
Featured Project	
Soil acidity in the Avon	4
Staff Focus	
Heritage Training Course - Badjaling	6
Noongar Budja Carers update	6
Initiatives, Collaborations and Partnerships	
Linking NRM with Local Governments	7
MERI Framework	8

NOONGAR SEASONAL UPDATE

DJERAN

April - May

Becoming cooler with winds from the south-west. Bulbs and seeds were collected for food.

From the Chair



Welcome to another update on Avon Catchment Council activities.

Our previous issue was well received and this one again highlights the great achievements occurring in the Avon River Basin. At this time of the year on-ground activity in the Natural Resource Management world has lessened (apart from fencing!) but there is still a lot going on. Informative field days, final project plans and reporting, nursery checks, site visits for oil mallees, brushwood, sandalwood and saline pastures incentives. It's all about being ready for the planting season!

- The Avon now has a \$3.96 million regional allocation to work with over the next four years through the Australian Government's "Caring for our Country". Everyone has worked hard in a bid to ensure partnerships and collaboration are a feature of this and the competitive round that has just closed. Thanks and well done to everyone involved. Now, like the rain, we wait! Two reviews of the Regional Model have now been completed. The first one commissioned by the six regional bodies has just been released and we are waiting on the findings of the Ministerial Review.
- You may have seen in the press we've been canvassing our State politicians to ask for at least matching funds to complement and extend the Australian Government funds. We understand that times are difficult but we need to be able to build on the good work in our region not currently being funded water management including waterways, salinity and biodiversity.
- We've released our Annual Review and it's

impressive! Please contact the office on 9690 2250 if you would like a copy. It shows great examples of the seven key values identified that regional groups aspire to. It also shows where we need to improve and we will be working on this. See http://www.avonnm.org.au/about_us/Annual_Report_07_08 to view the report.

- I recently attended a two day Seminar in Albury, NSW titled "Reigniting the Salinity debate". One of the key messages delivered was that although climate variability is having some positive impacts on groundwater in some areas, salinity has not gone away (especially in WA). It is still silently waiting. Coincidentally, the State Salinity Strategy is now up for review.
- As a member of the Future Farm Industries CRC Salinity Reference group I was briefed on the valuable research occurring through their key partnerships. This includes the salt tolerant wheat, saline pastures, perennials and annual legumes. And some really good things are happening, especially the new Saltland Genie web-site. See www.SaltlandGenie.org.au
- There has been much progress on the Board restructuring and we've been considering the really big questions, what it is we're about and how we need to go about it. We're working on positioning the ACC to be resilient and flexible to meet the needs of our community and environment. This is particularly important as the uncertainties of funding impact on how we do business in the future. We are positioning ourselves for the challenges ahead!

GLENICE BATCHELOR
CHAIRPERSON
AVON CATCHMENT COUNCIL

Spotlight on

Oil Mallee plantings as a strategic tool

Story and Photos by David McFall
Oil Mallee Association

email: templemc@treko.net.au

Wind and water are 'fluid' elements of the nations biosphere and have long shaped the natural landscape. However wind and water have the capacity to become very destructive given the aligned elements of a temperate climate, fragile soil and lack of vegetation cover. The stronger the velocity of the wind

and water the more accelerated and destructive the erosion. This could have devastating consequences in maintaining ecosystem integrity and function. As an example, strong winds in the Albany region of WA in May 1995 created a dust storm that 'blew' an estimated 2 million tonnes of topsoil and organic particles into the Southern Ocean. The estimated value of soil nitrogen loss alone was 5,000 tonnes at a replacement cost of \$4.2 million. In today's values the cost would be very much higher.

Continued on page 3...

Oil Mallee plantings as a strategic tool



Dust storm at KULIN WA. March 2007. Integrated oil mallee trees checking the wind and sheltering sheep (foreground)

...Continued from page 2

Other negative NRM impacts of a severe 'blow' can be seen across a range of NRM asset areas such as air (pollution), water (contamination, nutrification), biodiversity (smothering, sandblasting) and land (soil stripping).

Strategic planting of oil mallees can reduce wind and water velocity thus providing a dampening and infiltration effect reducing airborne and surface loss of soil and organic nutrient more trees, the greater the control. As an example, strategic use of oil mallee tree belts to provide control of wind blown seeds into natural revegetation areas has been implemented by the Department of Environment and Conservation (DEC) in the Lake Bryde Recovery Catchment region of the Avon River Basin. Outside Lake Bryde many WA landholders have adopted many 'integrated' alley plantings of oil mallees to provide NRM outcomes such as wind erosion control to protect soil, livestock and infrastructure assets. Many design configurations are available and are tailored to a landholders needs.



Oil mallee belt. Toolibin WA

Salinity is one dramatic example of a hydrological imbalance in our landscape and is a major threat to

maintaining the integrity and function of our natural assets. Brought on by excessive clearing and annual climatic 'wet and dry' seasons, the interrupted hydrology often causes the accumulation and depositing of sub-surface salts on the surface with devastating impact on the natural environment.

Planting oil mallees is one strategy to reduce the 'recharge' and therefore 'discharge' of excessive water and accumulated salts in lower landscapes. Plantings in excess of 10% are considered to have a positive impact on local hydrology with many landholders observing a water table drop and recovery of paddock conditions and productivity. The WA Salinity Action Plan acknowledges that large scale and sustained plantings at a regional scale (over 2 million hectares) will be required to dramatically prevent the threat of salt encroachment rendering a third of WA land area 'salt affected'. This reality will equate to an estimated 6 million

'This reality will equate to an estimated 6 million hectares of former arable land potentially salt affected'

hectares of former arable land potentially salt affected 'if nothing is done'. Impacts of this scale will not only severely alter the natural ecosystem but will equally impose greater cost and production

constraints on all aspects of society's food, water and fibre needs.

Lesser known, but equally beneficial NRM outcomes from planting oil mallees is the creation of biodiversity habitats. Birds, bugs and beetles colonise many oil mallee plantings and the elongated alleys and block plantings provide a link to natural stands of remnant bush for many fauna like Phascogale and Pygmy possums. Oil mallee plantings also protect the soil biota from hot, drying and eroding winds thus supporting the critical soil biophysical processes of nutrient, carbon and energy cycling so critical for sustaining life, production and ecosystem function. Somewhat overlooked, the silent world of the soil biota is one of our most endearing NRM biodiversity assets and is the foundation of many ecosystems and life on the planet.

The Oil Mallee Project is proudly supported by the following entities:



Featured Project

Soil acidity in the Avon

By **CHRIS GAZEY, DAFWA & JOEL ANDREW, Precision SoilTech**

Thanks to the participation of 248 farmers in the subsidised subsurface sampling programme, 18,073 topsoil samples, 22,099 subsurface samples were collected from 2507 paddocks between 2005–2008 by the Avon Catchment Council soil acidity project. If the 840,000 ha or 10% of the Avon River Basin agricultural area managed by these farmers is indicative, these samples show that in the Avon River Basin, 80% of topsoils (0–10 cm) and 45% of subsurface soils (10–20 & 20–30 cm) are below Avon Catchment Council targets.



Joel Andrew, Precision SoilTech, collecting subsurface soil samples

The soil pH targets of 5.5 and 4.8 have been chosen to eliminate acidity as a constraint to production. Maintaining topsoil pH above 5.5 allows sufficient alkalinity move down to treat ongoing subsurface acidification and keeping the subsurface above 4.8 prevents reduced root growth caused by aluminium toxicity.

15% percent of sites in the Avon River Basin are above pH targets and 59% of sites could reach targets by 2020 if sufficient lime is applied. The message the soil acidity team have been delivering to farmers at more than 50 farmer meetings, field days and crop update talks and through the Time to Re-lime information series is:

- Soil test pH to 30 cm in 10 cm increments
- Develop a soil acidity management plan
- Apply the required rates of lime
- Monitor soil pH and re-lime as necessary



DAFWA Wongan Hills field day discussing the importance of subsurface acidity

The soil acidity project worked in conjunction with farmers and farmer groups. A trial established in 1991 by farmer David Leake was highlighted in this year's agribusiness and some regional Crop Updates. In this trial 0, 1, 2.5 or 5 t/ha of lime were applied, with the 5 t/ha achieving the best pH and yields.

Grain yield for lime treatments at Kellerberrin in 2008

1991 treatment ha)	Lime (t/	Wheat grain yield (t/ha)	% Relative to max yield	\$ value of extra grain @ \$300/t
0		2.92	83	
1		3.30	93	\$99
2.5		3.20		
5		3.50	100	\$174

The evidence is clear from this trial and many others that liming to recover and maintain appropriate soil pH is profitable. However, current overall levels of liming in the Avon River Basin are insufficient to properly treat soil acidity. A challenge for the soil acidity team in the next project is to determine the barriers that prevent the adoption of sufficient liming as a standard farming practice.

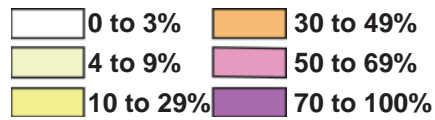


Kellerberrin demonstration group inspect responses at long-term lime trial

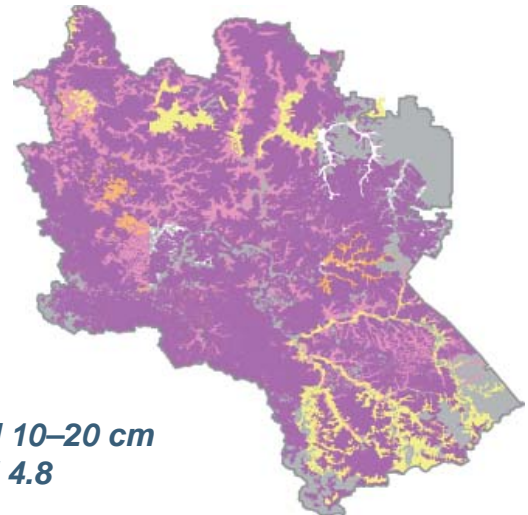
Soil acidity in the Avon

A major outcome from the project has been the updating of the soil acidity situation map for the Avon River Basin, reflecting the current situation. The large number of sites sampled for subsurface pH in this project have also enabled similar maps to be drawn for the 10–20 and 20–30 cm layers for the Avon River Basin.

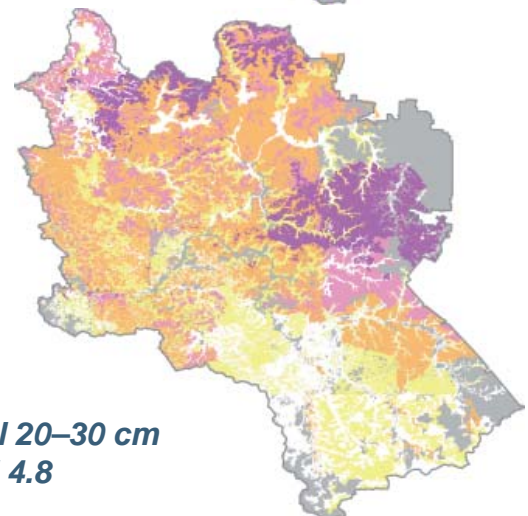
Two possible scenarios regarding the future of soil acidity in the Avon River Basin were developed by the project. The first scenario, where soil acidity is managed effectively, predicts that by 2020 80% of sites could meet the pH targets. In this scenario, profits increase and production is sustainable. The second scenario, where insufficient lime is applied, predicts that 85% of sites could be below targets resulting in greater production losses (estimated for the WA grain crop at \$341M in 2008), restricted rotation choices and increased off-site effects.



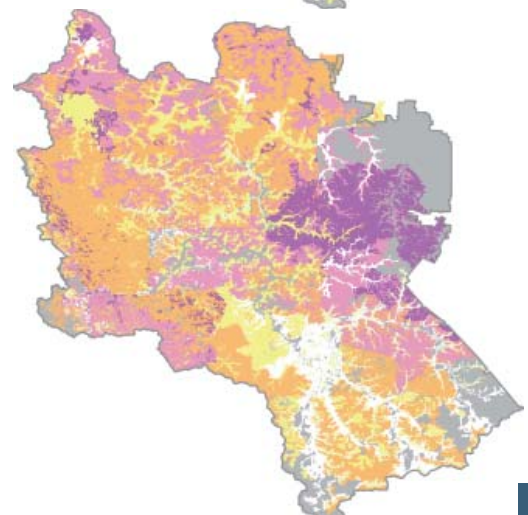
Topsoil 0–10 cm
% < pH 5.5



Midsoil 10–20 cm
% < pH 4.8



Subsoil 20–30 cm
% < pH 4.8



Why acidic soils are a problem

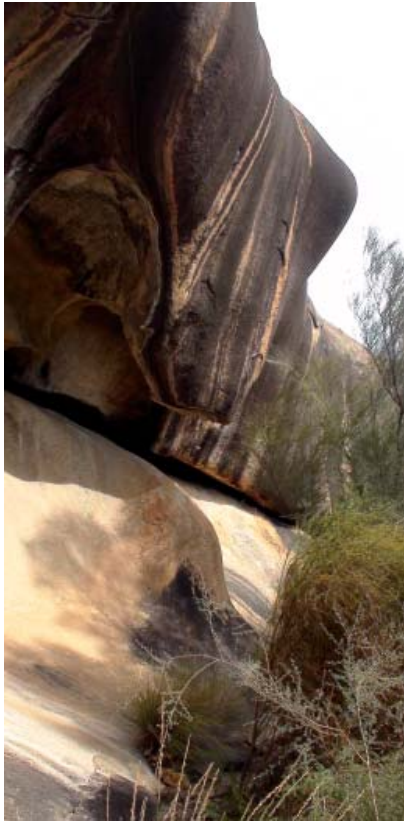
Soil acidification is a natural process accelerated by agriculture. Acidic soils cause significant losses in production and restricted crop choice and there is a wider concern of unsustainable production and degradation of the soil resource. Reduced plant growth can lead to an increase in erosion and salinity and reduce organic matter accumulation. Increased water run-off and nutrient leaching can negatively impact on off-site water resources.

Low pH in topsoils may affect nutrient availability and microbial activity, most notably decreasing nodulation and nitrogen fixation in pastures. These problems rarely occur if the topsoil pH is above 5.5.

Subsurface acidity is more complex. In WA, the major problem when soils acidify is aluminium toxicity. When pH drops, aluminium becomes soluble. In this form, aluminium retards root growth, restricting access to water and nutrients. Small changes in soil pH can have a dramatic impact on soluble aluminium. There is 5–15 times more aluminium at pH 4 than at pH 5, depending on soil type.

Staff focus

Heritage Management Training - Badjaling



Kokerbin Rockface

Staff from Avon Catchment Council (ACC) were recently given the opportunity to attend the Department of Indigenous Affairs (DIA) 'Introduction to Heritage Management' a course facilitated by Robert Reynolds, Senior Regional Heritage Officer with DIA, and co-ordinated by Nathan Heal, Indigenous NRM Officer with the ACC. The two days of training began in the Quairading Shire and soon moved out into Badjaling with all participants eager for a 'hands on' experience.

Noongar elders Winnie McHenry, Theo Michael and Kevan Davis also attended the training session and were excellent guides to both facilitators and participants alike. They shared their knowledge of country and guided the group through the history of the Badjaling community site. The first day ended with a yarn by the campfire with many humorous and insightful stories related. Everyone appreciated the wealth of experience shared by the elders and were keen to learn more.

The next day participants visited Kokerbin Rock and several other sites of significance, putting their theoretical knowledge into practice before returning to Badjaling for a sumptuous meal prepared by the CWA women of Quairading.

'It was an excellent experience' said Chris David, Communications Facilitator with the ACC. 'We have gained a greater understanding and appreciation of Noongar culture and history, particularly here at Badjaling.'

Badjaling is currently home to enthusiastic Noongar Elder Winnie McHenry. Many Noongar people who spent time at the Mission in their youth have a significant and special relationship with the site. Between 1887 and 1954 Badjaling was the camping area for about 30 Aboriginal families. Under the guidance of Miss Belshaw and Miss McRidge of the Australian Aboriginal Missions, Aboriginal men built a school from nearby bush timber and later a hospital ward and a straw roofed church lined with hessian. By 1938 there were 38 children attending classes. The mission was closed in 1954.

ACC and the Aboriginal community continue to work together to improve the condition of the natural environment in the Avon region, reflecting the common goal of seeing our land returned to its former beauty.

Noongar Budja Carers Update

Kathleen Kickett, Avon Catchment Council and Department of Environment and Conservation Noongar Budjar Carer based in Northam is keeping busy within her new role, having enrolled in a Conservation and Land Management course with C.Y. O'Connor TAFE. These studies will be undertaken while working fulltime. Kathleen is currently completing four of the fifteen units required for this certificate including Recognising Plants, Map Interpretation, Occupational Safety and Health and Interpret Aspects of Australian Indigenous culture.

Within DEC Kathleen has also completed a range of courses. Outside of the office she has been preparing seed from four different species of Acacia with the help of an aspirator, and conducting weed management operations on African lovegrass (*Eragrotis curvula*). Inspections were also carried out on nursery operations and scanning and labeling flora specimens with the District's herbarium. Kathleen also attended the inaugural DEC Aboriginal Staff workshop. Kathleen declared that 'it was an eye opener, it was very interesting, I really enjoyed meeting the different people and finding out more about DEC's procedures and policies.'

Noongar Budja Carers Update - continued

Mick Hayden Snr, Noongar Budja Carer in Merredin, has been keeping busy on a number of projects. As always, maintenance of the work environment is essential and Mick has been busy with compound maintenance and improving the usability of the work area by building a structure to store building equipment.

Mick has also been busy conducting road inspections in his area, checking unsealed roads and tracks for maintenance requirements and reporting on any issues. Inspection of nature reserves was also on the agenda with a number of reserves such as Lake Champion being inspected for infestation of weeds, feral animals, dumping of rubbish and other illegal activities. Further weed management work has been undertaken at Bruce Rock Nature Reserve where Bridal Creeper (*Asparagus asparagoides*)

has been noted up in the rocky areas and chemical management has begun.

Another major event has been the Inaugural Aboriginal Department of Environment and Conservation (DEC) Conference, held in Yanchep over three days in March. During this conference Mick learned about joint management arrangements which are underway in the desert country and hopes that this type of arrangement can be extended in his own area providing greater partnerships in priority reserves. This is the first Aboriginal DEC conference supported by the Department. Mick thought the conference was invaluable in that they were all able to come together to discuss issues and concerns and present these perspectives to the corporate level.

Initiatives, Collaborations and Partnerships

Linking NRM with local governments

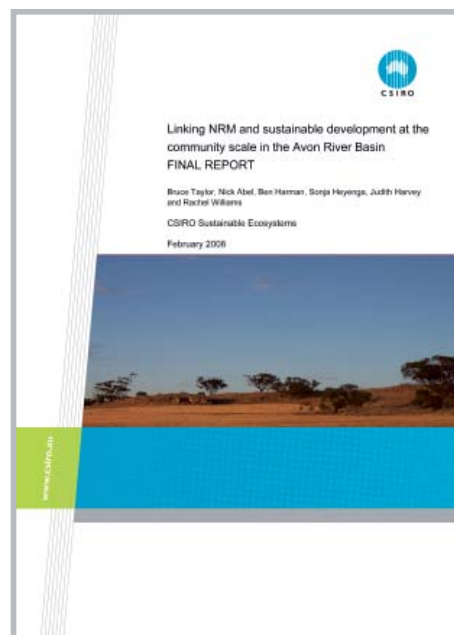
By **Elizabeth Kington**

In December 2007, the Avon Catchment Council (ACC) commissioned CSIRO to undertake a research project to assess ACC's relationship with local governments. Its objective was to link natural resource management and sustainable development at the community scale in the Avon River Basin. The findings were published in a report submitted to the ACC in February 2009. The following opportunities were identified where ACC could improve its partnership with local governments in the region:

- 1) Working with local shires on key regional scale NRM issues, such as climate variability, agricultural sustainability, water security and deep drainage.
- 2) Working with shires on local priorities, where ACC can build on successful recent NRM investments, or where there are synergies with the Wheatbelt Development Commission and a link with sustainable community initiatives.
- 3) Developing a closer relationship with local government through the Regional Organisation of Councils in order to negotiate landscape scale priorities.
- 4) Improving the strategic alignment of local and regional plans where there are natural resource management values shared by the local community.

The CSIRO research team conducted this research through scoping interviews with key individuals, a classification of local government areas based on their relative NRM need and capacity and through conducting in-depth qualitative interviews with local government representatives.

To find out more about the results of this research the CSIRO report can be downloaded from the ACC website at: http://www.avonnrm.org.au/reports_publications/SustainableCommunities/



MERI Framework

AVON CATCHMENT COUNCIL

Lot 12 York Road
PO Box 311
Northam WA 6401

Phone: (08) 9690 2250

Fax: (08) 9690 2255

Email: avonnrm@agric.wa.gov.au

Website: www.avonnrm.org.au

The Australian Government's Monitoring, Evaluation, Reporting and Improvement (MERI) Framework has now been finalised, and is available on the Caring for our Country website at the following address: <http://www.nrm.gov.au/publications/frameworks/meri-framework.html>

MERI is a critical component of all Caring for our Country funded projects, with the development of a MERI Plan one of the first milestones of small and medium scale projects.

Avon Catchment Council has an experienced Monitoring and Evaluation Coordinator with knowledge regarding all aspects of the MERI framework. The MERI Plan guides all aspects of monitoring, evaluation, reporting and improvement. These activities provide approaches to assess the impact, appropriateness, effectiveness, efficiency and legacy of policies and programs and a process to promote accountability.

The purpose of the MERI Framework is twofold:

- It explains the overarching conceptual framework for evaluating NRM programs with an emphasis on learning, improvement and accountability ; and
- is intended to guide the development and implementation of program-level and investment-level evaluation plans.

If you would like more information about how ACC is planning for MERI, or assistance on how you might plan for MERI in your own project, please contact:

Michelle Kidman, Monitoring and Evaluation Coordinator

Avon Catchment Council

Phone: 9690 2250

Email: mkidman@agric.wa.gov.au

Printed on 100% post
consumer waste
recycled paper



Planning for Evaluation Course

27th – 29th May, 2009

Agribusiness Training Program Flexible learning for professionals in the agricultural and natural resource industries
A joint Initiative between the Department of Agriculture and Food Western Australia and Curtin University

Make evaluation work for you and your project!

A joint Initiative between the Department of Agriculture and Food Western Australia and Curtin University

Location: Technology Park Function Centre.

Cost: \$755

Wanting to evaluate your program or project? The upcoming Planning for Evaluation Course will provide you with the tools to ensure your evaluation plan works for you.

The course will enable you to:

- Better understand evaluation
- Plan your evaluation
- Formulate key evaluation questions
- Consider audience needs
- Choose appropriate methods of evaluation
- Develop a program logic model
- Document your evaluation plan

Make time NOW! Well planned monitoring and evaluation will help you deliver great projects now and better projects in the future through a continuous learning and improvement approach.

This course is currently available for non accredited enrolment only.

All enquiries contact:

Brigette Lacey on 9690 2128

Email: brigette.lacey@agric.wa.gov.au

Or Fabiola Cousins on 9690 1530

Email: F.Cousins@curtin.edu.au