



Northern Agricultural Catchments Council's Sustainable Land Use Regional Workshop 26-27 Aug 2008

Summary of Outcomes



TABLE OF CONTENTS

1.	Introduction.....	2
1.1	Purpose of the workshop.....	3
2.	Summary of project outcomes.....	4
1.	Land targets review in the NAR.....	4
2.	Salinity rehabilitation and extension project.....	4
3.	Drainage benchmarking project	4
4.	Agronomic package & benchmarking of periodically and mildly affected saline land allowing for viable crop and pastures.....	4
5.	Revegetation of natural drainage lines and protection of remnant vegetation in the east Moore catchment.....	5
6.	Northern Agricultural Catchments Council's (NACC) targeted investment program (TIP).....	5
7.	West Koojan/Gillingarra CDI.....	6
8.	Healthy farms - environmental management system.....	6
9.	Soil stabilisation solutions for Nangetty Valley.....	6
10.	Long term sustainability of profitable 'medium rainfall' farming systems.....	6
11.	Reducing erosion under high stocking rate grazing systems.....	7
12.	The Acacia saligna for Fibrewood project.....	7
13.	Mogumber caring for country project.....	7
14.	Climate change, perennial pastures and carbon trading in the NAR.....	8
15.	Grain & Graze: Profitable and sustainable mixed farming.....	8
16.	Grain & Graze: The Environmental Perspective.....	8
17.	Rural Towns - Liquid Assets (project summary).....	9
18.	Farming to the climate: managing climate variability and risk in the low rainfall NAR.....	9
19.	Soil Carbon Project (ASCAS & NACC carbon initiative).....	10
20.	New Ag and environmental prospect for carbon in the NAR.....	10
3.	Australian Government's Caring for our country update.....	11
3.1	Funding update.....	11
4.	Key Messages.....	12
4.	Evaluation (dart board).....	13
4.1	Results.....	13
4.2	Other comments and suggestions.....	14
5.	Appendix.....	16
5.1	Agenda.....	16
5.2	List of participants.....	19

1. INTRODUCTION

The Northern Agricultural Catchments Council (NACC) is a peak natural resource management body in the Northern Agricultural Region. Its vision is to assist the development of ‘vibrant communities with diversified economies and healthy environment’. It aims to achieve this through providing leadership, advice and on-ground support for natural resource management (NRM) issues and projects.

The NACC region lies north of Perth and stretches from Gingin in the south to Kalbarri in the north and from the coast to Kalannie in the east. The NACC region is a rich farming & fishing area, covering 7.5 million hectares. It is characterised by near pristine beaches and offshore islands, coastal sand plain with considerable areas of retained natural vegetation, and a fertile low-rainfall hinterland. The region is also known as a hotspot of biodiversity at both national & global scales. The region has over 30 % of the State’s threatened species within its boundary. Board acre agriculture is the predominant industry accounting for 35% of the regional economy (approx \$1 billion per annum). Fishing, mining and tourism also contribute very significantly to our regional economy. However, despite the economic strength and the valuable environmental assets of our region, we are also faced with some of the critical management issues including loss of biodiversity, control of introduced pests, soil quality & production levels, water quality and quantity, and salinity. The region has also been identified as under significant threat from climate change impacts.

Figure 1 Shires of the NAR



In line with Australian, State and regional priorities over the past few years, the NACC has been investing in NRM projects that are located across the region and beyond. Under the Sustainable Land Use Program alone, NACC has funded projects dealing with issues of dryland salinity, waterlogging and rising groundwater level, erosion, climate change, and farming systems. NACC has also funded projects that deliver incentives to community groups and land managers who have NRM priorities.

1.1 PURPOSE

This workshop aims to review projects involved with managing land issues and discuss key outcomes. It will also provide an opportunity for participants to learn more about what we are doing in the region & what innovative activities others are achieving in managing our valuable natural resources.

2. SUMMARY OF THE PROJECTS OUTCOMES

Speaker	Project title	Key points	Key outcomes
Stanley Yokwe Contact: 9956 8503; Syokwe@agric.wa.gov.au	Land targets review in the NAR	<ul style="list-style-type: none"> - To ensure that our NRM strategy remains relevant: develop targets that are specific, measurable, achievable, relevant and time-bound and fit in the Program Logic Framework. 	<ul style="list-style-type: none"> - Technical working group formed - 2 Technical reports produced - 5 Draft SMART resource condition targets (RCTs) developed - 6 meetings held to review the targets - 3 workshops held to identify quality data and methodology for monitoring future change in the resource condition targets - 2 Maps produced - 3 presentations were delivered to the NACC board and the public.
Mike Clarke 9956 8527; MGClarke@agric.wa.gov.au	Salinity rehabilitation & extension project	<ul style="list-style-type: none"> - Deliver on farm salinity advice; broad extension and fencing incentive of \$2000/kilometre for fencing of saline areas. 	<ul style="list-style-type: none"> - Since July 2006, 139 farms have been visited. - 110 landholders showed interest in fencing incentive - 71 landholders signed fencing contracts - 28 landholders erected fences - 318km fencing - 117 erected fences - 14,000ha signed up with contracts - 6,000 ha managed by erected fences - 19% of existing salinity has been seen by this project. - All captured on Microsoft Access and Geomedia.
Angela Stuart-Street 9956 8547; astustreet@agric.wa.gov.au	Assessing deep drains in the NAR of WA	<ul style="list-style-type: none"> - To get a clearer picture of how drains had performed over time and look closer at what they actually did achieve. 	Field assessments: <ul style="list-style-type: none"> - Half the drains inspected were dry - Water was mainly alkaline and 700 to 6000 mS/m - Drain design mainly double leveed - Main soil type was Sandy duplex - Dominant soil salinity levels were moderate to extreme – appears that salt is NOT leaching out of soil, even after many years. Bore monitoring observations: <ul style="list-style-type: none"> - Variable impact from nil to beyond 100m - Evaporative discharge may be having a large influence on watertables

<p>Lorinda Hunt 0427 388 642 LCHunt@agric.wa.gov.au</p>	<p>Agronomic package and benchmarking for mild and periodically saline soils</p>	<ul style="list-style-type: none"> - Benchmarking site variation between severe, high, moderate and mild salinity; - Explore cropping and pasture options suitable for mildly and periodically saline land in the North Eastern Ag Region (NAR). - Investigate the biology of slender iceplant, herbicides options; soil amelioration options; and agronomic requirements for successful establishment and maintenance of saltland pastures. 	<ul style="list-style-type: none"> - A quantitative & qualitative map of existing and at risk salt affected areas of the Morawa, Perenjori and Dalwallinu shires produced. - Literature review has been conducted on slender iceplant and its relationship with saline and sodic soil. - The biology of slender iceplant has been researched. In-kind support from Botanical Gardens & Parks Authority has allowed for further investigation into the biology by examining germination requirements and dormancy of iceplant. - Herbicide trials have been carried out on slender iceplant, exploring “off label” options. Data collected will be used for applying for minor use permits. - Herbicide tolerance of established saltland pastures were investigated, so that herbicide options for controlling slender iceplant in established saltland systems could be determined. - Herbicide tolerance of germinating saltland pastures was also determined to allow for cheap and reliable establishment of saltland pastures. - 30 benchmarking and demonstration sites have been established over the three years of the project. These sites investigate suitable crop and pasture options for mildly affected saline land across the NEAR. - Benchmarking includes soil type, soil landscape systems, soil salinity & pH, depth to water table, water salinity & pH, and overall site variation. - Analysis of slender iceplant tissue has given an insight into oxalate content and elemental composition.
<p>Lana Kelly 9653 1355; lkell@bigpond.net.au</p>	<p>Reveg of natural drainage lines and protection of remnant veg in East Moore Catchment</p>	<ul style="list-style-type: none"> - Implementation of strategic, integrated conservation works that build on existing Local Action Plans, by prioritising remnant vegetation and natural drainage areas within the catchment. 	<ul style="list-style-type: none"> - Priority areas have been determined and landholders within these areas are eligible. - Since March, landholders have been visited including possible sites for inclusion in the project. - Expressions of interest have been received and recorded. - On 14 August, a field day was held to see rising groundwater sites & to GPS the fence lines. - Flora surveys were also carried out within four project areas.
<p>Jane Bradley 9964 9774 ipm@nacc.com.au</p>	<p>NACC's Targeted Investment Program</p>	<ul style="list-style-type: none"> -The program is designed to assist land managers to adopt practices that will address increasing salinity and declining water quality threats. -Promotes an integrated, strategic 	<ul style="list-style-type: none"> - TIP launched late June 2007. - TIP Team employed August/Sept 2007. - 103 management agreements and site management plans developed since Sept 2007. - 7,303 ha protected through establishment of perennial pastures; remnant native vegetation; farm forestry; and management of saline/waterlogged

		<p>approach to deliver on-ground change thru defined suite of incentives available.</p>	<p>land.</p> <ul style="list-style-type: none"> - Communications with landholders through: Quarterly newsletters; workshops, radio, newspapers; and word of mouth referrals. - Capacity building activities through fencing workshop; farm mapping workshop; seed collecting workshop for landholders and managers.
<p>Mark Weston 9965 0502 cdipl@nacc.com.au</p>	<p>West Koojan/Gillingarra CDI</p>	<ul style="list-style-type: none"> - Similar to TIP project—plant based solutions, decreasing recharge, water management and changing practices 	<ul style="list-style-type: none"> - 1782 ha of perennial pastures, over 200 ha of tagasaste, and over 30 tree have been planted so far. - Between 2006-07, NACC Biodiversity support officer engaged in CDI work, has conducted flora survey, as a result, about 305 specimens were collected from various sites - Monitoring bores constructed throughout the catchment by mid 2008. - Flora & fauna surveys undertaken in 2006 2007 to establish base line information are to be followed up with work in 2009 with an emphasis on bird surveys. Providing some continuity with similar projects.
<p>Kristy Chapman 9928 1646 k.chapman@westnet.com.au</p>	<p>Healthy Farms - EMS</p>	<ul style="list-style-type: none"> - To get widespread recognition of safe and sustainable ag practises; - Integration of programs (CBH audits, Environmental Management Systems or EMS) 	<ul style="list-style-type: none"> - Best management practices and record keeping procedures were developed. - 50% of members have completed an EMS, of these 46% Better Farm IQ and all completed Chemcert. - Held audit workshops for EMS to get systems up-to-date and run through self-review process.
<p>Kristy Chapman</p>	<p>Soil Stabilisation solution for Nangetty Valley</p>	<ul style="list-style-type: none"> - Demonstrate and evaluate likely rehabilitation techniques for one of the most degraded landscapes in WA 	<p>Site 1: 9 ha of gullies filled; Hay mulch; Seed spread over bare areas; Crop planted over 3 km of bare area; 8000 native seedlings planted to create buffer.</p> <p>Site 2: 1.5 km of fence erected to exclude 20 ha; Gully filled; Contour bank constructed; 9,000 seedlings planted on yellow sand; 4,000 seedlings planted in exclusion zone; Transplanted sedges into wet gully.</p>
<p>Rob Grima 99568545 rgrima@agric.wa.gov.au</p>	<p>Long term sustainability of profitable medium rainfall farming systems</p>	<ul style="list-style-type: none"> -Plan, analyse, develop and deliver workshops and info packages aimed at helping farmers to decide on best bet options for the management of herbicide resistance with a specific focus on soil and other resource impacts/risks 	<ul style="list-style-type: none"> - Grower survey of 52 respondents covering 220,000 ha was undertaken. - Main risk areas were identified. - 6 “standard” farms were developed. Based on this analysis: - On average... <ul style="list-style-type: none"> - All farms are profitable - High crop focus - Minor stock improvements match optimal profit - Main NRM threat currently is erosion - Weed threat not huge...for now.

			<ul style="list-style-type: none"> - Lupins not viable on red soil. - Some farms can afford spending \$ on weed management to maintain high crop areas - Some farms cant afford to have 100% crop-weed risk - Some farms would be better off with more livestock.
Rob Grima	Reducing Erosion under high stocking rate grazing systems	<ul style="list-style-type: none"> - To learn effective grazing techniques that minimise wind erosion; - To investigate alternative grazing techniques and crop rotations which minimise weed seed set, and increase production. 	<ul style="list-style-type: none"> - Group of 8 growers identified for pilot group - Training according to ProGraze - 8 trial paddocks assessed - Whole farm feed budgeting undertaken - Grazing data collected to gain information on the differences either feed supply or grazing management had on stocking rate and the effect on autumn ground cover. <ul style="list-style-type: none"> - Erosion risk analysed: Growers received \$3000 to fund; Fencing; Pasture seed; Machinery; Training.
Phil Bellamy 9651 8091 PhilBellamy@bigpond.com	<i>Acacia saligna</i> for fibrewood production in the Northern Agricultural Region	- Demonstrate the positive impacts of planting a deep rooted woody perennial tree crop in lower rainfall areas of marginally saline land adjacent to natural drainage systems and poor sand plain soils that are problem soils in the traditional farming systems.	<ul style="list-style-type: none"> - \$243m project being developed - \$70m cardboard pulp processing facility - Caring for our country application submitted - Renewable energy and biochar options being developed - Farmers have registered expression of interest
Brendan Moore 9358 7427 Brendan.Moore@nongar.org.au	Mogumber Caring for Country Project	<ul style="list-style-type: none"> - To create a framework for sustainable land management - Protection, conservation and enhancement of the 5,000ha property. - Biological protection. - Maintaining Cultural Traditions. - Raising awareness in NRM. - Yued community capacity building through NRM workshops. 	<ul style="list-style-type: none"> - The Management Plan is now completed - 4 Caring for Country Workshops delivered - Flora surveys completed, two unnamed plants found- <i>Philotheca spicata</i> subspecies, and <i>Dampiera sp.</i> “an interesting collection not readily identifiable to species. Probably closest to <i>D. triloba</i> but may well be undescribed” - Undertaken on ground works including site auditing and registering sites, Aboriginal Heritage site protection including fencing and signage - Heritage Walk Trail developed - Weed management and pests controlled - Revegetation of saline land through 1500 seedlings planted - Proposal for a large scale fencing project - Full Aboriginal Green Corps team - Certificate 1 in Conservation and Land Management

			<ul style="list-style-type: none"> - Water quality monitoring and river assessments done - Dieback Free (dieback audit done on the property) - Signage delivered to property, will be put in by the Green Corps team - Fencing of Mogumber Burial sites. - Fencing of priority wetland site - Created maps for the property including priority areas for protection, recommendations from the implementation plan, and areas subject to threatening processes.
Tim Wiley 9956 8518 Twiley@agric.wa.gov.au	Climate Change, perennial pasture and carbon trading in the NAR	<ul style="list-style-type: none"> - Climate change has been worse than predicted! - Perennial pastures carried stock throughout the two years of drought; - Can we build up soil carbon in our soils? Yes, using the “right” plants. 	Future depends on questions: <ul style="list-style-type: none"> - Will soil carbon offsets be allowed as part of national emissions trading scheme? - ASCAS continuing (Aust Soil Carbon Accreditation Scheme) - NACC monitoring soil carbon at TIP sites - Grain & Graze data from Ahmed Hasson, Department of Agriculture and Food WA. - Soil and vegetation carbon research proposals to CFOC and Australia’s Farming Future
Tim Wiley	Grain & graze: Profitable and sustainable mixed farming	<ul style="list-style-type: none"> - Species and agronomy trials on perennial pastures, fodder shrubs and grazing cereals 	<ul style="list-style-type: none"> - Modelling of production, economics, and NRM completed. - Extension work through field days, newsletters, case studies, tours, conferences, radio & TV, taped interviews. - Case study results: <ul style="list-style-type: none"> - Theme was “matching feed supply to feed demand” - To do this you can change the feed base to supply the stock enterprise <u>or</u> change the stock enterprise to match the feed base. - Consider using sheep to graze out weeds in crop
Wayne Parker 9956 8511 Wparker@agric.wa.gov.au	Grain & graze: The environmental perspective	<ul style="list-style-type: none"> - Impact of perennial grasses on the agricultural environment: Moisture and nutrient measurement below perennials; Remote erosion monitoring (will perennial grasses help reduce erosion); and Biodiversity in grain and graze systems 	1. Moisture and nutrient measurement below perennials: <ul style="list-style-type: none"> - Perennial grass systems take more moisture from soil than annual systems - Soil moisture profiles developed at each site (Nov 05 to Nov 06) - Total profile water is more useful measurement and showed that perennials use more than annuals; perennials use water throughout the year 2. Remote erosion monitoring <ul style="list-style-type: none"> - Looked at satellite imagery from 2002 to 2007 to determine erosion in areas that have now been planted to perennials.

			<ul style="list-style-type: none"> - First summer after sowing shows high exposure to erosion. - Trend to decreased erosion two or more years after sowing. - Figures show % of paddock prone to erosion: 1st year after sowing there is large increase in potential erosion, but this quickly reduces in the subsequent years. <p>3. Biodiversity in grain and graze</p> <ul style="list-style-type: none"> - Nationwide project; 47 farms involved. - Large data gathering exercise - Insects, birds, soil nutrients, vegetation in remnants vs crop/pasture rotations. - Currently assessing relationships between all data collected. - Plan is to develop decision support tools and ultimately BMPs. - National Award winner.
Mark Pridham 9368 3919 mpridham@agric.wa.gov.au	Rural Towns - Liquid Assets (groundwater management)	- Designed to fill the knowledge gap between current understanding of groundwater systems and the practical application of water production and utilisation technologies.	In Moora, Morawa and Perenjori the following outcomes have been achieved: <ul style="list-style-type: none"> - Social contexting survey undertaken - Community (in the 3 shires) were engaged and consulted - Geophysical surveys conducted - Carried out water quality analysis and groundwater modelling - Groundwater investigations including infill drilling and pumping testing in Moora done and surface water monitored - Drainage designed.
Kari Lee Falconer 9651 0537 kfalconer@agric.wa.gov.au	Farming to the climate: managing climate variability and risk in the low rainfall NAR	- Providing information and tools to growers and industry to improve the management of current climate variability and develop robust farming systems.	<ul style="list-style-type: none"> - An economic analysis on the benefits of using climate predictions to make farm management decisions based on crop rotation choice and fertiliser strategy. - Monthly newsletter bulletins sent to participating farmers - Raised industry awareness of climate information through regular AgMemo newsletter articles and presentations on climate rainfall outlooks. - Developed and delivered 10 workshops on Managing Seasonal Variability; covering understanding the weather, climate and applying it to management decisions. - Established a long term demonstration site at Mullewa to examine managing climate risk in farming systems focusing on the profitability of rotation choice, nitrogen fertiliser strategy and soil moisture conservation. - An economic analysis on the impact of management decisions in drought on a low rainfall northern wheatbelt farm. Paper published at the 2008

			<p>Agribusiness Crop Updates by C Peek and A Blake.</p> <ul style="list-style-type: none"> - 3 Demonstration sites with farmers looking at aspects of climate risk management in farming systems. A further 3 demonstration sites established on Mullewa Research station looking at fallow based farming systems, early establishment grazing cereals, establishment of perennials in low rainfall - 7 case studies on farmers applying seasonal climate risk management collated with 3 case studies published in Kondinin Group's Farming Ahead magazine. - Contribution to DAFWA's new e-newsletter AgTactics. Providing timely and tactical information to farmers and industry and incorporating the climate message into a risk management framework. This has allowed growers to make more informed decisions at seeding.
<p>Tim Wiley/Jane Bradley</p> <p>0427 779 430 twiley@agric.wa.gov.au</p>	<p>Soil carbon project (ASCAS & NACC carbon initiative)</p>	<ul style="list-style-type: none"> - Measurement of soil carbon under commercial paddocks of perennial grasses and tagasaste on poor sandy soils. 	<ul style="list-style-type: none"> - First round of sampling occurred at the end of Aug 07. - Sampling and analysis protocols were developed. - Hydraulic soil corer used. - Samples collected for 0-10, 10-20, 20-30 and 30-110cm. - Samples analysed for Walkley Black organic carbon and total carbon and full soil chemistry analysis undertaken for bulked sample at 0-10cm.
<p>Paul Blackwell</p> <p>9956 8537 ; PBlackwell@agric.wa.gov.au</p>	<p>New Ag and environmental prospect for carbon in the NAR</p>	<ul style="list-style-type: none"> - Biochar - remnant of plant/animal material from pyrolysis. - Known as agrichar & when made from only wood is usually called charcoal. - Improve digestibility of some animal feeds - Capture up to 50% of carbon from trees - Increase soil microbial biomass - Assist production of biodiesel from algae 	<ul style="list-style-type: none"> - In soil, Biochar provides a habitat for soil microbes. - Biochar helps improve soil hence increases yields and productivity by reducing soil acidity, and use of less fertiliser. If you use less fertilizer with biochar you save 30% - Biochar holds water and nutrients available to plants - The optimal biochar production process can capture half the biomass carbon in biochar and half as bio-energy.

3. Australian Government's Caring for our country (CFoC) update

3.1 Funding update (by Mike Grasby, AG CfoC Sustainable Farm Practices Facilitator)

- 12 people, 7 facilitators in WA CFoC team.

Key messages:

- Farming and agriculture is important to the Australian Government.
- Landcare is alive and well.
- Regional NRM groups remain relevant and important.
- Industry groups are critical delivery organizations.
- Community skills, knowledge and engagement are key National Priorities.
- Climate change and adaptation strategies are key Govt initiatives.

- NATIONAL PRIORITIES includes Sustainable farm practices
- CFoC will have a much greater focus on Cwlth national priorities and will need to meet the govt's NRM election commitments.
- CFoC is funded as an ongoing program with a total of \$2.246 billion allocated for the first 5 years
- Base regional group funding is \$636M plus up to \$75M between 2008-09 and 2012-13
- Contestable funding – open to all delivery organizations; cross regional, national focus
- Regions can now bid for funding to deliver on national priorities
- Regional funding must target priorities
- 2008-09 is a transitional year
- Full implementation from 2009-10

Business Approach to CFoC

- Oct outcomes statements will be released.
- Dec 2008 first business plan will be issued
- Will commence in July 2009
- March 09 – lodgment of proposals
- Apr 09 – announcement of successful proposals

Regional NRM groups:

- Regional delivery model remains an integral part
- Regional strategies and targets remain relevant
- Regional groups should:
 - Review strategies against national priorities
 - Consider direction of existing projects / emphases
 - Build on strengths of integration and
 - Further develop partnerships
 - Still have partnership arrangement with states and territories
- Bilateral interim agreement
- Transition year 2008-09
- Implementation 2009-10 to 1012-13.

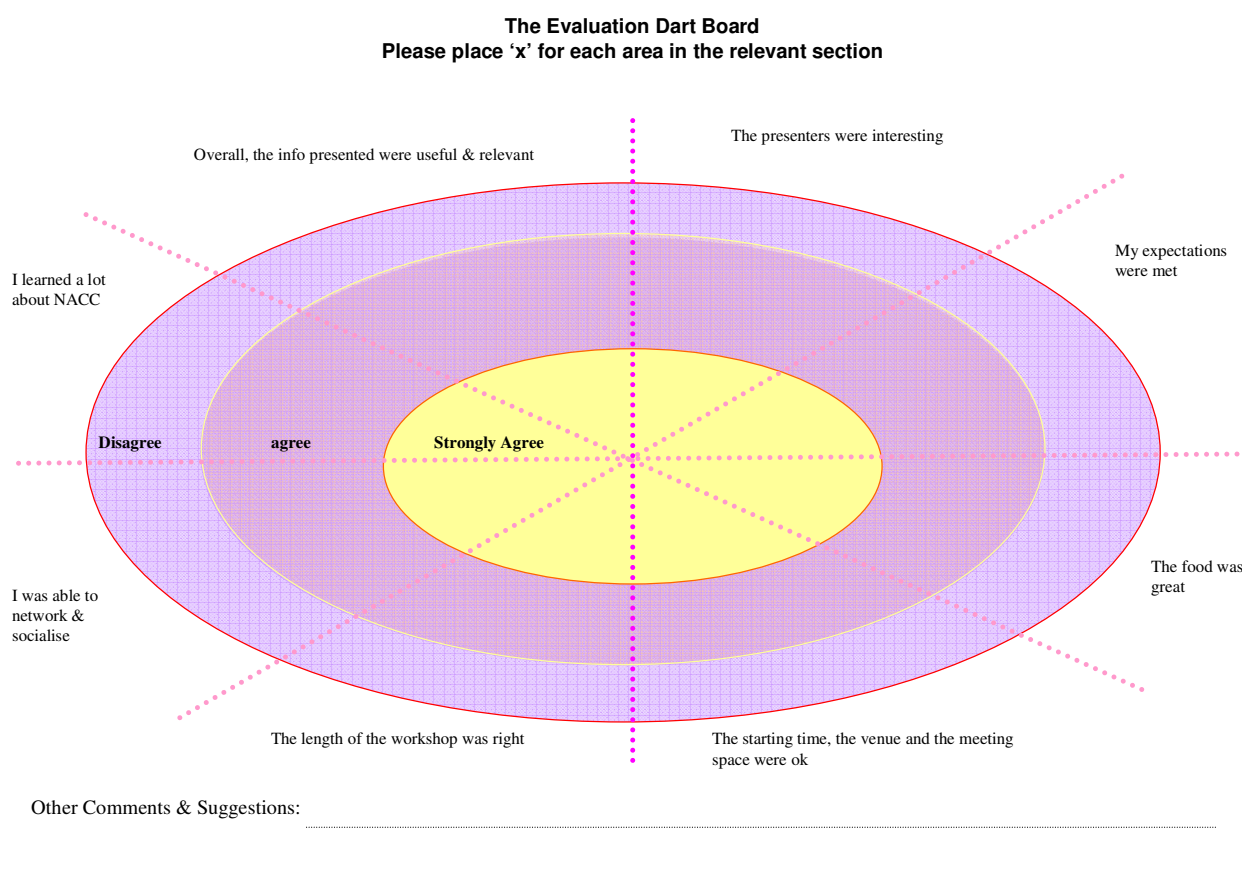
4. Key Messages

A number of key messages have been extracted from the workshop presentation sessions:

- The region is of great environmental, economic, social and cultural significance and is facing a number of important natural resource challenges.
- NACC is working towards the sustainable use and management of the region's resources, and our existing on-ground projects have made significant achievements and provide understanding.
- Our regional revised strategy will drive future investment (funding) over the next FIVE years.
- In CFoC, farming and agriculture is important to the Australian governments. Community skills, knowledge and engagement are key National Priorities. And climate change and adaptation strategies are key Govt initiatives.
- Regional delivery model remains an integral part and regional strategies and targets remain relevant. However, partnerships, collaboration, best processes are critical for the future.
- NACC has positioned itself through good governance model.
- Change management is the biggest challenge ahead of us. We have the right people to do the best job of that.

5. EVALUATION

Evaluation dart boards were distributed to the workshop’s participants to gauge participant feeling on a range of workshop aspects. Participants asked to make a mark in each segment of the dartboard according to their level of satisfaction. . The nearer the mark is to the middle of the board (strongly agree), the higher the satisfaction. The further away from the middle (disagree), the less their satisfaction is. The dart board below depicts aspects of the workshop that were presented to the participants. There were 60 participants in total, however, 37 of them filled out the dart boards.



5.1 Results

Evaluation aspects of the workshop:	Strongly Agree	Agree	Disagree
Overall, the information presented were useful and relevant	17	20	0
The presenters were interesting	15	22	0
My expectations were met	15	19	3
The food was great	23	13	1
The starting time, the venue and the space were ok	27	9	0
The length of the workshop was right	21	15	1
I was able to network and socialise	18	18	1
I learned a lot about NACC	12	20	0

- As can be seen in the Table above, all respondents showed that the information presented in the workshop was useful and relevant and that the presenters were interesting.

- About 92 % of respondents indicated that the workshop has met their expectation with 7% indicated their expectations were not met.
- In terms of hospitality, 97% of respondents mentioned that the food provided in the workshop was great.
- As far as the starting time, the venue and the space of the workshop are concerned, most respondents indicated satisfaction. Also they showed that length of the workshop is alright.
- Regarding knowledge about NACC 86% respondents agreed that they have learnt more about NACC; while 14% indicated they have already know about NACC.
- Nearly all respondents agreed that the workshop has provided good opportunity to network and socialise.

5.2 Other comments and suggestions:

- Would like speakers to add their thoughts towards future directions in relation to NRM and or agriculture.
- Good workshop Stanley, it's good to learn about projects that I previously didn't know existed. I'll be coming next year. Also, maybe more "outsiders" should be invited to attend.
- Information from others in the region preference for a one day w/shop would increase their attendance.
- Very well organised. I like the question time after each section. I'm a bit concerned about using bottled water when we have filter water onsite and NACC has a green policy.
- It should be "mandatory" not optional that project managers present their projects at such a forum. It is tax payers' money funding all of this work and the public have the right to be informed of the outcomes and progress.
- Microphone for the presenters, when a person has two topics to present; split the presentations so people will know that they are two separate projects.
- Notes for all speakers please.
- Disappointed there was no afternoon tea. Would have liked to have seen the NRMOS present their NLP projects. Great to have bottled water. Great couple of days, well done.
- Presenters need to correctly attribute funding sources.
- A tour or site visit to a farm or revegetation farm practicing these methods would've been great. Just breaks up the day in just sitting and listening.
- Setup the room differently; looking at peoples backs not so welcoming. How do we convince farmers to embrace changes in farm management?
- From my perspective, there were many "production" type presentations with sustainability but very much with the orientation towards agricultural production rather than conservation.
- Starting at lunchtime on Tuesday silly and finishing at 1:00 on Thursday makes it a waste of two days.
- Fantastic Stanley again, well done and thank you. Nice to have Alan, Sandy and chair of NACC tell us thanks. See you next year, Lana Kelly.
- A greater emphasis on the "workshop" elements. It may have been useful to have a facilitated discussion after the sessions to bring out the key messages, what worked and what didn't and how things could be improved in the future.
- Many presenters I had heard in the previous workshop.
- Probably a bit too soon after the last workshop ran 12-18 months apart mix up the agenda so the same speakers don't do two talks in a sessions sometimes difficult to distinguish between projects, sessions to capture land program feedback and gaps would have been good.
- I believe it was not a workshop but rather a presentation of NACC projects with minimal "workshopping" activities. Does NACC have any sustainable land use regional activities? Does sustainable land use have to be all about farming and/ or the pursuit of personal wealth and economic development?
- It was definitely a great chance to find out about some of the projects in the region

- It's difficult to learn too much about NACC when you already work there. Good work Stanley.
- Well done Stanley, another well organised and informative workshop.
- Well organised, I'll definitely continue attending while I'm about; short talks are the way to go, more about the trees.
- Questions needed to be repeated by the presenter if and after the questioner is too quiet especially for people up the back. Also some presenters are hard to hear and they need microphone.
- Seeing the land program funded by NACC in one workshop enabled a good overview as well as well detail. Written summary very useful. I would like to have this booklet produce for the workshop to be redone and include:
- A land program summary of learning from this workshop and some thoughts about future direction based on the composite summary learning's.
- Should provide list of all NACC funded projects that include those for which there was no presentation
- Well organised, well structured.

6. APPENDIX

6.1 Agenda

Workshop Program (Tuesday 26 August 2008)

	Topics		Time (min)
11:30 -12:00	Arrival and Registration		
12:00 - 12:45	Lunch		45
12:45 – 13:00	Welcome	Paul Findlater	15
13:00 - 13:30	Background to NACC and Strategic Land Targets review	Bill Currans/Stanley Yokwe	35
	Session 1: Salinity project in the NAR	Chairperson: Liz Easton	
13:30 – 13:45	Salinity Rehabilitation and Extension Project	Mike Clarke	15
13:45 – 14:00	Assessing deep drains in the NAR of WA	Angela Stuart-Street	15
14:00 – 14:15	Agronomic package and benchmarking for mild and periodically saline soils	Lorinda Hunt	15
14:15 – 14:30	Revegetation of Natural Drainage Lines and Protection of Remnant Vegetation in the East Moore Catchment	Lana Kelly	15
14:30 – 14:50	Questions time	All above speakers	20
14:50 – 15:10	Afternoon Tea Break		20
	Session 2: Incentive delivery for NRM solutions	Chairperson: Jessica Hasleby	
15:10 -15:25	NACC Target Investment Program Project	Jane Bradley	15
15:25 – 15:40	West Koojan/Gillingarra Catchments demonstration Initiative (CDI)	Mark Weston	15
15:40 – 15:50	Questions time	All above speakers	10

	Session 3: Farming systems	Chair: Andrew Blake	
15:50 – 16:05	Healthy farms – a pilot project	Kristy Chapman	15
16:05 – 16:20	Soil Stabilisation solutions for Nangetty Valley	Kristy Chapman	15
16:20 – 16:35	Long term sustainability of profitable medium rainfall farming systems	Rob Grima	15
16:35 – 16:50	Reducing erosion under high stocking rate grazing systems	Rob Grima	15
16:50 – 17:10	Questions time	All above speakers	20
17:10 – 19:00	End of Day one: Sundowner & BBQ		1hr:50min
	Day 2 (Wednesday 27th)	Chairperson: Andrew Blake	
	Session 3: Continuation of Farming systems		
8:30 – 8:45	The Acacia Saligna for Fibrewood project	Phil Bellamy	15
8:45 – 9:00	Mogumber Community Project	Brendan Moore	15
9:00 – 9:15	Soil carbon sequestration under annuals, perennials & tagasaste	Tim Wiley	15
9:15 – 9:30	Grain and Graze Project (Environmental and productivity aspects)	Wayne Parker / Tim Wiley	30
9:30 – 9:55	Questions time	All above speakers	25
9:55 – 10:10	Morning Tea		15
	Session 4: Climate change and water	Chairperson: Angela Stuart-Street	
10:10 – 10:25	Rural Town – Liquid Assets	Mark Pridham	15
10:25 – 10:40	Farming to Climate: Managing climate risk and variability in the low rainfall region of the NAR	Kari-Lee Falconer	15
10:40 – 10:55	Soil Carbon Project (ASCAS and NACC Carbon Initiative)	Tim Wiley/Jane Bradley	15
10:55 – 11:10	New AG and Environmental Prospect for Carbon in the NAR	Paul Blackwell	15
11:10 – 11:30	Questions time	All above speakers	20

11:30 – 11:55	Caring for our Country Information Session by Australian Government Sustainable Farm Practices Facilitator	Michael Grasby	25
11:55 – 12:20	NACC's Sustainable land use program: A way forward	Alan Bradley	25
12:20 – 12:30	Evaluation form & Conclusion of the Workshop	Stanley Yokwe	10
12:30 – 13:20	Lunch time		50
	Thank you very muchEND OF WORKSHOP.....		

6.2 LIST OF PARTICIPANTS

No.	Name		Organisation	Area	Contacts
	Surname	First Names			
1	Atkinson	Katherine	NACC	NRM	ipo@nacc.com.au
2	Bagshaw	Rachel	MIG	NRM	r.bagshaw@westnet.com.au
3	Bellamy	Phil	Trees Midwest Inc	Forestry	PhilBellamy@bigpond.com
4	Blake	Andrew	DAFWA	NRM	ablake@agric.wa.gov.au
5	Bradley	Jane	NACC	NRM	ipm@nacc.com.au
6	Bradley	Alan	NACC	NRM	ceo@nacc.com.au
7	Chapman	Kristy	MIG	NRM	k.chapman@westnet.com.au
8	Clarke	Mike	DAFWA	NRM	MGClarke@agric.wa.gov.au
9	Colebrook	Georgie	NACC	NRM	tipo3@nacc.com.au
10	Curnow	Chris	WWF	Wildlife	ccurnow@wwf.org.au
11	Currans	Bill	NACC	NRM	ipc@nacc.com.au
12	Eaton	Elizabeth	NACC	NRM	eeaton@inet.net.au
13	Eaton	Will	NACC	NRM	wea81342@bigpond.net.au
14	Easton	Liz	NACC	NRM	merilynga@bbsat.com.au
15	Falconer	Kari-Lee	DAFWA	Farming systems	kfalconer@agric.wa.gov.au
16	Findlater	Paul	DAFWA	NRM	Pfindlater@agric.wa.gov.au
17	Ferris	David	DAFWA	Biosecurity	dferris@agric.wa.gov.au
18	Gill	Jackie	NACC	NRM	ctc@nacc.com.au
19	Grasby	Michael	AG Caring for our Country	Sustainable Farm Practices	Michael.Grasby@csiro.au
20	Grima	Rob	DAFWA	Farming systems	rgrima@agric.wa.gov.au
21	Harburg	Sam	DAFWA	Farming systems	sharburg@agric.wa.gov.au
22	Hasleby	Jessica	DAFWA	NRM	Jhasleby@agric.wa.gov.au
23	Hasson	Ahmed	DAFWA	Farming systems	ahasson@agric.wa.gov.au
24	Howell	Justine	WMNR Group	NRM	wmnrg.nrmo.1@westnet.com.au
25	Hunt	Lorinda	DAFWA	NRM	LCHunt@agric.wa.gov.au
26	Innes	Carol	SW Aboriginal Land & Sea Council	NRM	carol.innes@noongar.org.au
27	Jansen	Marieke	NACC	Business services	giso@nacc.com.au
28	Kelly	Lana	MCC	NRM	lkel@bigpond.net.au
29	King	Chris	NACC	NRM	chair@nacc.com.au
30	Krockenberger	Ingrid	MCC	NRM	mcc.nrmo1@bigpond.com
31	Lewis	Clayton	Aust Gov Caring for our Country	Indigenous Land Management	clayton.lewis@icc.gov.au
32	Longman	John	MCC	Community rep	capitela@bigpond.com
33	Manning	Jo	WMNR Group	NRM	wmnrg.nrmo@westnet.com.au
34	Maher	Marissa	SW Aborginal Land & Sea Council	NRM	marissa.maher@noongar.org.au
35	Marsden	Yvonne	NACC	NRM	yamy1@bigpond.com
36	McDonald	Glenn	DAFWA	Crop Research	GMcDonald@agric.wa.gov.au
37	Moore	Brendan	SW Aborginal Land & Sea Council	NRM	Brendan.Moore@noongar.org.au
38	Nannup	Alison	SW Aborginal Land & Sea Council	NRM	Alison.Nannup@noongar.org.au
39	O'Callaghan	Chris	Liebe Group	NRM	liebe.chris@bigpond.com
40	Parker	Wayne	DAFWA	Farming systems Rural Landuse Project Development Officer	Wparker@agric.wa.gov.au
41	Pate	Sandy	Perth Regional NRM		Sandy.pate@water.wa.gov.au
42	Pridham	Mark	DAFWA	Ecohydrology	mpridham@agric.wa.gov.au

43	Rayner	Donna	NACC	NRM	ro@nacc.com.au
44	Schrank	Christel	NACC	NRM	tipo1@nacc.com.au
45	Solomon	Dene	YYCMG	NRM	yycmg.dene@bbnet.com.au
46	Stuart-Street	Angela	DAFWA	NRM	AStustreet@agric.wa.gov.au
47	Thomson	Naomi	DAFWA	Communication	nthomson@agric.wa.gov.au
48	Troup	Georgie	MCC	NRM	georgietroup@border.net.au
49	Tschirner	Kurt	Charles Darwin Reserve	Bush Heritage Australia	charlesdarwin@bushheritage.org.au
50	Tschirner	Andrea	Charles Darwin Reserve	Bush Heritage Australia	charlesdarwin@bushheritage.org.au
51	Vaughen	Jeff	Community	Community rep	potoroo@australiainmail.com
52	Walmsley	Rachel	MCC	NRM	mcc.nrmo@bigpond.com
53	Weir	Margi	NACC	NRM	wpl@nacc.com.au
54	Weston	Mark	NACC	NRM	cdipl@nacc.com.au
55	Wells	Martin	Land Assessment Pty Ltd	Consultancy group	'Landass@iinet.net.au'
56	Wiley	Tim	DAFWA	Farming systems	twiley@agric.wa.gov.au
57	Williams	Bronwyn	MCC	NRM	bronwynwilliams@westnet.com.au
58	Wishart	Peter	NACC	NRM	p-wishart@bigpond.com
59	Woolston	George	DAFWA	Farming systems	gwoolston@agric.wa.gov.au
60	Yokwe	Stanley	NACC	NRM	Syokwe@agric.wa.gov.au

Acknowledgements

This report was produced for the Northern Agricultural Catchments Council by the NACC's land program leader Stanley Yokwe. During the development of this workshop enormous support has been received from the following persons Tracy Antrobus and Rebekah Nona (NACC), Andrew Blake and Stewart Edgecombe (DAFWA).

Thanks also to Margi Weir and Naomi Thomson for taking notes during the presentations sessions. Mike Clarke has also peer reviewed the report.

Disclaimer:

While all reasonable care has been taken in the compilation of this report, the NACC and Western Australia Government and its officers accept no responsibility for any errors or omission it may contain, whether caused by negligence, or otherwise or for any loss, however caused, sustained by any person who relies on it.

The summaries compiled in this report are property of the project managers and their sponsoring bodies. They may only be reproduced in any form with permission from the respective project managers.