

# LOWER BLACKWOOD BASIN GROUP (Afternoon)

**Location:** Augusta

**Date:** April 1, 2014

**Time:** Afternoon 2:00pm to 5:00pm

## ***Process***

The group was asked to identify their components and to write these onto sticky notes (yellow). I tried to get them to work through linkages but they really could only group the components. They did however then identify these groupings (orange), look at where there may be irreversible points of change (pink) and then what opportunities were there for the system (green)

The groups had noticed a wide range of changes occurring over the last few years and could go back to 60 years of change. They were generally very accepting of climate change and pointed out a range of ways in which they had already adapted or changed. There were concerns about the impact of an increasing population on their lifestyle (they did not want to be inundated with people) and livelihood (especially concerns over the long term availability of water and the change in zoning of land). The concerns for the environment were less clear, as they saw the environment had changed so much that maybe we should be accepting introduced weeds (such as arum lily which is now widely established even though it is on 'the' list with feral deer) now as a part of the changed system, a bit like the birds which have moved in or the foxes.

## ***View of the Catchment***

Group members came from or had clearly visited and been influenced by other nations, bringing a world view to the table. The catchment was not clearly defined but ranged from the ocean into the surrounding farm land taking in Augusta and smaller towns. It was an operating landscape rather than a water shed.

## ***Points of interest from the session***

- Acceptance that some introduced species have now naturalised as the system has changed to accommodate them. The example given was when an extensive rabbit baiting program was carried out recently the predators (such as birds of prey, foxes, cats) were hungry and there was a marked increase in attacks on sheep, chook yard fowl and other farm animals.
- Compulsory rezoning of land from rural to conservation without compensation
- Seen as the food bowl of South West of Western Australia
- Viticulturists say there was nothing here until the grapes came undermining the longer term land use and productivity – this undermined the value and input of many people.

## ***Community responses***

### **GROUP A**

#### **What is changing?**

- Margaret River dead town – hospital
- State planning changed dimensions – development still going – no development down here
- Increasing red/green tape – legislation – increase in bureaucratic jobs but decrease in jobs on farm
- More pests and weeds – blackberries/cotton bush/ kangaroos, blue gum plantations, weeds imported on machinery
- Too many subdivisions
- Lost 200 000 in production because of government lands with no management of pests and weeds, emus and roos
- More snakes, more wild pigs, more emus
- For example baiting of rabbits
- Change in NRM, used to be more local community based, now more regional
- More of a focus on sustainable foods – pressure on farmers
- Government studies water ways, landuse – increasing regulation but does not translate to money on the ground
- Shortage of skilled farmers and family farmers leading to farmers leaving the land
  - Need new to extend farming skills to the next generation
  - Increase in fire hazards – people, property (e.g. Margaret River Fire)
  - Resources – lose farmers, lose fire fighters, lose community
  - Not involved in landcare
  - Subtle changes
- Development – agricultural zone being rezoned non-agriculture in Margaret River
- Foreign ownership
- More intensive agriculture
- Government – lack of understanding of agriculture
- Planting of trees
- Increasing populations taking over productive land
- Increase in migration of urban population e.g. hobby farmers/large land owners
- Due to change in age population – lifestyle
- Climate change – moving from Perth to Augusta
- 40% dairy cows moved south
- Number of young farmers 7 out of 37 farms in Nannup have a succession person – decline in young farmer willing to take over
- 50% of all farmers will change hands as the farmers too old (10 years) who will be the new farmers?
- Change of ownership from Australian to Foreign
- Concern with changing climate and food security (Fly in Fly out)
- Huge amount of red tape – farmers can't cope, with workload
- Reduction in surface water flow due to reduction in rain
- Effects flushing of river

- Alarming rate of dieback and canker
- Existing knowledge of farming systems needs to be transferred
- Current dairy industry – big industry – larger companies moving in
- No social infrastructure outside of Margaret River
- Scott Plain – dairy industry moving – foreign employees no local employment as they don't want to.
- Shift from Agriculture to mining – people don't train in agriculture
- Lacks of skilled workers in agriculture – farmers employ unskilled workers.
- Paperwork, paperwork, paperwork!

### **What will climate change look like in the future?**

- New energy sources e.g. methane from dairy effluent or wind
- Existence of local community group – proper administration and community group
  - Why do SWCC have staff doing similar projects? Use contact lists
  - Competing projects
  - Invitation to local
- R&D attached to local LCDC's
- We need funding at local level for projects
- Streamline process
- Impact – if we have a drying climate – look at the crops and pastures we grow – use new species.
- Agricultural shift – benefit
- More people in the region increase in effluent
- Need social infrastructure put in place
- Recharge – storage of water

### **What are the important points of change?**

- Water availability and quality
- Thousands of head of cattle and sheep moving from Wheatbelt to this area due to lack of dams
- Water allocation for industry specific (e.g. horticulture, agriculture)
- R & D into water options
- Make local land more productive
- Increased temperature – locally much lower
- Grapes have moved south
- Decrease water logging – only some in winter
- Local inlet would be affected
- Native vegetation affected
- Tipping – evaporation rate which makes this area better for irrigated farming
- South west is the premium food bowl of the state. It has stable weather and more water.
- There is no strategic support for this (ag in the region – DAFWA is not helping and researching)
- Social infrastructure is critical
- Biodiversity Hotspot – SW region.

## GROUP B

### What changes have you noticed over the last 15 years or so?

- Pink and grey galahs are new to the region
- Sulphur crested cockatoos are increasing rapidly in the Margaret River and Busselton areas
- Long billed corellas are increasing in numbers and doing a lot of damage
- There has been a decrease in the number of orchids from when I grew up as a child going "orchiding".
  - Fire regimes encourage some orchids and discourages others
  - The seasons are changing and this also changes the range and numbers of wildflowers (2013 was not such a good wildflower season as it was cold for so long)
  - Fires promote colourful orchids such as spider orchids and cowslips
  - Leak orchids grow in rotting vegetation so decrease with fires
- Increase in numbers of kangaroo
  - reduces the numbers of orchids
  - roos are really hammering the bush
  - more hobby farms are leading to more roos as they have feed available and low stock numbers and often encourage the roos
- Increasing numbers of emus
  - 20-25 years ago the emus were relatively rare
  - they started coming in after the severe drought in the eastern wheatbelt and have stayed and increased in number
  - a suggestion was to shoot but farmers have to obtain a destruction permit to shoot the emu and they must leave it to rot.
  - Aboriginals could harvest them but there is not enough money to do so
- Massive loss of peppermint trees – at Jelorup the peppermint trees are dying. One landholder found if they cut the top half off the trees they could keep them alive
- The water level in this region has dropped 8 metres
- Peppermint trees did not exist in the Augusta area (further south than Jelorup)
  - so they are viewed as an introduced weed
  - not palatable to stock so they come up in grazing paddocks
  - They are a pioneer species like Bosia
- Arum lily is now naturalised – could be used as an export industry but one group member had been declined a harvesting licence because it is still a declared species.
- Land has been rezoned from agricultural to conservation WITHOUT COMPENSATION
  - The landholder is still liable for rates, and continued management of the land
  - But is not allowed to derive and income from the land
- Constantly told we represent the past of the shire not the future
- New weeds emerging – grape vines are spreading in to the creek lines
- Some plants come here and 'niche' in like three cornered jack, arum lily, doloscopy
- It is a bit like the 7 headed devil – control one weed and another takes its place.

- Weed control is reducing due to cuts in APB & DEC and because 24D effects on operations
- Grass fires more flammable than bushfires
  - More dangerous than bushfires
  - Grass fires fast moving
- Things happen with the best of intention but end up being a problem
  - E.g. rabbits – the system has now adjusted to them
  - Snakes, goannas, foxes and birds of prey control the rabbit numbers
  - Ferals are now part of the system
  - When calici virus came through and reduced the numbers of rabbits – the animals that preyed on rabbits began to break into chook yards and attacked sheep for food
- More tiger snakes than 15 years ago
- Manage to equilibrium NOT fixed systems
- When of number are controlled and reduced it leads to an increase in cat numbers
- 1980 when foxes were harvested for fur numbers were kept in check then when out of balance when the trade stopped
- Feral deer and pigs (most in Scott River area) – the deer came in over the last 10-15 years – they are mostly fallow deer but there are some red deer too.
  - France has an open season on pigs – maybe we could look at that
  - In US white tailed deer have a hunting season – of the 45000 they allow 10000 to be shot
  - Black market pig shoots
  - Shooters plan pigs in WA bush
- Large areas of forest in the area but none as it was
  - people go out there to dump garden rubbish – I have noticed fruit trees in the forest
  - cut fire wood
- Impact of tourism down here – they don't understand and don't know how to care for NRM
- Margaret River is a party town
- The district is Margaret River centric (but 80% on shire wages)
- Community funding goes to Margaret River then Augusta – leading to community disenfranchisement
- Next generation – attitudes are changing
- Very little farm succession because very few kids are coming back to the farm
- Feel isolated – especially youth (22-26 yr old boys)
  - Don't go out much because not into drugs or surfing
  - Sport is good but often clashes with farming operations
  - As farmers we think differently – sit back and observe instead of quick reactions
- Farmers are creating a vision of the landscape and future
- Few people really interested in what went on before
- Head of viticulture said public there was nothing at Margaret River until the vineyards started
- What the farmers produce is REALLY needed food – dairy and beef
- Area of farm land is reducing

- In reality we are only 20% developed on our farms – need money to develop further
  - Commonwealth and state funding for R&D
  - Could increase production on the land we already have and not get bigger
  - Support DAFWA
- Fruit farmers in the region are very progressive
  - they go to the US to get ideas
  - Not able to hand over the farm – no succession and no superannuation
- Open bushland is changing
- ORAL HISTORY could be got from Bill and Kitty Darnell (Bill senior come to area in 1922)
- Farmers are independent, risk takers and need to have the ability to move – government, large corporations and bureaucracy takes the mickey out of the next generation

### **How will a changing climate impact on this region?**

- Tourist fishing –
  - Depleting fish stocks and changing the types of fish
  - Collapse in sardine fishing at Penguin Island said penguins are looking for food
- Massive coastal erosion there were 4 storms in 2013 with over 8 m high swell events which is almost unheard of
  - Capel and Harvey shires have lost kilometres of fencing along protected dunes which have been washed into the ocean. Ocean coastal rehabilitation ended up in the ocean
  - Now working further back to protect areas – will need to think about where to do this in the future
  - Expect more frequent high energy storms
- Farming increasing risks because of erratic seasons start and finish of season causes increase risk
  - But rate of grass growth because it is warmer when it used to be cold and gloomy and raining now it is more productive
- Shortage of water in streams and creek lines
- Insect attack – black beetles have always been around but now they are impacting on production
- Fire risk to new arrivals with bush around
- Most change is a result of increased information and technology – proliferation of information
  - take stock of noticing photos
  - early settlers logging we would be horrified
  - climate change don't go into a frenzy – look at it with a workable manner
  -

## **OPPORTUNITIES (Combined group)**

- FARM
  - Grow as much grass on farm as possible
  - Affordable growth
  - Major problem hardpans – need realist advice
  - Need help from DAFWA and experts – we have been told we can rip the hard pans but they just close up
  - We used to have research stations but these have gone so there is no R&D
  - Robotic dairies
  - grazing (harvest grass and bring to stock)
  - irrigation
  - composting
  - methane harvesting
  - effluent as fertilizer
  - different species of plants and grasses for forage
- Off-farm
  - Marketing – fair price for fair work
  - Government wants cheap food for population (then they buy widescreen TVs and boats!!)



# LOWER BLACKWOOD GROUP (Evening)

**Location:** Augusta

**Date:** April 1, 2014

**Time:** Afternoon 6:00pm to 8:00pm

## ***Process***

Drew a picture of their system There was a slightly different approach used this time as they were asked to pictorially draw their system. They easily identified the components they saw as important in their area. One gentleman jumped into drawing quickly while others were a little more reluctant and with the input from others the diagram developed reasonably well. We stayed as one group which worked well as the members fed off each other.

Engaged well in identifying what they saw as important or identified with. They were well aware of their environments and the changes which had occurred in the area over the last 20 years. The group then clearly outlined the changes they saw would come with a changing climate. A few good and many concerning changes.

## ***View of the Catchment***

This group did not clearly define the area of the catchment, but it was reasonably local including the key towns and extending along the coast and into the farming regions surrounding Augusta.

## ***Community responses***

### **What is important to you in your landscape/area/home?**

- Lack of traffic – quiet near my home is important to me
- Soils – the alkaline soils mean we can produce Lucerne
- Love the bush – peppermint trees and orchids
- Land, ocean and trees
- Bush – uninterrupted, if mining was nearby – no or development (population)
- Conservation area decided that these areas were not suitable for agriculture and were rezoned so that agriculture could not be carried out on them
- Love the climate, forest and lifestyle – the pace of life is better
- Had enough of hot weather and humidity in Perth
- If we lost our South Easterly it would be very uncomfortable.
- Climate was the most significant reason for coming to this area - ground water was necessary (if we cannot produce food we will have starvation in 60 years)

## What have you noticed changing – over the last 15 or so years

- Increased numbers of kangaroos and emus – farms providing water and food and the animals can hide in the blue gums
- Change in the birdlife – red wattle birds – November they disappear (usually they stay)
- Got white corellas and pink galahs – last 20 years
- Less rainbow beardeders, top notch pigeons, chats
- Definite changes in bird populations
- Marron disappearing – since the flood in 1982 (flushed salt down the river)
- Dolphins and crabs are found further up the river
- Dolphins seen as far up as Alexander Bridge = salt water further up the river
- Less frosts
- Cows don't get winter coats – they used to be quite woolly but this has declined over the last 15 years – maybe they have adapted or might be change in diet (more grain feed leads to higher core temperatures)
- Sunnier coast – weather patterns changed – more sunshine
- Used to have gale force winds – 6 to 7 years with out
- Warmer winters – changing direction of rain – west now N/W
- No frosts in winter anymore
- We used to have 60 inches of rain and now 45 inches – significant reduction in 20 years
- Other areas nearby are consistent
- Blue gum impacts – no water on ground – draining gets away so less water lying round
- Crazy rain patterns
- Heat and humidity are higher – Cows die at 38' – Jerseys are more tolerant – a few years ago lost a cow when temp got over 38', someone near Busselton lost 5 cows.
- Get evaporation from centre pivots and the irrigation increases humidity
- There were possums and native cats – now just feral cats and foxes
- Less banksias than there used to be – the bush is changing – thicker now less burning
- Low risk fires that don't work – fierce fires more natural
- Cost of energy – sun and wind (talked about examples that didn't go ahead) (Govt not supported)
- No incentive – link into grid to put in energy
- It affects the GRID – the GRID would lose money
- Hot fires might help get rid of dieback??
- Nature would have sent lightening fires in autumn
- The same would happen again if we get the right conditions
- Now DPAW light fires in spring and the birds fly out of nests in trees
- People used to light fires around Scott River as no one lived there but now areas have not been burned for 23 years
- Broad leaf grass/forb used to grow animals loved it – gone now
- 09 was a wet year – rainfall fairly consistent but the average temperatures are coming

- This last November was the hottest on record
- Moved from Boyup Brook because of rainfall
- Noticing similar things – no science but noticing
- Summer sun has more bite causing sun damage in fruit
- Putting up shade cloth to protect fruit & vegetables

### **What will happen if we had Climate Change?**

- Population increase
- The Wheatbelt will be a dust bowl
- Maybe growing wheat at Scott River
- We will evolve – adapt to agriculture
- Increase in 3' will will animals
- Super towns will move down the Coast – Busselton will have the biggest growth
- Water in Manjimup deteriorating
- Forecast that by 2020 Yarragadee water supply runs out for Manjimup
- Shire happy to have water supply into Augusta – comfortable it is not going to Perth
- In Margaret River waste water is utilised – water school and town ovals
- Roads – haven't got resources to upgrade and maintain – built up over 40 years ago
- Nannup do small strips beside their roads maybe MR shire could trip this
- Vehicles getting bigger, roads not build for it
- Planning – key areas – Local Planning Strategy
- Bypass road – Margaret River
- Blocks made smaller – but bigger blocks selling better 30% higher development
- Augusta – 950 lot subdivision and Ellis estate – not sustainable
- Future – high density housing
- Extensive Toad Network – most development infrastructure in place – Augusta
- Sea level rises leading to flooding
- East Augusta low (flooding)
- Population influx – retirement base
- Young people in Bunbury, Perth etc
- If population comes so will jobs
- Population control – should be discussed
- Dependent on how extreme
- Fast travel – FIFO – Busselton
- Commuting – traffic now to Bunbury – use of fuel – driving for granted
- Developers – Leeuwin Naturaliste Plan
- Irrigation for farming will be needed
- Reduction in Climate extend our seasons – the warmth means we get more grass growing
- Increased sophistication in farming – trying to meet regulation - drive farmers out – because it is too hard
- Look after ground water – water for this area is important (food production, living etc)
- Don't seem to be planning for water or power
- Population density increasing

**FIGURE XXX LOWER BLACKWOOD SYSTEM DIAGRAM (Evening)**

