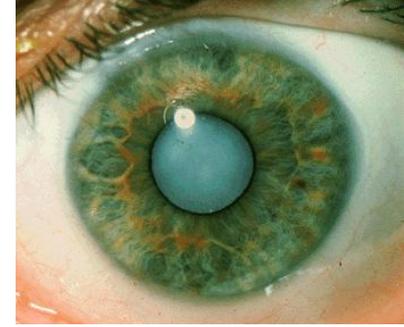


Dry, drier, drought? Wet, wetter or whatever? Farmer responses to climate

Opening the gates on farmer health Hamilton 2010

Susan Brumby, John Martin, Stuart Willder
National Centre for Farmer Health



Climate change

Climate change is the biggest global health threat of the 21st century. Effects of climate change on health will affect most populations in the next decades and put the lives and wellbeing of billions of people at increased risk. The Lancet vol 373 May 16, 2009

The farming sector is amongst the most vulnerable, with many communities, particularly in southern Australia, already dealing with more intense and more frequent drought and fire. The Climate

The likely effects of climate change in Australia include

1. Warmer and drier
2. Less rainfall in the south
3. More rainfall in the north east
4. Experience stronger tropical cyclones
5. All of the above

A warmer climate is likely to see increased incidence of

1. Queensland fruit fly
2. Cattle ticks
3. Mosquitoes
4. Skin cancer
5. Cataracts
6. All of the above

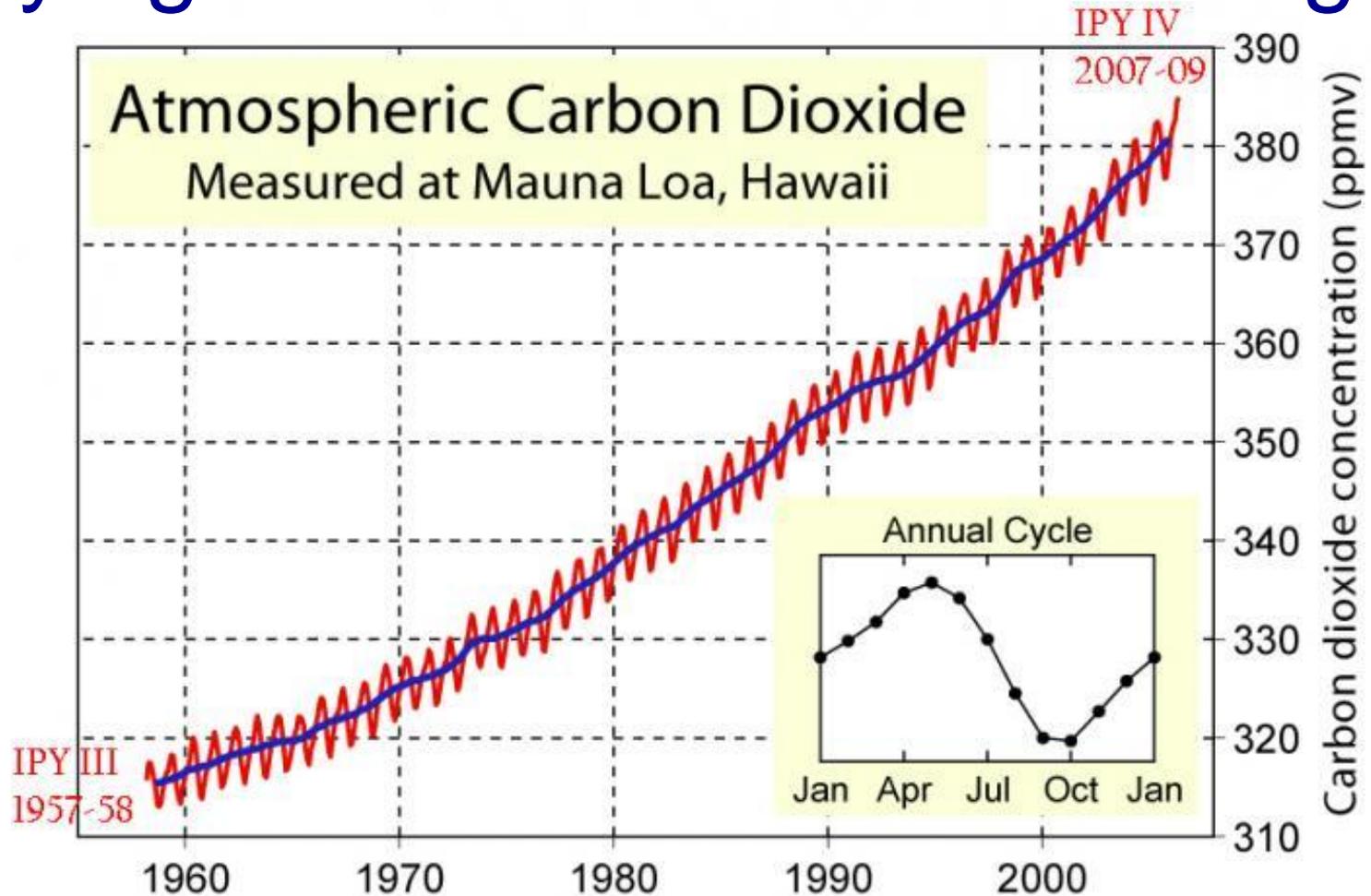
According to “how to feed the world” Agriculture in the 21st century has to produce

1. More food and fibre
2. Work with smaller labour force
3. Adapt to climate change
4. All of the above

In 2007 the worlds stockpile of food was

1. 123 days
2. 365 days
3. 30 days
4. 61 days

Paying attention to climate change



Paying attention to climate change

- 1.** 42% of Australia's primary production comes from the rural sector
- 2.** If the health of rural people suffers, it will affect productivity
- 3.** If the health of farming people suffers, productivity will definitely fall.....(DeWitt, AJRH, 2007)

Climate change and farming

- 2002 - 2006 40% Exceptional Circumstances (EC) declared
- 2007 - all Victoria Ag. Land EC declared
- 2008 - two thirds of Australia
- 2009 - half all Aust Agricultural land EC declared
- 2003 Sustainable Farm Families program commenced.

Extreme weather events - heatwaves

Heatwave death toll revealed - The Age

ANDREA PETRIE

February 3, 2009

The number of deaths in Victoria during last week's heatwave was more than double the same time last year, the State Coroner has revealed.

Almost two and a half times more people died last week than the same time last year, Coroner Judge Jennifer Coates said in a statement released this afternoon

Effects of Ecosystem



Effects of Ecosystem

The screenshot shows a Windows Internet Explorer browser window displaying an ABC News article. The browser's address bar shows the URL <http://www.abc.net.au/news/stories/2009/02/06/2483935.htm>. The page title is "Eel fishermen struggle as lakes dry up - ABC News (Australian Broadcasting Corporation) - Windows Internet Explorer". The ABC News logo is prominently displayed at the top of the page. The article's main headline is "Eel fishermen struggle as lakes dry up", posted on Friday, February 6, 2009, at 9:04am AEDT. The sub-headline reads: "Commercial eel fisherman say businesses are going broke because lakes in Victoria's west are drying up." A map link is provided: "MAP: Colac Colac 3707". The article text states that two of the region's largest eel habitats, Lake Colac and Lake Bolac, are empty. It quotes Bill Allen, president of the Victorian Commercial Eel Fisherman's Association, saying that eels have buried themselves in lake beds to survive. Mr. Allen notes that dry conditions have reduced the state's eel haul to virtually nothing. He provides statistics: "The state's production pre-drought was up around 450 tonnes, it's currently down around 40 tonnes," he said. He also mentions that current market conditions are challenging for eel farmers. The article includes tags for drought, environment, rural, fishing-aquaculture, rivers, water, vic, ballarat-3350, colac-colac-3707, lake-bolac-3351. On the right side of the page, there is a search bar for ABC News and a "Featured Video" section with three video thumbnails: a genetic study on human diseases, a Qantas plane landing gear issue, and the Dalai Lama's arrival in the US. The Windows taskbar at the bottom shows several open applications, including Telstra Turbo C..., STORE'N'GO (E...), 2 Microsoft Of..., HMF701 5 Clima..., schematic desig..., 7 Microsoft Of..., and Eel fishermen... The system clock shows 11:22 PM.

Sea level rise and currents

Bonney Upwelling

Fishing production in the south West



Environmental



'Code Red' as heat intensifies

2009-11-17 11:35

Sydney - Australian officials issued their first ever "catastrophic" wildfire evacuation warning on Tuesday, as a parching heatwave intensified over the country's south.

Created in the wake of February's devastating Black Saturday firestorm, which killed 173 people, the new warning urges residents to flee due to conditions being at their most extreme.

It replaced a "stay or go" policy allowing homeowners to remain and fight extremely risky blazes, which came under heavy criticism after the

Open gardens dying out - Mike Pritchard Fashion and drought are conspiring to wipe out some of the best country gardens, according to one of Australia's leading garden historians. The ever falling farm work force and the gradual changes in farm ownership, are also contributing to the changing face of our classic country gardens. And according to Trish Dixon the drought has highlighted the decline. She told Mike Pritchard in her travels, she's observing that many key features are falling into disrepair.

Sustainable Farm Families (SFF)

SFF addresses the health, well-being and safety of farm families within their community.

Funded - Rural Industries Research and Development Corporation (RIRDC 2003-07)

- 10 farming regions SE Australia
- 190 farming men and women.
- Farming enterprises cropping, sugar, cotton, wool and meat production.

Program provided

- Annual physical assessments, review of health conditions, assessment of health behaviours, focus groups and education relating to common health conditions.

In 2009 funded to assess:

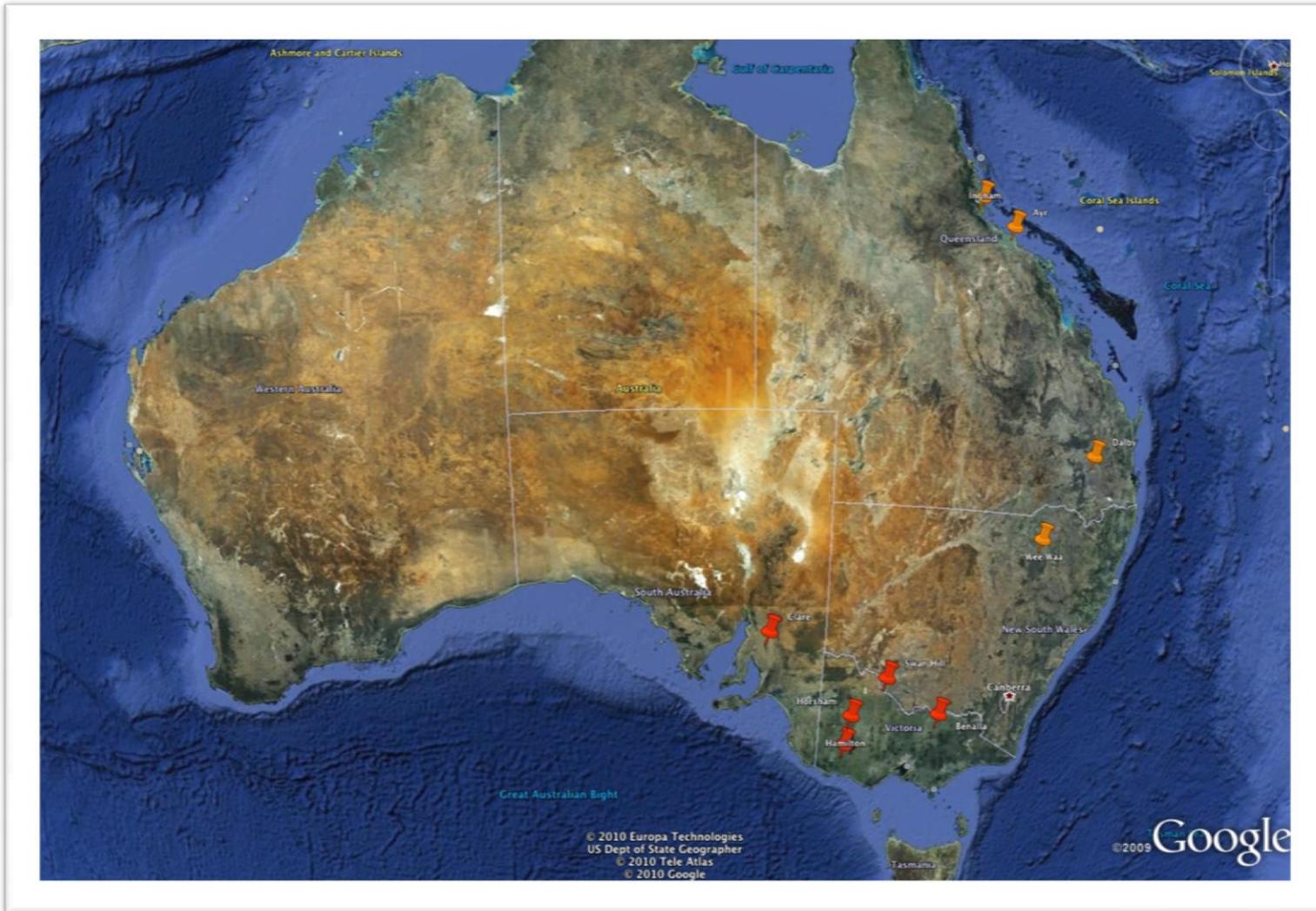
Longitudinal effects of the program

- health indicators,
- health, well being and safety behaviours
- health, well-being and safety knowledge

Greater part of Australia still suffering drought keen to assess the impact climate had upon:

- farm men and women and
- their agricultural businesses.

By the Way - has a changing climate impacted on your health, career or farm business decisions?



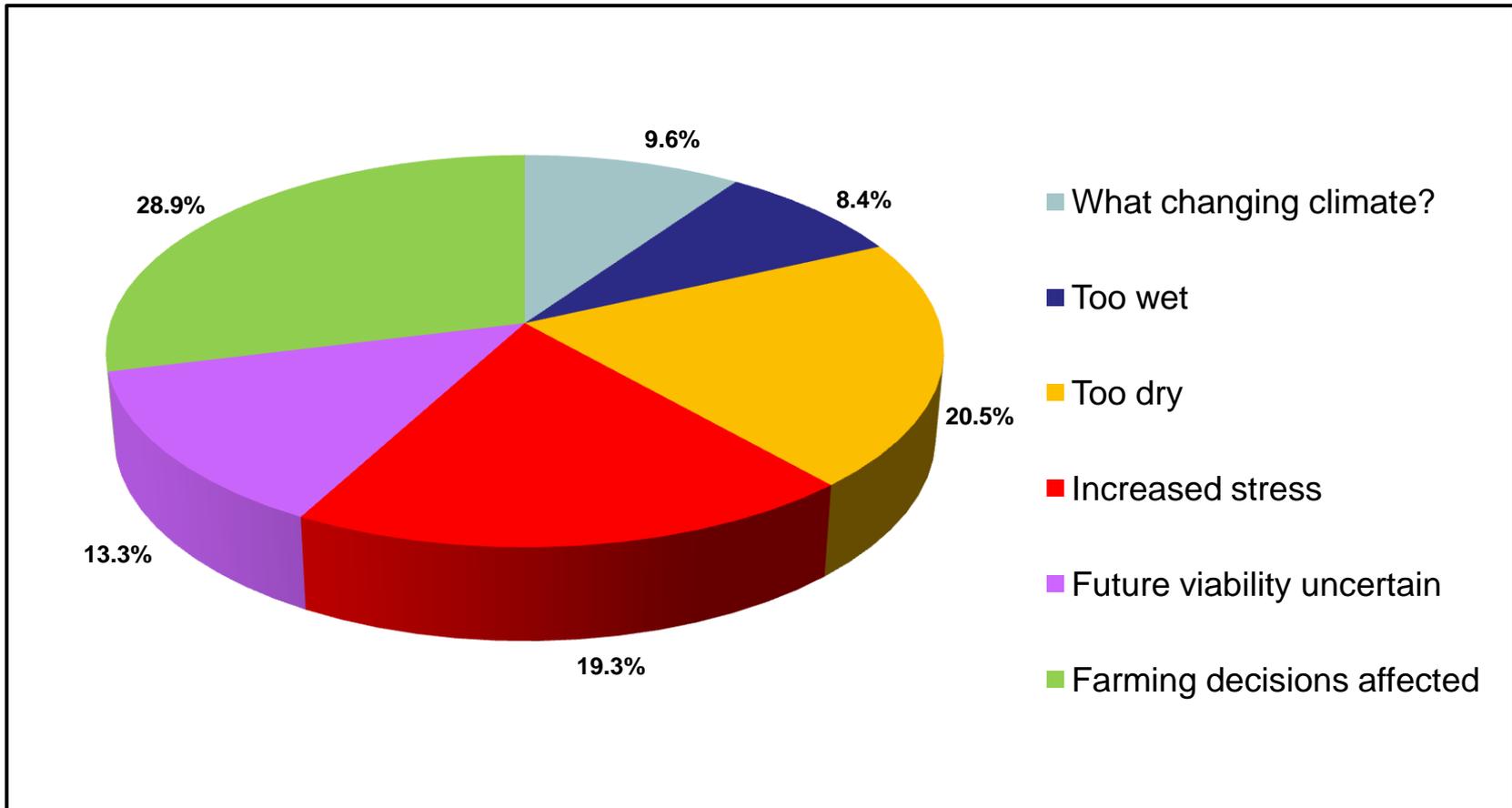
By the Way - has a changing climate impacted on your health, career or farm business decisions?

- *“Last 8 and 9 years have tested us out - lots of farms are up for sale and I have never seen it like this before in my lifetime” SA*
- *“Looking out of the window was really depressing there was just dust everywhere... every time you opened the window” VIC*
- *“Didn’t know it (climate) had changed” NSW*
- *“Pretty simple - if we are not getting any rain we are getting less income” VIC*

By the Way - has a changing climate impacted on your health, career or farm business decisions?

- *“Bank will not take land as an asset – you must have water” VIC*
- *“The hope for a good season becomes very tiring” QLD*
- *“Regardless of what people want to call it - the changing climate has impacted on our decisions” VIC*
- *“We see it as a normal cycle” QLD*
- *“Started to think about our future” NSW*

By the Way - has a changing climate impacted on your health, career or farm business decisions?



By the Way - has a changing climate impacted on your health, career or farm business decisions?

1. Climate change or variability is not universally accepted across all areas of agriculture.
2. The impact of water usage and availability appears to have the most impact on farm viability, commodity choice and land value.
3. The effect of climate change has a significant mental, social and economic impact upon farming families across SE Australia.

Climate and structural change



The Future

