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Climate Smart Agricultural Development in the Goulburn Broken

A regional climate change adaptation partnership project

Marisa O'Halloran – GBGA Project Manager

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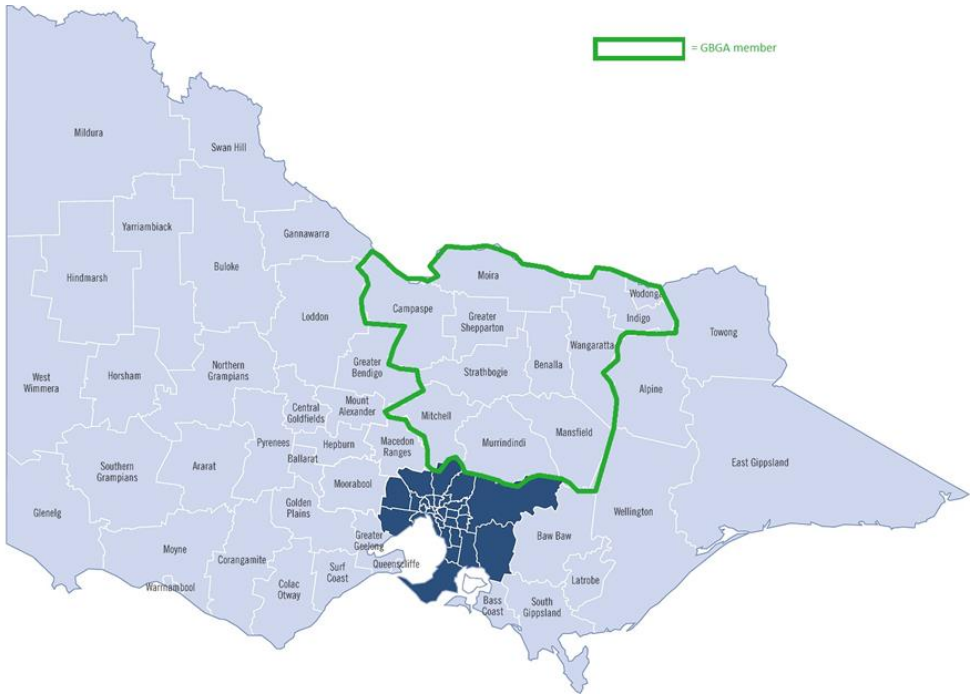
Climate Change and Agriculture in the Goulburn Broken

- Agricultural production underlies our rural and regional economies
- Climate Change predictions:
  - Decrease in rainfall and increase in temperature (evapotranspiration impacts)
- How will our current agricultural systems cope and adapt?
- What new opportunities may become available?



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Climate Smart Ag – Project Outcomes

- Spatial Tool developed by Deakin University to understand the geographic and temporal impacts of climate change on the Goulburn Broken agricultural landscape
- Summary reports and technical reports developed for individual commodities to integrate adaptive responses of agriculture to climate change into economic development, strategic planning and environment by Councils
- Improved regional knowledge of the impact of climate change on agriculture through GBGA and GB CMA website, summary information and presentations

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How was the modelling conducted?

- 17 commodities selected (pasture, vegetable, fruit, grain crops and timber)
- Initial yield maps generated based on detailed crop requirements and soil data under historic climate conditions (1961 – 1990)
- Yield maps ground-truthed with local growers for accuracy and modified as required
- CSIRO climate projections inserted into model to generate 2030 and 2050 maps
- Models assume no change in grower management from present

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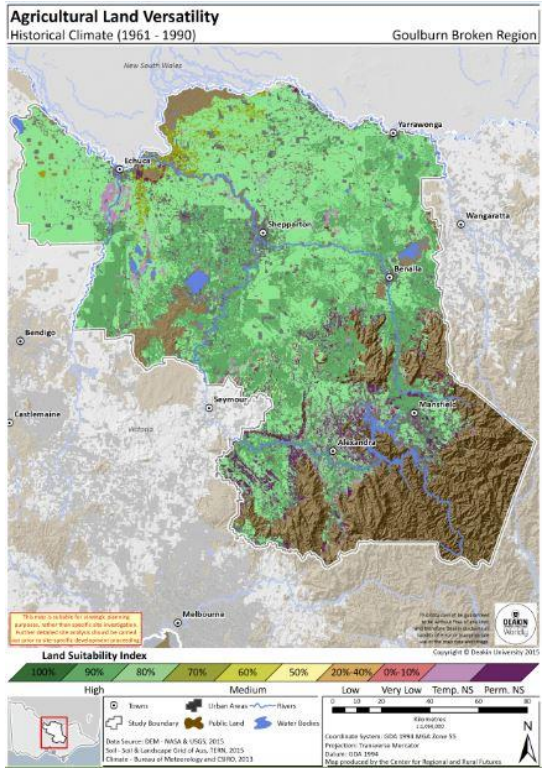
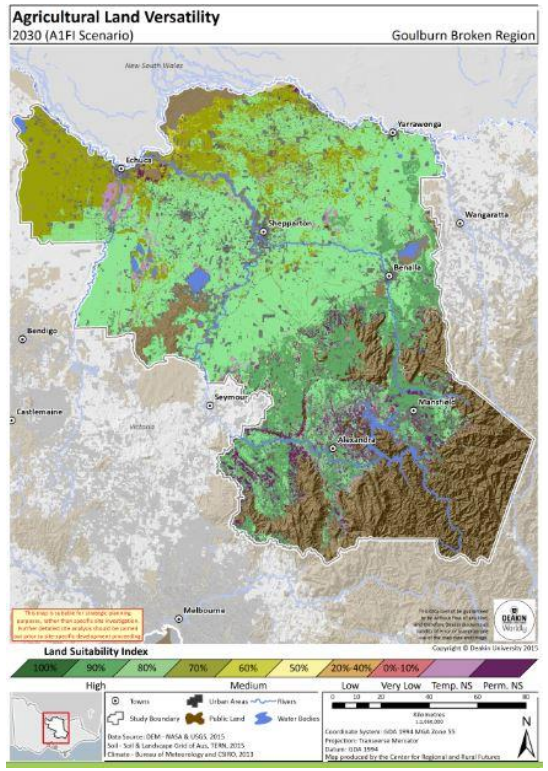
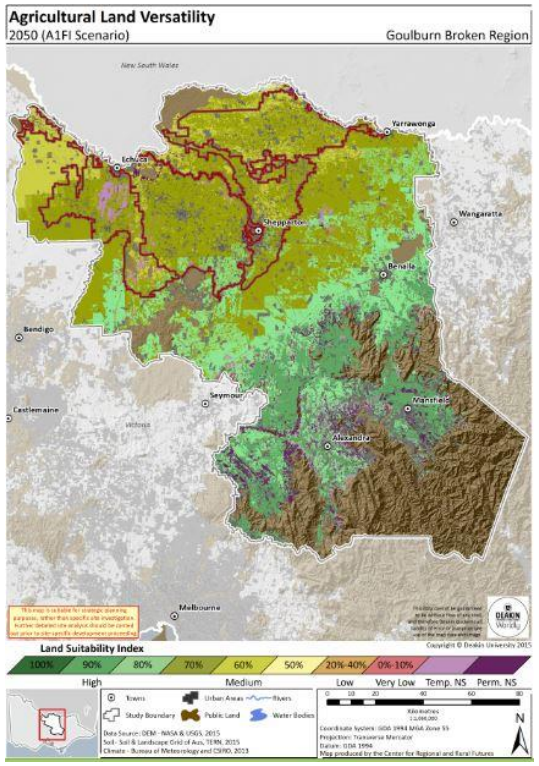
Goulburn Broken Agricultural Versatility Maps







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Agricultural Adaptation Considerations

- Some adaptations are cost neutral (e.g. sowing/harvest times, varieties)
- Some adaptations costly (e.g. netting, irrigation infrastructure upgrades)
- Some adaptations may require change of location for crops (e.g. temperature thresholds)
- Pest, animal welfare, OH & S considerations
- Growers understanding options for greater flexibility to respond to seasonal conditions
- Councils understanding challenges and opportunities in their region

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Project Partners – Challenges and Opportunities

GROWERS

- Talking about 'climate change'
- Starting from growers own experience with climate challenges and 'Climate Variability'

COUNCIL and CMA PARTNERS

- Economic development opportunity focus
- Framing the future as an opportunity when some partners face marked climate impacts
- Presenting a regional partnership approach given the large range of future challenges/opportunities

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Project Resources

Publicly Available:

- GBGA website (www.gbga.com.au)
- Technical reports for each commodity
- ARCGis Storymaps site in partnership with GB CMA

Council Resources:

- Municipality specific commodity, climate and soil maps on internal GIS systems, summary reports

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Goulburn Broken Greenhouse Alliance

Our communities actively responding to climate change to help build a positive future

State Government Victoria
Benalla Rural City
Shire of Campaspe
Strathbogie Shire
Greater Shepparton
Indigo Shire Council
Mansfield Shire
Mitchell Shire Council
moira Shire
Murrindindi Shire Council
Rural City of Wangaratta
City of Wodonga VIC
Goulburn Broken Catchment Management Authority
North East Catchment Management Authority

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