

Rural People's Attitudes to Climate Change

Chris Evans

School of Agriculture & Environment, Curtin University

Dr Christine Storer

School of Agriculture & Environment, Muresk

Dr Angela Wardell-Johnson

Centre for Advanced Studies in Australia, Asia and the Pacific

“attitude defines risk perception”

Sjoberg (2000)

● This research asks:

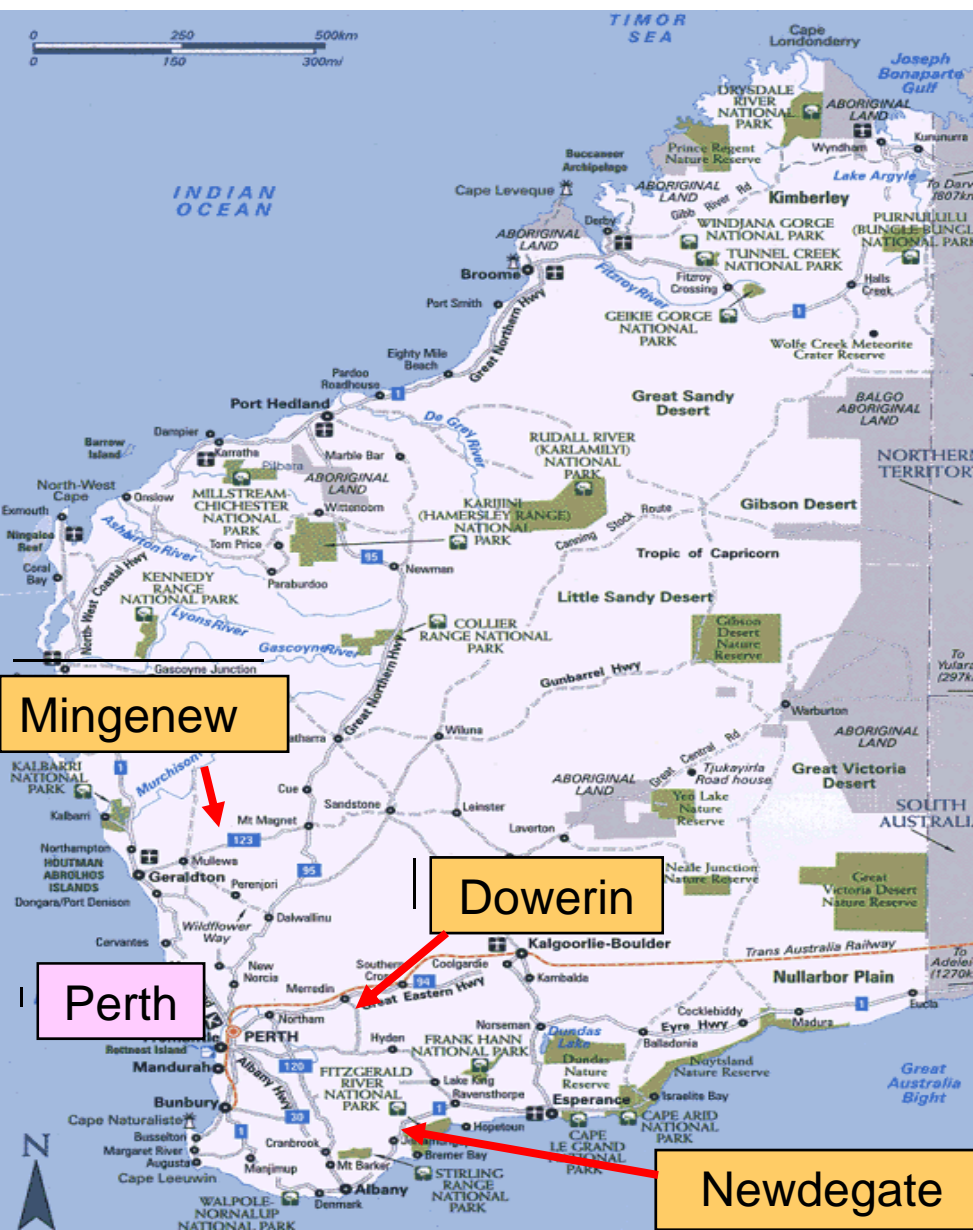
- Do rural West Australians think climate change is occurring?
- Is climate change natural or the result of human activity?
- Is climate change a tangible threat?

● This research asks:

- Are perceptions of science and governance influencing attitudes?
- What contributes to the development of attitudes?
- What identifies different groups of responses to climate change?



Methodology



Surveys:

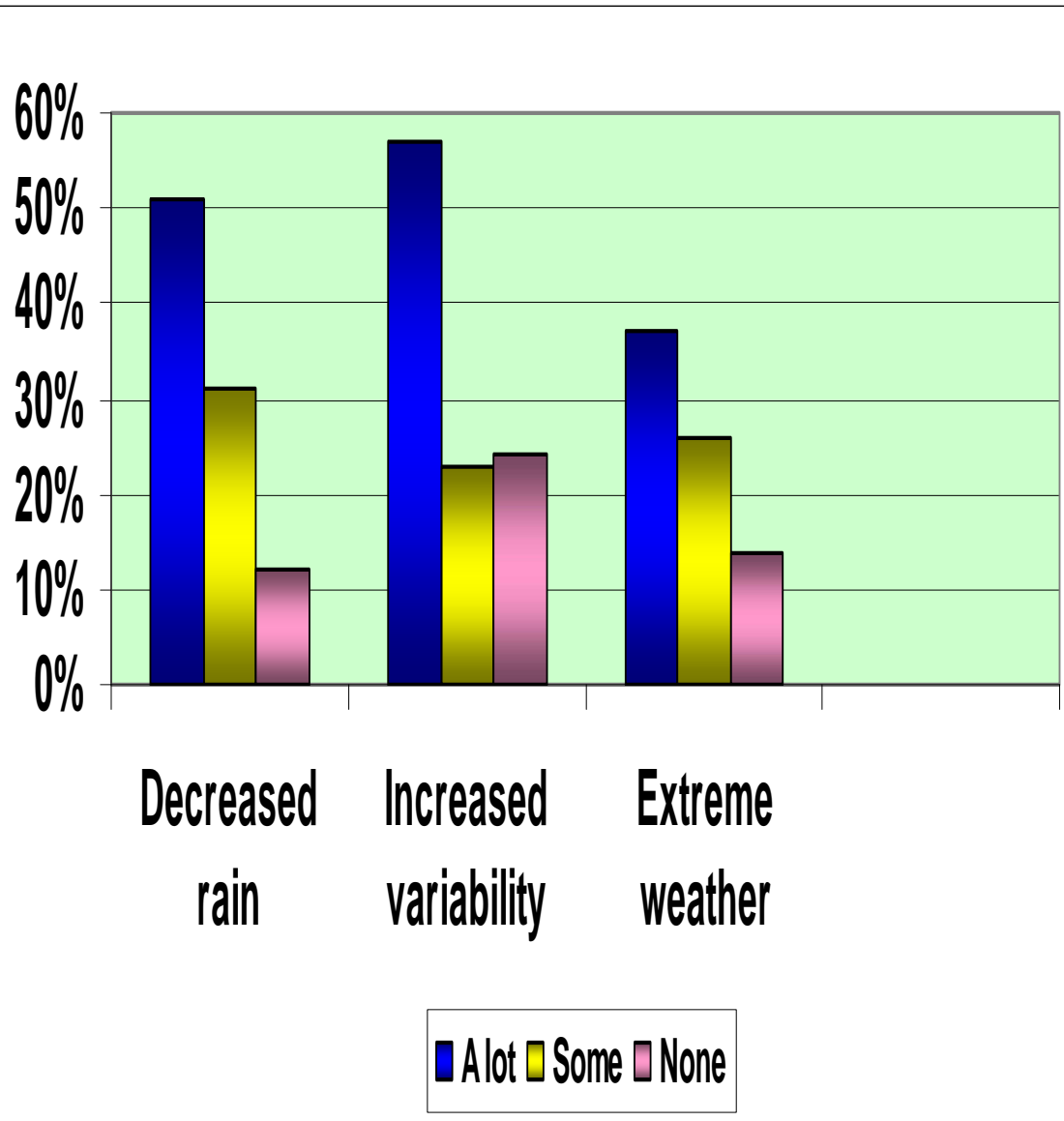
- Dowerin Fieldday (n=129)
- Newdegate Fieldday (n=122)
- Mingenew Fieldday (n= 78)
- Secondary locations (n=82)

Total surveys 411

Analysis

- PATN; Numerical Taxonomy; Multivariate approach
- SPSS (Ver 15 2008)
- Excel (2003, 2007)

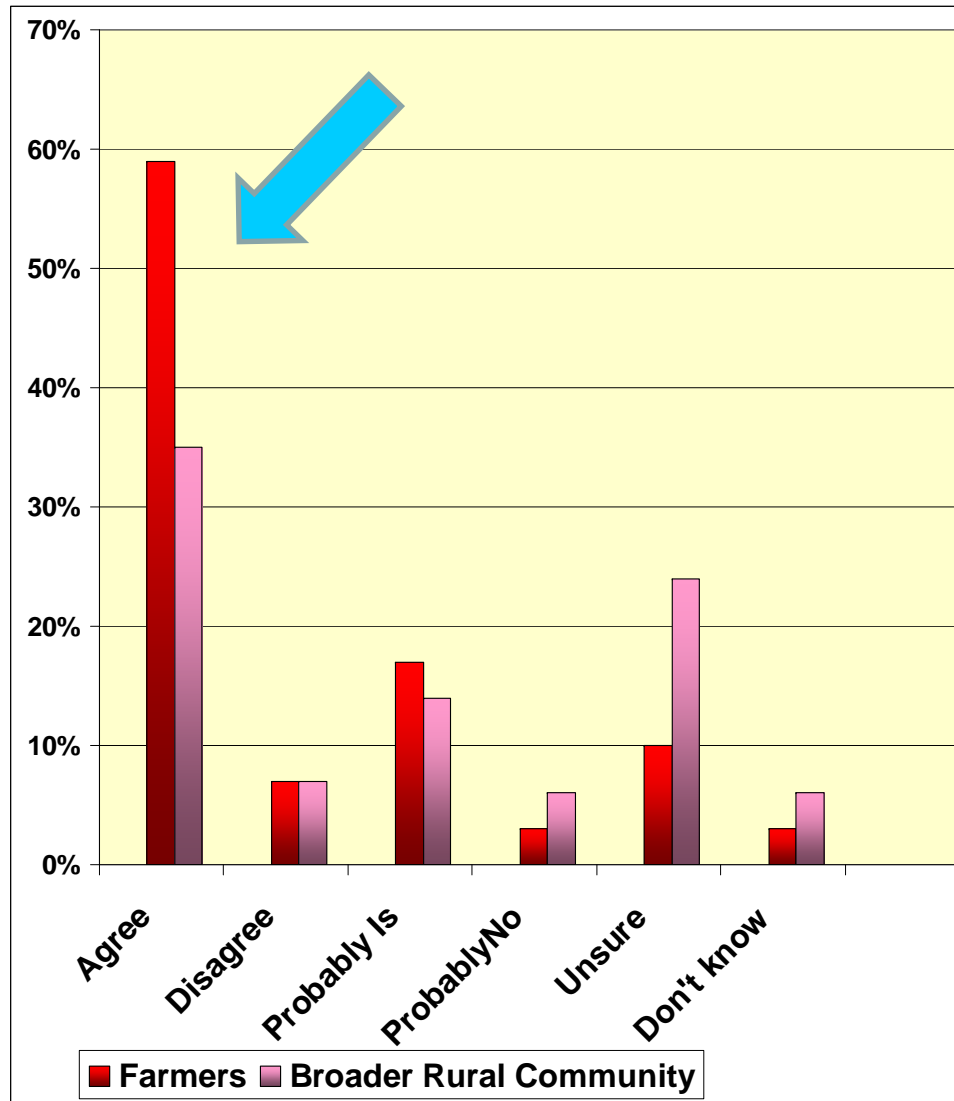
Climate Change



Q: Have any changes in the local climate been noticed over the last 10 years?

- Observed changes in local climate are regarded as normal (cyclical)
- Many have noticed major changes in local climate
- Farmers noticed more decrease in rainfall & little increase of extreme weather events

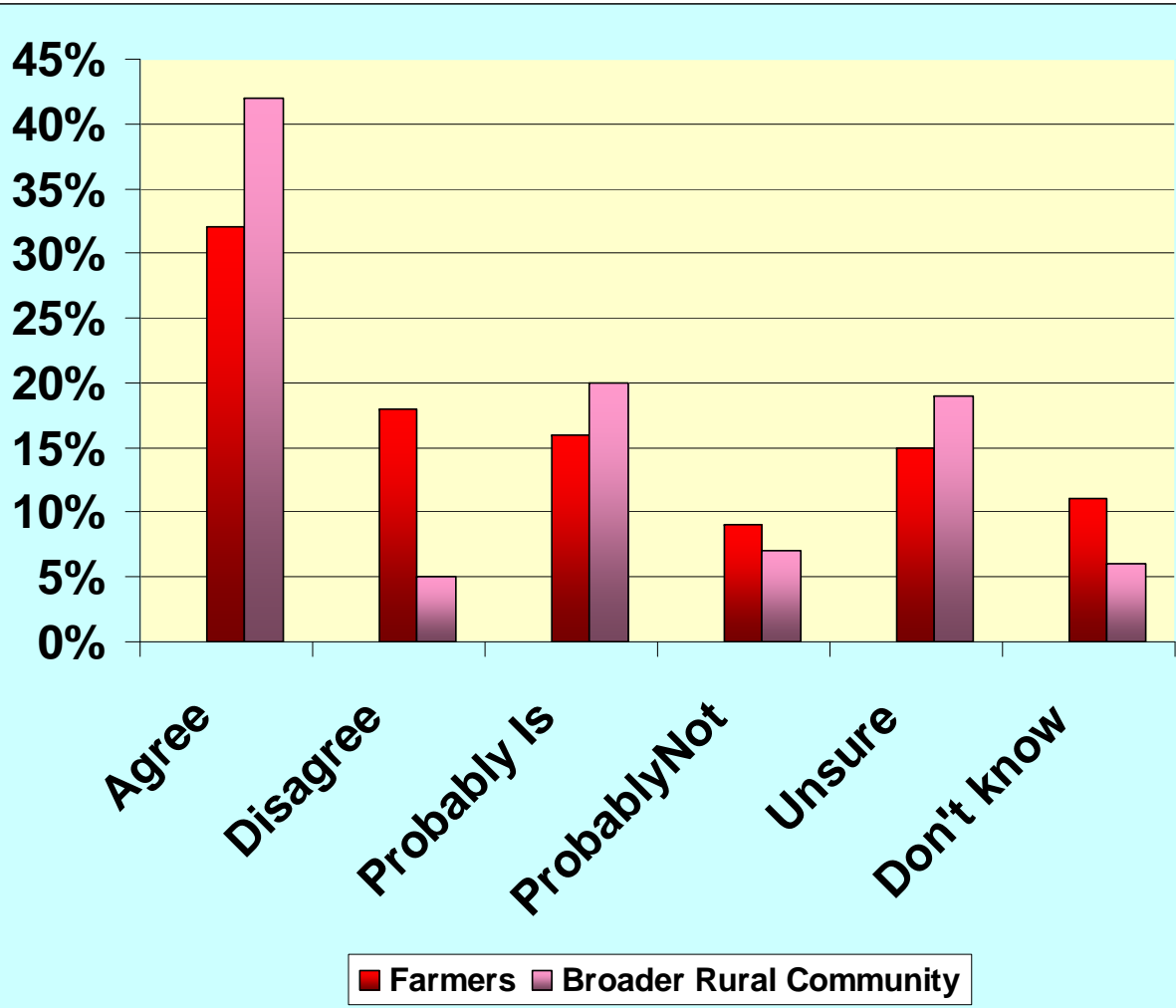
Poor seasons



Q: Are poor seasons & seasonal variability are just part of living in rural areas?

- 59% of farmers agree
- 35% of the Broader community agree

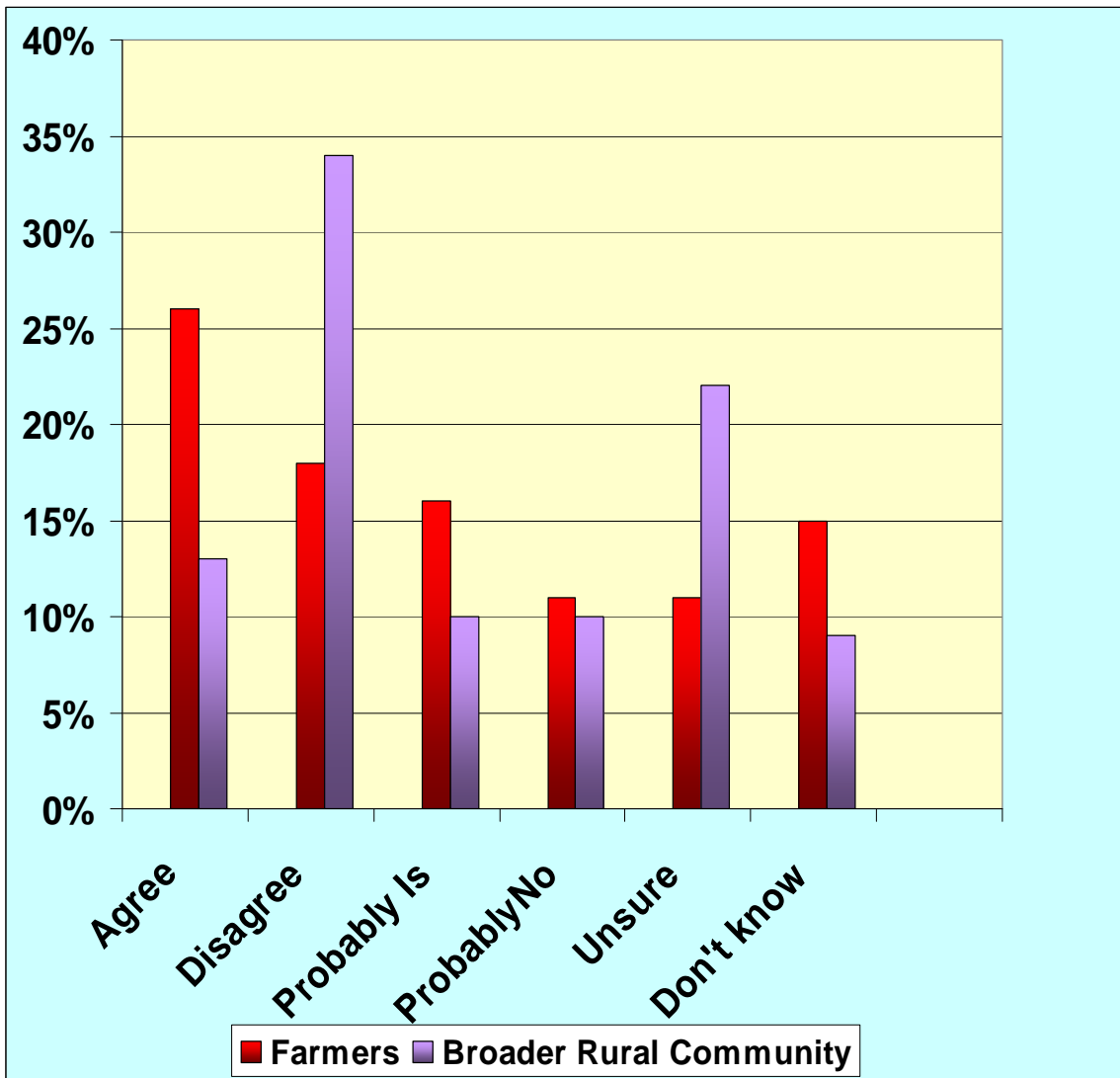
Changes in the climate



Q: Is climate change occurring?

- 32% of farmers agree
- 16% disagree
- 42% of the community agree
- Generally rural people are not certain

Climate Change is natural

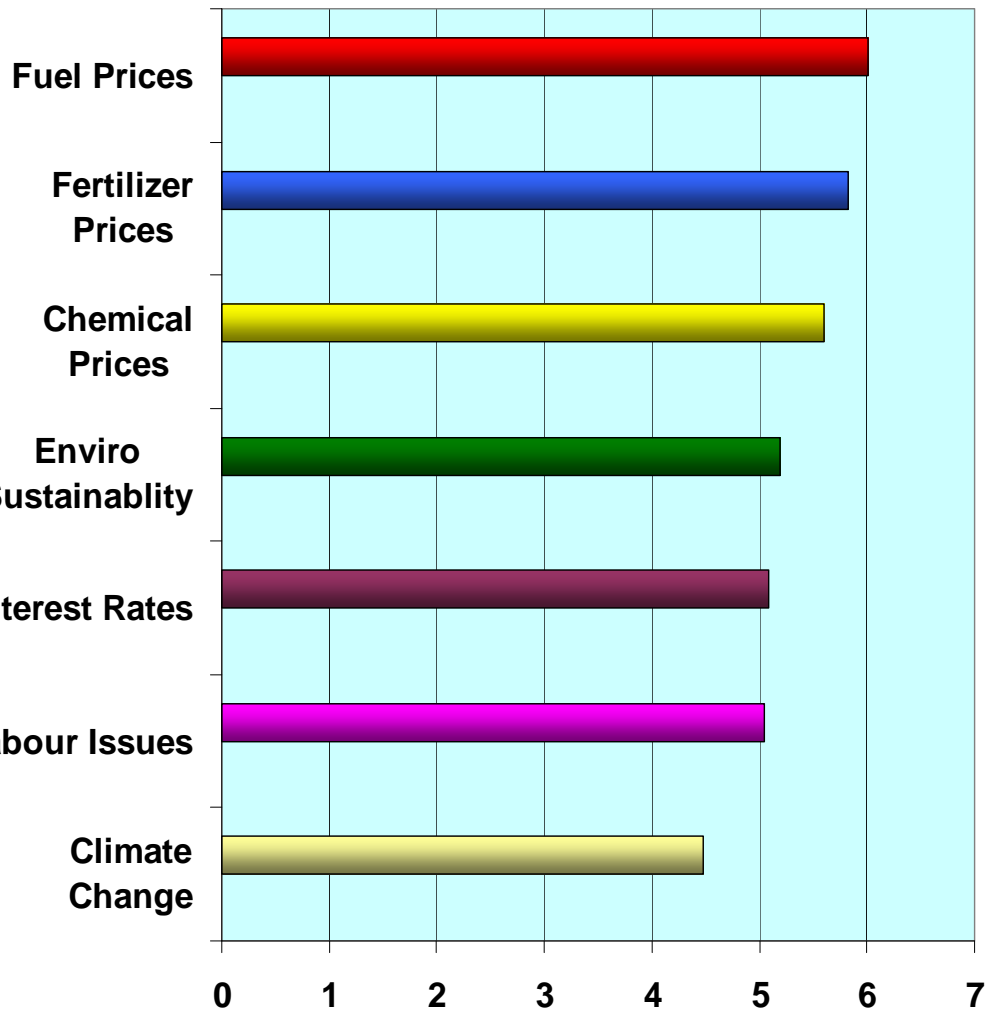


Q Is climate change part of a natural cycle & not influenced by greenhouse emissions?

- 26% of farmers agree
- Only 19% disagree
- High levels of uncertainty – 55%

Climate change as a threat

-business & economic sustainability



Q: Is climate change a threat?

- Short term economic imperatives are more important than the long term issues of environmental sustainability & climate change

Legend:
Importance
7 = very
6 = important
4 = some
1 = non at all

Responses to changes in local climate

Farmers

Q: Have you changed management practices?

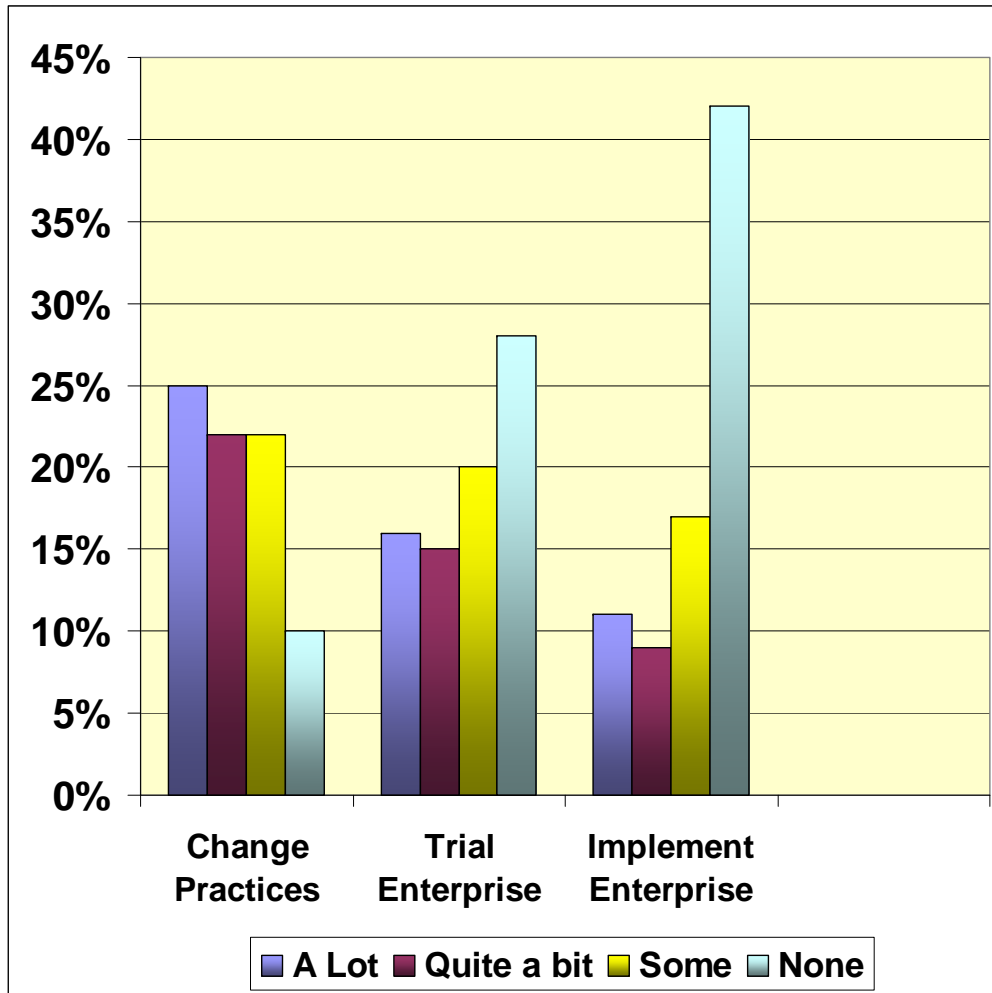
- 48% between 'Quite a bit' & 'A lot'

Q: Are you trialing alternative enterprises?

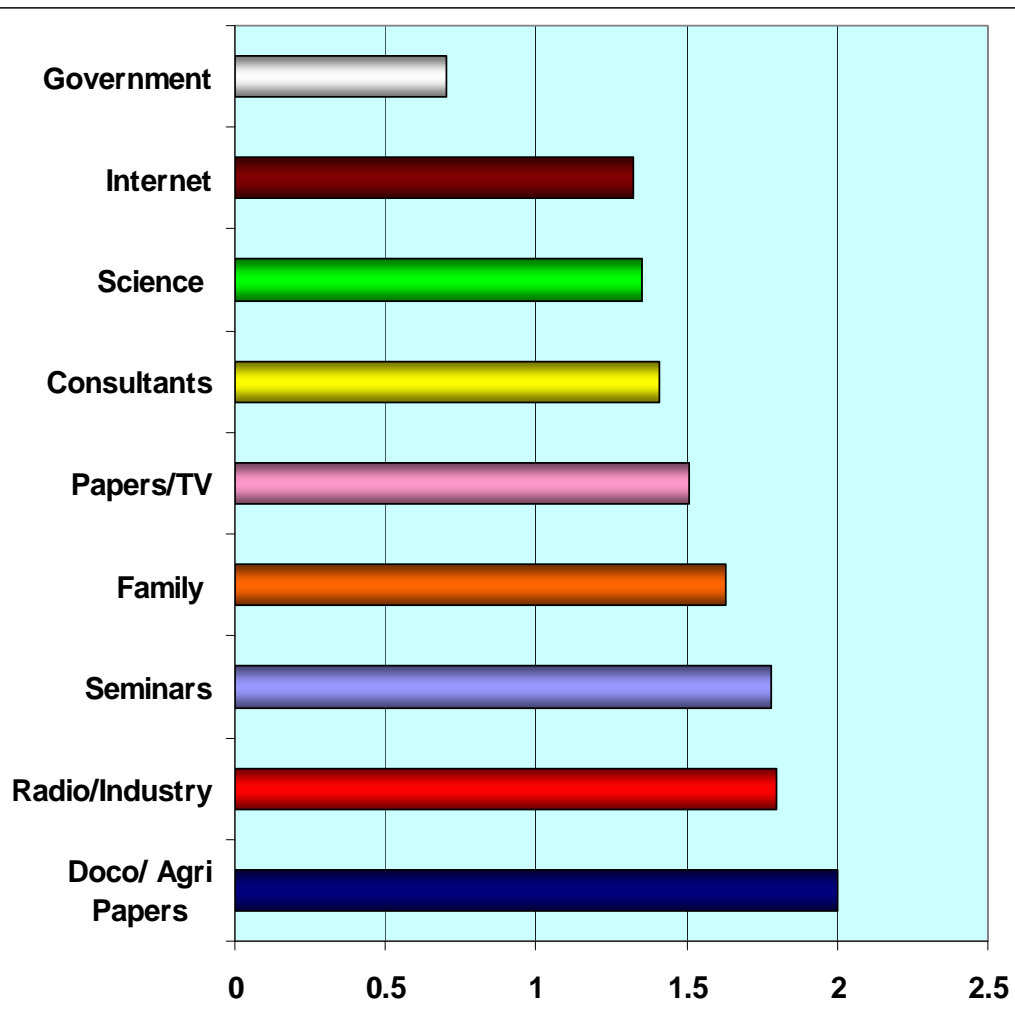
- 31% between 'Quite a bit' & 'A lot'

Have you implemented alternative enterprises?

- 20% between 'Quite a bit' & 'A lot'
- 42% had not implemented any enterprise change



Information sources



Legend
3 = most important
2 = important
0 = no importance

Q: Which sources of information are considered most useful?

- Documentaries
- Agri Newspapers
- Regional Radio
- Industry publications
- Seminars
- **Least useful:**
- Science publications
- Internet
- Government's Green Paper

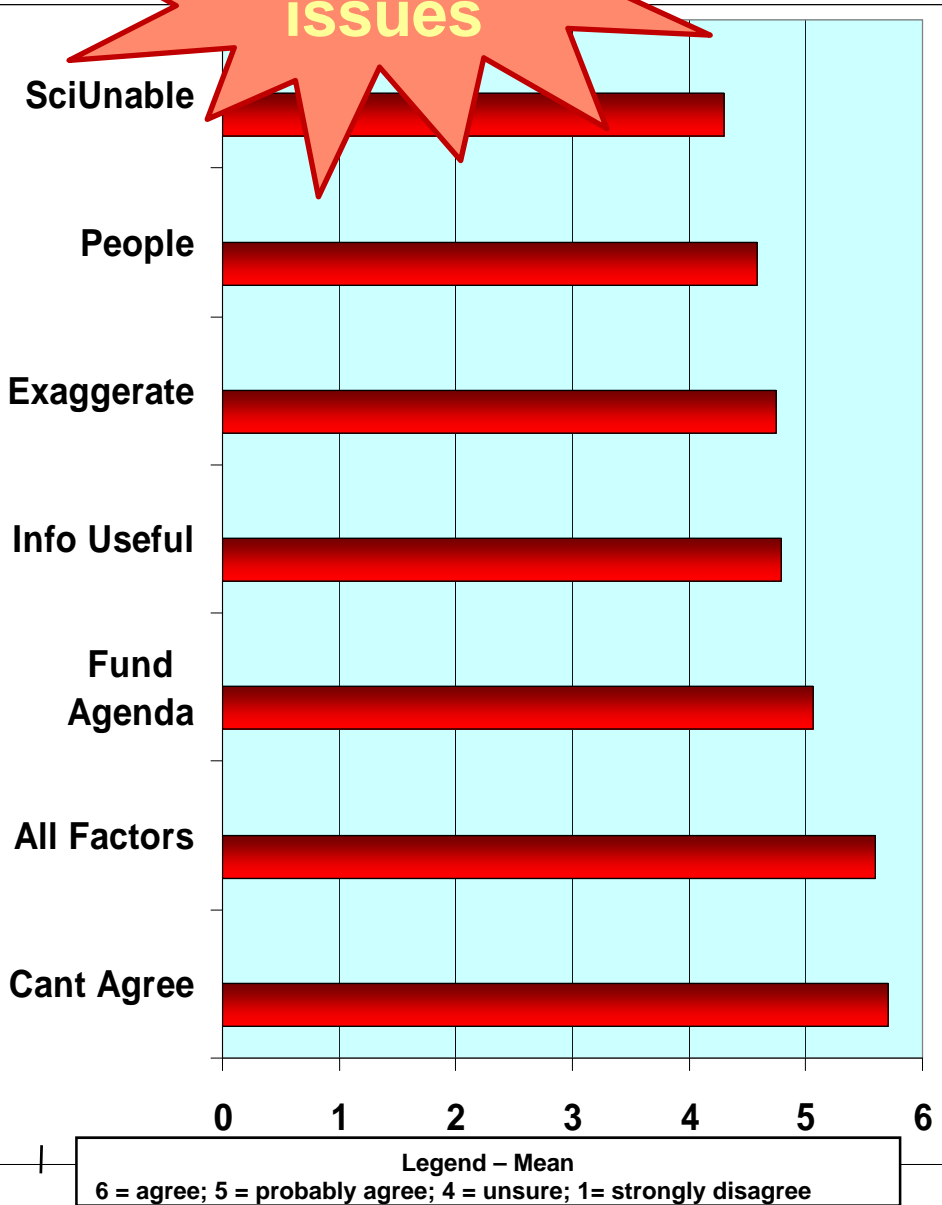
Credibility
issues

Science & climate change

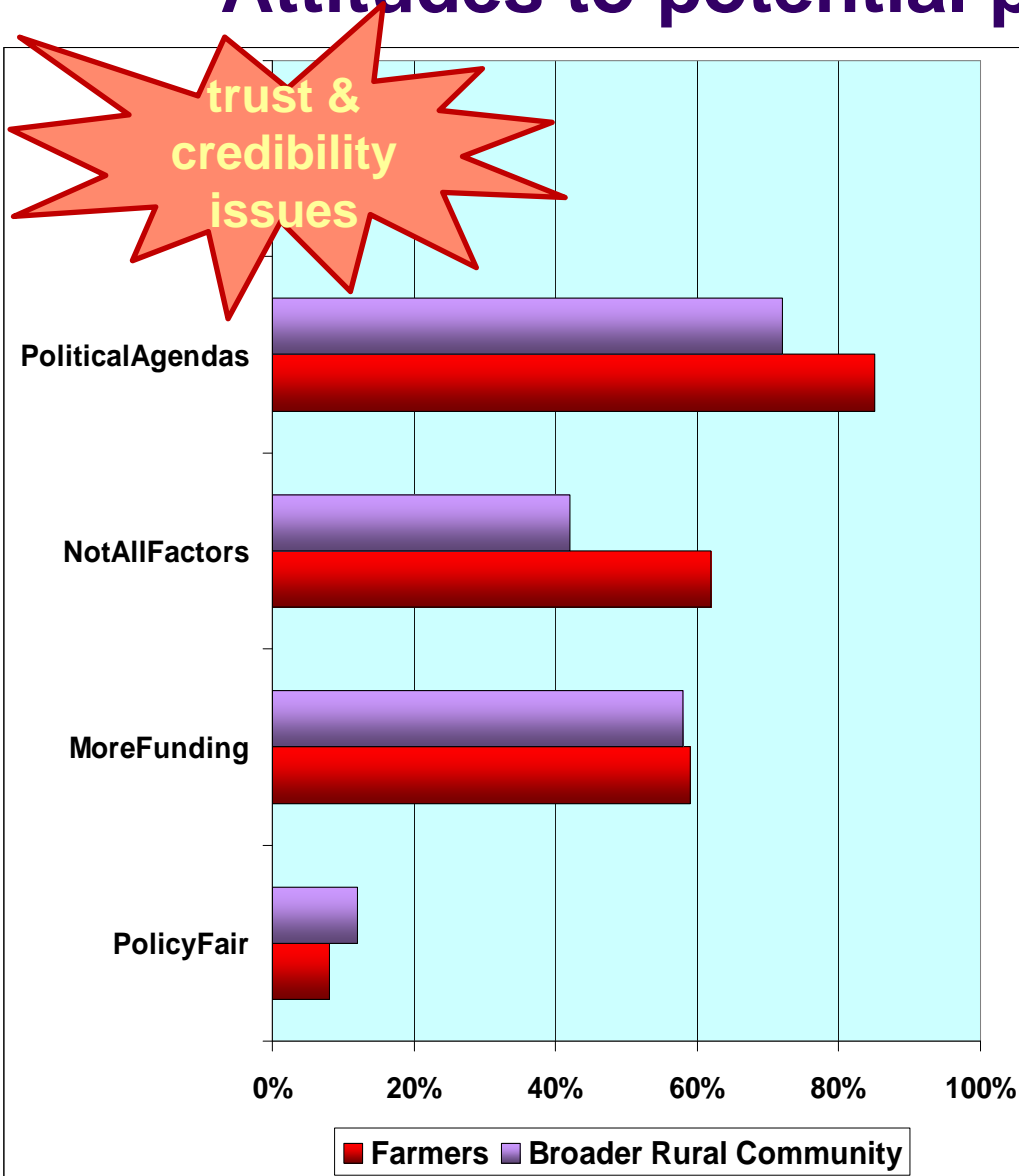
Q: What is the Rural Sector's attitude to the role of science?

Many Rural people believe science;

- Is divided over the causes & impacts of climate change
- Has not considered all factors in its estimation of climate change
- Is using climate change as the latest fashionable source for funding.



- Attitudes to potential policy strategies



- Agriculture & Rural Communities expect little consideration in future climate change policy
- Politicians will use climate change as election issues
- Climate change research is needs more funding

Relationships between values & cases

Analysis based on rows

Association measure: Bray & Curtis
 Classification strategy: Technique: Flexible UPGMA
 Beta: - 0.0500
 Number of groups to produce: 10
 Ordination method SSH
 Cut off = 0.900
 3 Dimensions:
 Number of random starts: 10
 Random seed value: 1235

Analysis based on columns

Association measure: Two - step Classification strategy
 Agglomerative Hierarchical Fusion
 Technique: Flexible UPGMA
 Beta: - 0.1000: Stress 1645
 PATN - Belbin et al 2003

Colours = social groups with similar respondents

Dots represent people in the survey

LEGEND

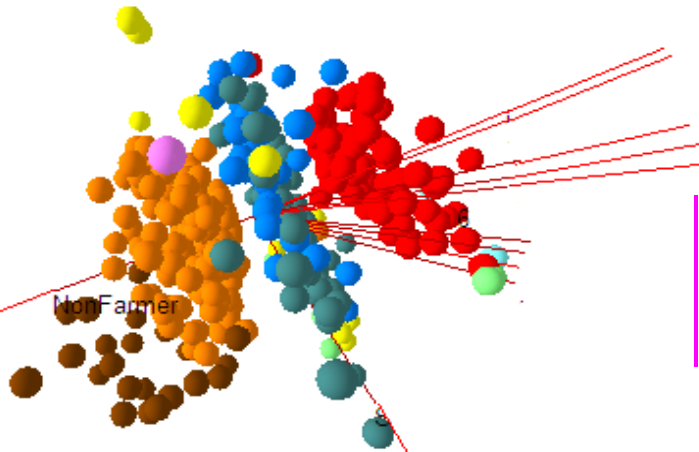
- Group 1
- Group 2
- Group 3
- Group 4
- Group 5
- Group 6
- Group 7
- Group 8
- Group 9
- Group 10

Cases:
 Farmers
 4000 – 6000Hct
 Long term exp
 Family history
 Debt concerns

Values
 Chemical/ Fertilizer/
 Fuel/ prices &
 Environmental sustainability

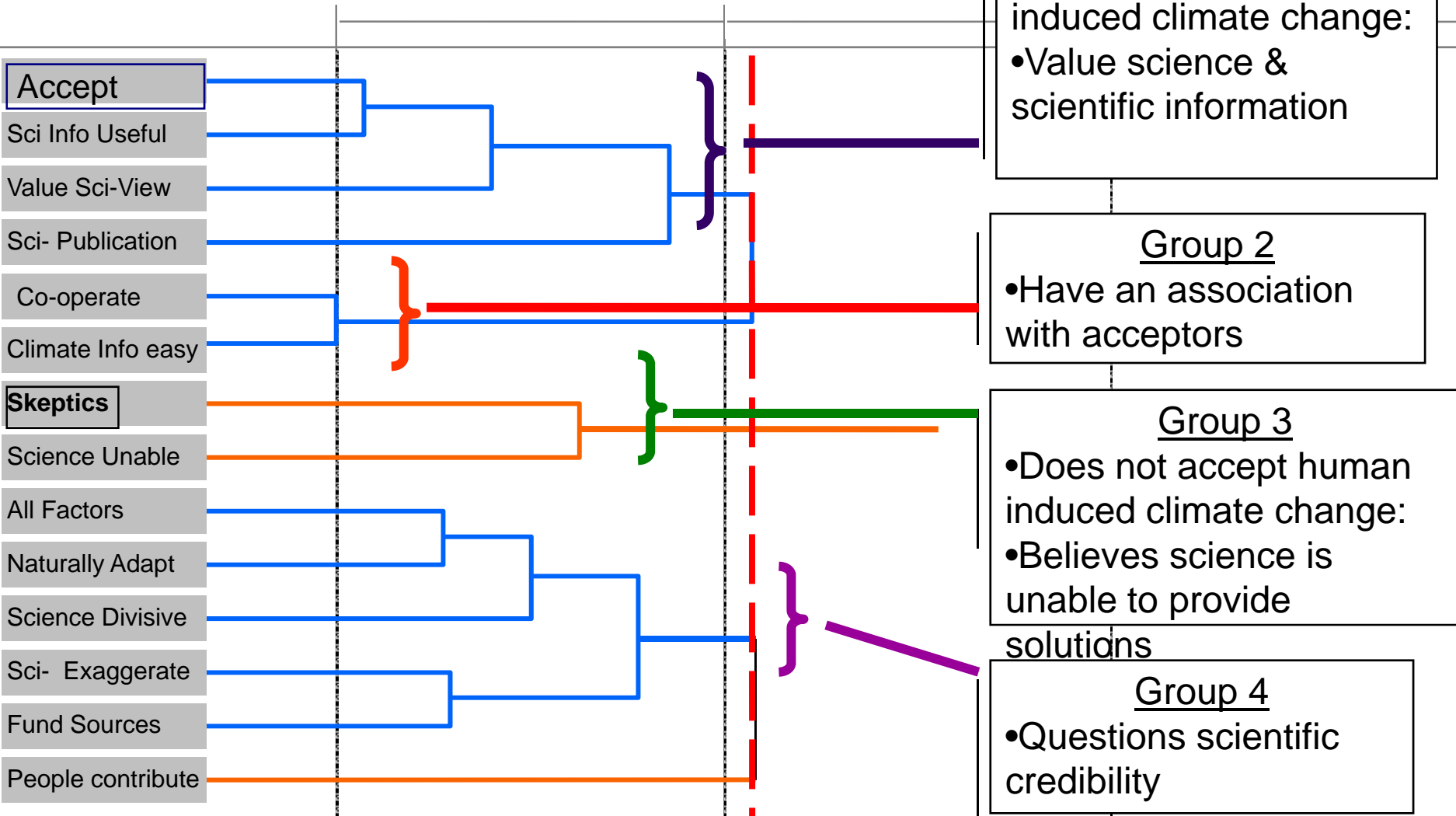
Non contributors to farming

Non acceptors of human induced climate change



Characteristics of Groups

Column Fusion Dendrogram



Summary

- **Climate change :**
Low acceptance, high uncertainty
- **Climate Change Science :**
Contributing to uncertainty – credibility?
Divisibility / information transfer issues
- **Climate Change Governance:**
Trust & credibility issues
- **Rural Responses to Climate Change:**
Limited

Acknowledgements

- The Organising Committees of the Dowerin, Newdegate, Minignew and Katanning Fielddays
- Royal Agricultural Society Cattle Sheep & Alpacas Stewards
- Waroona Show Organising Committee
- The rural people who generously gave their time to participate in the survey
- Mr. David Gray, DAFWA, Katanning
- The Data Collection Team – Ms E Varga, Mr. P Gwynne & Mr. D Hoare