



GISERA

Gas Industry Social and
Environmental Research Alliance

Social research:

**Trends in community wellbeing and local attitudes to coal seam gas
development: 2014 – 2016 – 2018**

Western Downs and eastern Maranoa regions QLD

Dr Rod McCrea | Dr Andrea Walton | Social Scientists | 11 Dec 2018



QGC



Santos
We have the energy.



Australian Government
Department of Industry,
Innovation and Science

Background to the research



Since 2012

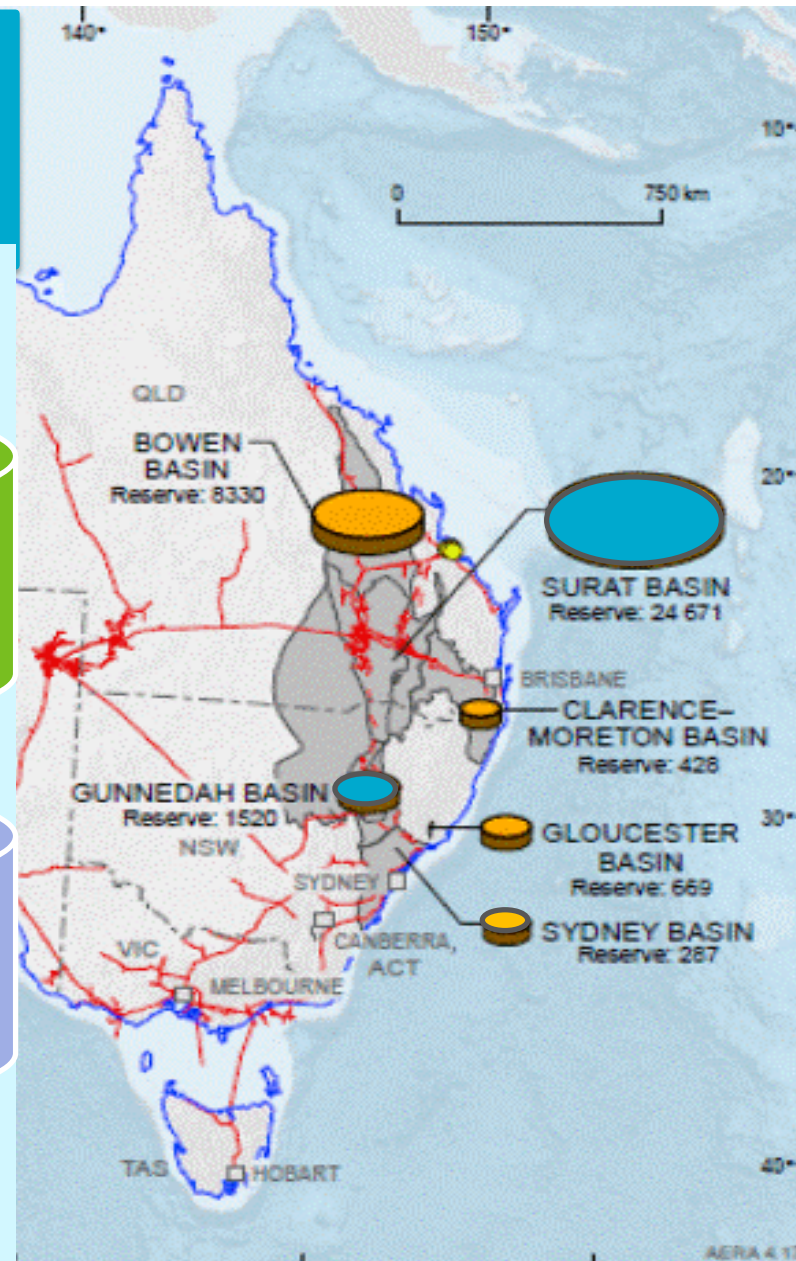
Four main research themes:

Community Wellbeing

Adapting to change

Community expectations
of CSG sector

Local attitudes perceptions
towards CSG development



Investigated impacts over different industry phases

Pre-approval



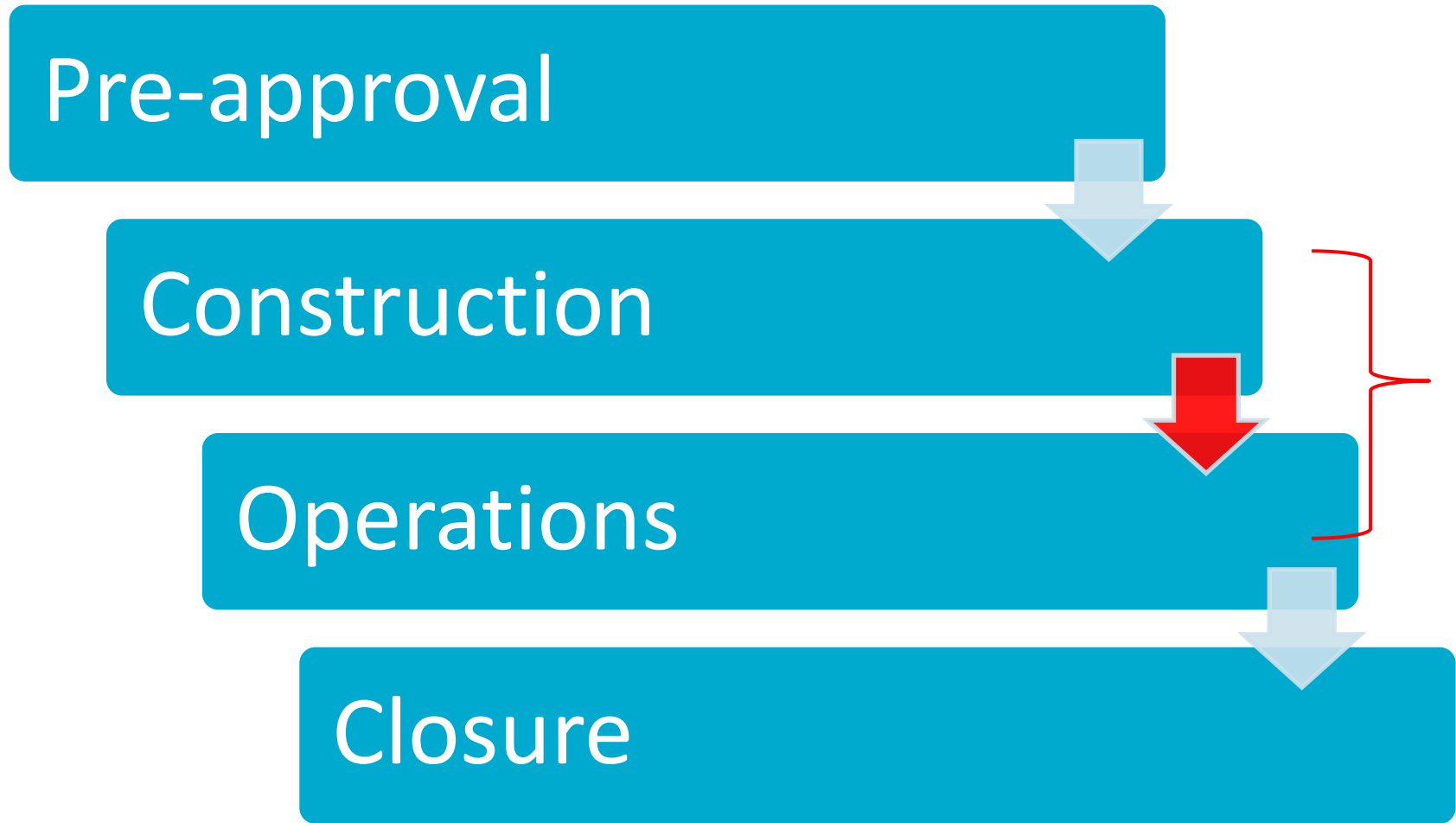
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graph TD; A[Pre-approval] --> B[Construction]; B --> C[Operations]; C --> D[Closure];
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Construction

Operations

Closure

Investigated impacts over different industry phases



We have used a diversity of methods

Qualitative

- Interviews and small discussion groups



Quantitative

- Large shire-wide surveys (randomly selected representative samples)



What we did in the survey research – an overview

Western Downs and eastern Maranoa regions, Qld

Surat Basin survey: Feb - Mar 2014, 2016, 2018



SAMPLE: N = 400; 500; 623

100 x

- Dalby
- Chinchilla
- Miles / Wandoan
- Tara
- Roma

In town = Out of town

ABS representative

- age, gender, and employment

Telephone interview covering four topics



- 180 questions
- 32 minutes

Telephone interview covering four topics



SAMPLE:
2014-2016-2018

At least 100 x

- Dalby
- Chinchilla
- Miles / Wandoan
- Tara
- Roma [200 in 2018]

In town = Out of town

ABS representative

- age, gender, and employment

Scores are on a scale of 1-5

- Likert-type responses
- 1 = least to 5 = most
- Scores < 3 represent an unfavourable view
- Average scores



Community wellbeing

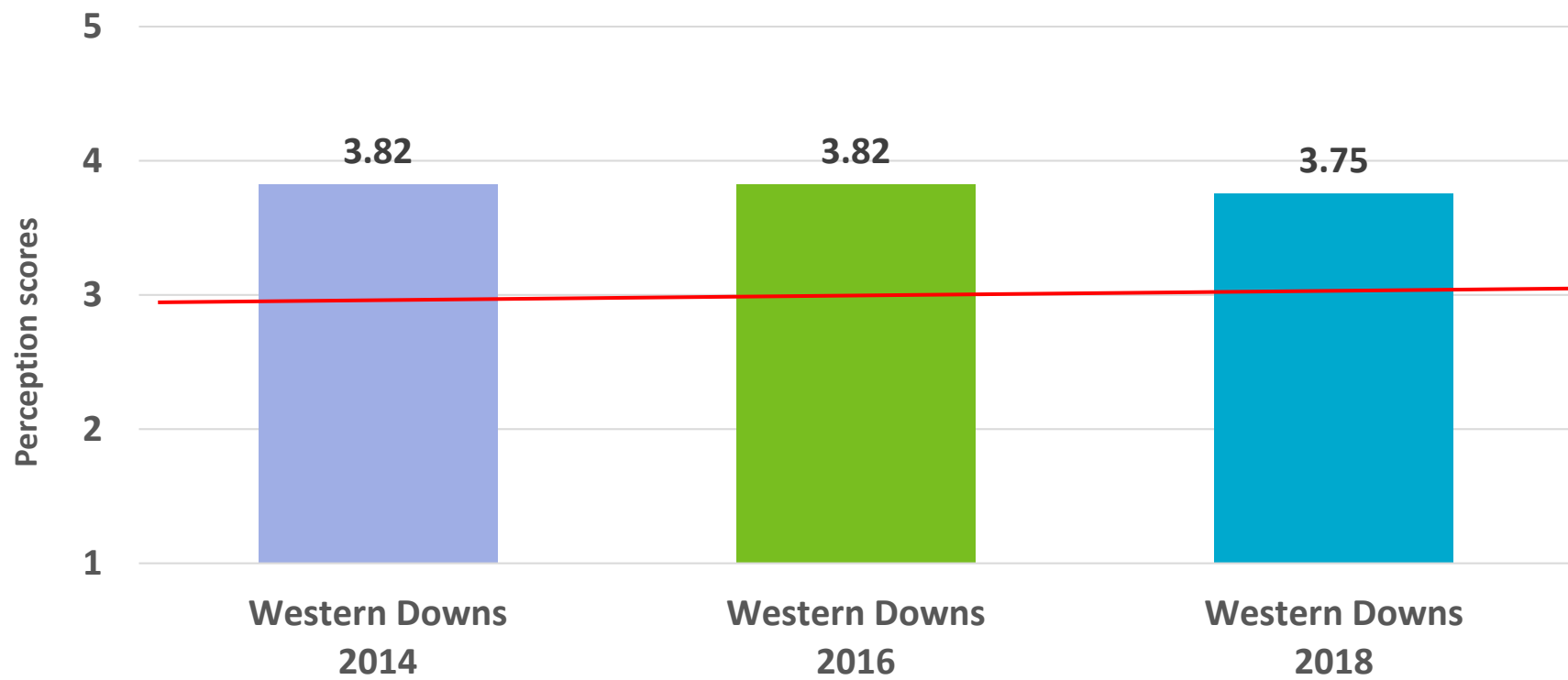
RESULTS



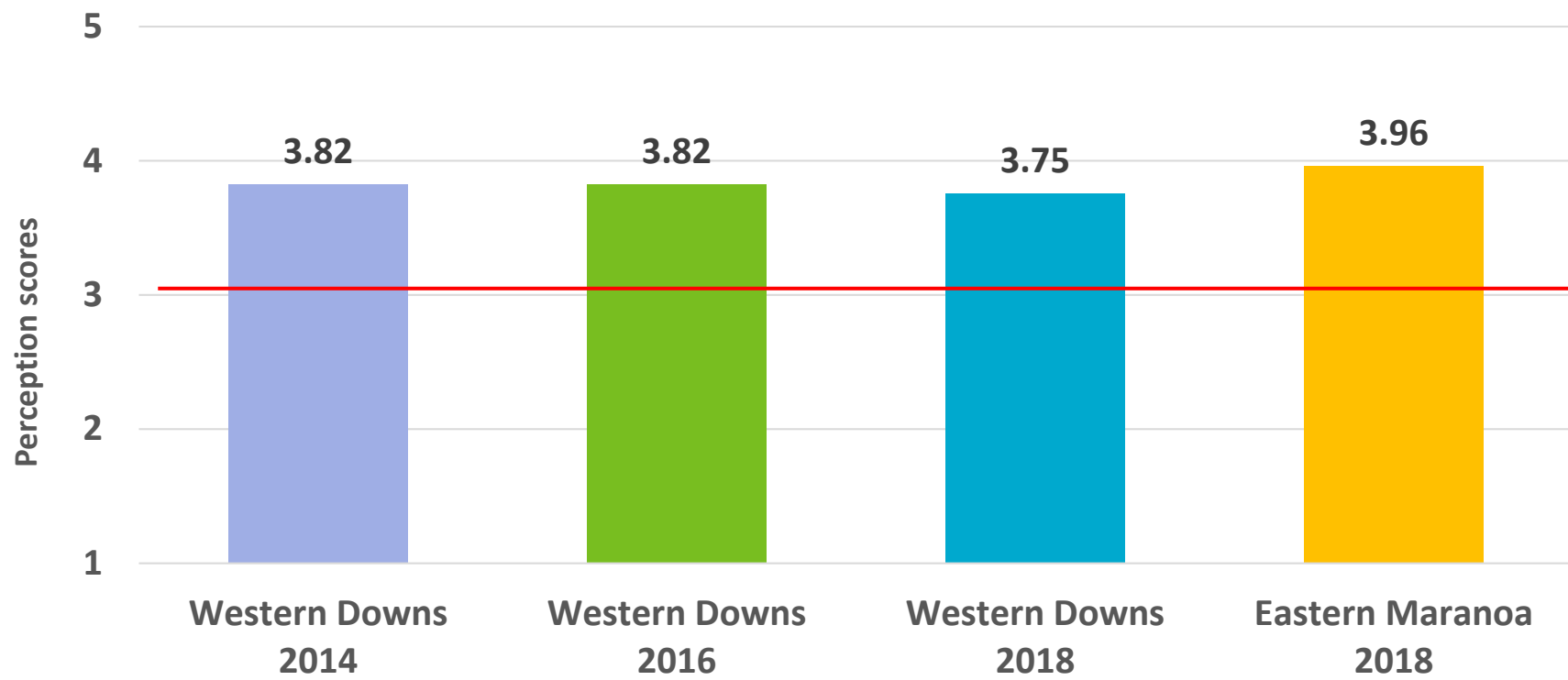
Measuring CWB: 15 dimensions in six domains



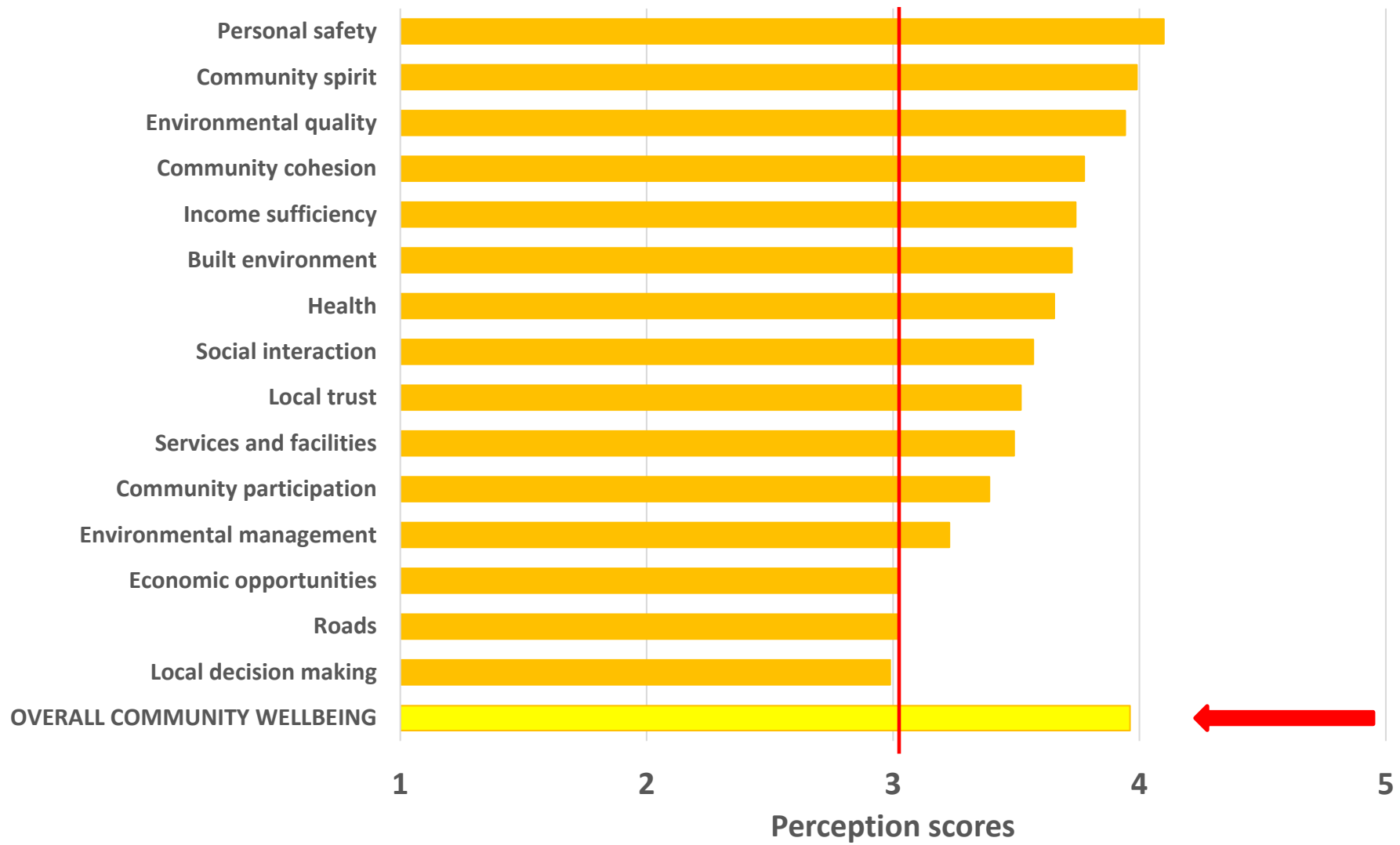
Overall Community Wellbeing: 2014-2016-2018



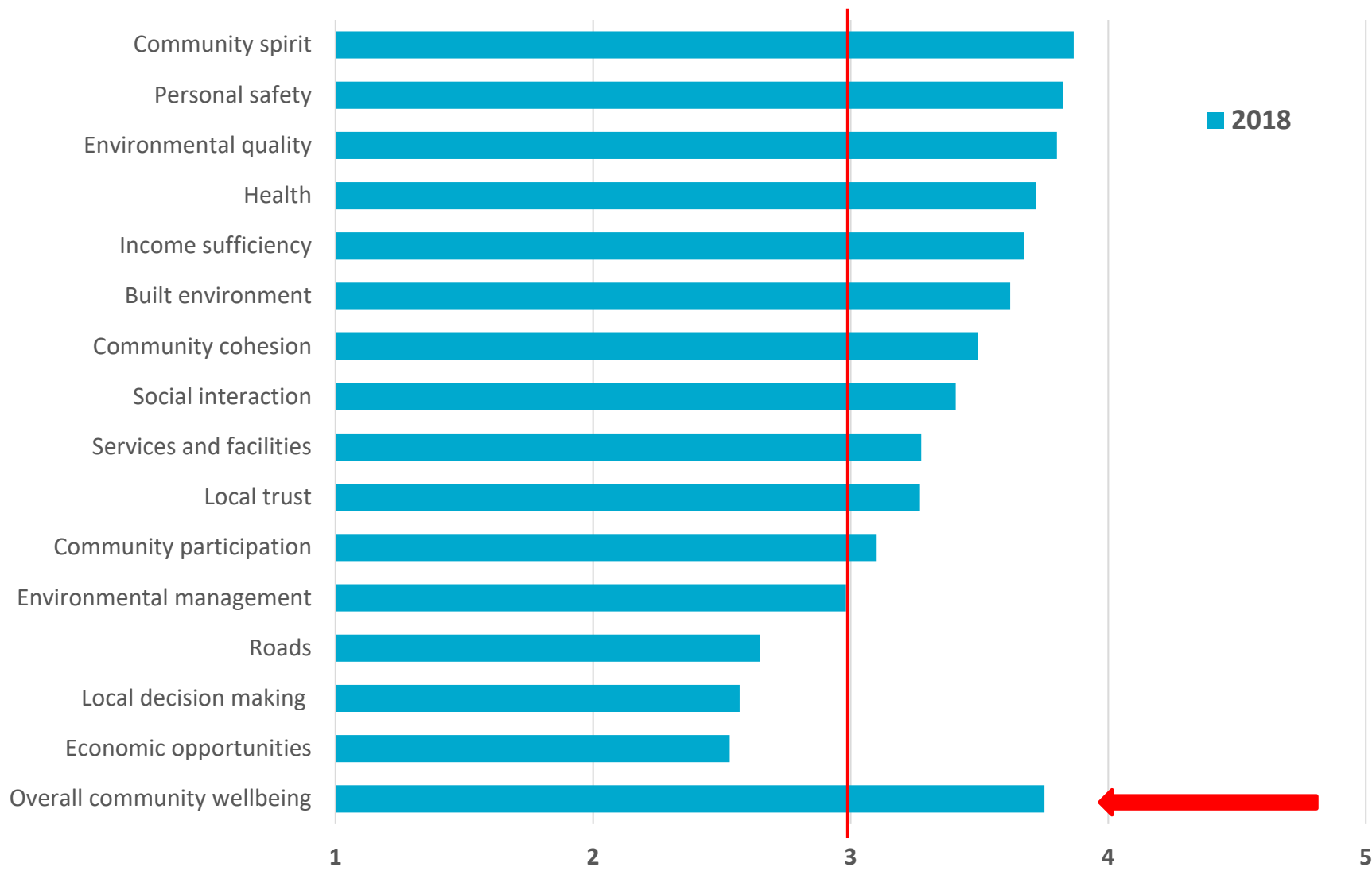
Overall Community Wellbeing: 2014-2016-2018



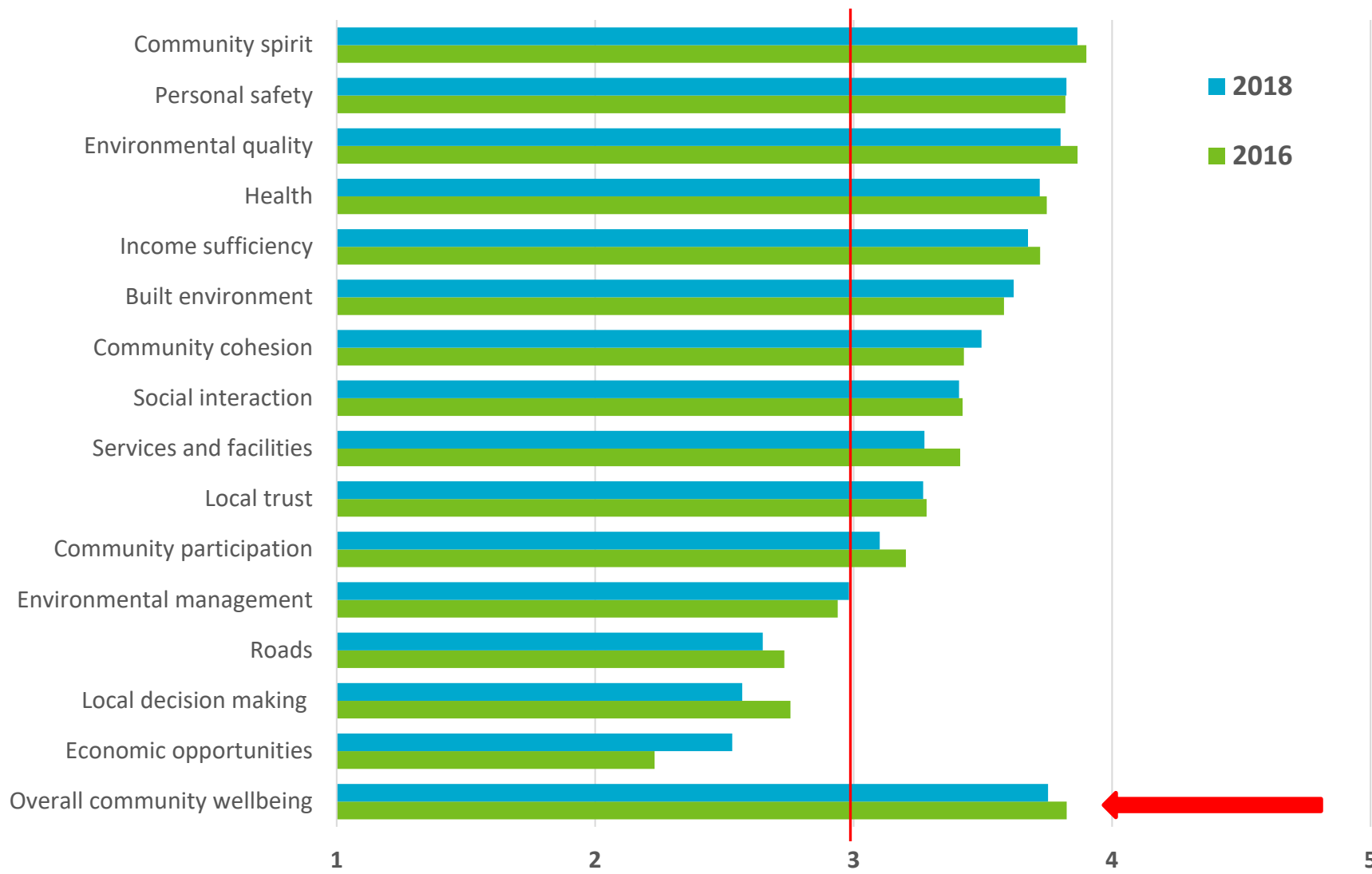
Community Wellbeing – Roma 2018



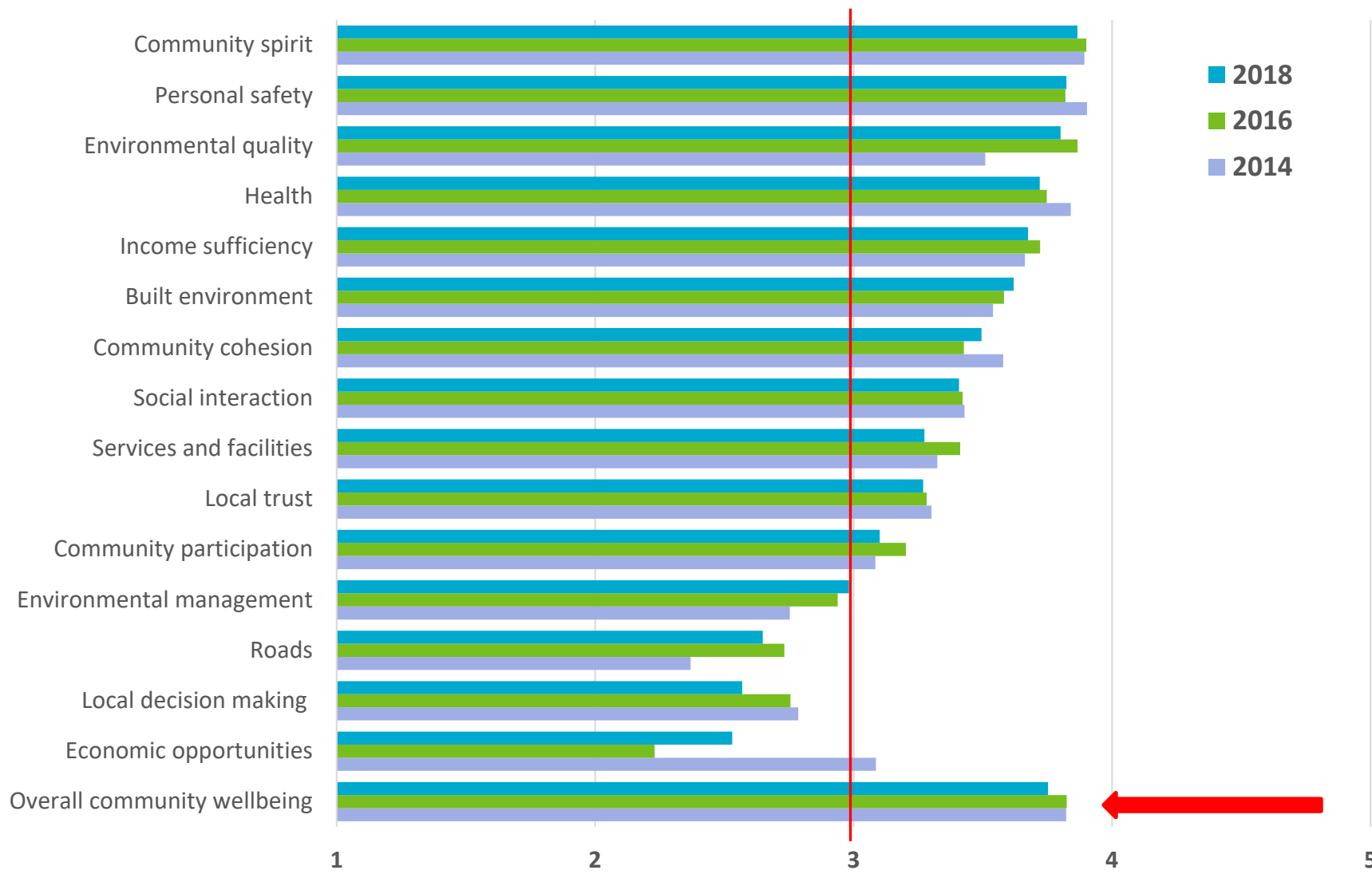
Community Wellbeing WD: 2018



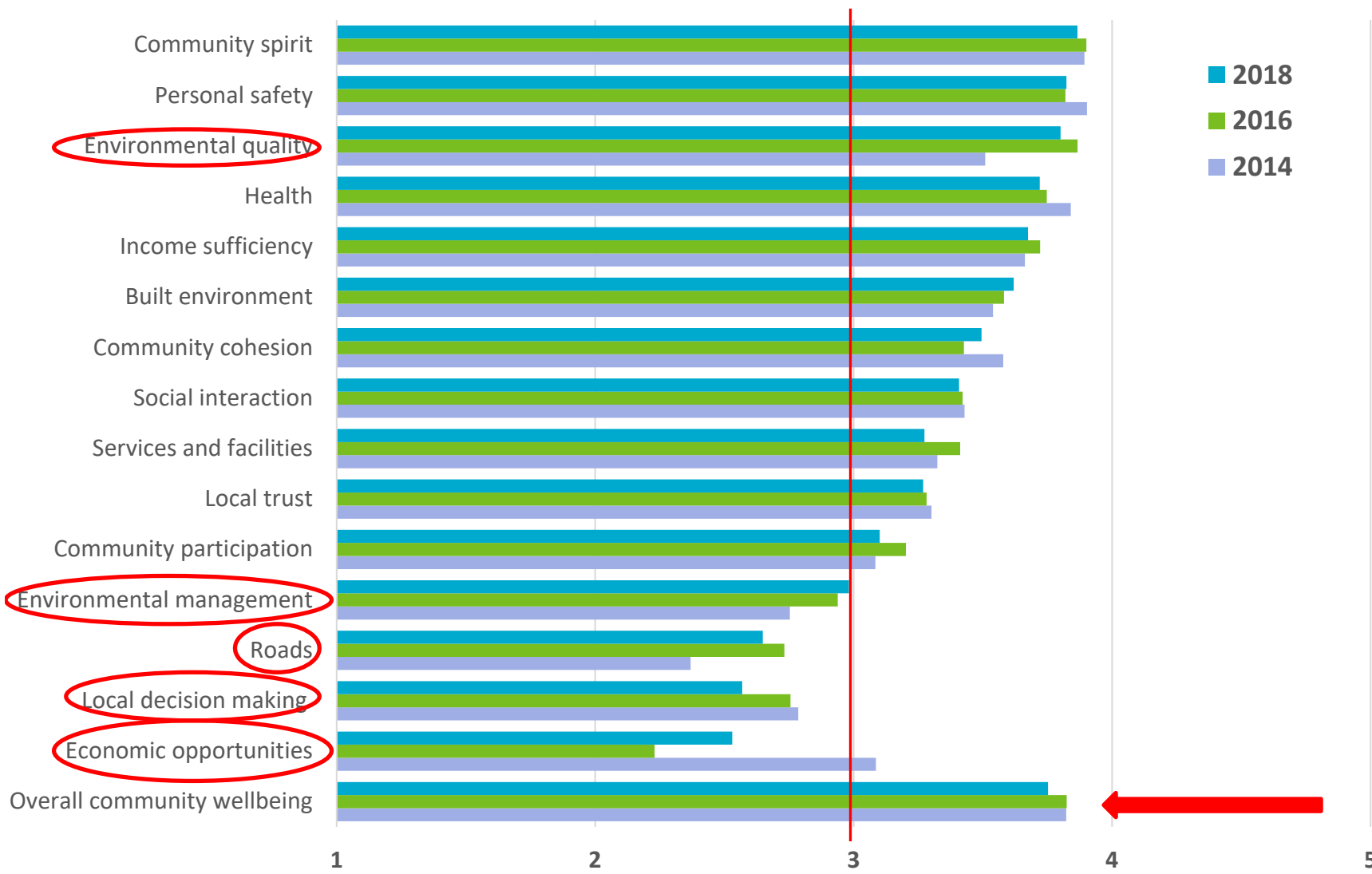
Community Wellbeing WD: 2016 - 2018



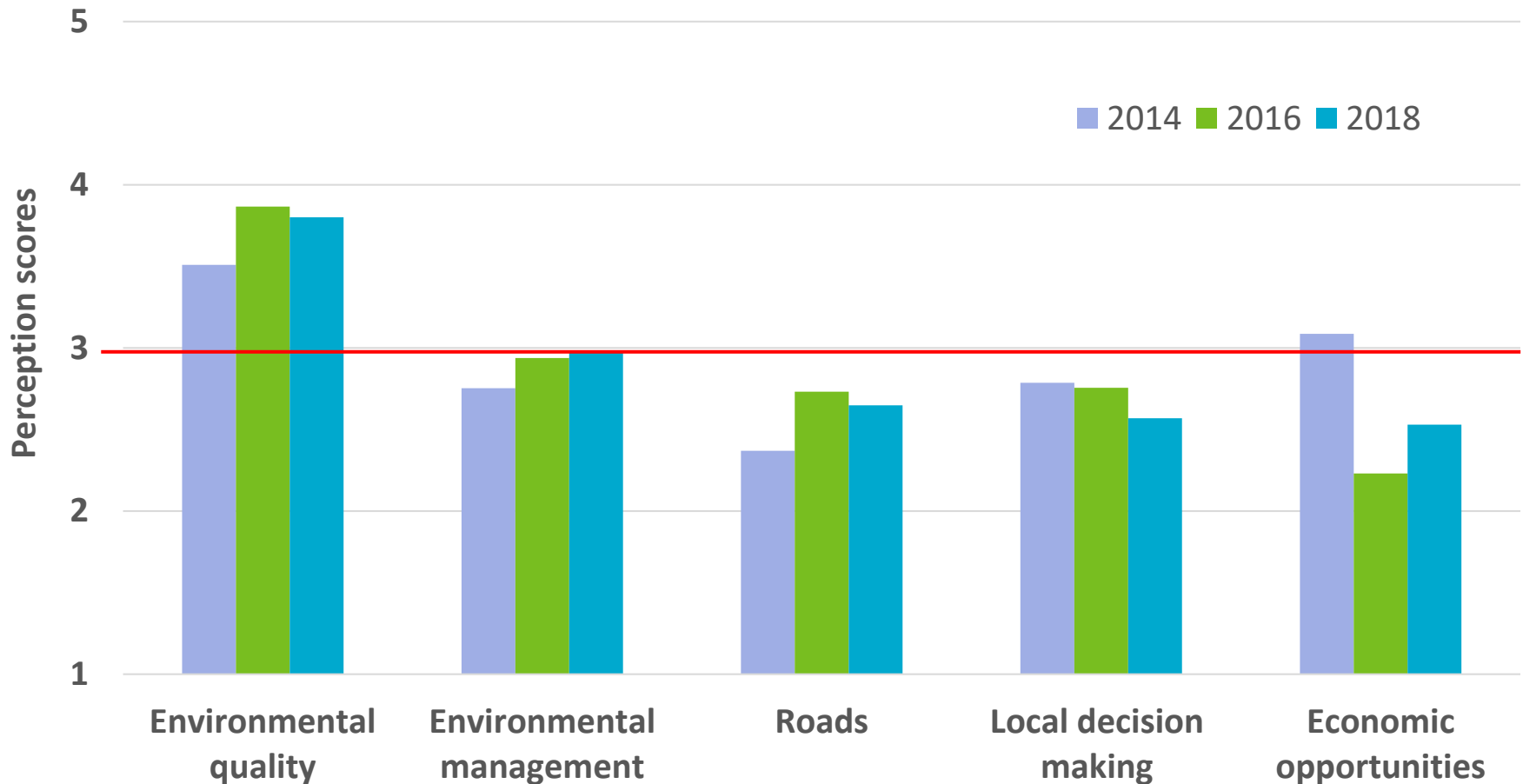
Community Wellbeing WD: 2014 - 2016 - 2018



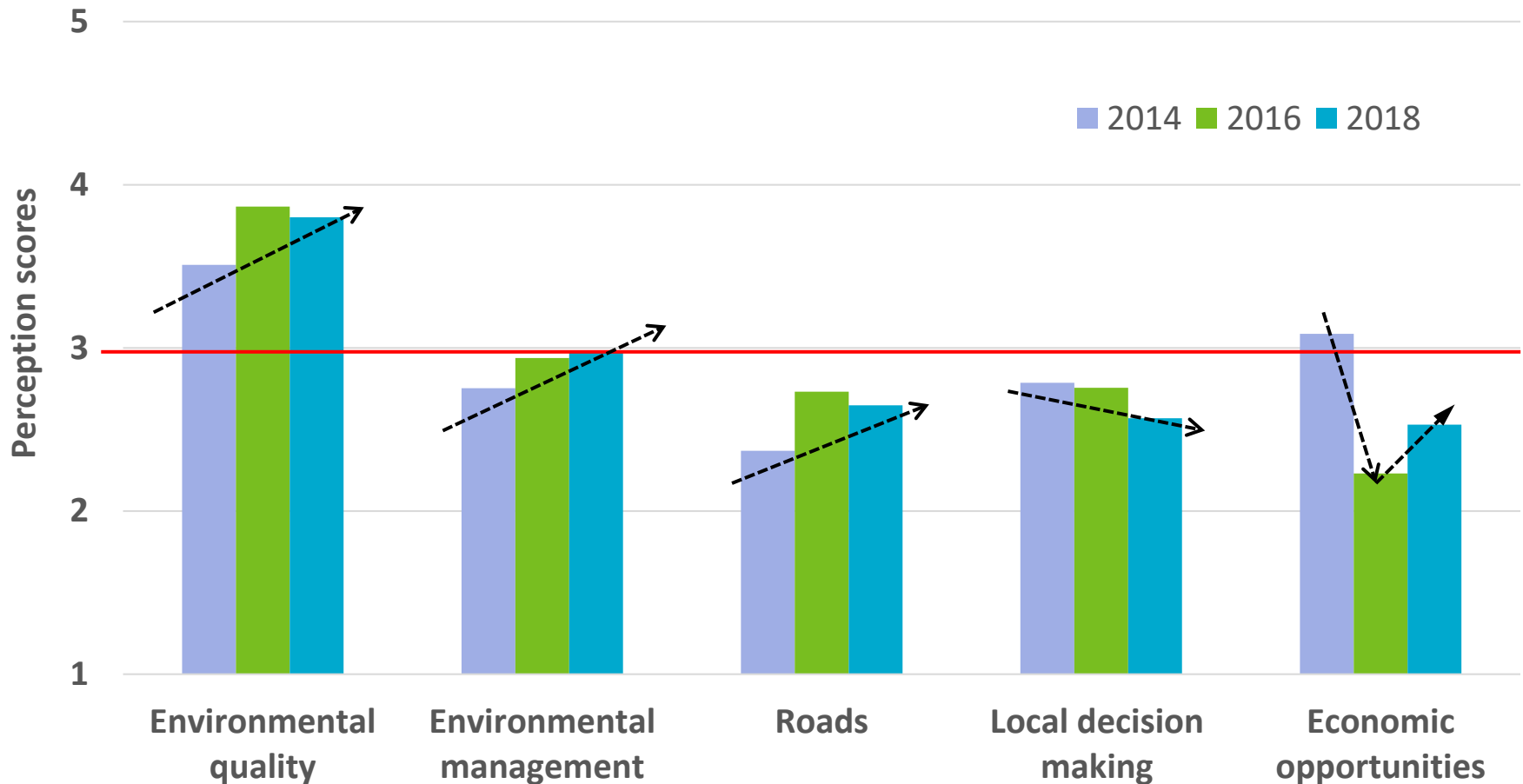
Community Wellbeing WD: 2014 - 2016 - 2018



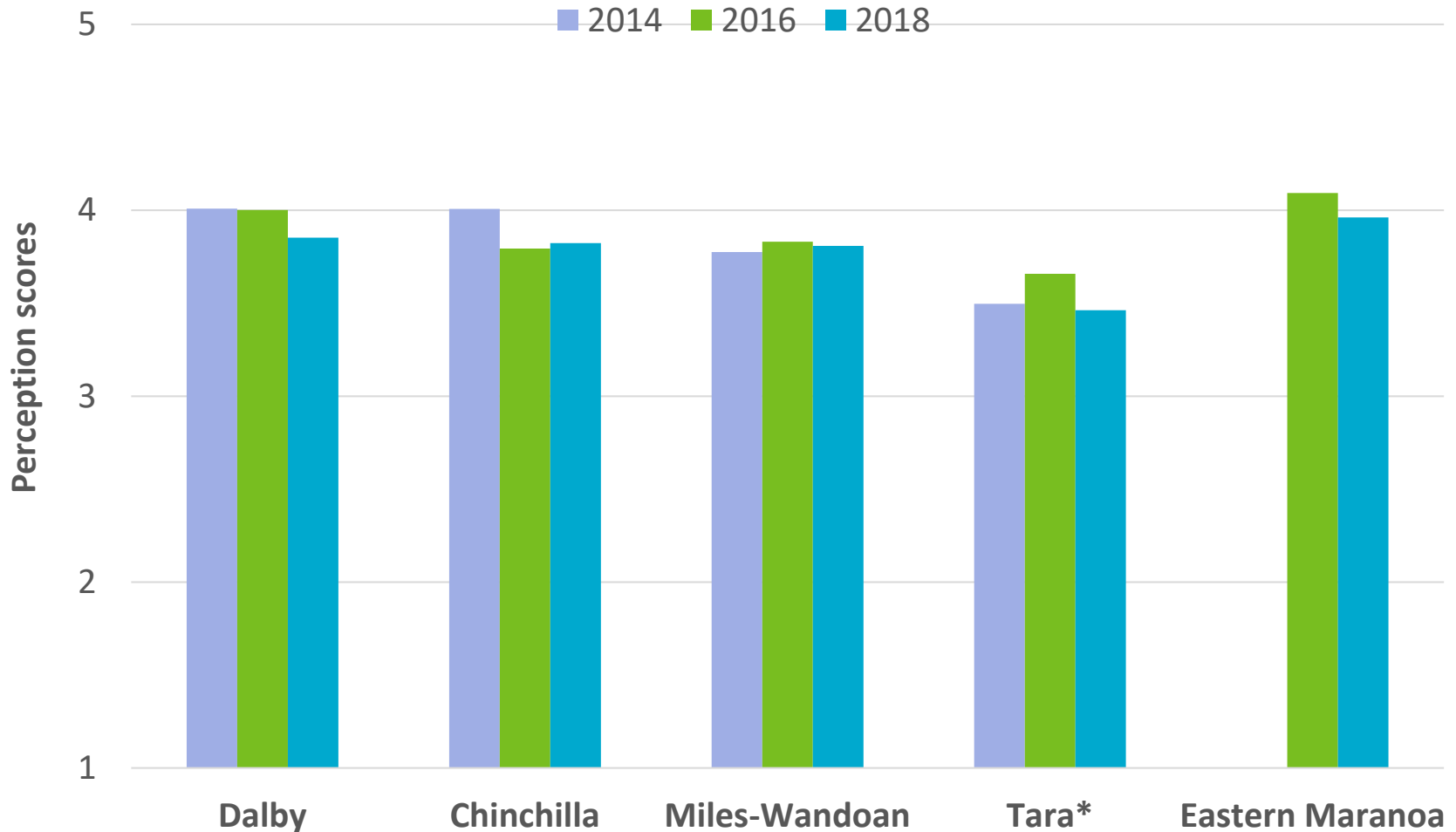
Only five dimensions changed significantly 2014 – 2016 – 2018



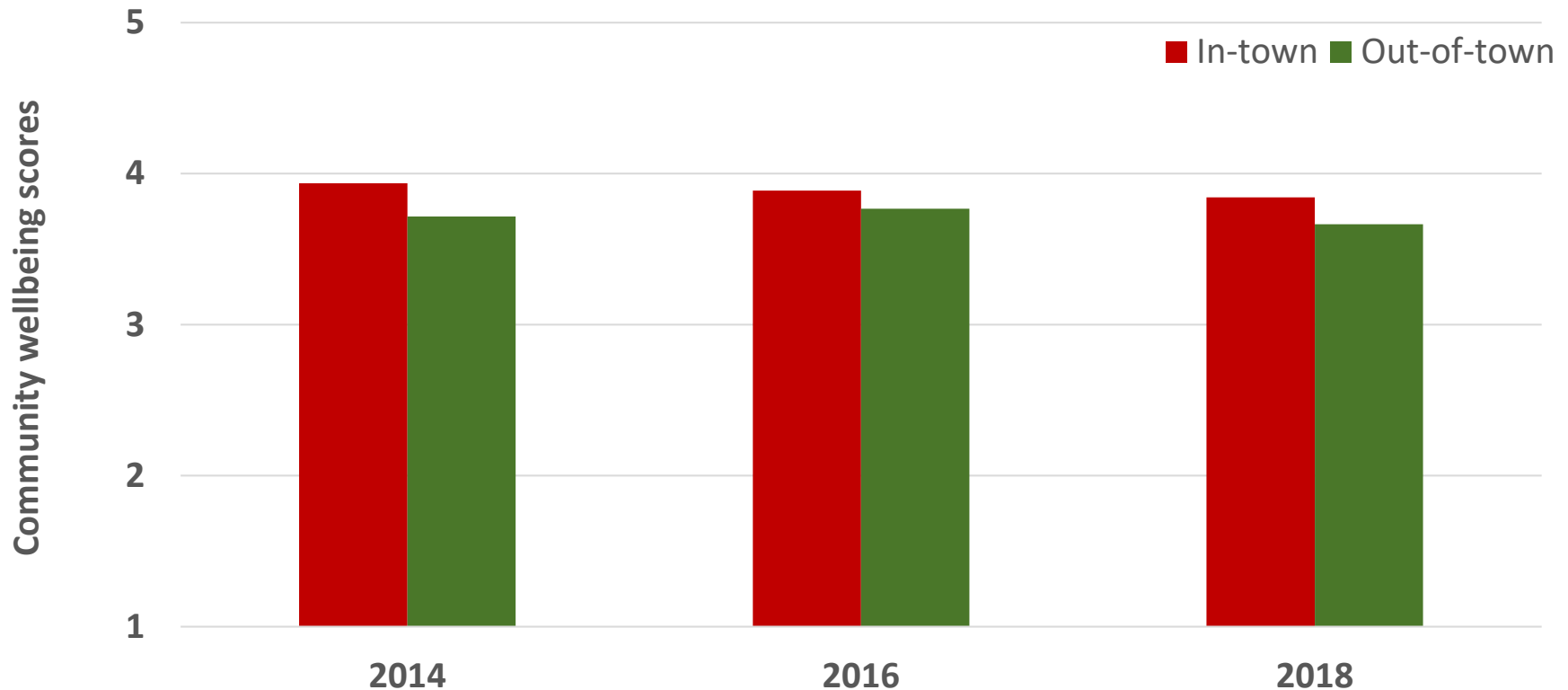
Only five dimensions changed significantly 2014 – 2016 – 2018



Sub-regions: Tara perceives its community wellbeing as lower



Compared to people who live in town, people who live out of town feel community wellbeing is lower



Demographic differences

Age

- Older residents experience higher community wellbeing
 - Rate services and facilities as higher

Income

- Lower income residents report lower community wellbeing in 7/15 dimensions

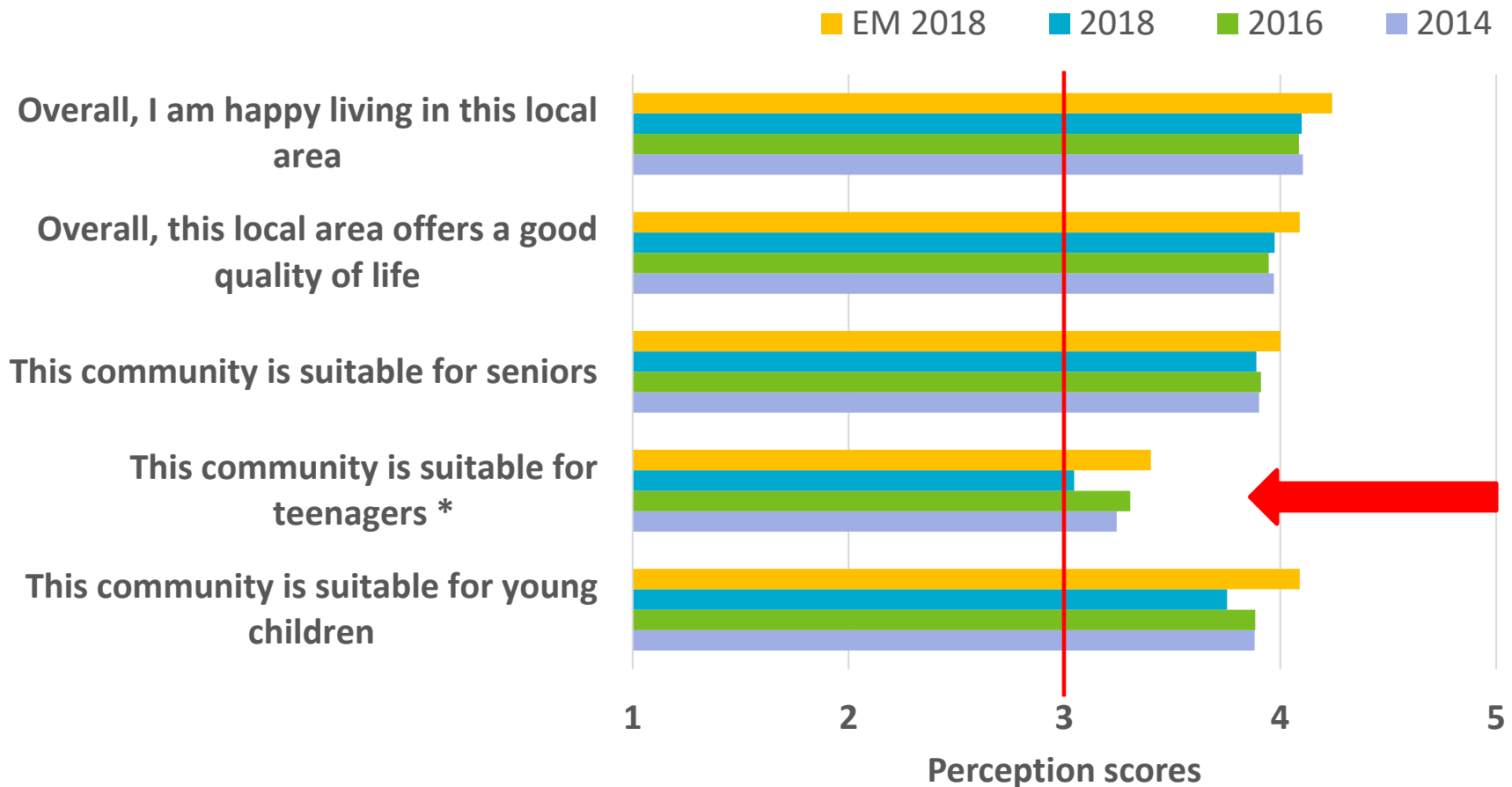
Gender

- Compared to men, women reported
 - Less satisfaction with personal safety, services and facilities, and environmental quality
 - More satisfaction with social interaction and higher community spirit

The community as a 'great place to live' is high except for teenagers



The community as a 'great place to live' is high except for teenagers



Important drivers of community wellbeing consistent over time



Top three drivers

- Community spirit, cohesion, and local trust
 - Services and facilities
 - Community participation, and social interaction
-
- Personal safety / Environmental loading / Economic opportunities

Resilience and adapting to change

RESULTS



Community resilience actions important for adapting to change

Adapting to
change

Resilience



Strategic actions

Planning, leadership, accessing and using information, learning



Working together

Sharing resources, information, learnings; good working relationships, collective efficacy



Community commitment

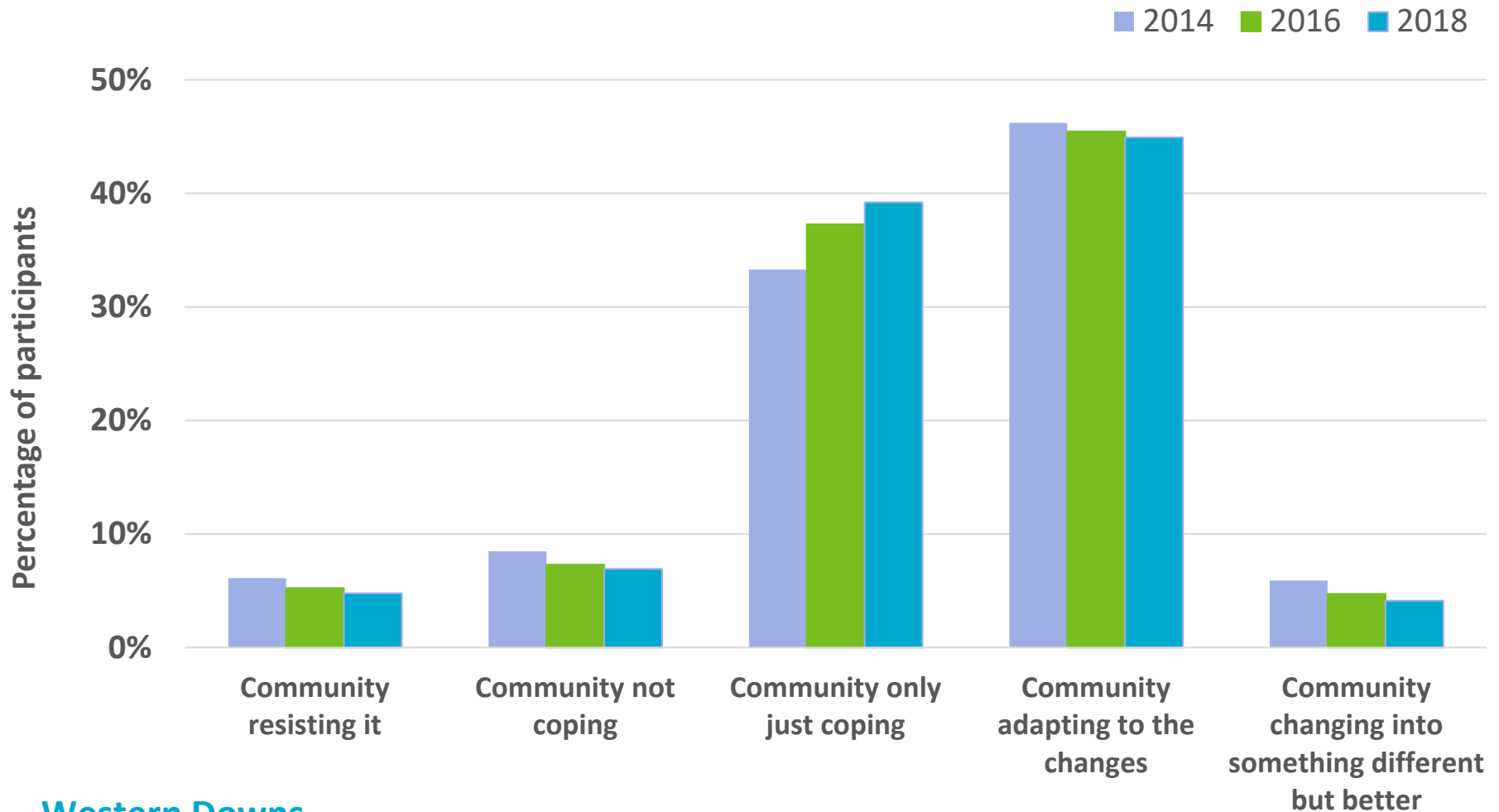
Perseverance, supporting volunteers, committed to the future, getting involved



Citizen voice

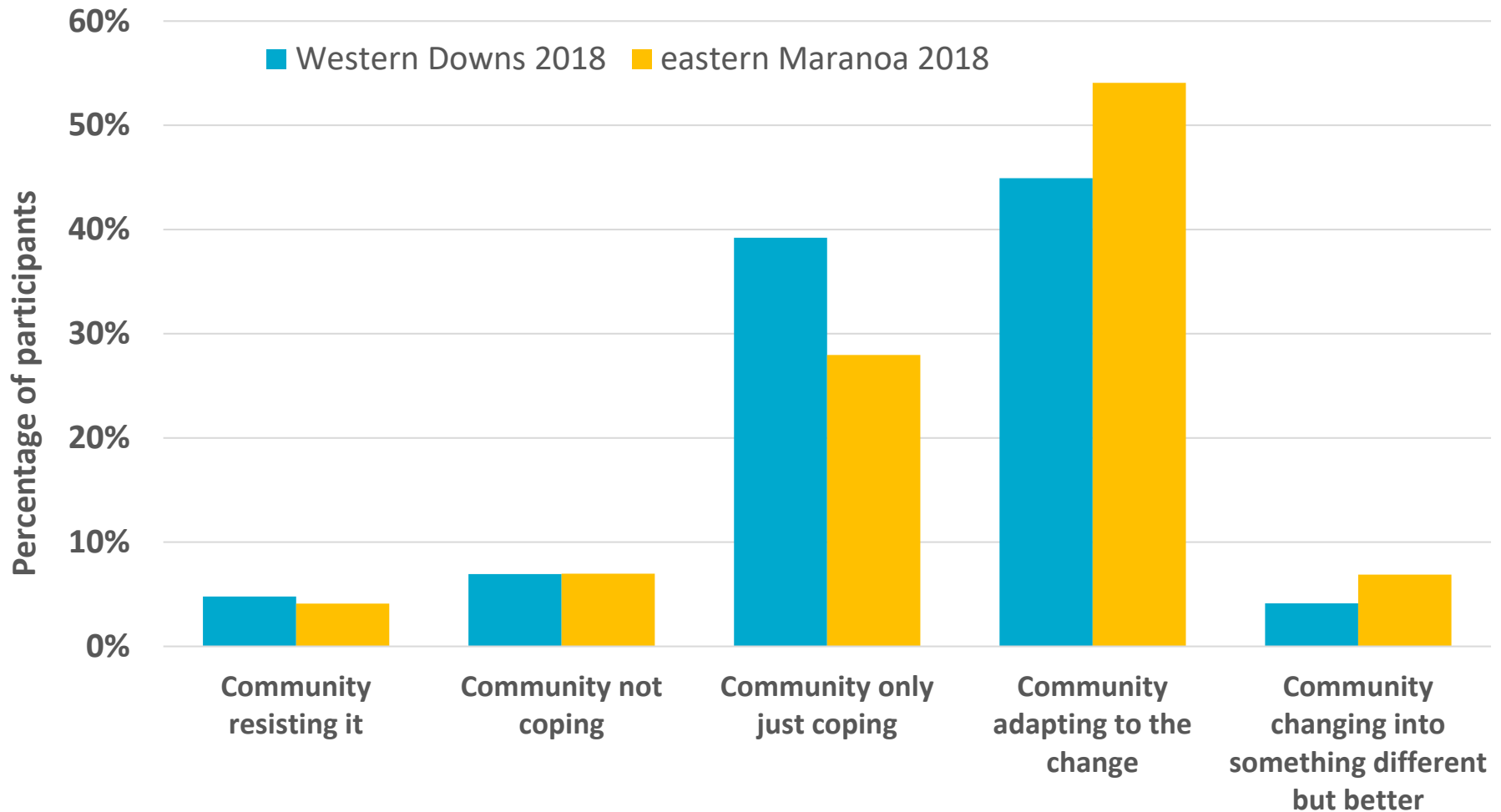
Local decision making processes, being heard, being involved, trust in leaders

Perceptions of adapting to CSG not shifting

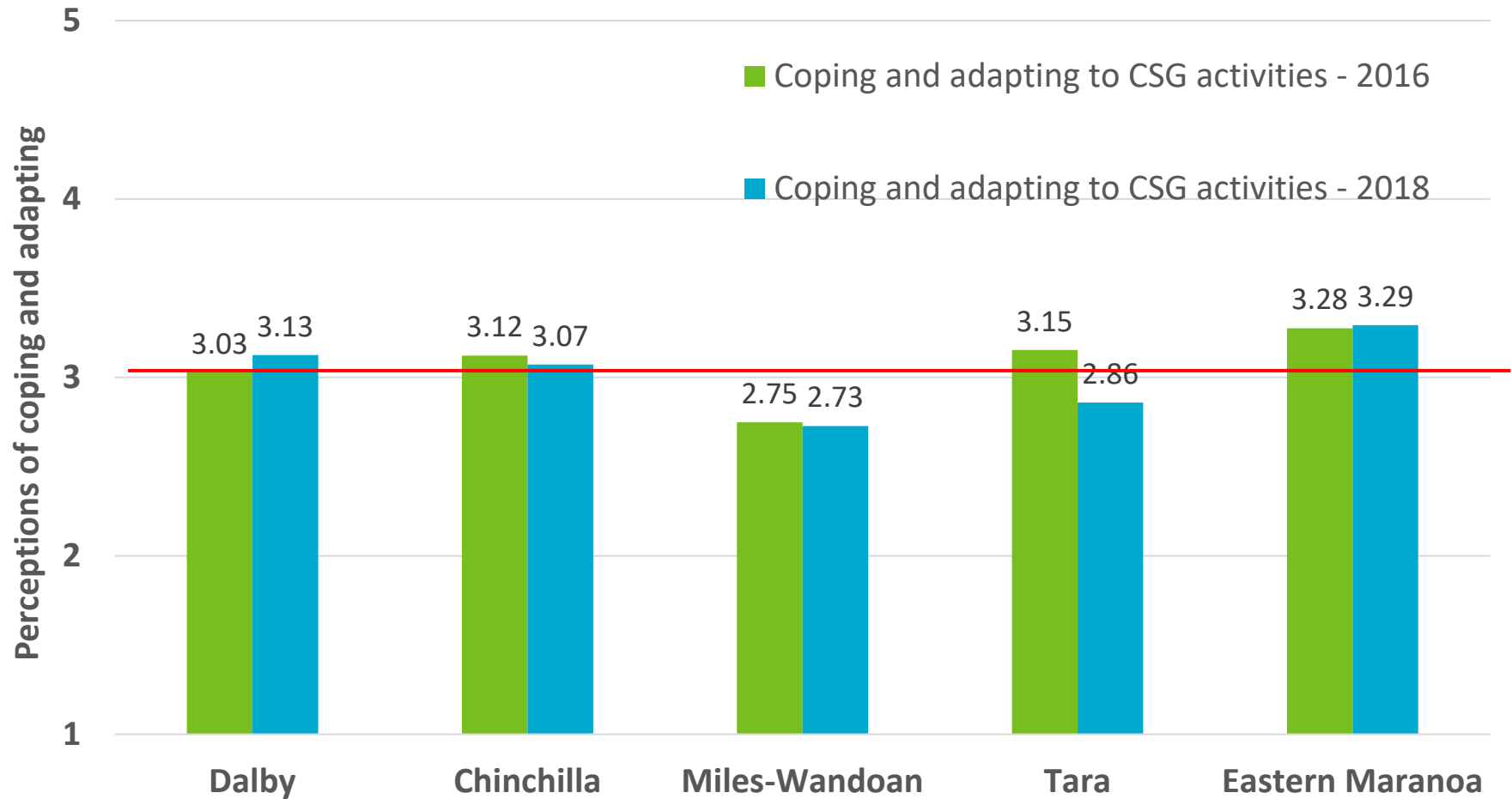


Western Downs

More positive perceptions of adapting to CSG in eastern Maranoa

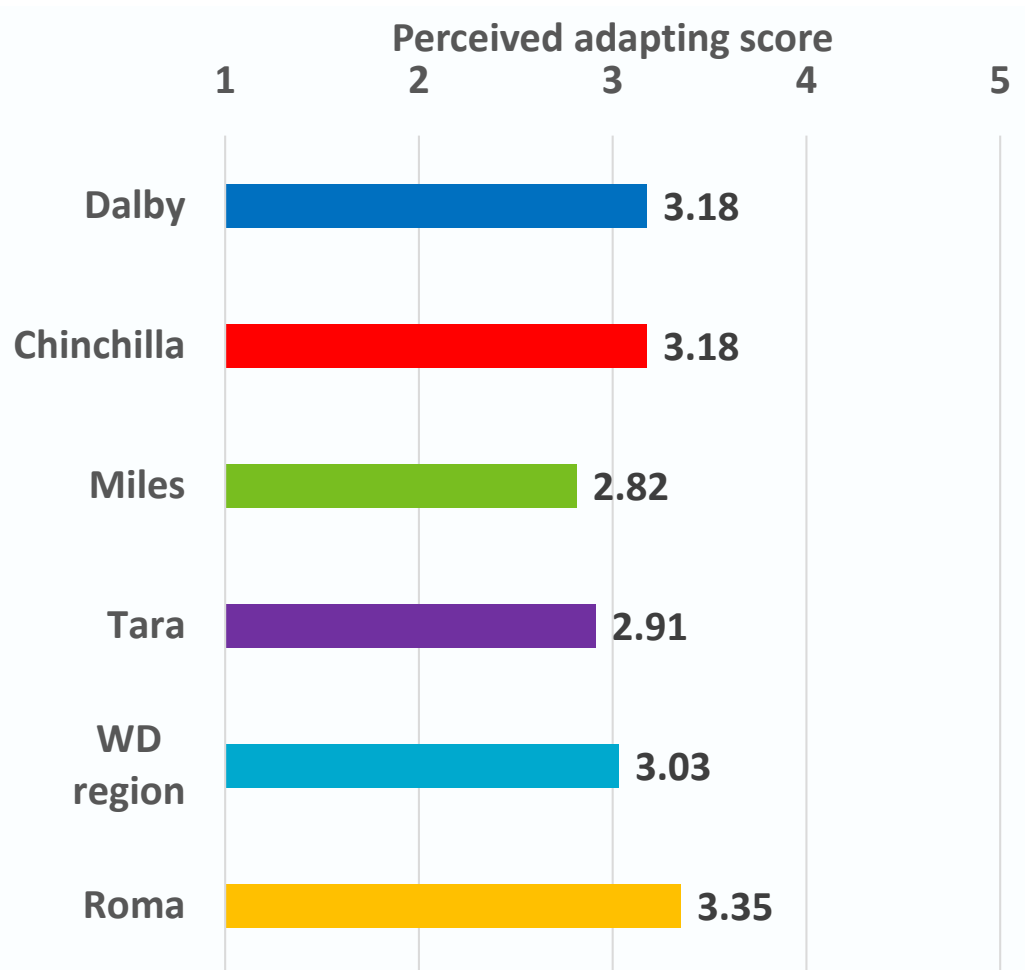


Smaller subregions feel coping and adapting less than larger centres



2018: What matters to adaptive communities

Adapting
to change



- ✓ Local planning
- ✓ Leadership
- ✓ Information access
- ✓ Working together
- ✓ Community commitment
- ✓ Local decision making
 - ✓ Being listened to
 - ✓ Having a say
 - ✓ Trust in local leaders
- ✓ **Economic opportunities**
- ✓ **Environmental management**

Perceptions of resilience actions modest

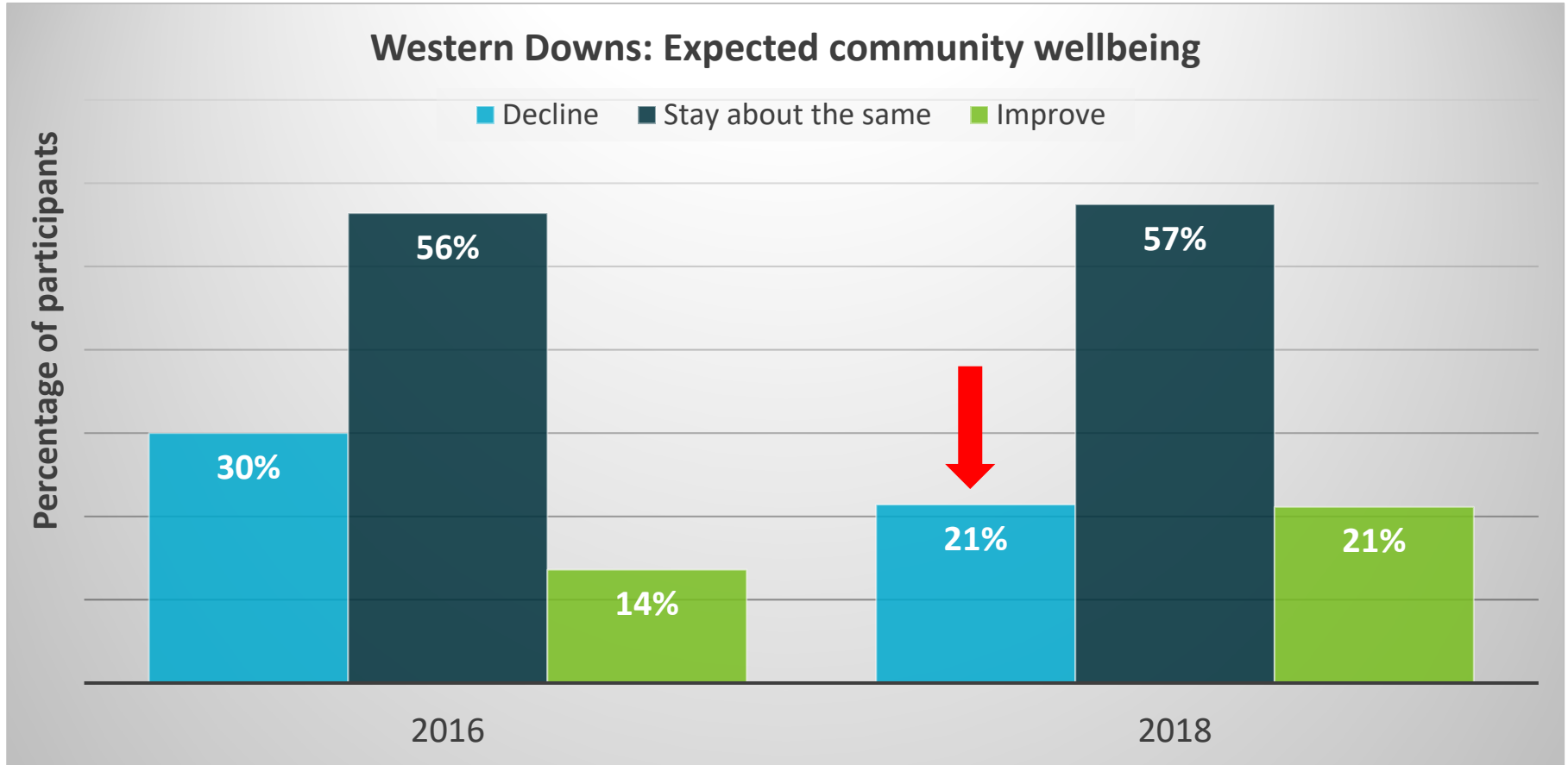


Expected future community wellbeing

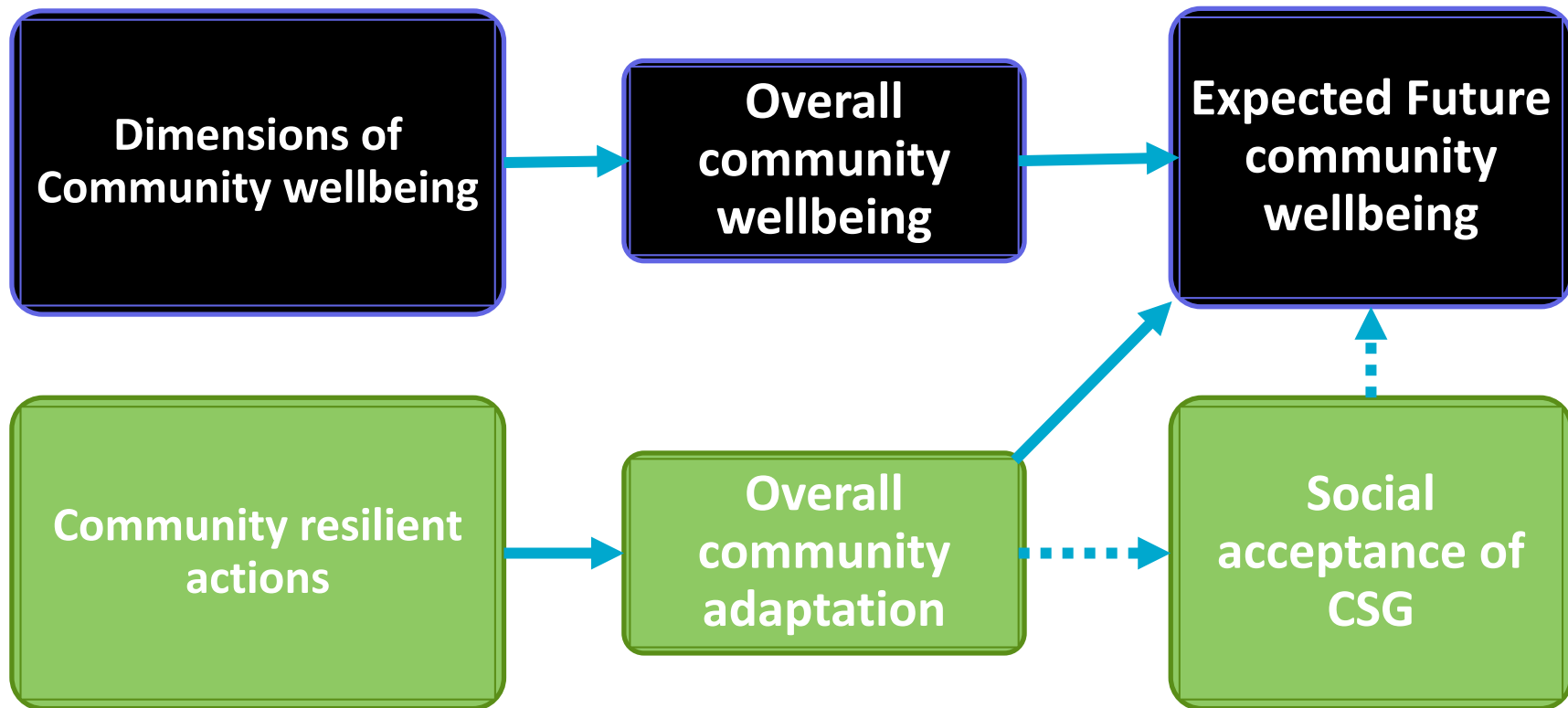
RESULTS



Expectations of future community wellbeing slightly more optimistic in 2018 than 2016



How does this all fit together



Based on McCrea, R., Walton, A., and Leonard, R. (2016)

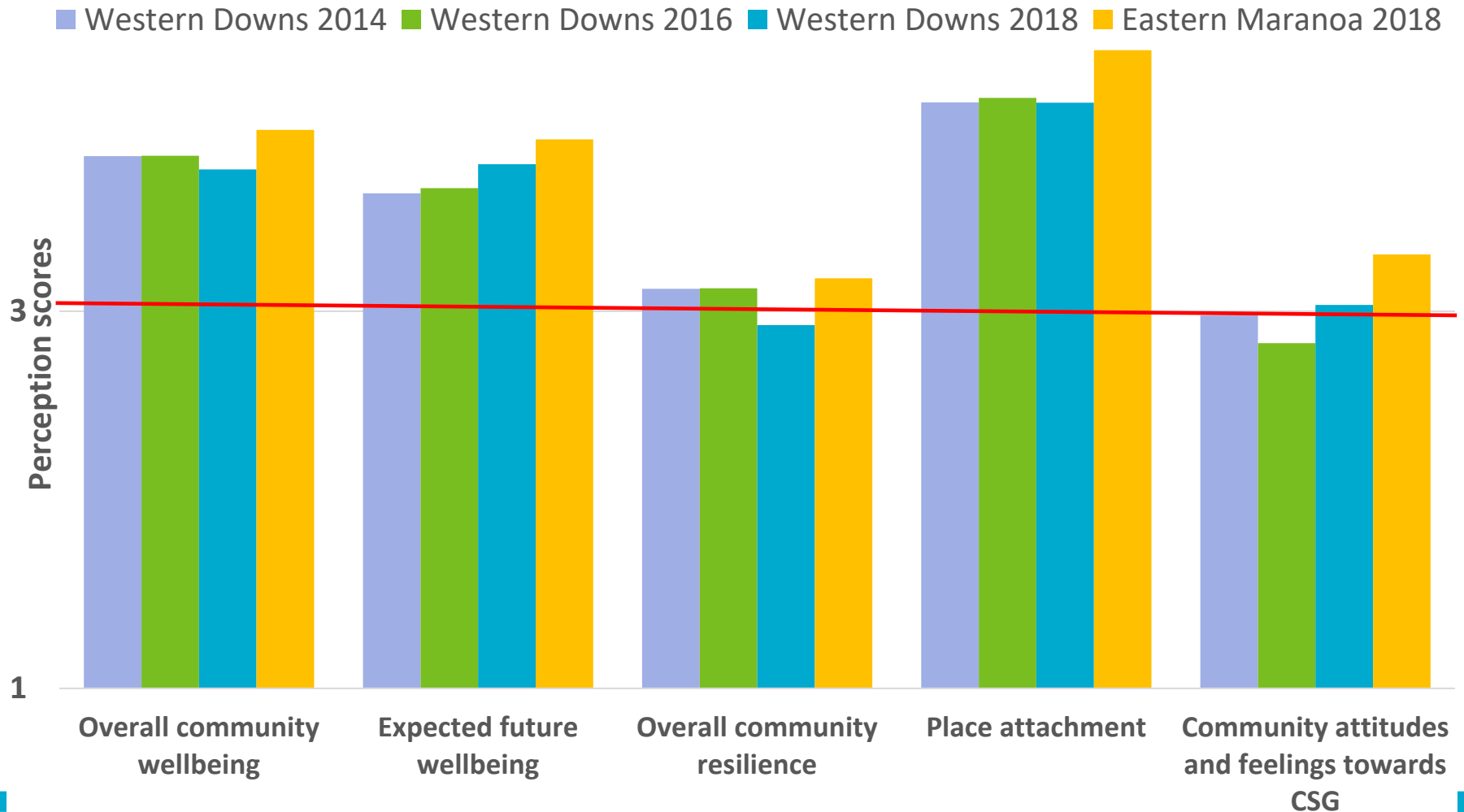
Summary of changes – WD region

5



Summary of changes – WD region and Roma

5



Key messages – Community wellbeing

- Communities maintained their wellbeing over three different industry phases
- The main drivers of community wellbeing were consistent over time
 - Ensure services and facilities maintained and enhanced
 - Social wellbeing is as important – personal safety, community spirit, social interaction
- Perceptions of community wellbeing were consistently lower over time for people who live out of town
- Expectations of future community wellbeing have become more optimistic in 2018

Observations – Community resilience to CSG

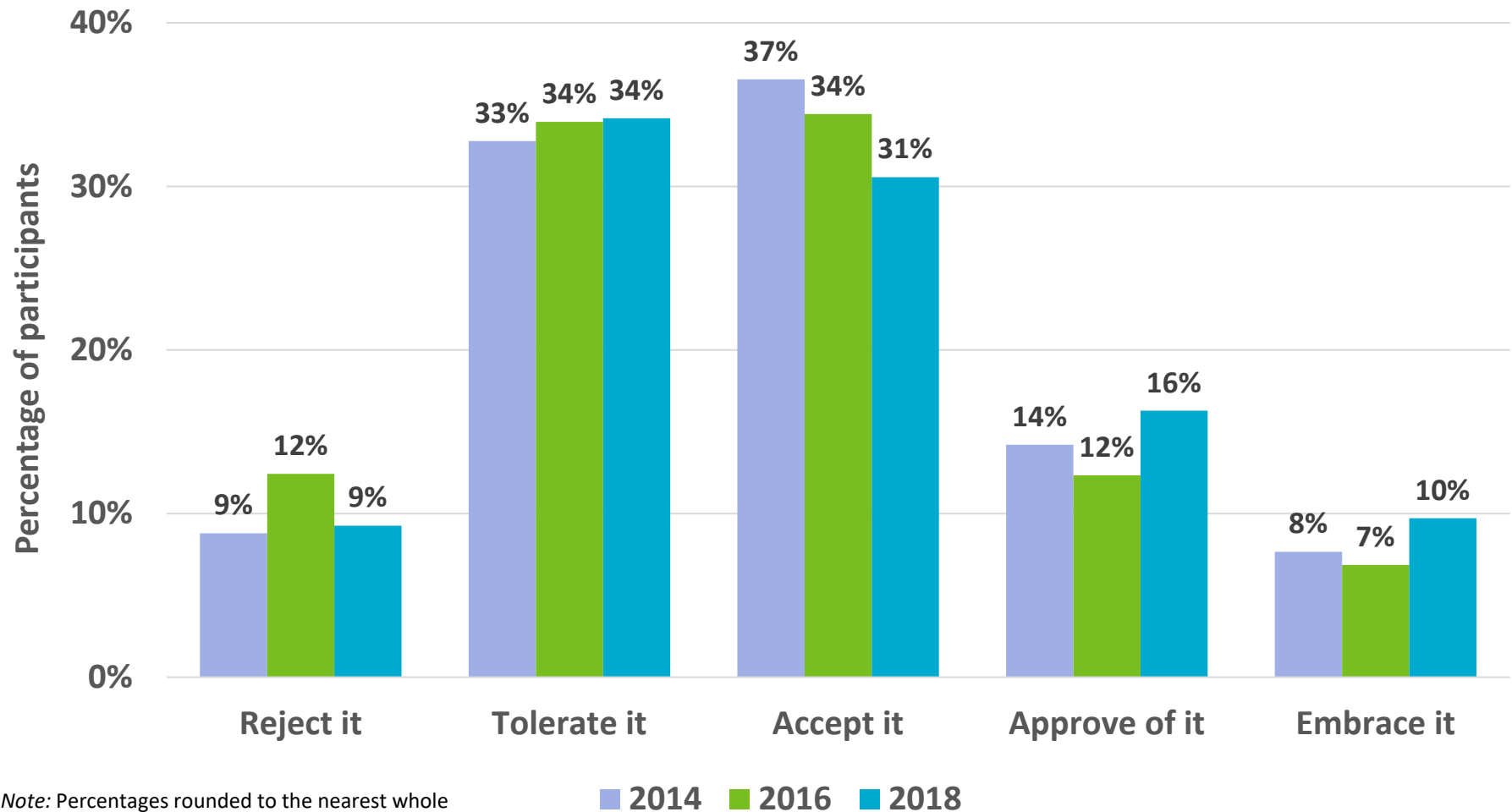
- Community perceptions of coping and adapting to CSG remained static for WD region
 - Perceptions of resilience actions to CSG development remained modest over time
 - Economic opportunities and environmental management act as indicators of how well the community is adapting
 - Processes for ensuring people feel listened to and heard, and ways to share information important
- Adapting to CSG development is different from community wellbeing
- Size of town seems to matter in perceptions of adapting to CSG development
- Age of the industry seems to affect perceptions of adapting

Local attitudes towards CSG development

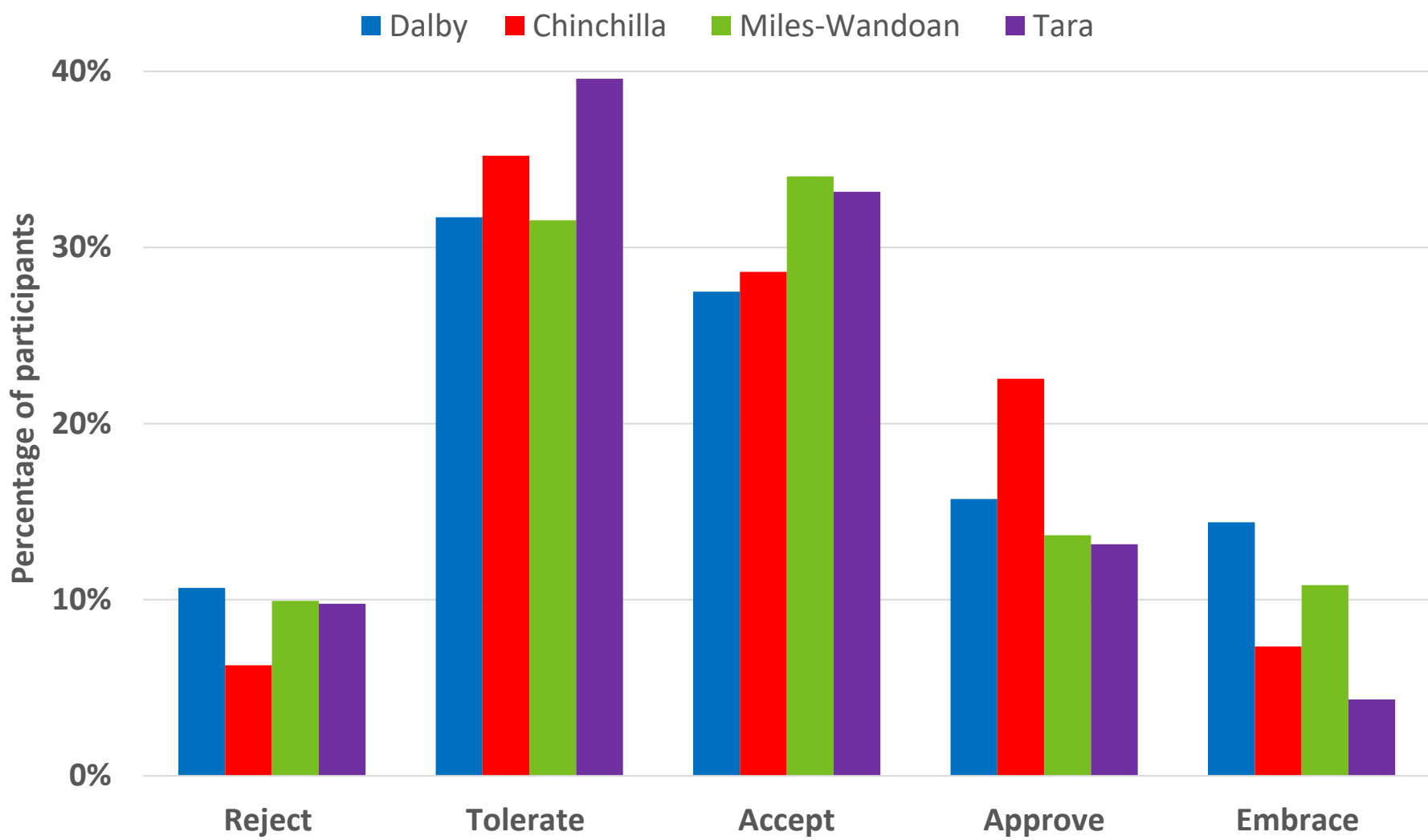
RESULTS



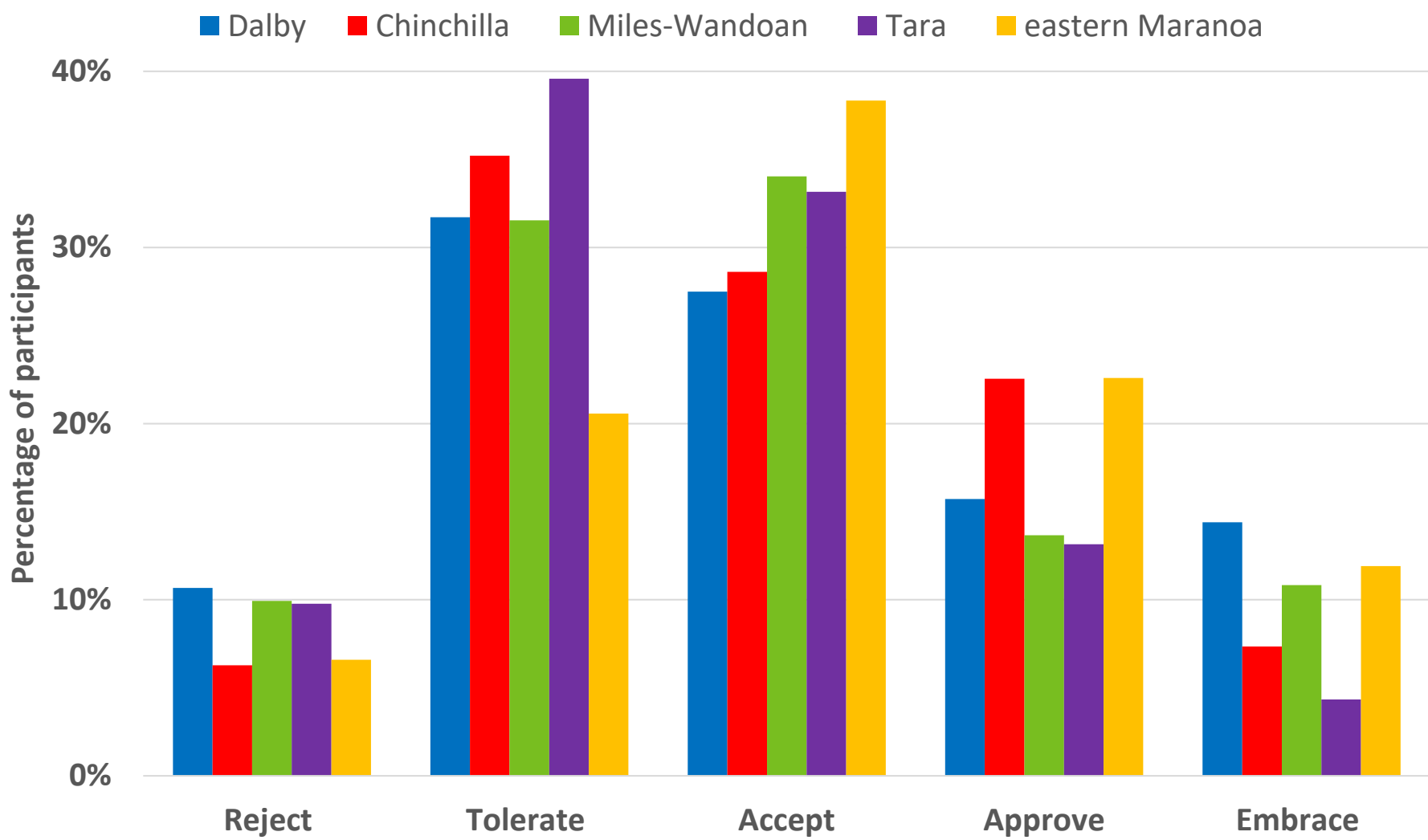
CSG Attitudes – slightly more positive in 2018



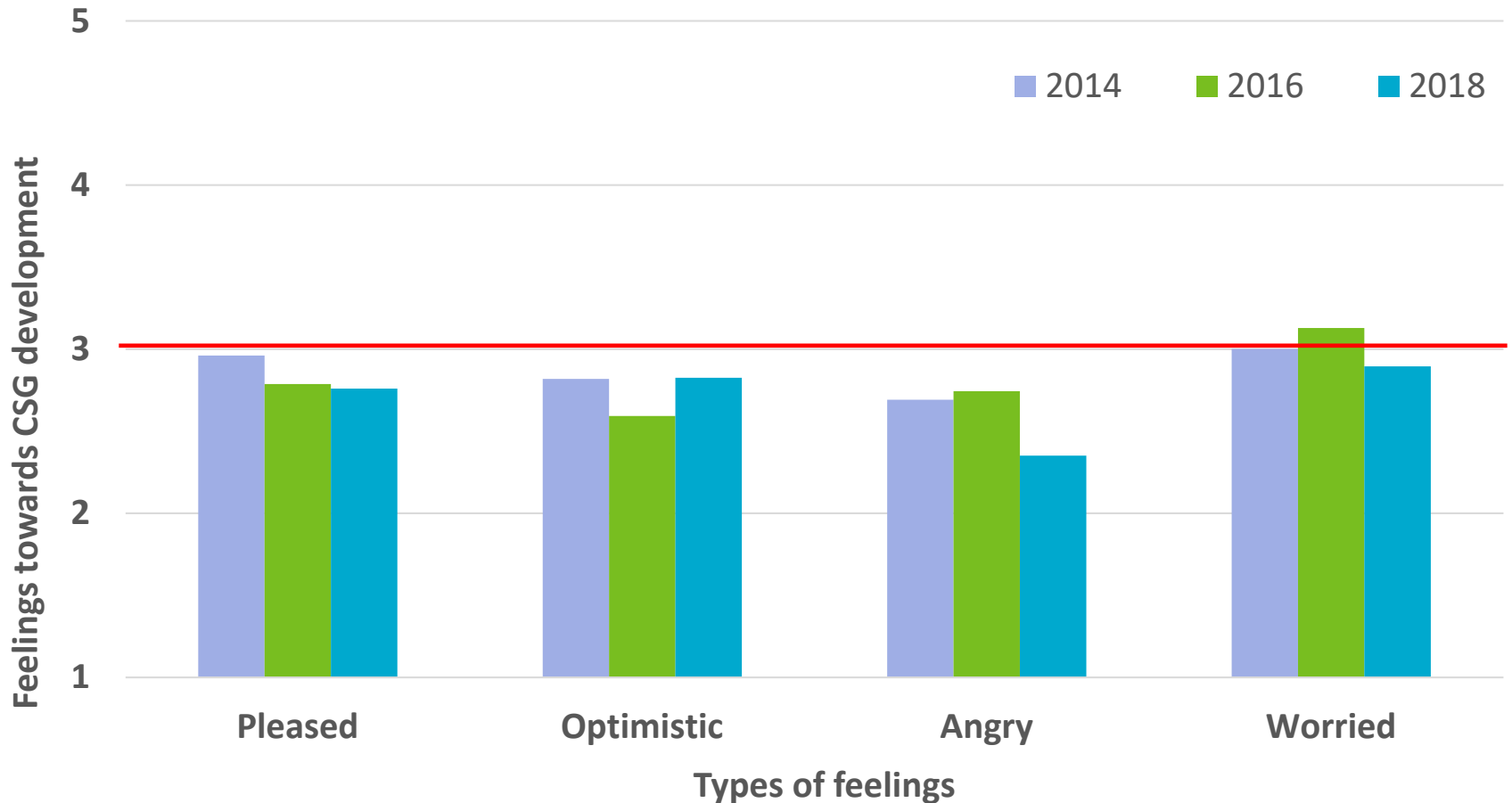
2018: Attitudes toward CSG – still vary across the region



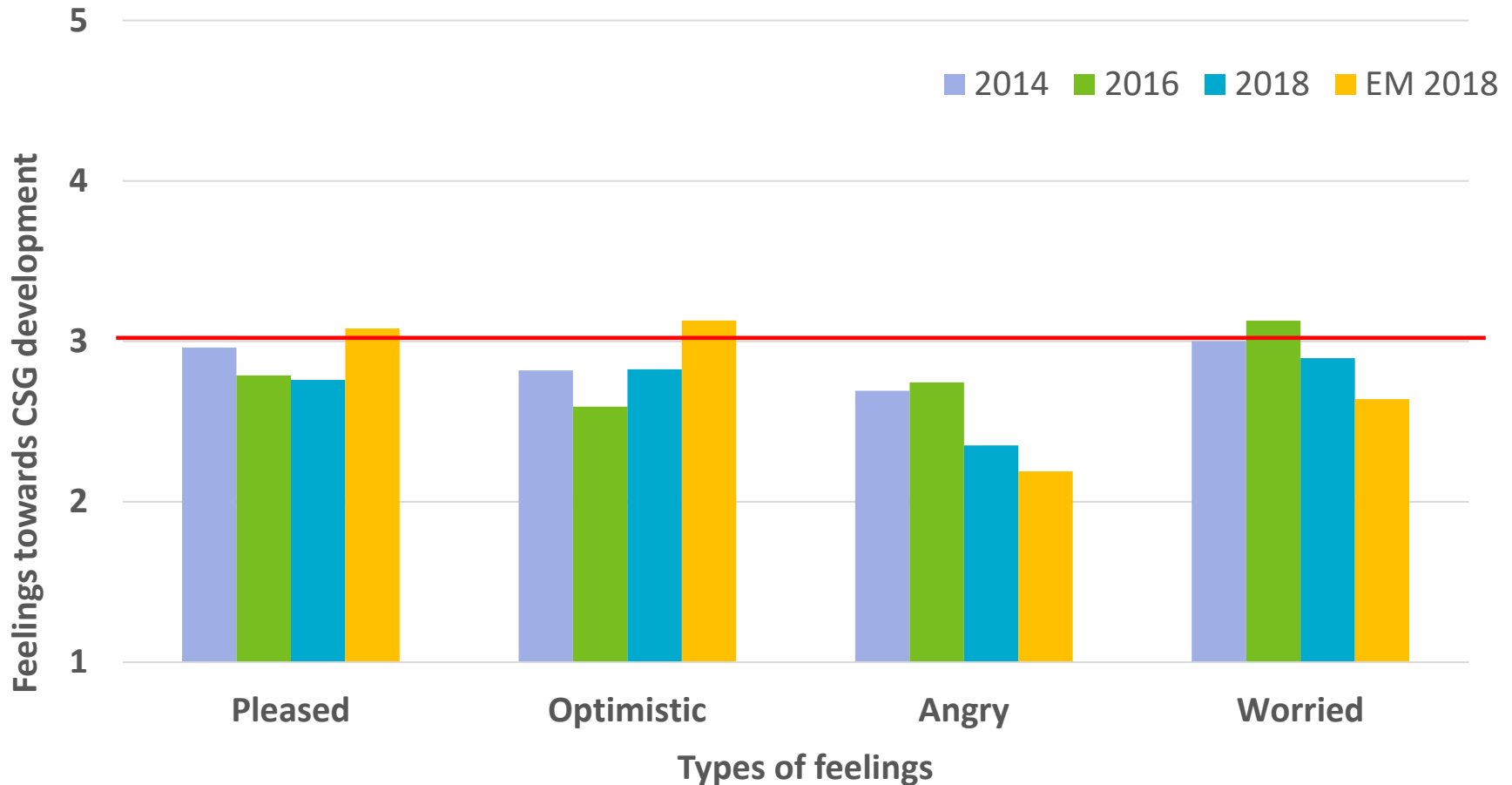
2018: Attitudes toward CSG – still vary across the region



A general softening of negative emotions over the four years in the WD

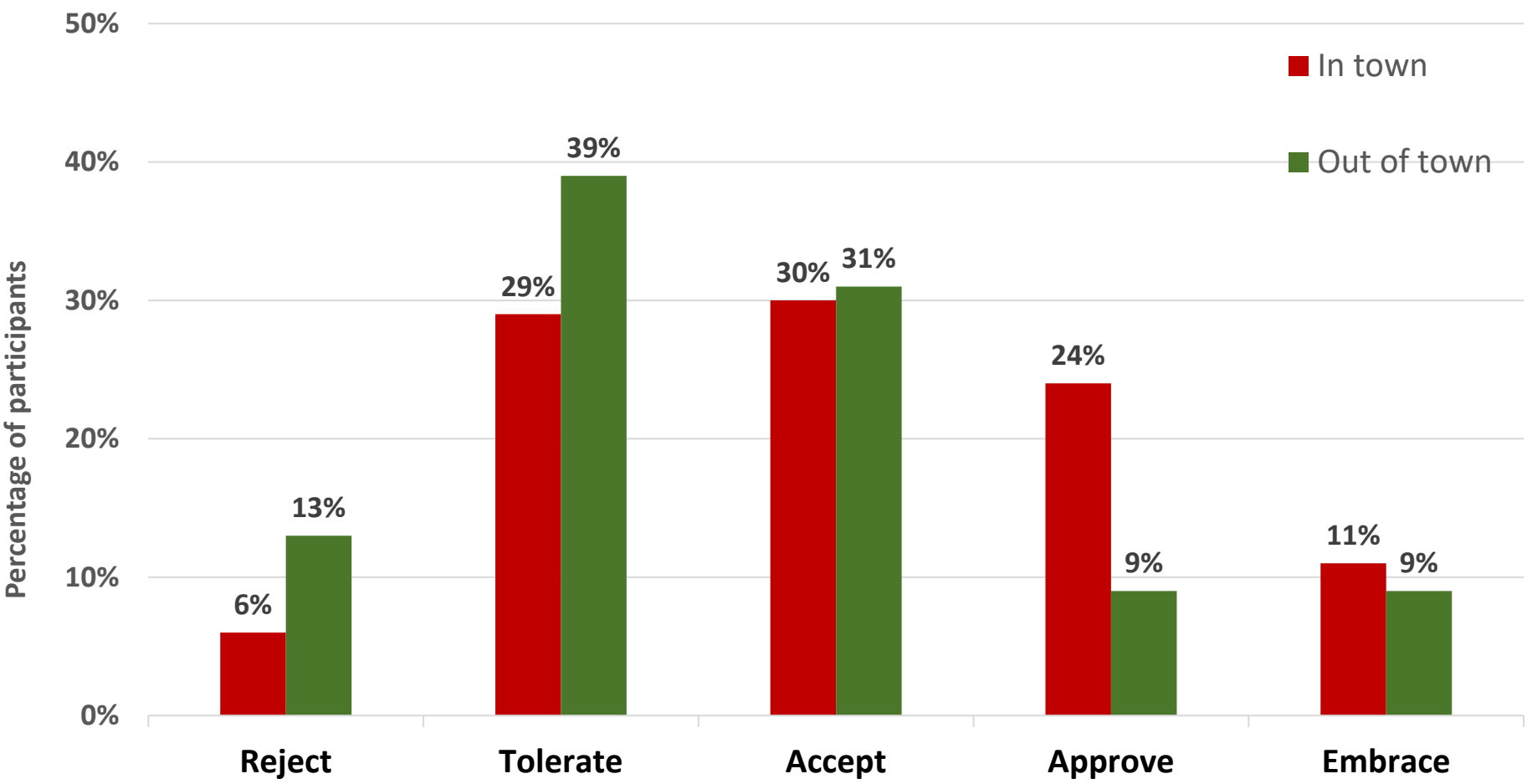


A general softening of negative emotions over the four years in the WD

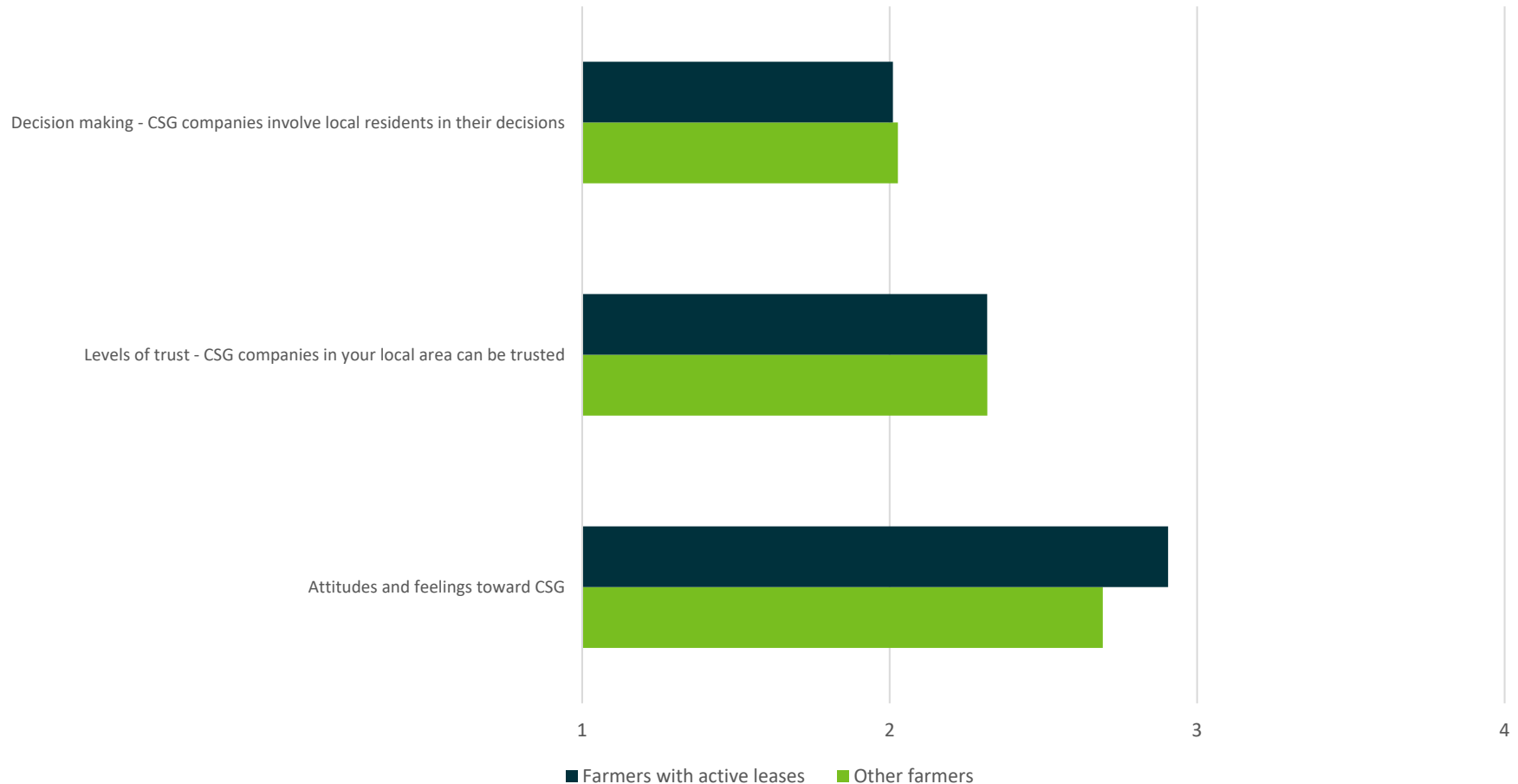


2018: CSG Attitudes –

Out-of-town residents still less positive



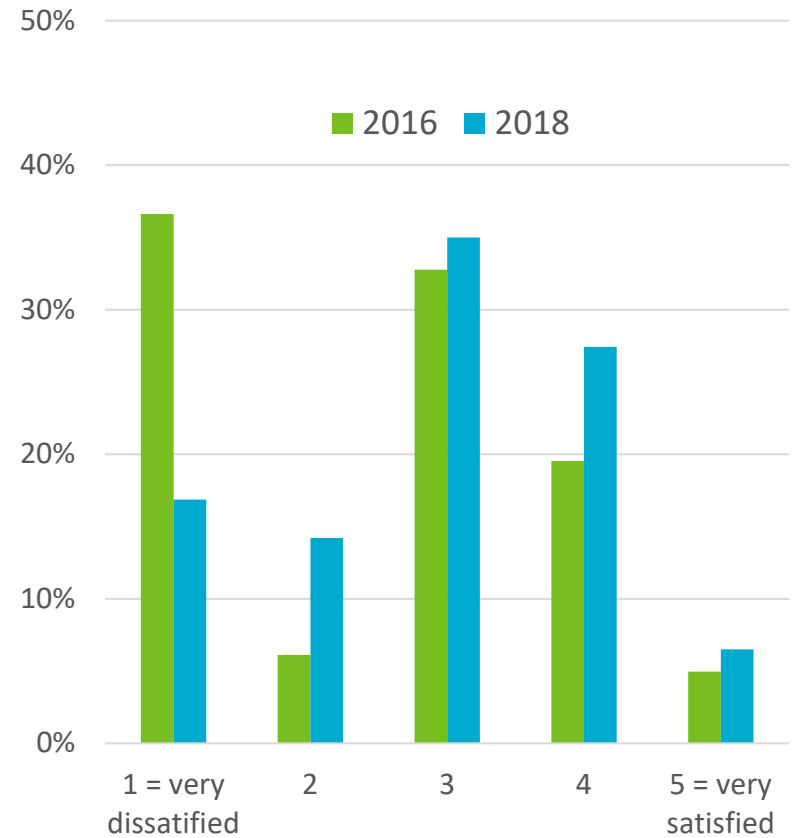
Farmers with active leases no differences in wellbeing compared to farmers without



Farmers with active leases more positive in 2018 than 2016

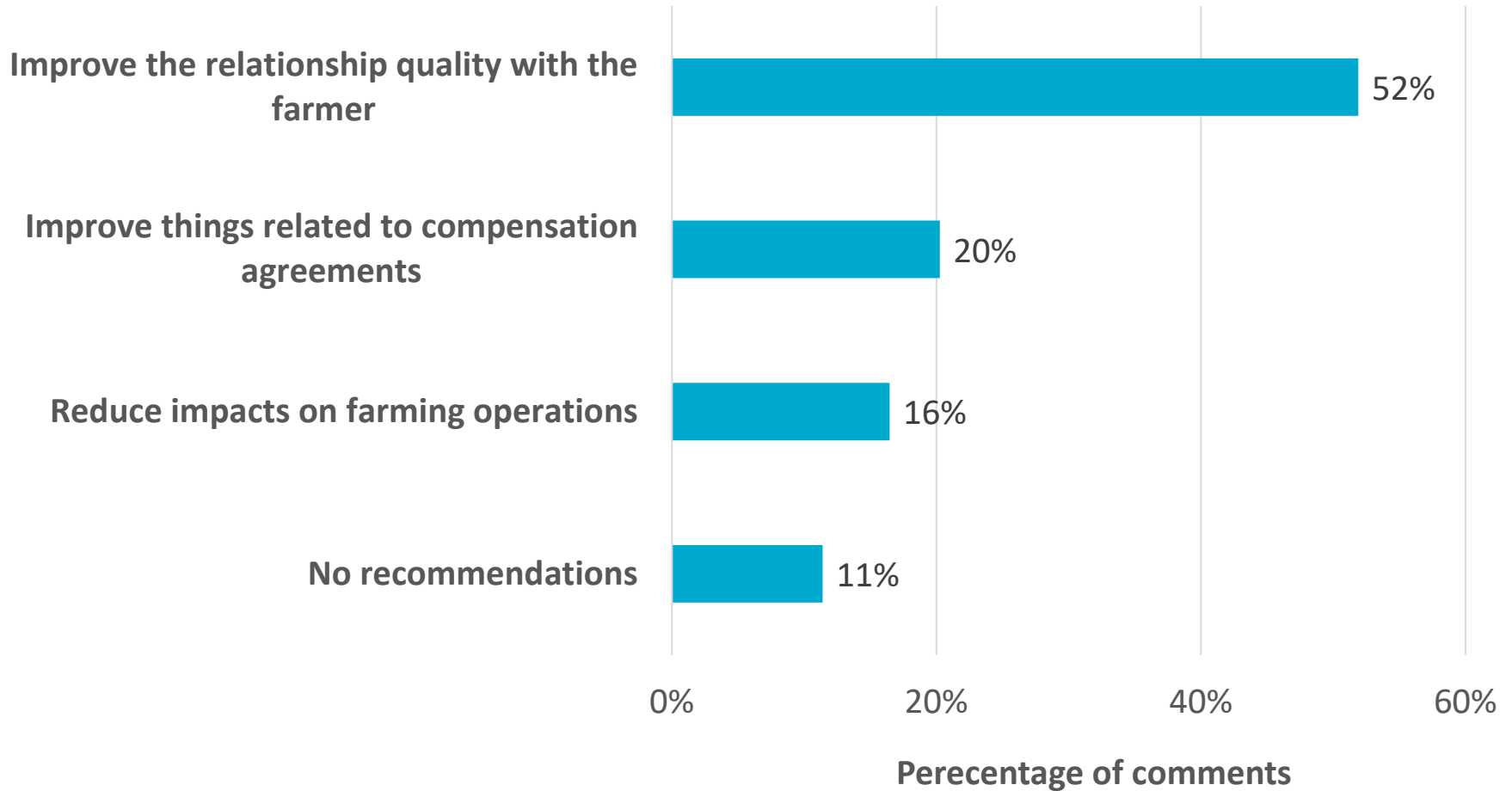


Farmers with active CSG leases: 2016 - 2018

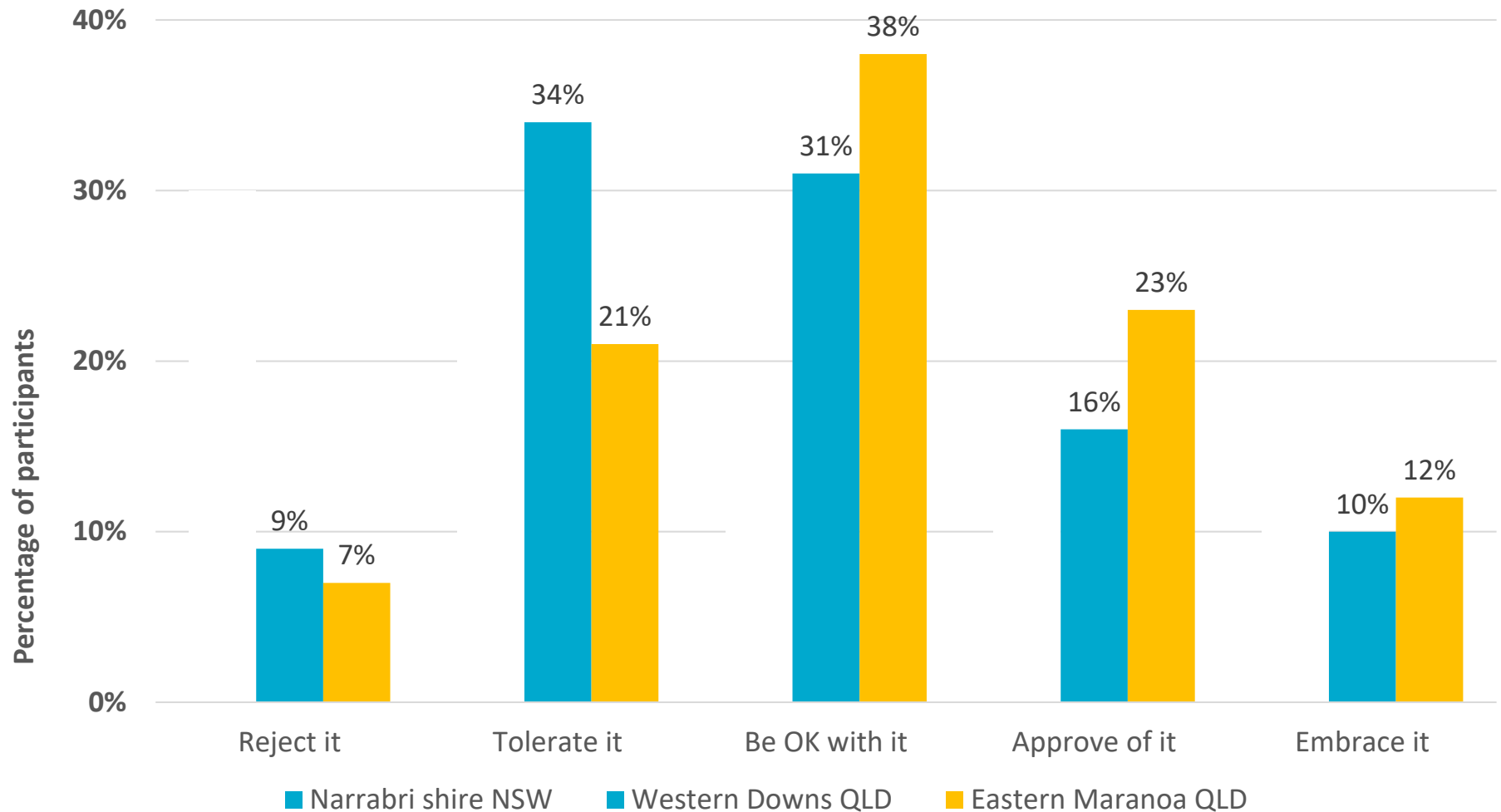


Satisfaction with dealings with CSG companies

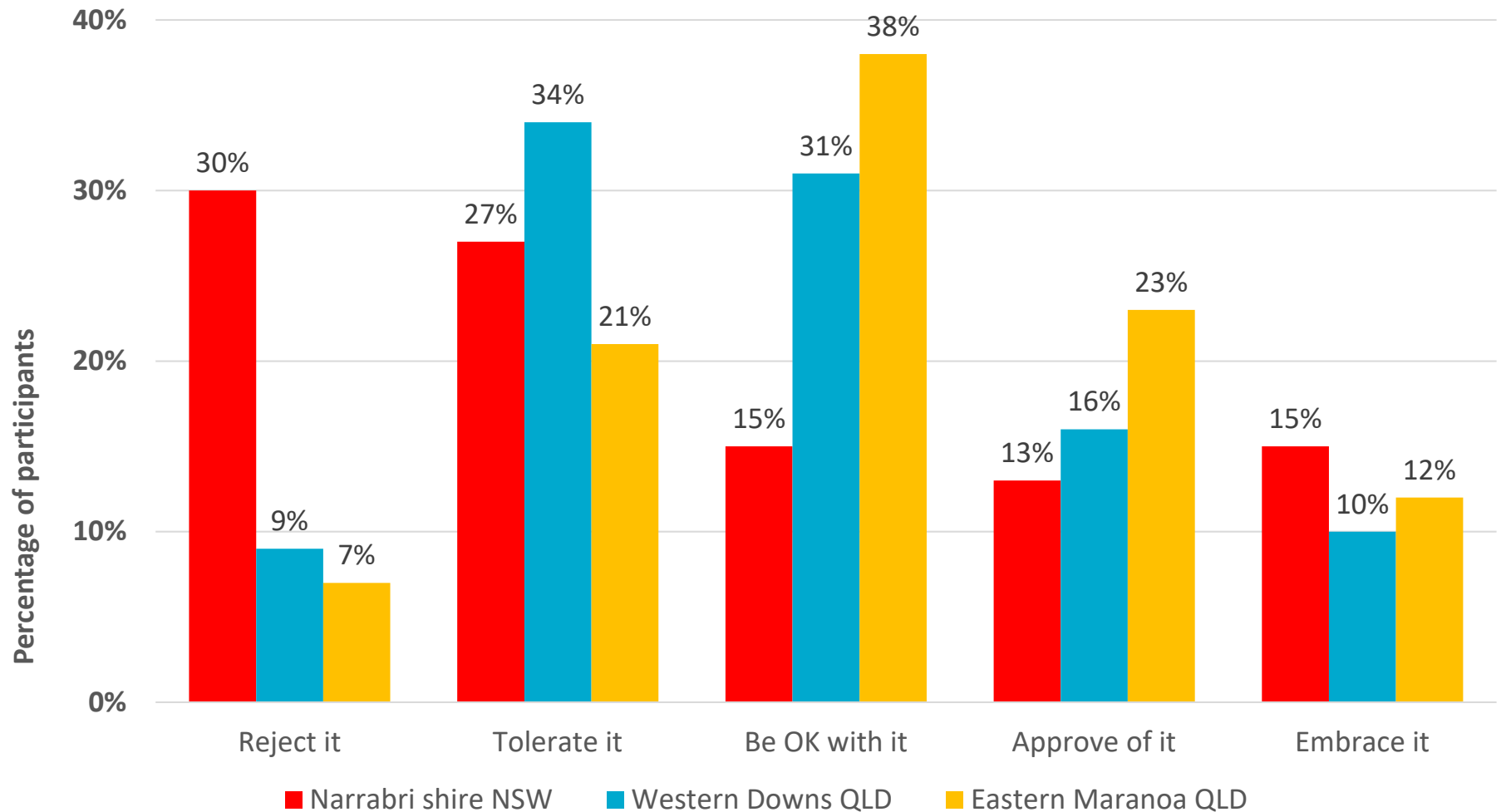
Suggested improvements from farmers with active leases, 2018



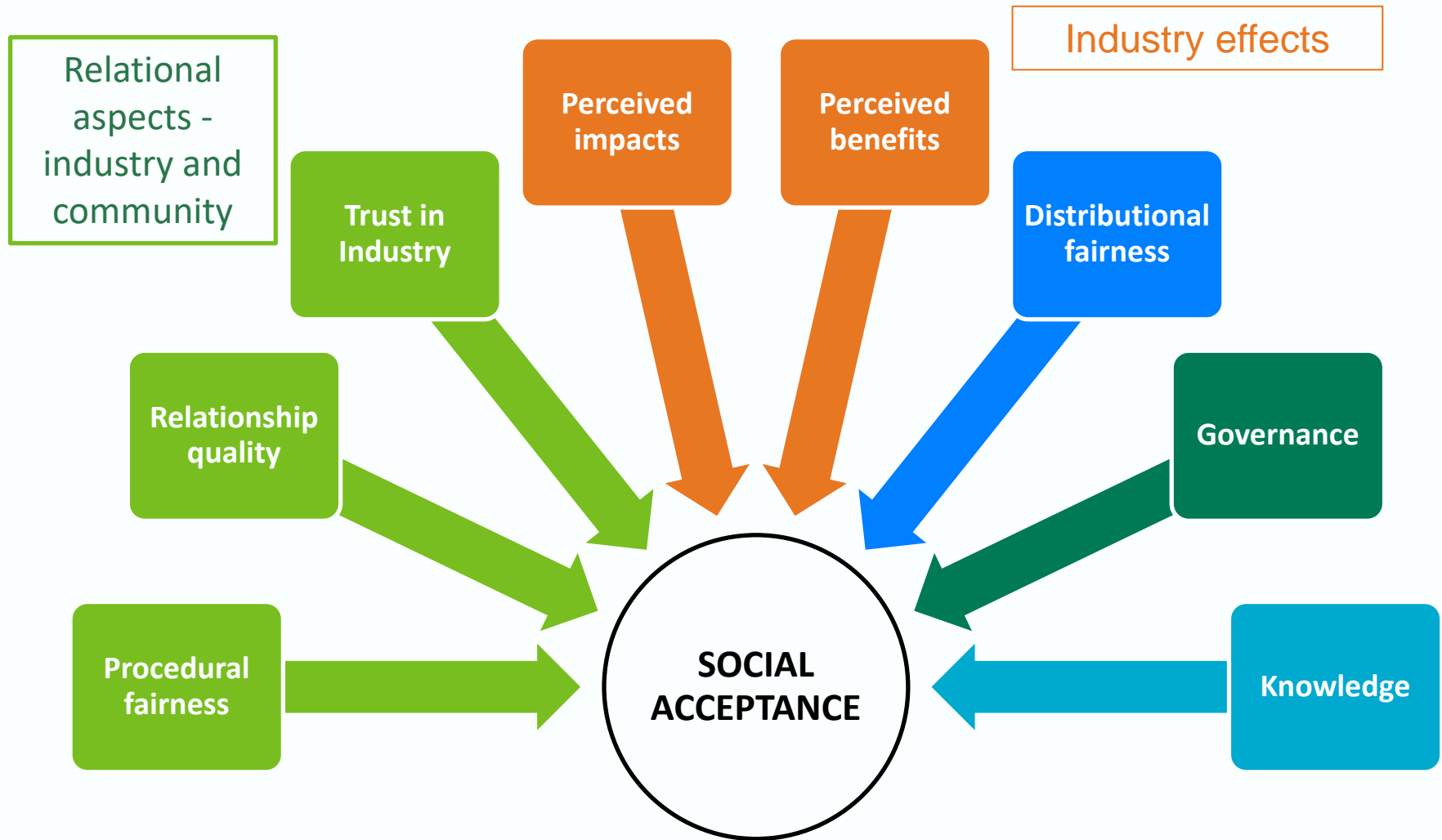
Comparison: QLD 2018



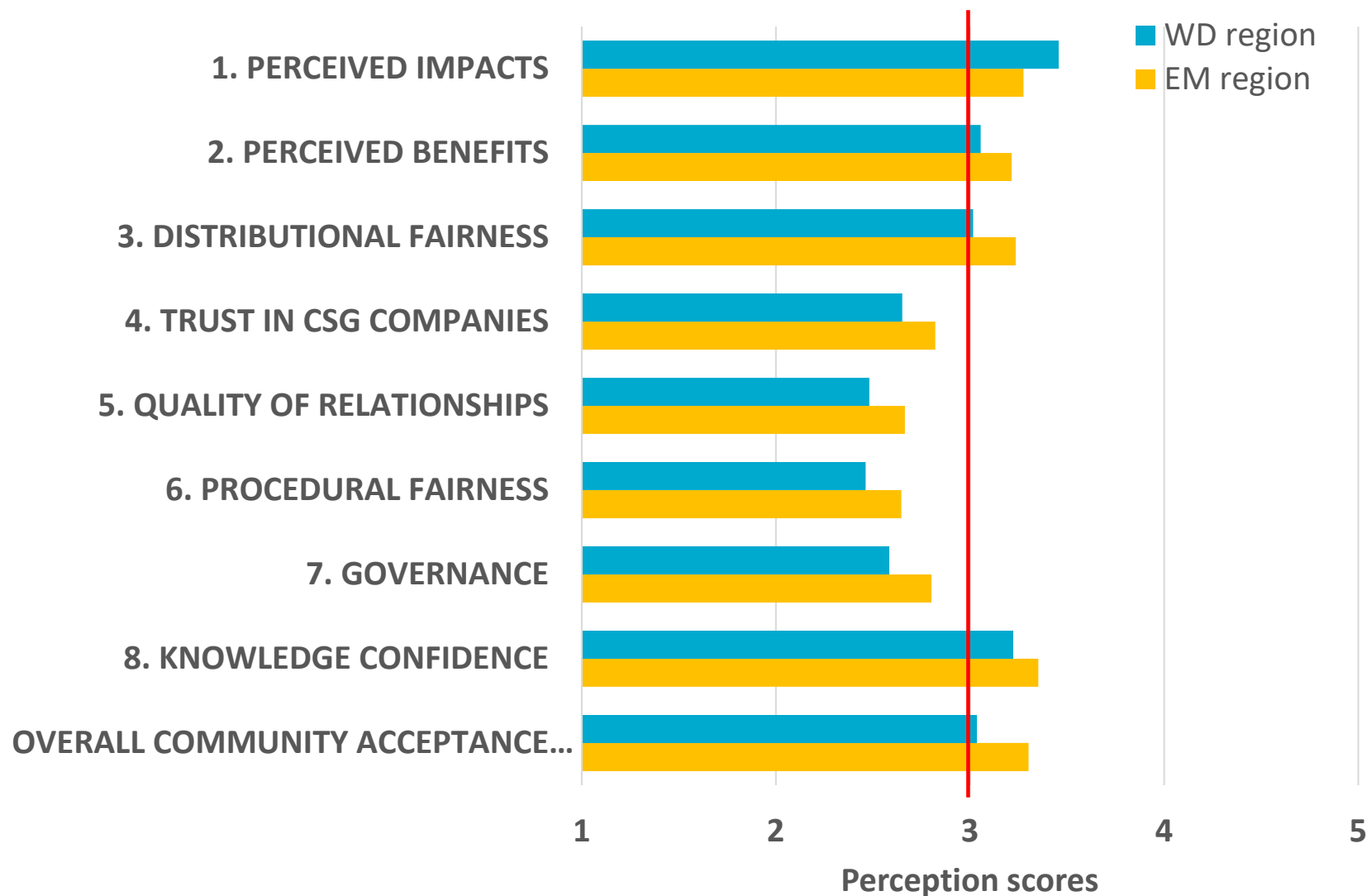
Comparison: QLD 2018 and Narrabri 2017



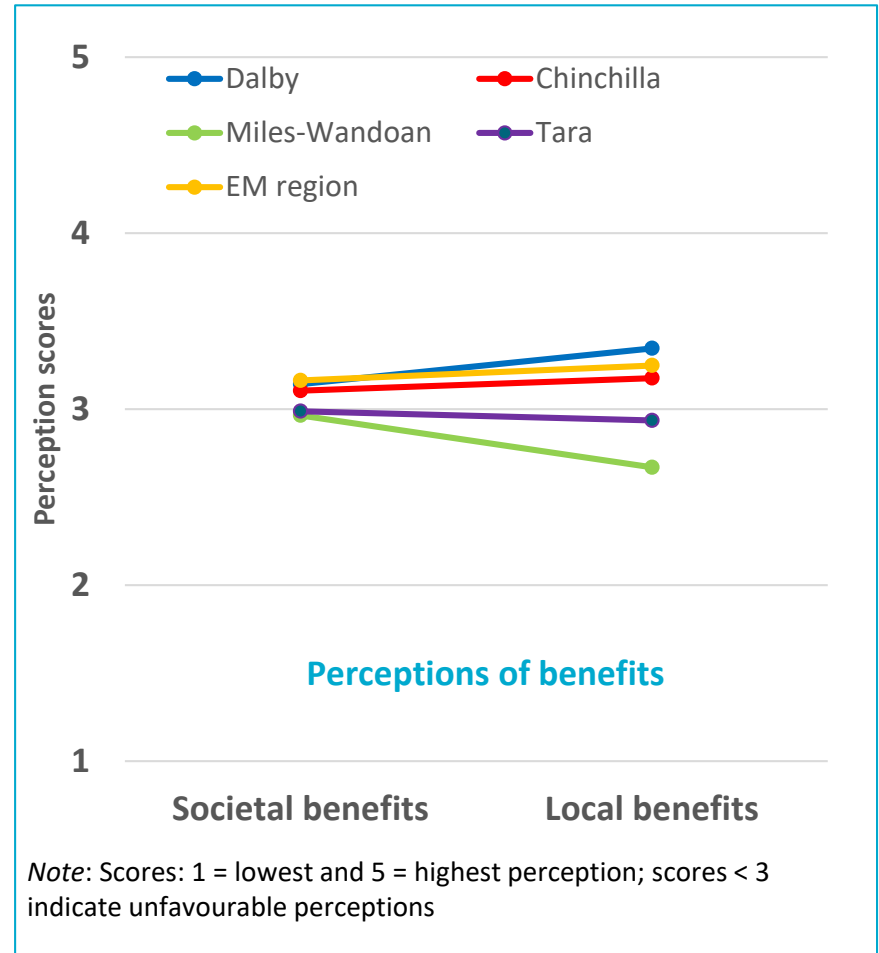
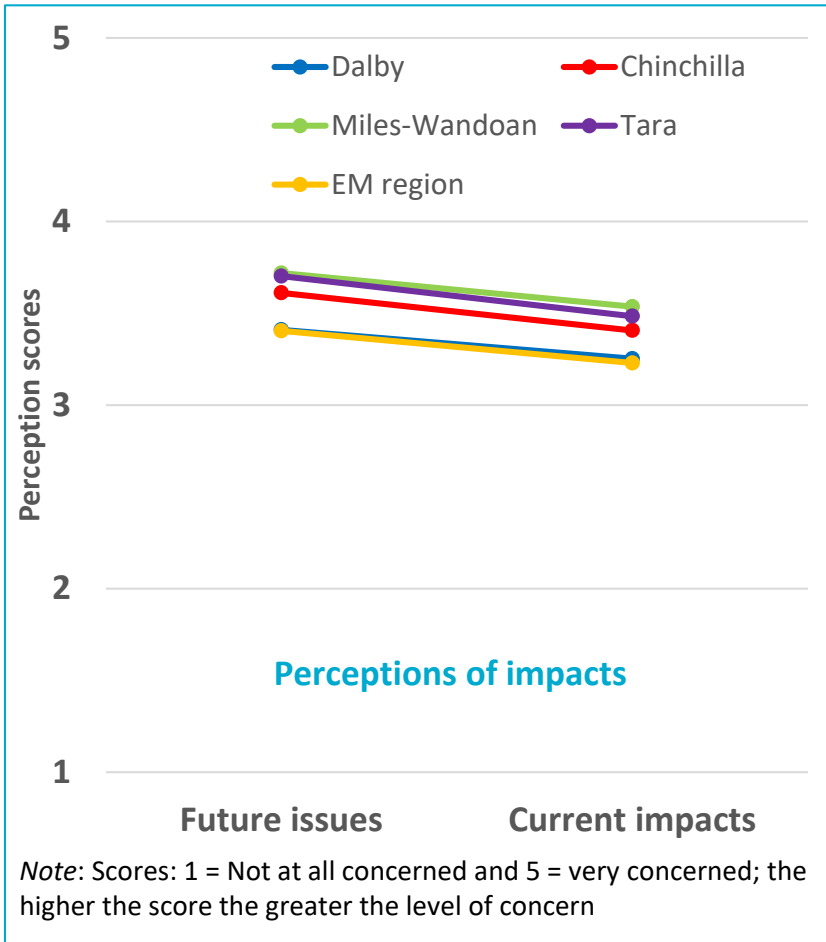
Eight groups of factors influencing attitudes and feelings toward CSG development



Factors important to acceptance of CSG development



Size of town matters in the way impacts and local benefits perceived



Demographic differences

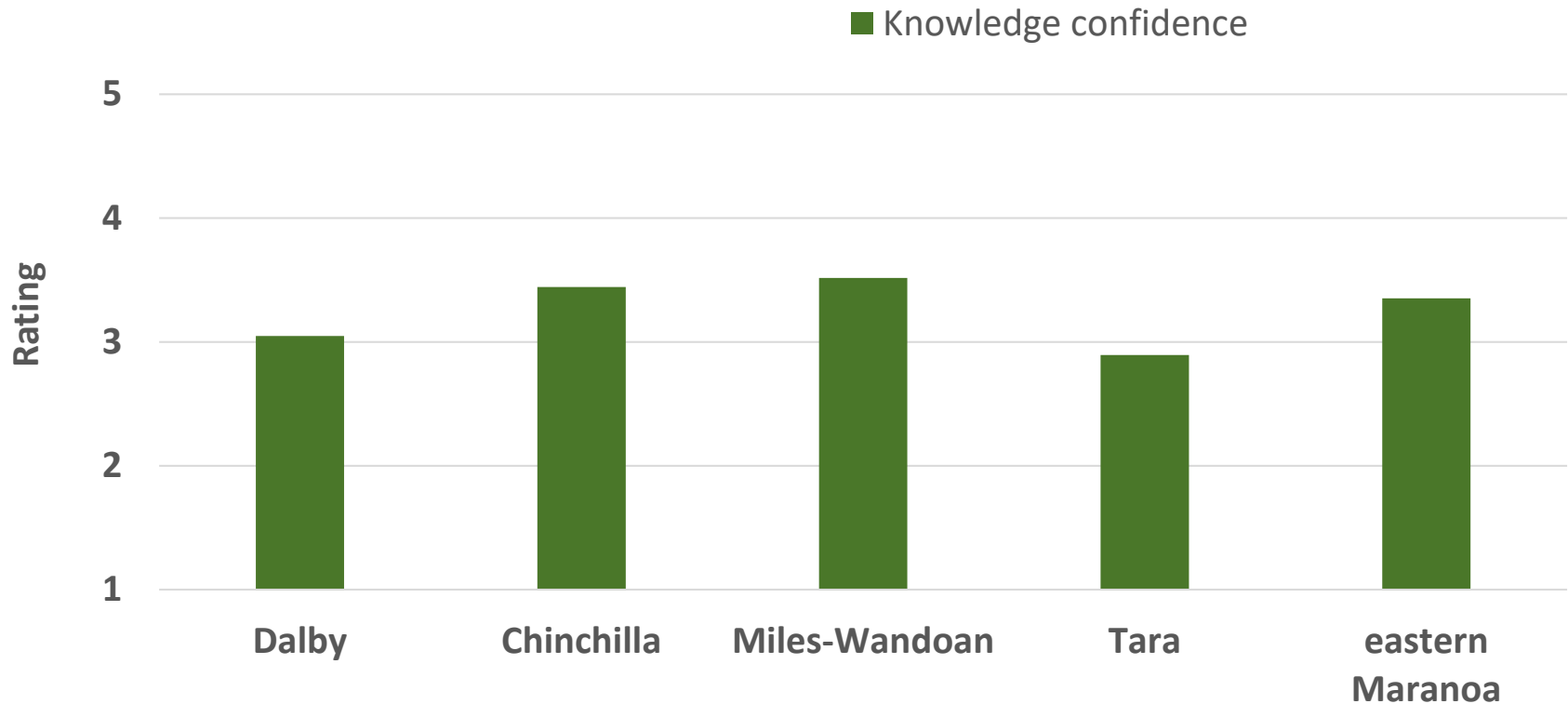
Age

- Younger adults more positive about CSG development
 - Perceive less impacts and more benefits
 - Distribution fairness to be higher
 - Much more confidence in and trust in governance

Gender

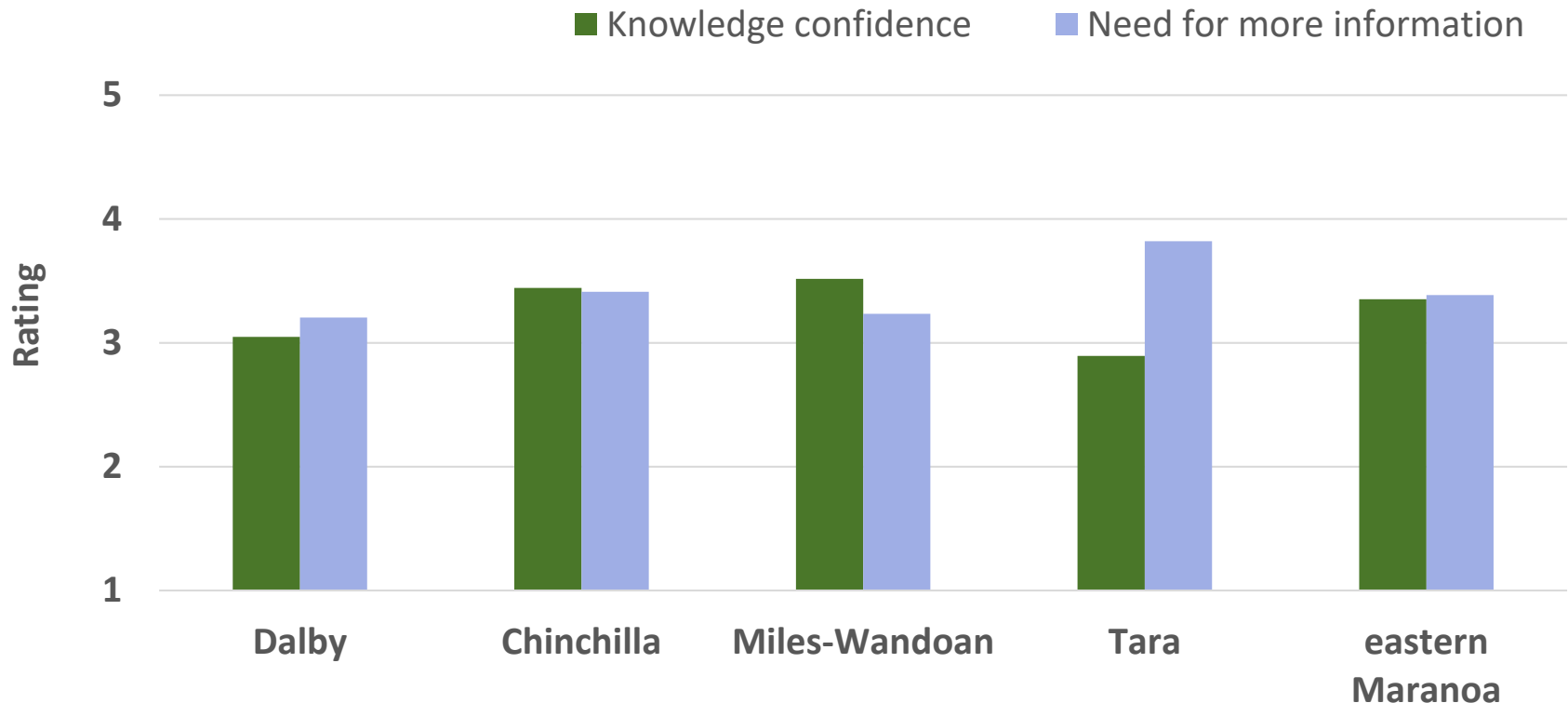
- Compared to men, women reported
 - Much less confident in their knowledge about CSG

Tara: lowest level of knowledge confidence about CSG



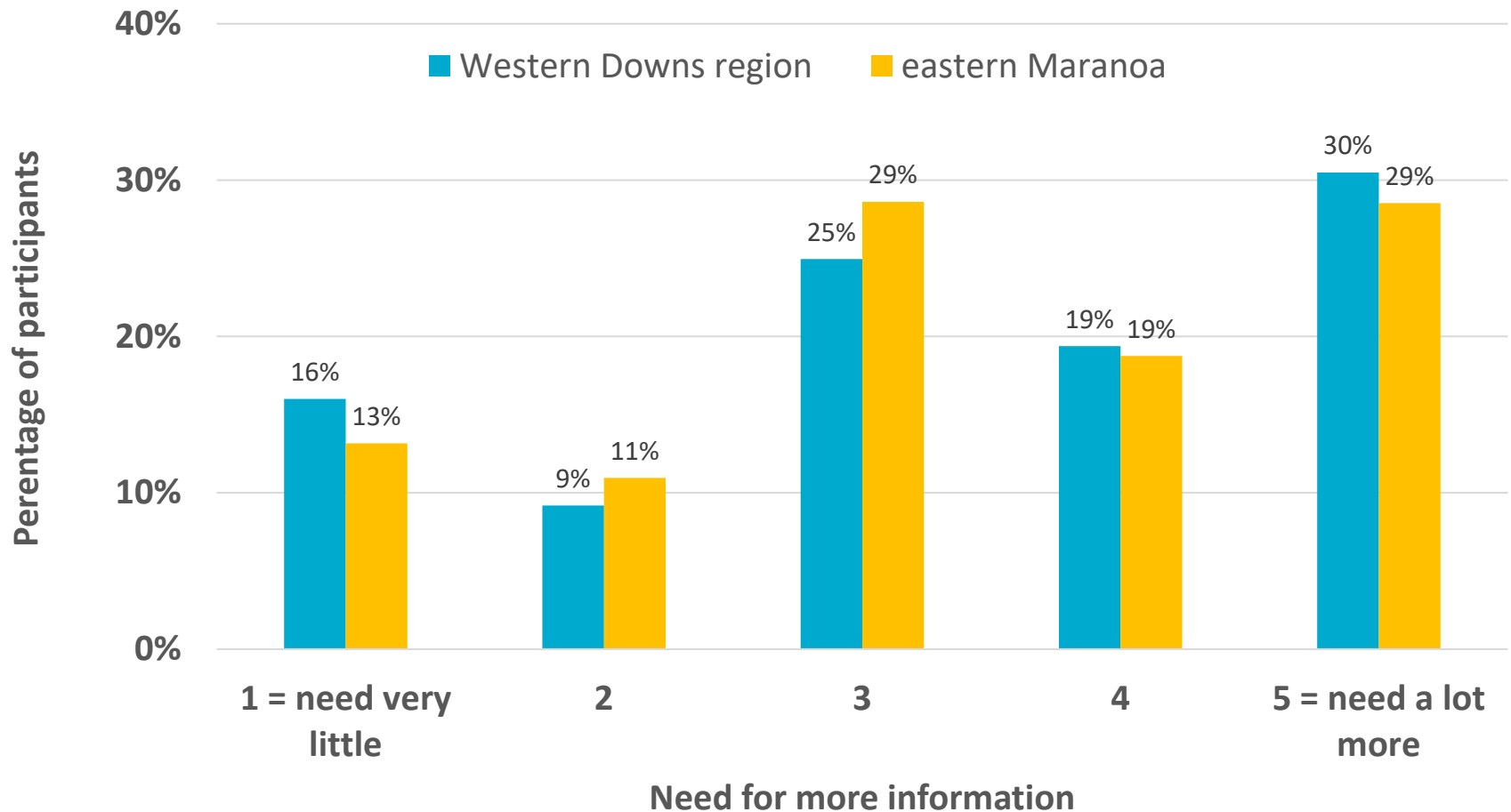
Note: The higher the score the greater the confidence in knowledge and the greater the need for information

Tara: lowest level of knowledge confidence about CSG; highest need for more information

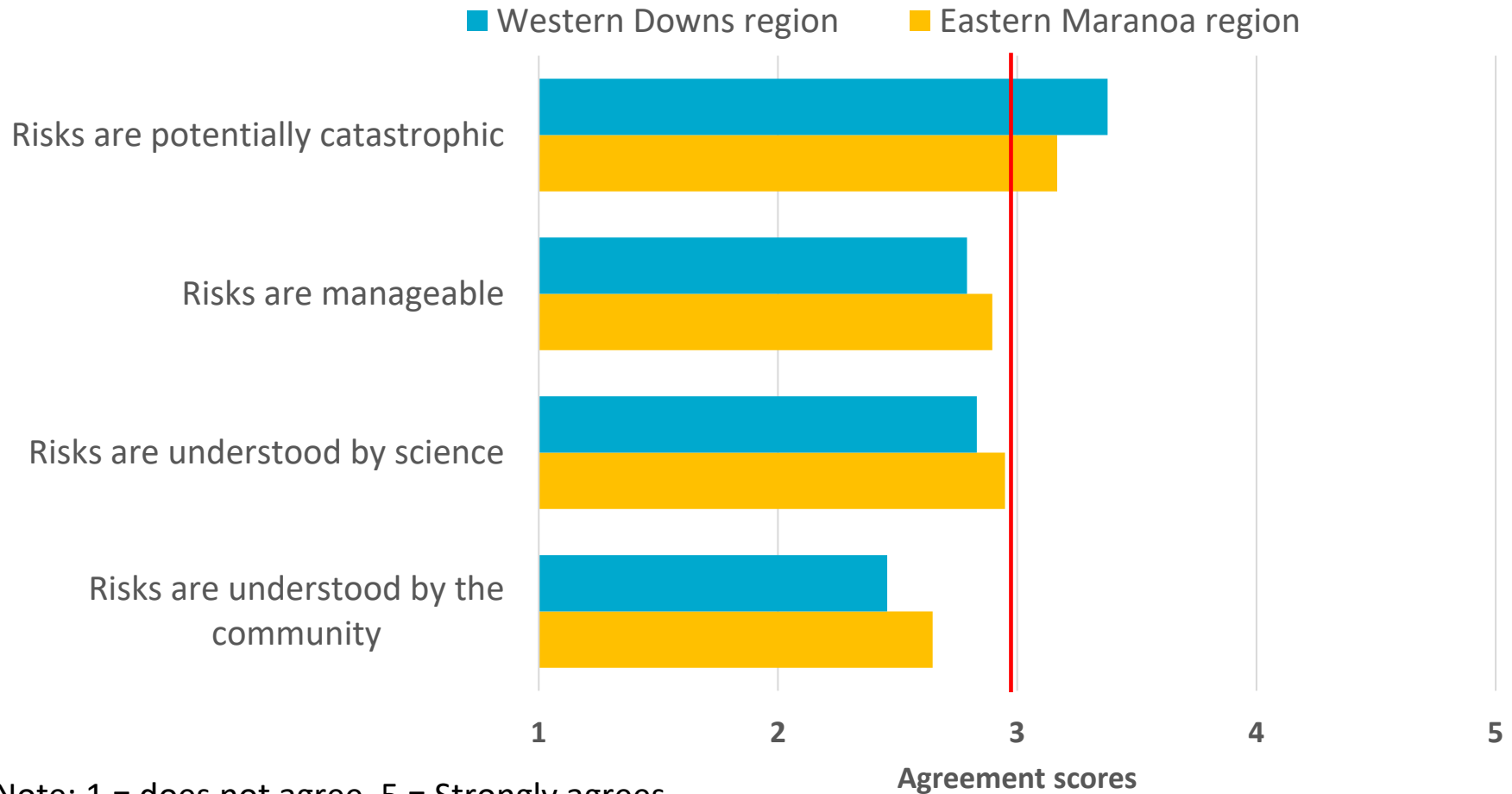


Note: The higher the score the greater the confidence in knowledge and the greater the need for information

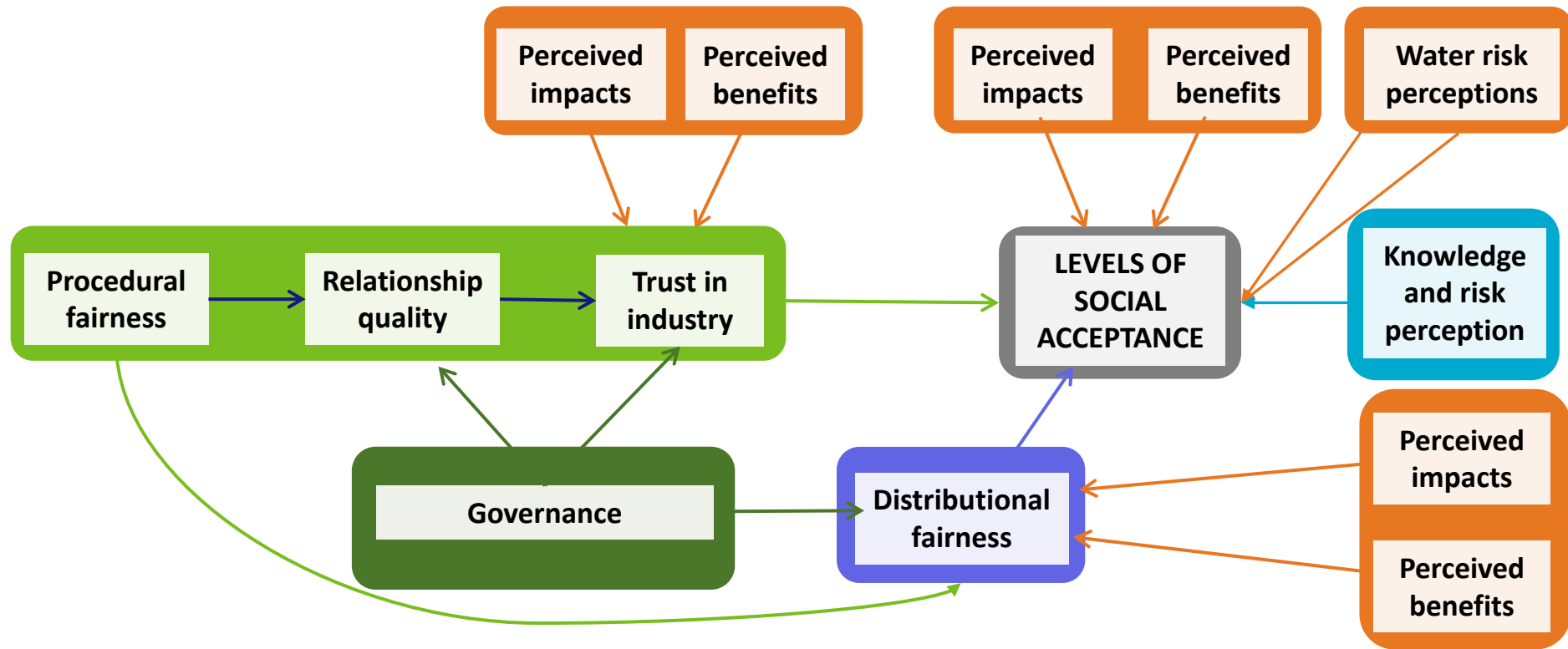
Half the community indicating a need for more information



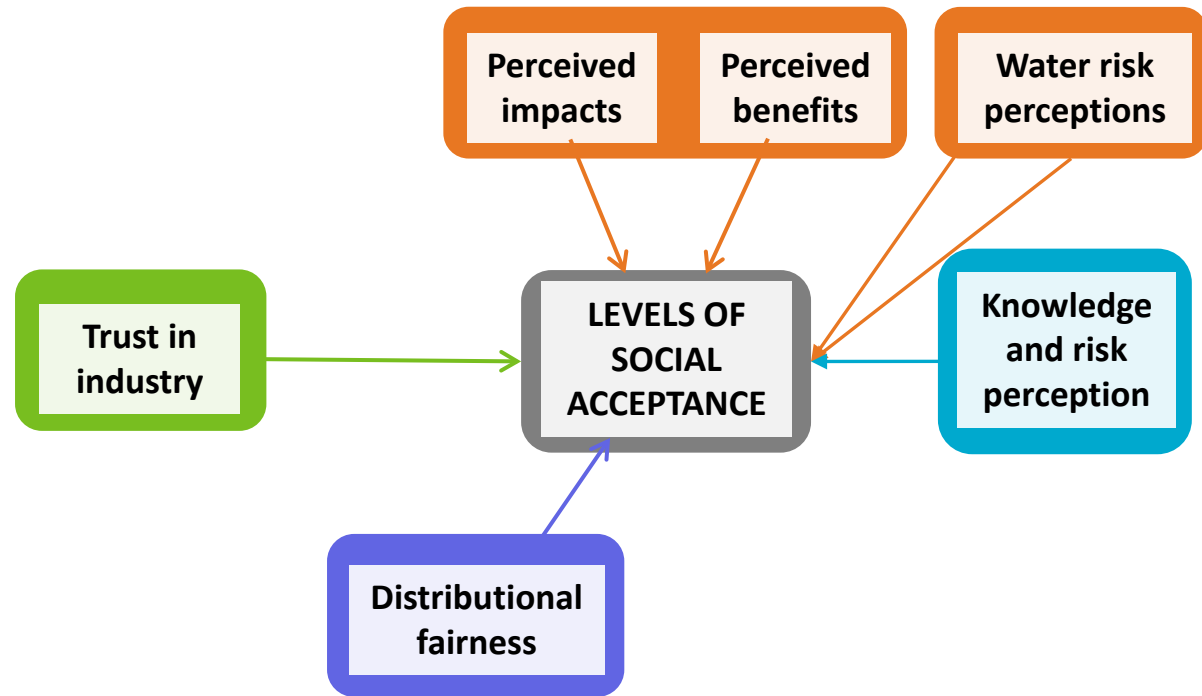
Risks to groundwater still seen as not manageable, not understood by science, and not understood by community



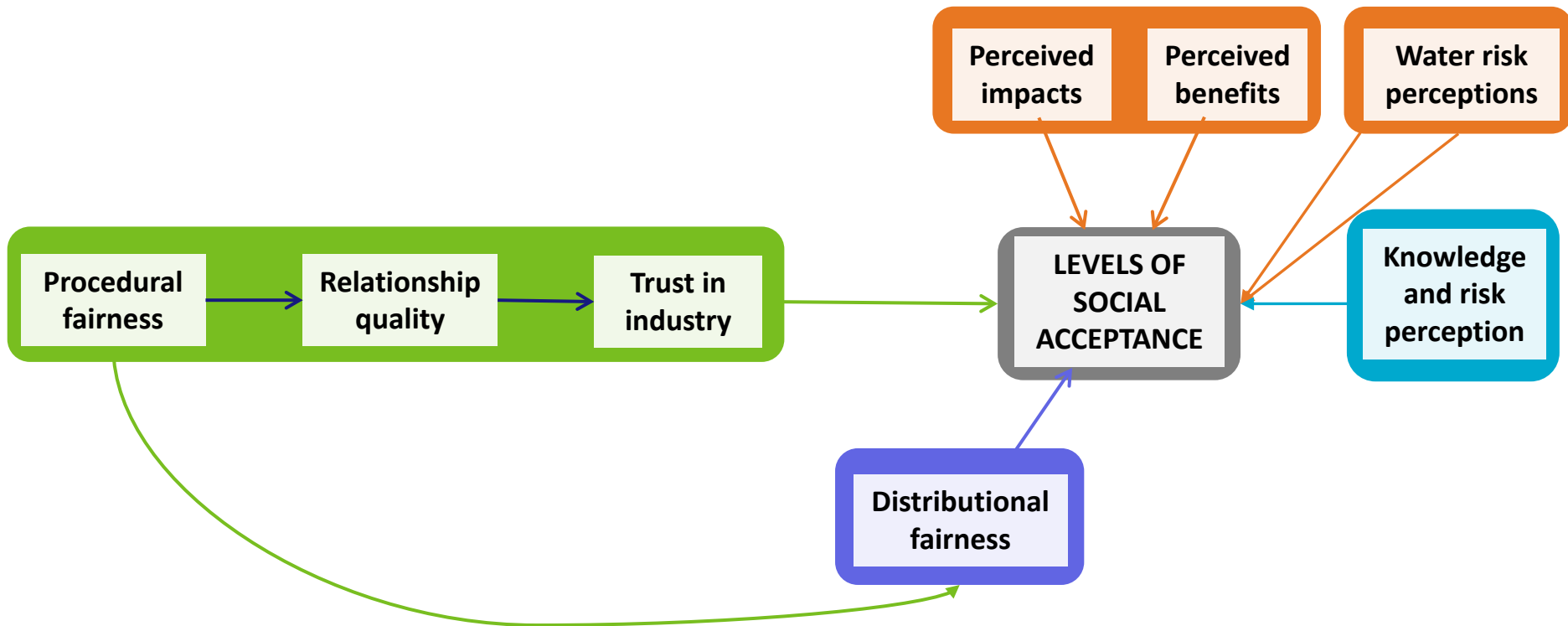
Modelling social acceptance, or lack of:



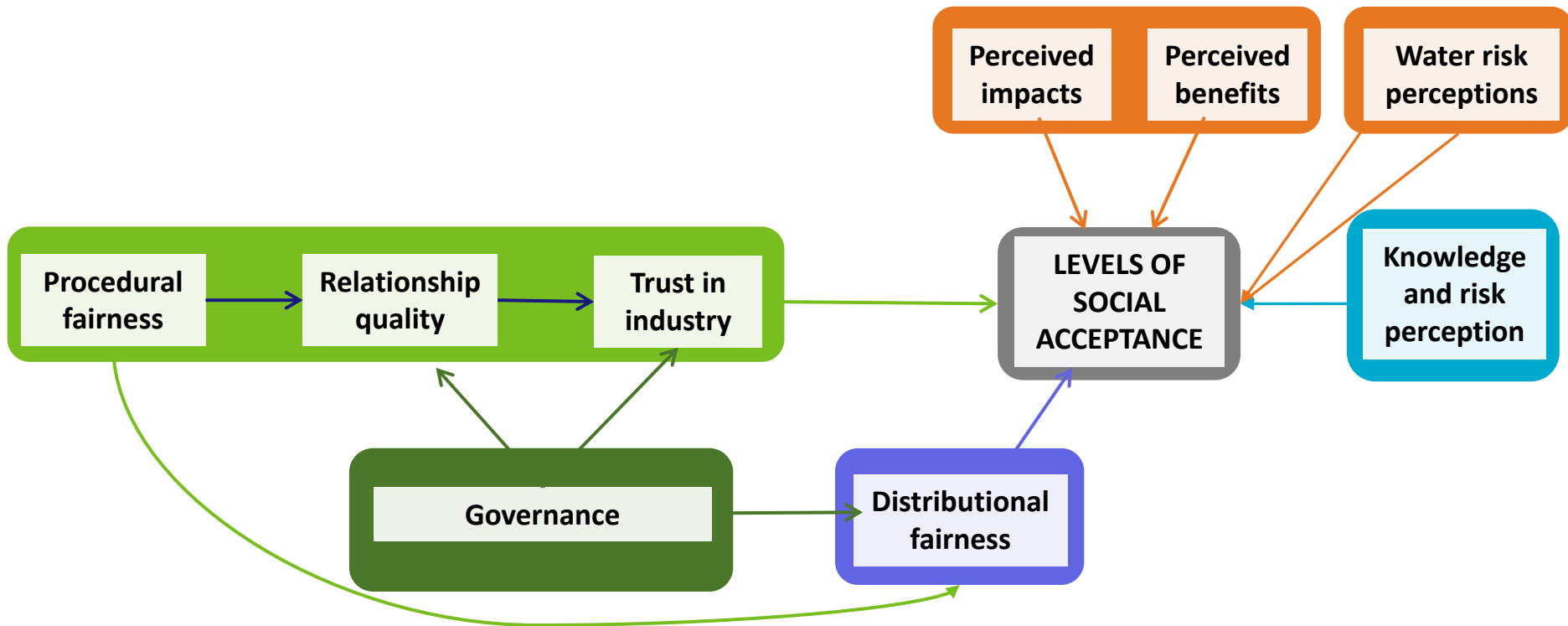
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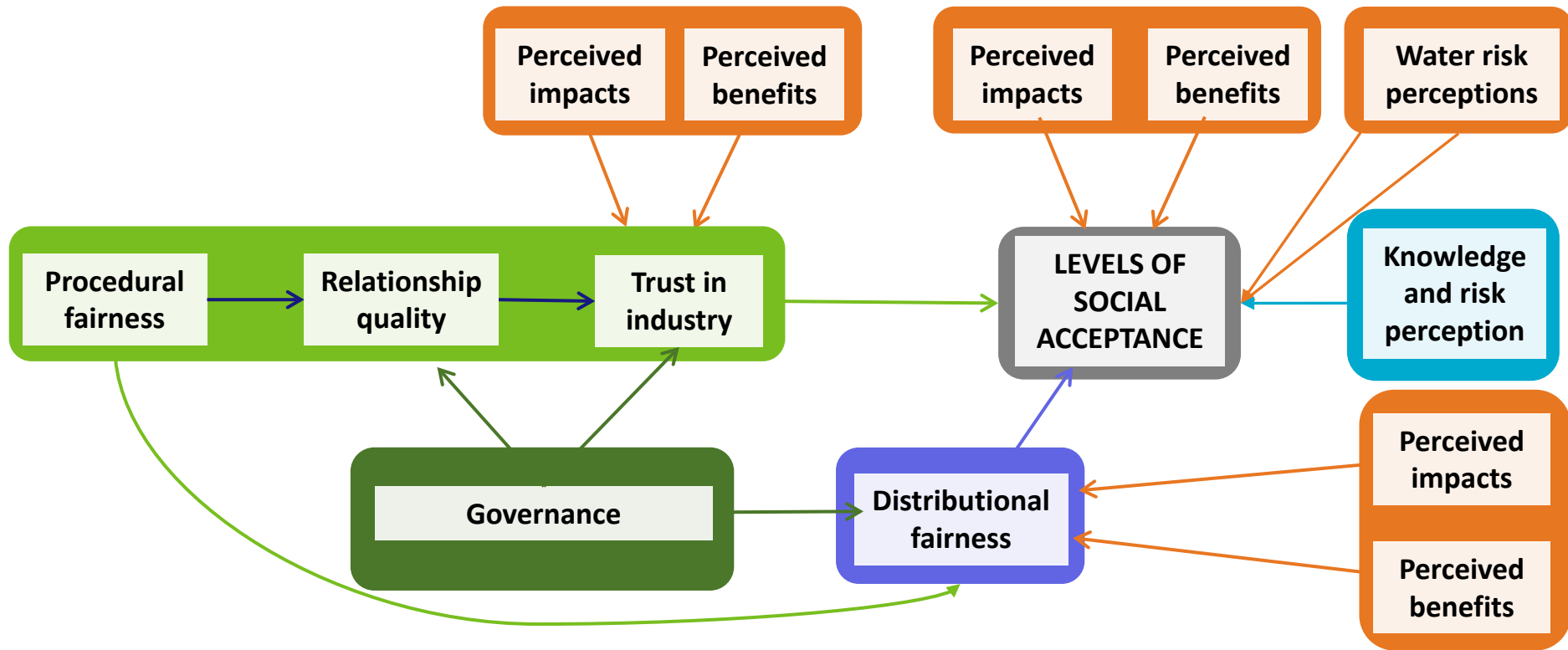
Modelling social acceptance, or lack of:



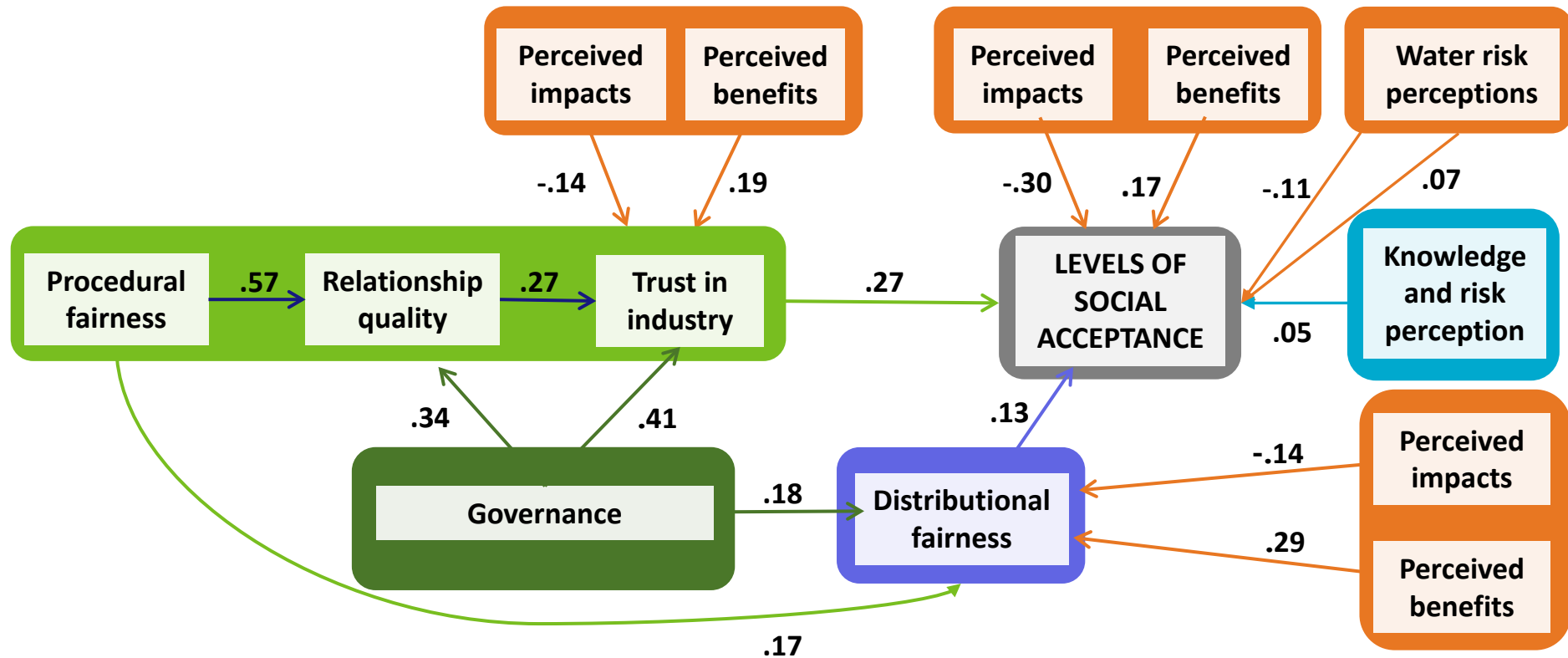
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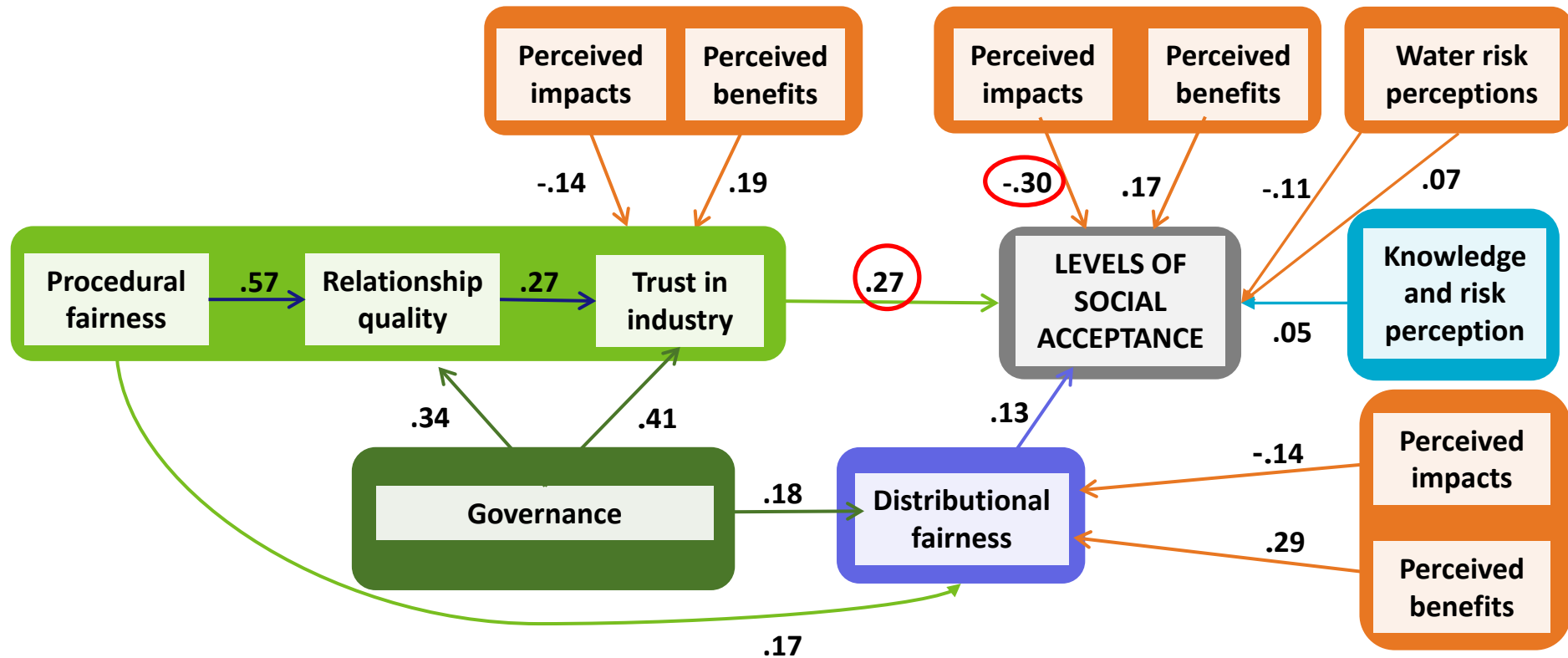
Modelling social acceptance, or lack of:



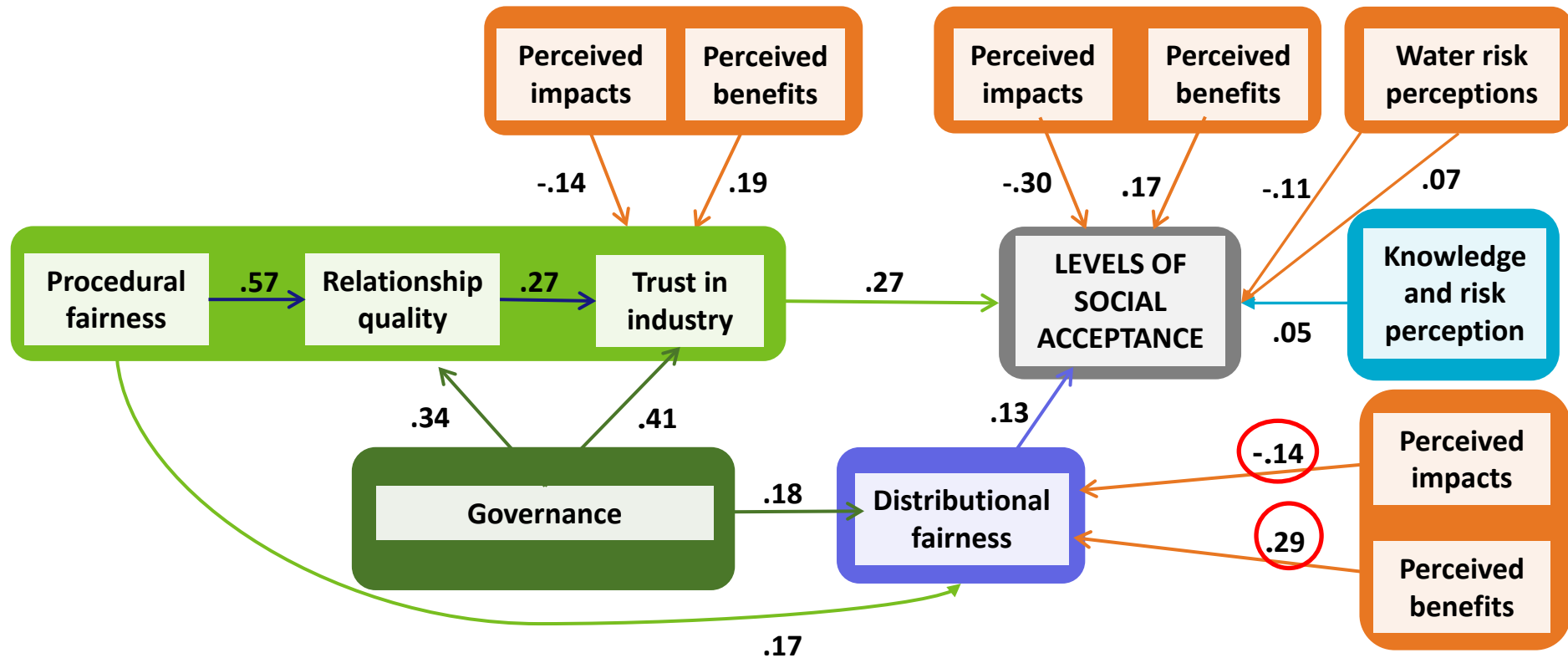
Modelling social acceptance, or lack of: with data



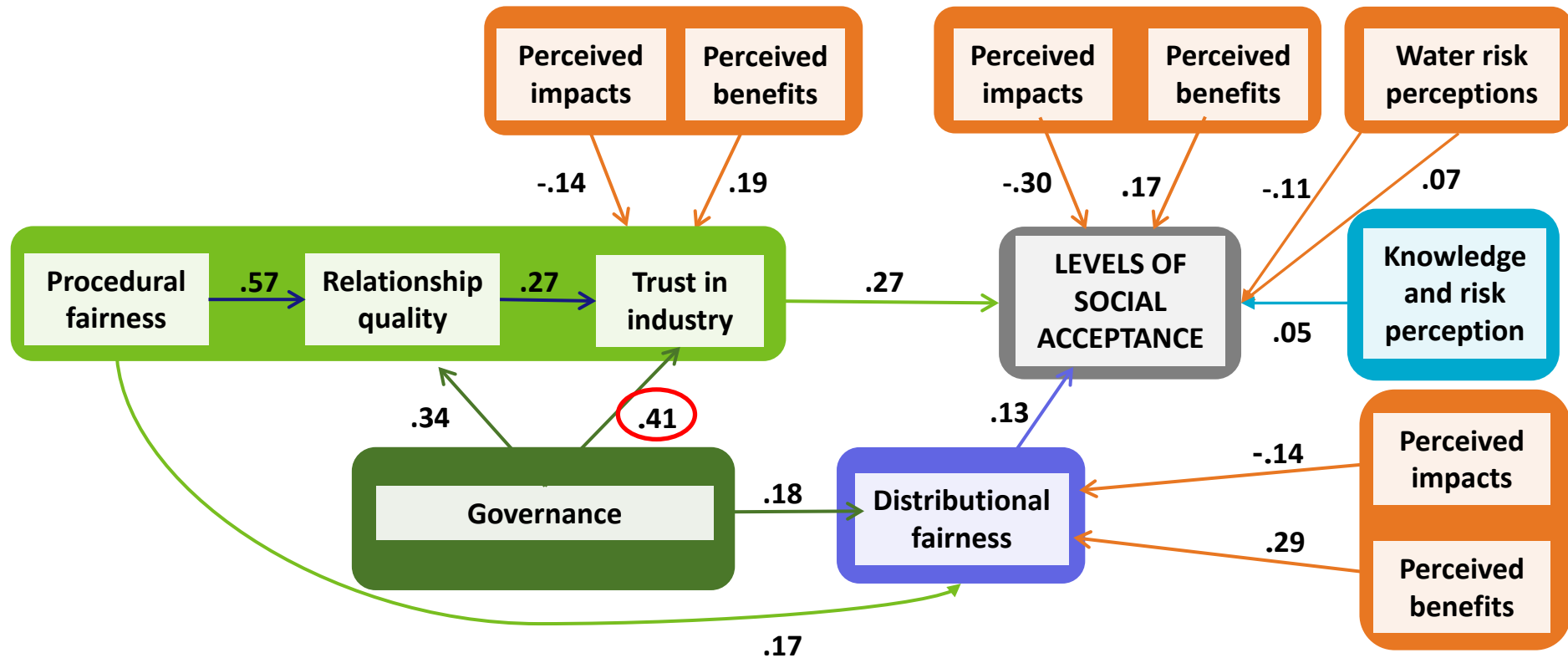
Modelling social acceptance, or lack of: with data



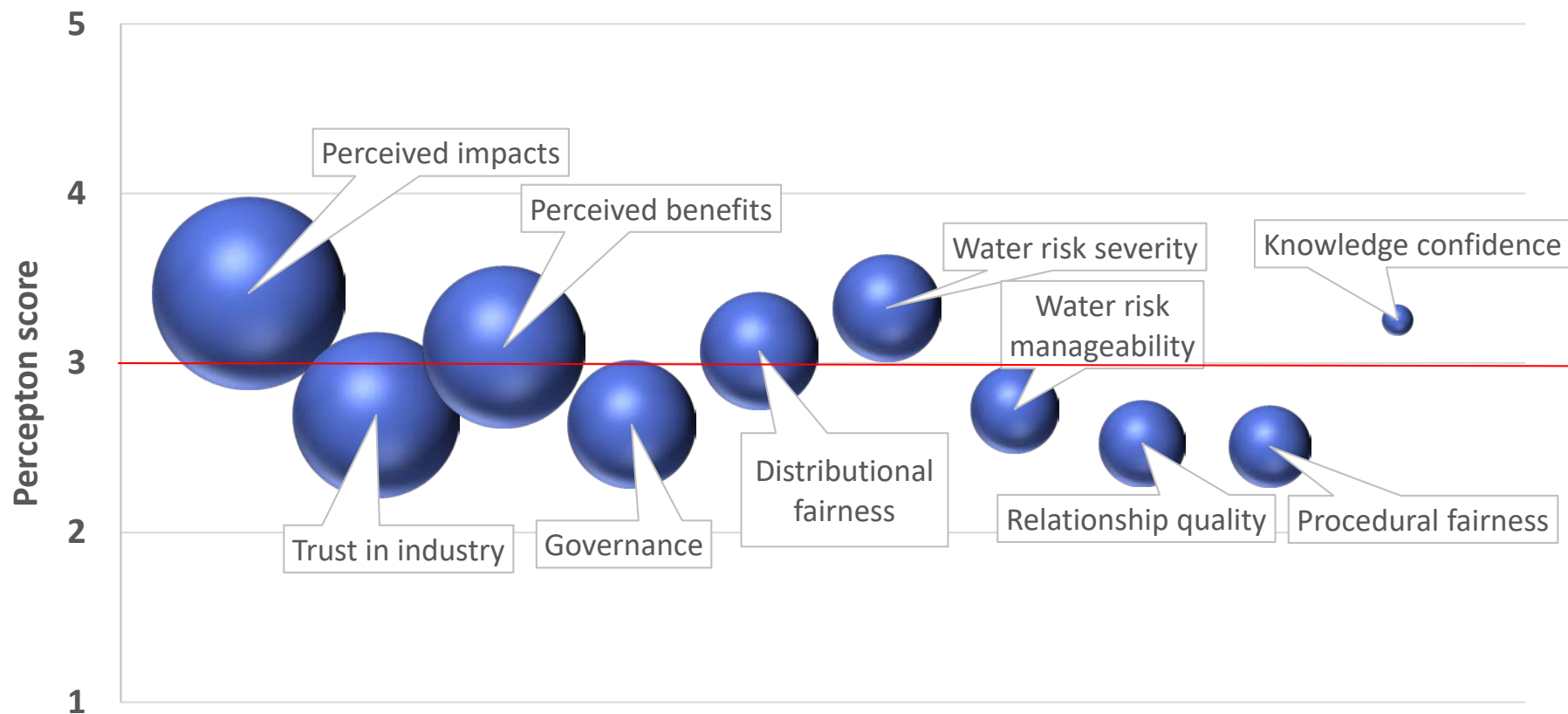
Modelling social acceptance, or lack of: with data



Modelling social acceptance, or lack of: with data



Opportunities to improve the things that matter to communities



Note: Size of bubble indicates relative importance of that driver; height of bubble indicates perception score of the driver (y axis); bubbles below the red line indicate an unfavourable perception of that driver except for perceived impacts where a higher score indicates greater concerns

Key messages - Attitudes and perceptions of CSG

- A range of views towards CSG development continue and with a similar pattern
- Attitudes not polarised
- Feelings had softened
- Water remains the main concern about CSG development
- Local and societal benefits from CSG development were both seen as modest
- Size of towns matter in the way local benefits and impacts are perceived
- More favourable perceptions towards CSG development in the eastern Maranoa than the Western Downs
- Landowner relationship with gas is ongoing
 - Needs continual work to maintain and improve

Key messages - Attitudes and perceptions of CSG

- Level of social acceptance in local communities depends on perceptions about:
 - Industry effects: *perceived impacts* and *benefits*
 - Relations between community and CSG operator: *procedural fairness*; *relationship quality*; and *trust in industry*
 - *Distributional fairness* in terms of how benefits and costs are shared
 - *Governance* of the industry: compliance, regulations, planning and trust in governing bodies
 - *Risk to underground water*: beliefs about the manageability of the risk and the severity of the outcome
 - *Confidence of knowledge* about CSG combined with beliefs about risks to underground water

Opportunities for building trust and increasing acceptance exist by improving these key drivers

Thank you

RESEARCHERS

Social projects

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Dr Bruce Taylor

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Dr Yiyong Cai

Dr Raymundo Marcos-
Martinez



[https://gisera.csiro.au
/research
/social-and-economic-
impacts-and-opportunities](https://gisera.csiro.au/research/social-and-economic-impacts-and-opportunities)

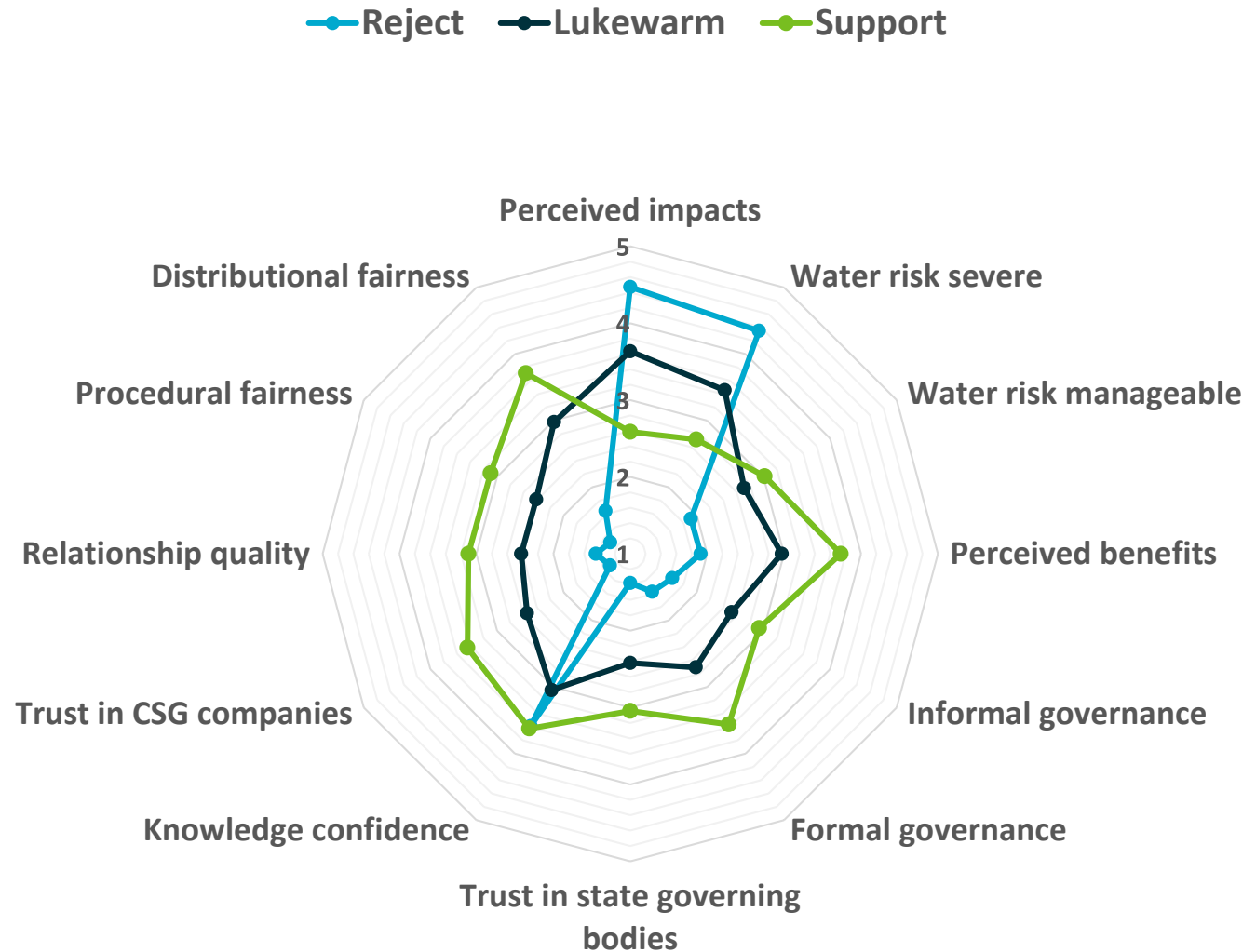
Scientific papers and technical reports

- Leonard, R., McCrea, R., & Walton, A. (2016). Perceptions of community responses to the unconventional gas industry: The importance of community agency. *Journal of Rural Studies*, 48, 11-21.
- McCrea, R., Walton, A., & Leonard, R. (2014). A conceptual framework for investigating community wellbeing and resilience. *Rural Society*, 23(3), 270-282. doi: 10.1080/10371656.2014.11082070
- McCrea, R., Walton, A., & Leonard, R. (2016). Developing a model of community wellbeing and resilience in response to change. *Social Indicators Research*, 29(1), 195-214. doi: DOI 10.1007/s11205-015-1099-y
- McCrea, R., Walton, A., & Leonard, R. (under review). Rural communities and unconventional gas development: What's important for maintaining community wellbeing and resilience over time? *Journal of Rural Studies*
- Walton, A. and McCrea, R. (2018) *Trends in community wellbeing and local attitudes to coal seam gas development, 2014 – 2016 - 2018: Western Downs and Eastern Maranoa regions, Queensland*. Survey report. CSIRO Australia
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- Walton, A., McCrea, R., & Leonard, R. (2016). *The 2016 CSIRO Community Wellbeing and Responding to Change survey: Western Downs region, Queensland - Changes between 2014 and 2016 in the Context of Coal Seam Gas Development*. Brisbane: CSIRO Retrieved from www.gisera.org.au.
- Walton, A., McCrea, R., Leonard, R., & Williams, R. (2013). Resilience in a changing community landscape of coal seam gas: Chinchilla in southern Queensland. *Journal of Economic and Social Policy - Special Edition: The Economic and Social Policy Implications of Coal Seam Gas Mining (CSG) in Australia*, 15(3), 1-23.
- Walton, A., McCrea, R., Taylor, B., & Jeanneret, T. (2017). Understanding local community expectations and perceptions of the CSG sector. Social baseline assessment: Narrabri project. Australia: CSIRO.
- Walton, A., Williams, R., & Leonard, R. (2017). Community perspectives of coal seam gas development during two phases of industry activity: construction and post-construction. *Rural Society*, 26(1), 85-101.
- Williams, R., & Walton, A. (2013). *The Social Licence to Operate and Coal Seam Gas Development. A literature review report to the Gas Industry Social and Environmental Research Alliance (GISERA)*. Canberra: CSIRO.
- Williams, R., & Walton, A. (2014). *Community Expectations and Coal Seam Gas Development: A report to the Gas Industry Social and Environmental Research Alliance (GISERA)*. Australia: CSIRO Retrieved from <https://gisera.org.au/wp-content/uploads/2016/04/socioeco-proj-5-community-expectations.pdf>.

Open discussion

Extra

Three groups of attitudes to depict the model: WD and EM



Three groups of attitudes to depict the model: WD and EM

