Engaging the community in a water sensitive future: getting the messaging right

Findings from Project A2.3

The University Of Queensland AUSTRALIA

Australian Government
Department of Industry and Science

Business Cooperative Research Centres Programme

CRC for Water Sensitive Cities

We exist to demonstrate how water can make the dream of sustainable, productive, resilient and liveable cities a reality. We have started with real questions and worked with government and industry to develop answers. Together we have built solutions and tools, and created enduring partnerships along with way.

Project A2.3 aims to identify effective community engagement strategies that will promote knowledge about water management, build trust in water institutions, and leverage support for policies that promote sustainable water management.

Dr Kelly Fielding
Associate Professor
School of Communication and Arts, UQ

Dr Fiona Newton
Senior Lecturer
Marking Department, Monash

Dr Angela Dean
Research Fellow
School of Communication and Arts, UQ

Tracy Schultz
PhD Candidate
School of Psychology, UQ

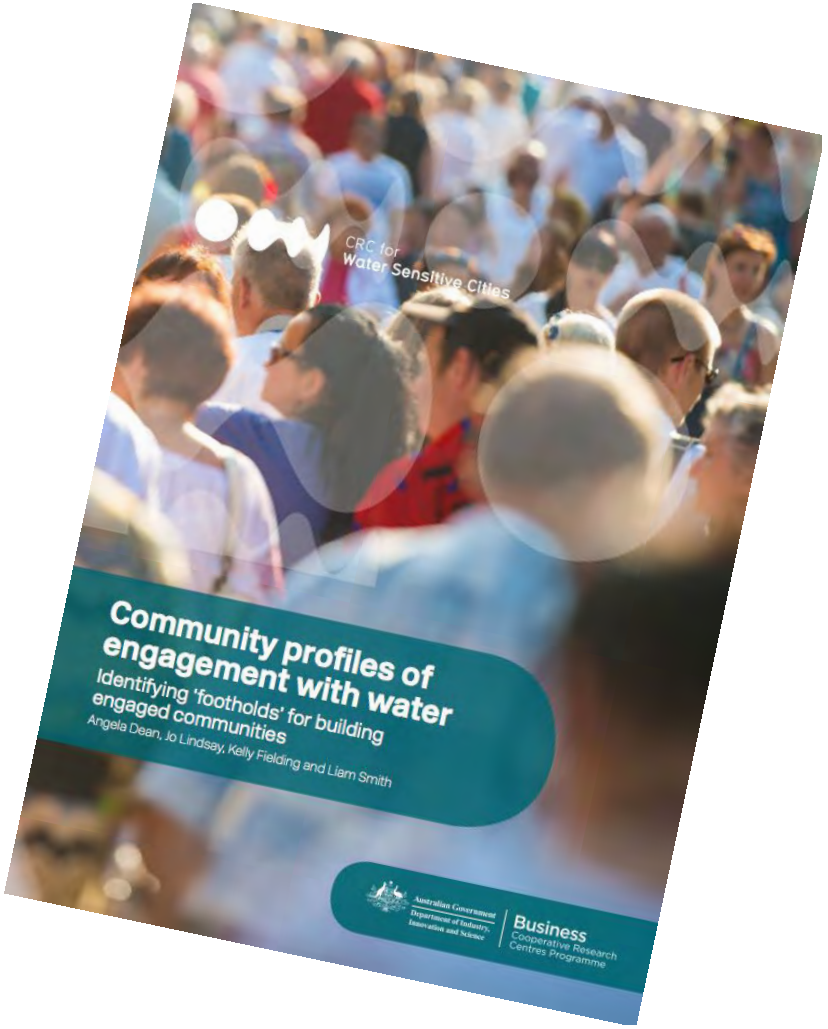
THE UNIVERSITY OF QUEENSLAND AUSTRALIA

CRC for Water Sensitive Cities

Know your audience

Know your audience

Community profiles



Know your audience

Community profiles

Water literacy

Know your audience

- Community profiles
- Water literacy

Frame the issue carefully

Know your audience

- Community profiles
- Water literacy

Frame the issue carefully

- Terminology

Know your audience

- Community profiles
- Water literacy

Frame the issue carefully

- Terminology
- Visuals

Know your audience

- Community profiles
- Water literacy

Frame the issue carefully

- Terminology
- Visuals
- Aligning to values

Know your audience

- Community profiles
- Water literacy

Frame the issue carefully

- Terminology
- Visuals
- Aligning to values

Use diverse mechanisms

Know your audience

- Community profiles
- Water literacy

Frame the issue carefully

- Terminology
- Visuals
- Aligning to values

Use diverse mechanisms

- Old mechanism

Know your audience

- Community profiles
- Water literacy

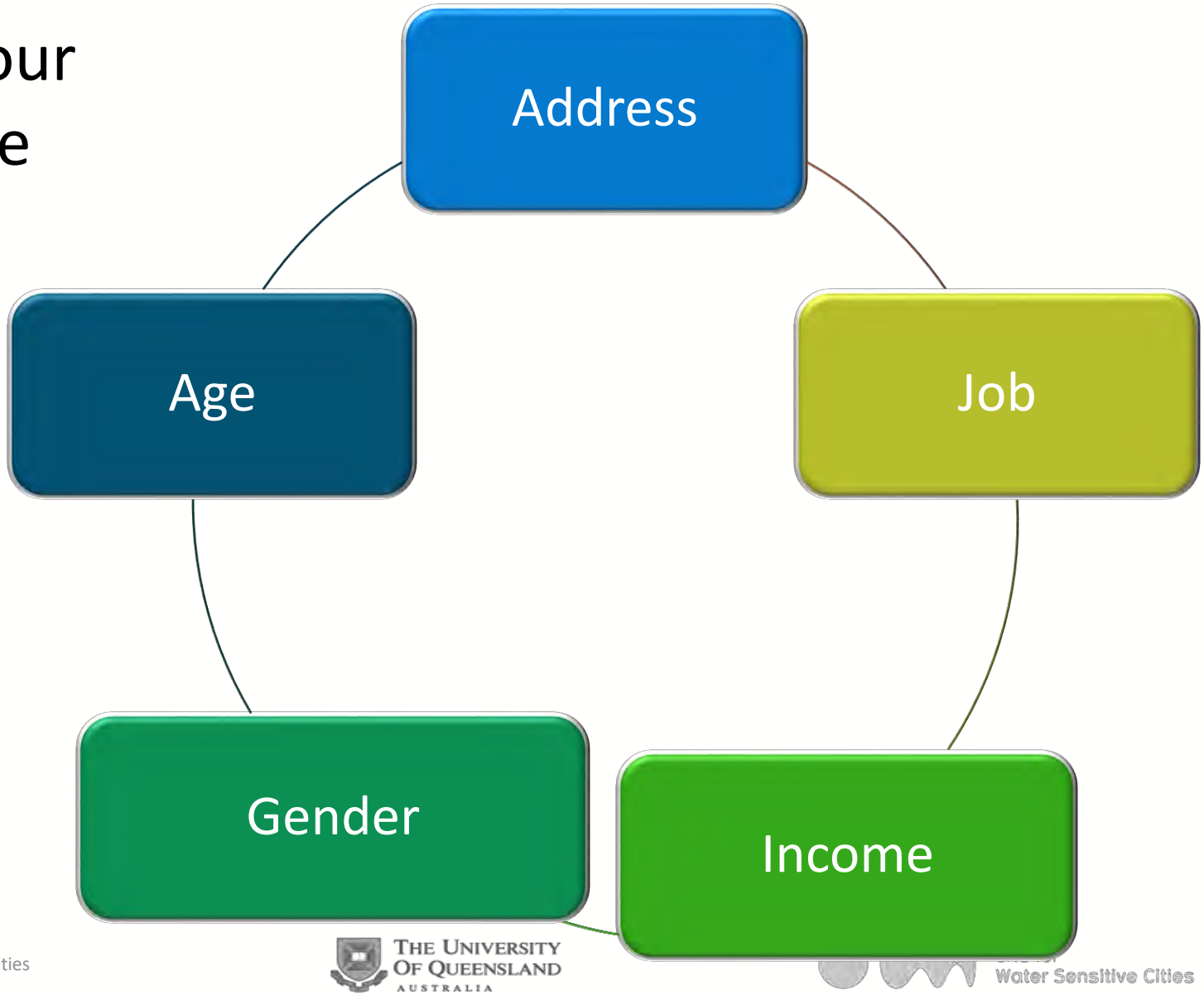
Frame the issue carefully

- Terminology
- Visuals
- Aligning to values

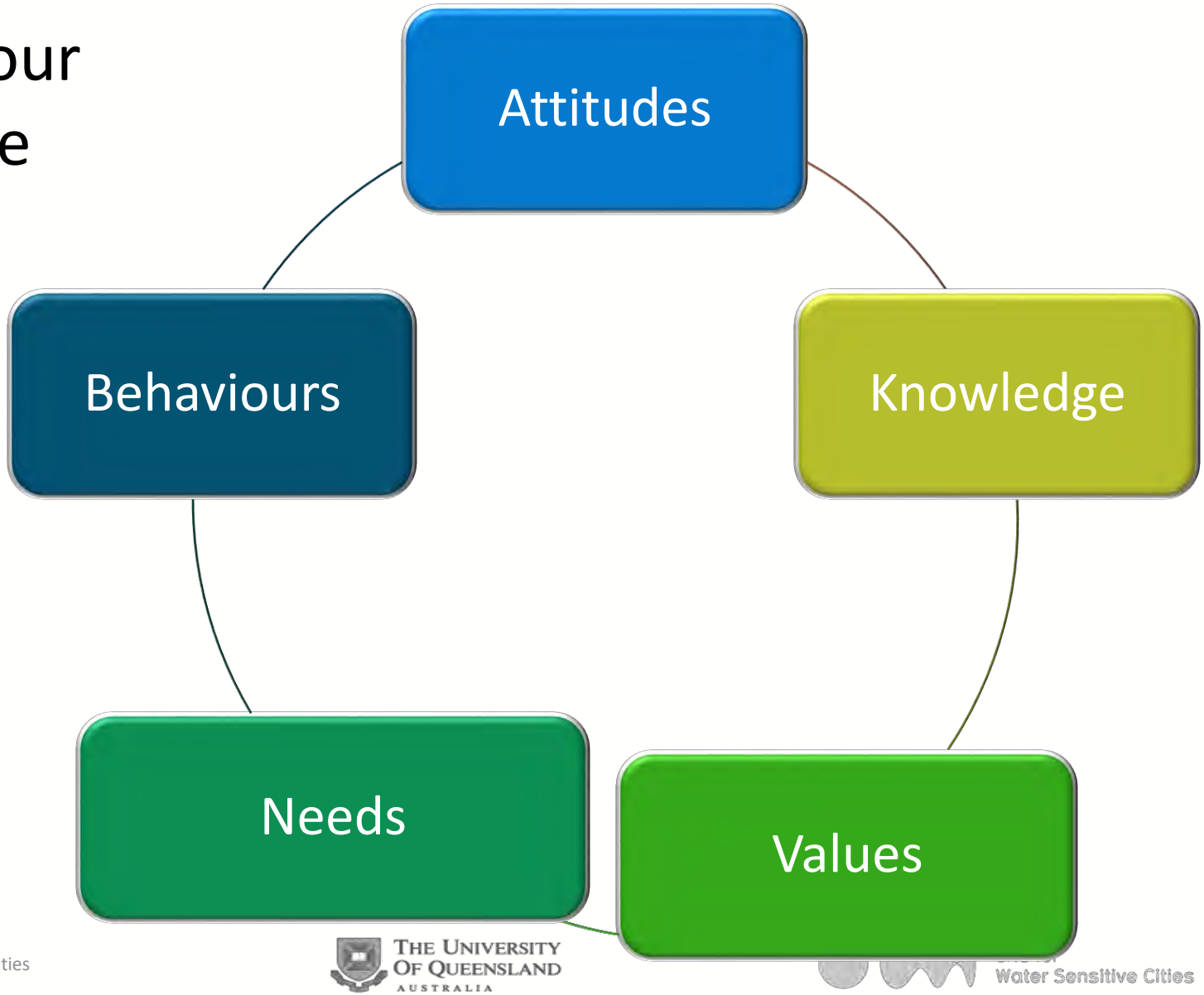
Use diverse mechanisms

- Old mechanisms
- New mechanisms

Know your audience



Know your audience



Online survey - representative sample of 5914 Australian adults

Indicators of engagement

Cognitive

- Water-related knowledge

Emotional

- Support for alternative water sources
- Environmental identity

Behavioural

- Water saving behaviours
- Uptake of water saving devices
- Pollution reduction behaviours

5 key profiles of engagement

Dean et al, *Environmental Science & Policy*, 2016

Disengaged vs Highly Engaged

Disengaged	Highly Engaged
Young men with a family	Older women
Urban residents without gardens	Home owners living in regional or rural areas
Renting	Greater education
Lower education and income	Strong life satisfaction
Low community participation and satisfaction	Higher rates of waterway use
Less experience of water restrictions	Greater experience of water restrictions
Limited exposure to information	Greater exposure to information

Implications for practice

Disengaged:

- Providing information is likely to have to strongest impact
- Focus everyday water-related behaviours
- Focus on personal relevance
- Focus on capacity building

High engaged:

- Early adopters of new technologies and behaviours
- Diffusion of behaviours through informal social networks
- Social norms
- Only 50% willing to install a raingarden on their property

Aims of the current study

- To assess Australians' water knowledge
- Identify who has better water-related knowledge
- Examine whether knowledge is related to attitudes and behaviours

Why is this important?

- Effective community engagement is an essential component of integrated water management
- Engagement is more effective when targeted to existing knowledge levels in the community

Don't we know this already?

- Very little research has examined these issues, especially in Australia
- The small amount of research done suggests that water knowledge is poor, and an important topic for further research

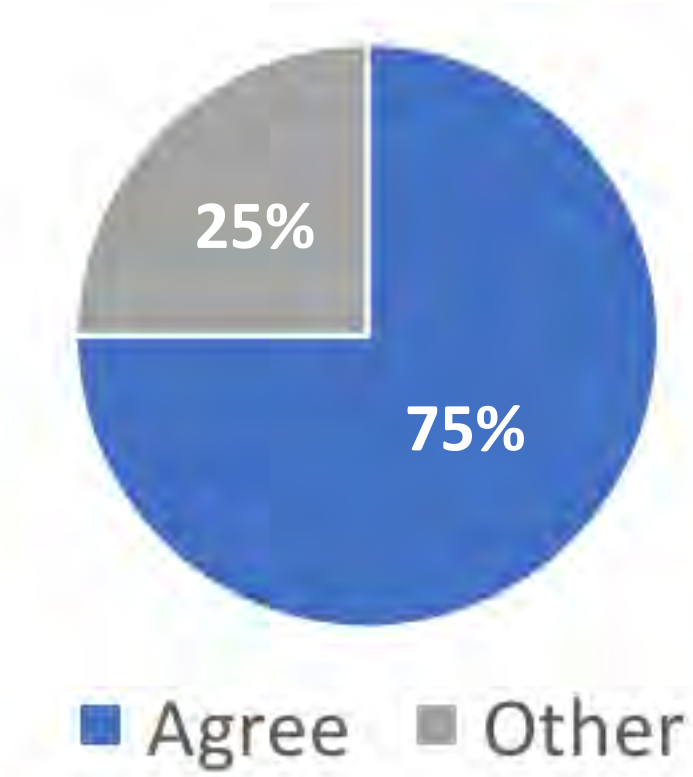
Water conservation actions by householders can significantly reduce the amount of water used in urban areas.

a) Strongly agree
b) Agree
c) Neither disagree or agree
d) Disagree
e) Strongly disagree
f) Don’t know

Water conservation actions by householders can significantly reduce the amount of water used in urban areas.

a) **Strongly agree**
b) Agree
c) Neither disagree or agree
d) Disagree
e) Strongly disagree
f) Don’t know

Water conservation actions by householders can significantly reduce the amount of water used in urban areas.



Which of the following best represents your understanding of what a catchment is?

a) The area that retains water like a wetland or a marsh
b) All of the land area that drains to a specific river or waterway
c) Reservoir that serves as a water source
d) Small building where water is stored
e) None of these
f) Do not know

Which of the following best represents your understanding of what a catchment is?

a) The area that retains water like a wetland or a marsh

b) All of the land area that drains to a specific river or waterway

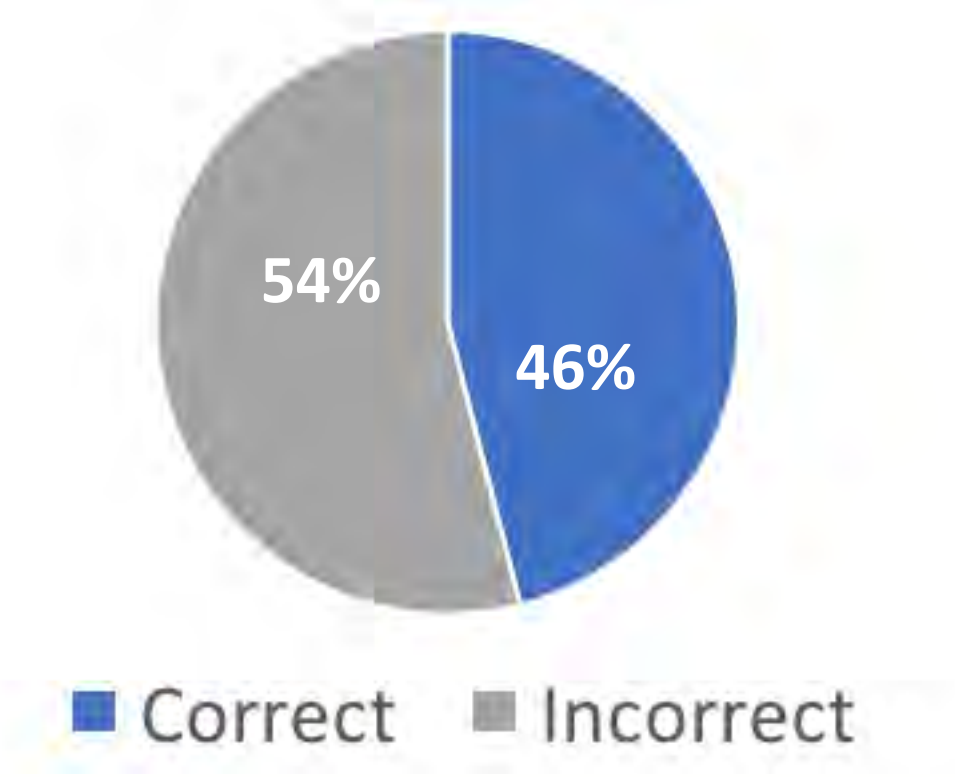
c) Reservoir that serves as a water source

d) Small building where water is stored

e) None of these

f) Do not know

Which of the following best represents your understanding of what a catchment is?



Domestic wastewater and stormwater are carried through different pipes.

a) Strongly agree
b) Agree
c) Neither disagree or agree
d) Disagree
e) Strongly disagree
f) Don’t know

Domestic wastewater and stormwater are carried through different pipes.

a) Strongly agree

b) Agree

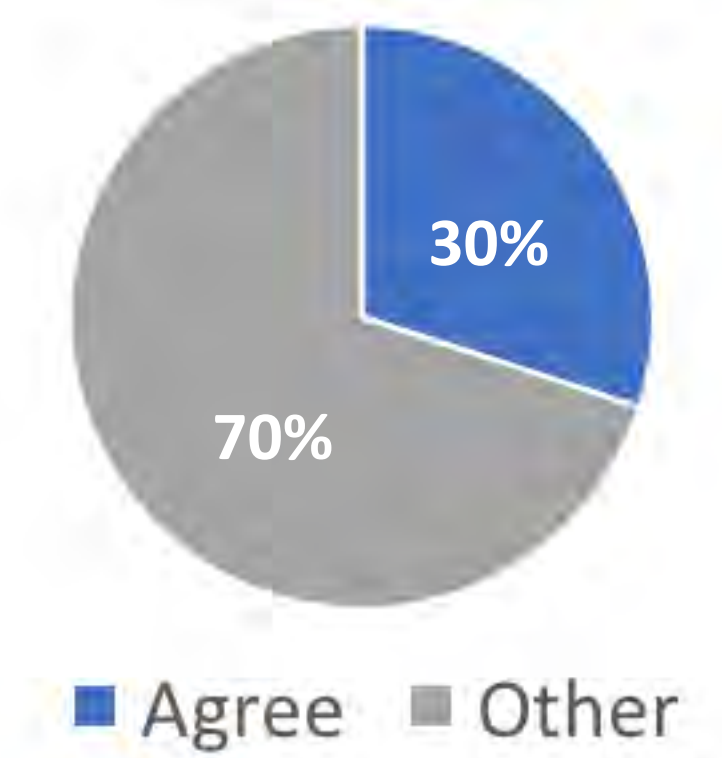
c) Neither disagree or agree

d) Disagree

e) Strongly disagree

f) Don’t know

Domestic wastewater and stormwater are carried through different pipes.



Knowledge varied across topoc

High

- Actions in the home can affect waterway health
- Household fertilizers can impair waterway health
- **Planting trees** near waterways improves waterway health
- **Stormwater flows can damage** waterway health

Medium

- Urban soil erosion can impair waterway health
- Large amounts of sediment can damage waterways
- Household pesticides can impair waterway health

Poor

- A catchment=total land area draining to a specific waterway
- Urban stormwater **is not treated** before entering waterways
- Domestic wastewater **is treated** before entering waterways
- Separate pipes carry domestic wastewater & stormwater

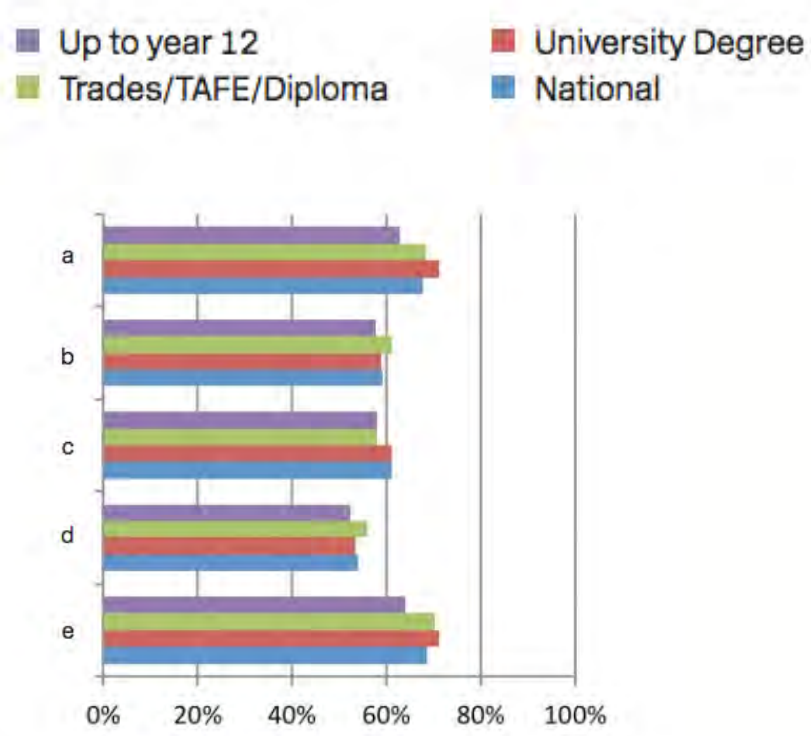


Figure 29. Knowledge of factors that can negatively impact on the waterway's health

a. Using fertiliser in the garden negatively impacts on waterway's health
b. Using pesticides in the garden negatively impacts on waterway's health
c. Soil Erosion from urban areas negatively impacts on waterway's health
d. Large amount of sediments is damaging to waterway's health
e. Stormwater flows can be harmful for waterway's health

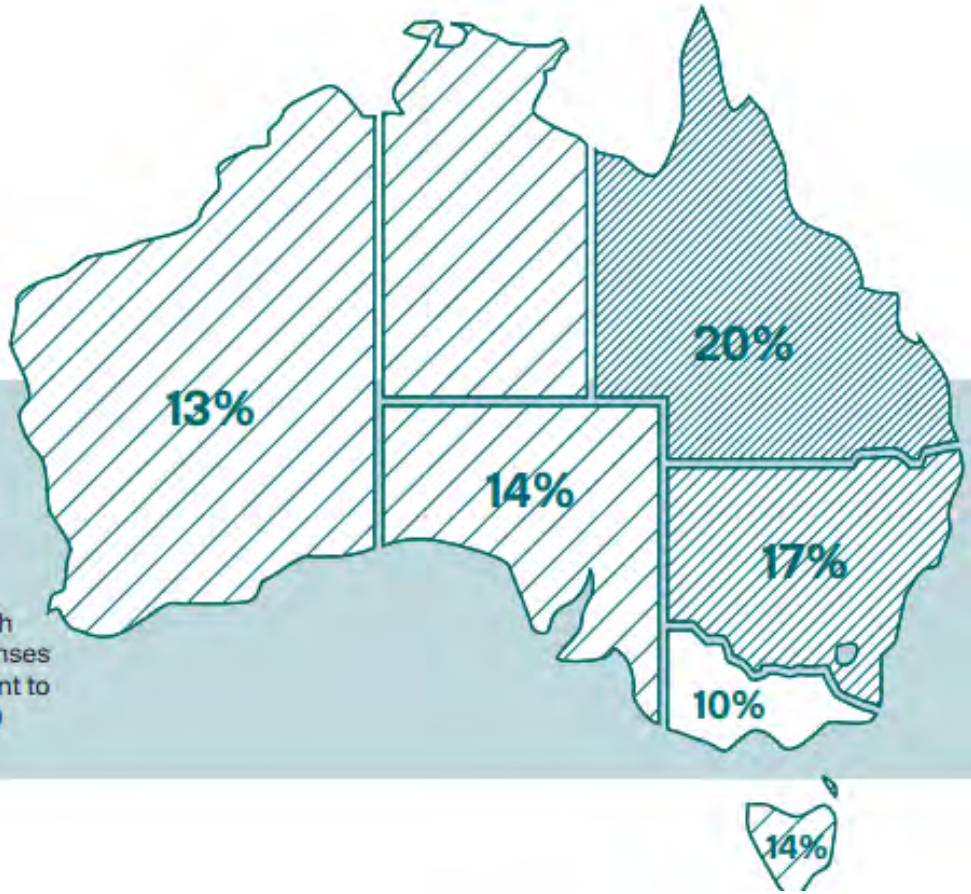
Figure 43. Knowledge of factors that can negatively impact on the waterway's health

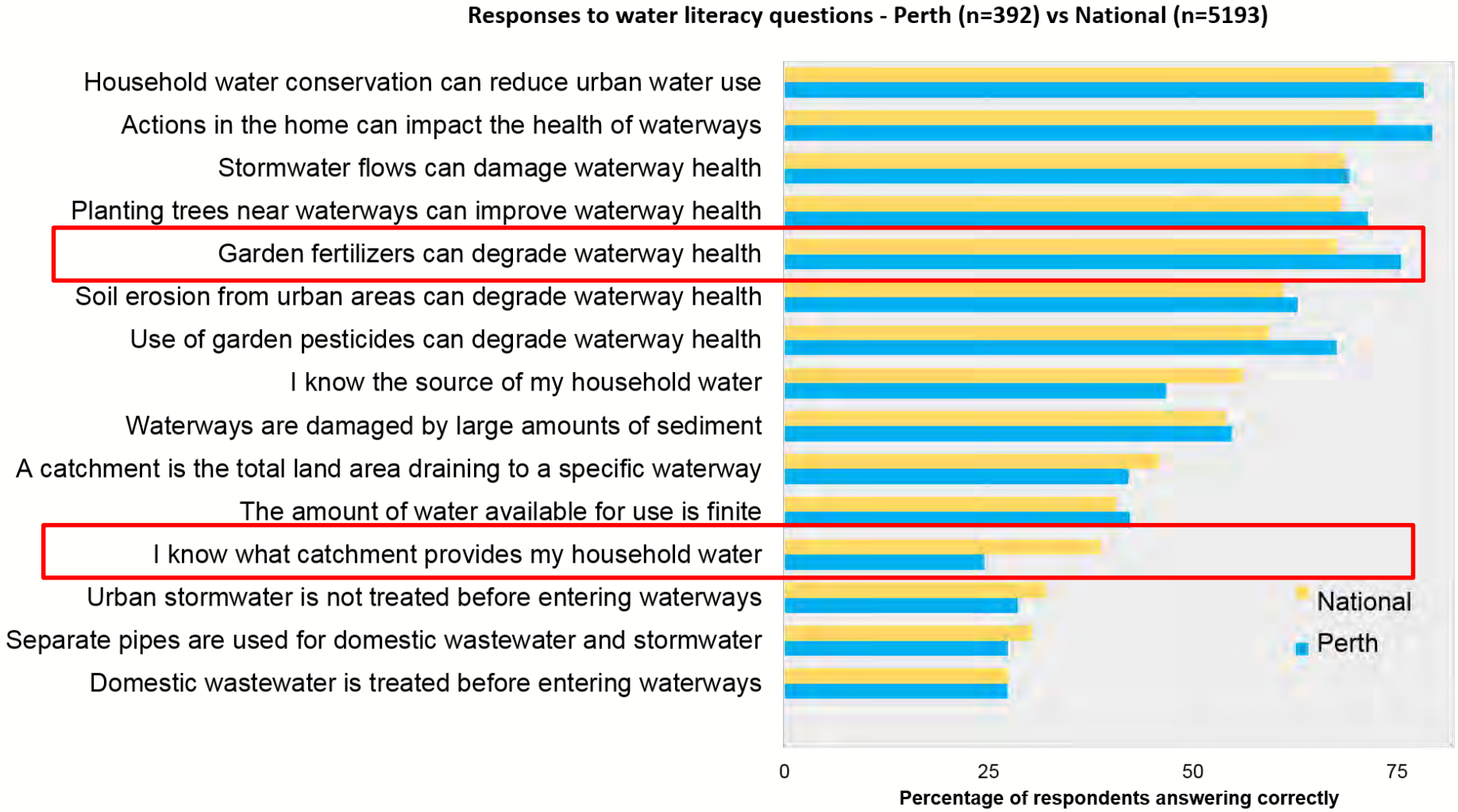
a. Using fertiliser in the garden negatively impacts on waterway's health
b. Using pesticides in the garden negatively impacts on waterway's health
c. Soil Erosion from urban areas negatively impacts on waterway's health
d. Large amount of sediments is damaging to waterway's health
e. Stormwater flows can be harmful for waterway's health

Figure 19. How much do you understand how the water cycle works?

Which states have the highest and lowest water knowledge?

Percentages denote proportion of population with 'high water knowledge, defined as correct responses to at least 14 of 17 knowledge questions (equivalent to 80% correct, or in grade terms, a high distinction)



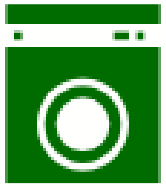


Does knowledge about water matter?

Knowledge is *"necessary but not sufficient"* for engagement

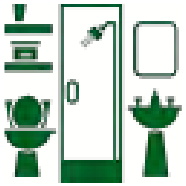
Greater support for alternative water sources

Greater support for raingardens



Higher uptake of water-saving devices

Greater use of everyday water-saving strategies



Greater engagement in pollution reduction behaviours

Does how we frame messages influence effectiveness?

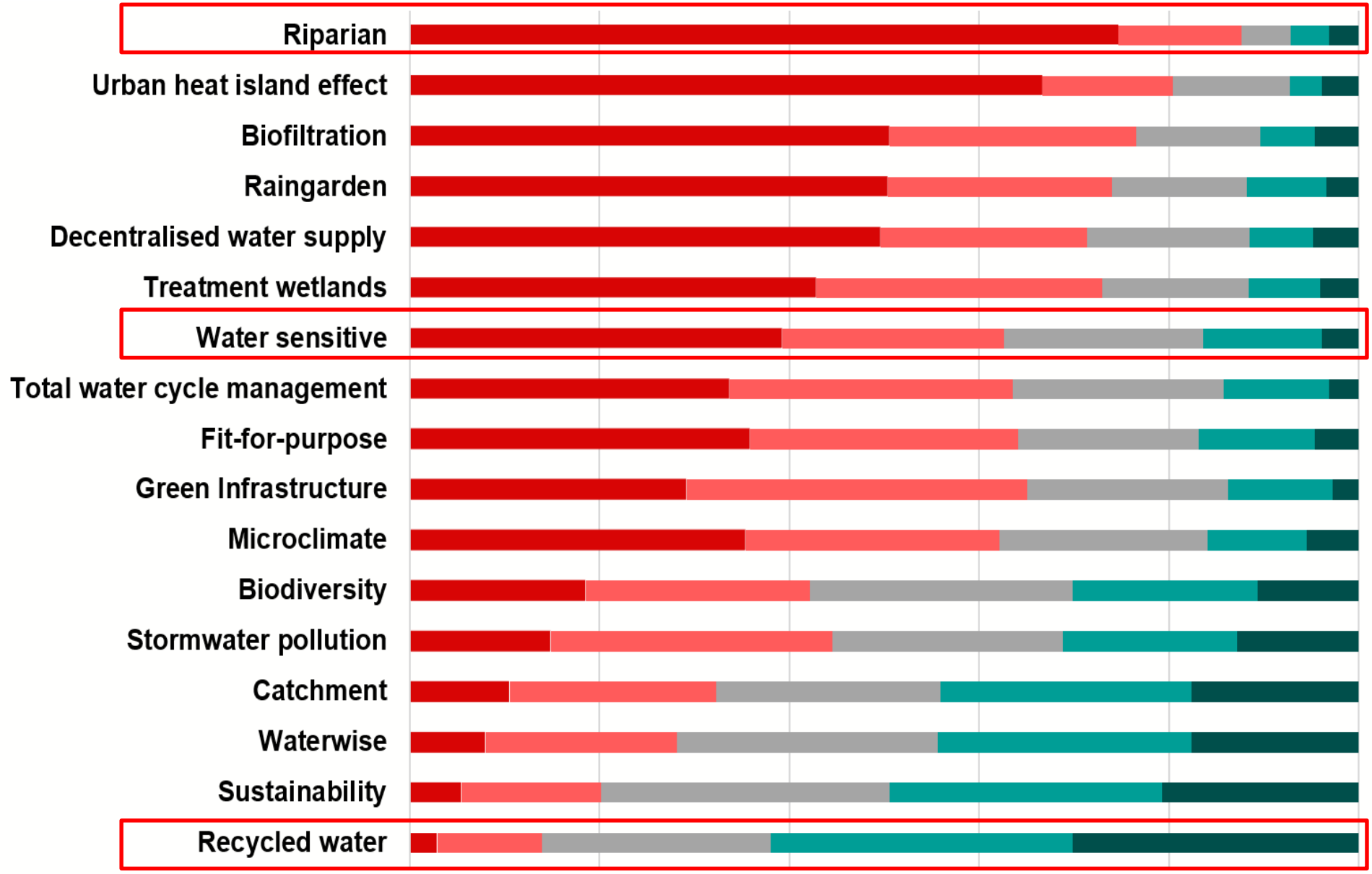
Water-related terminology

415 residents of Sydney, Melbourne, Brisbane & Perth

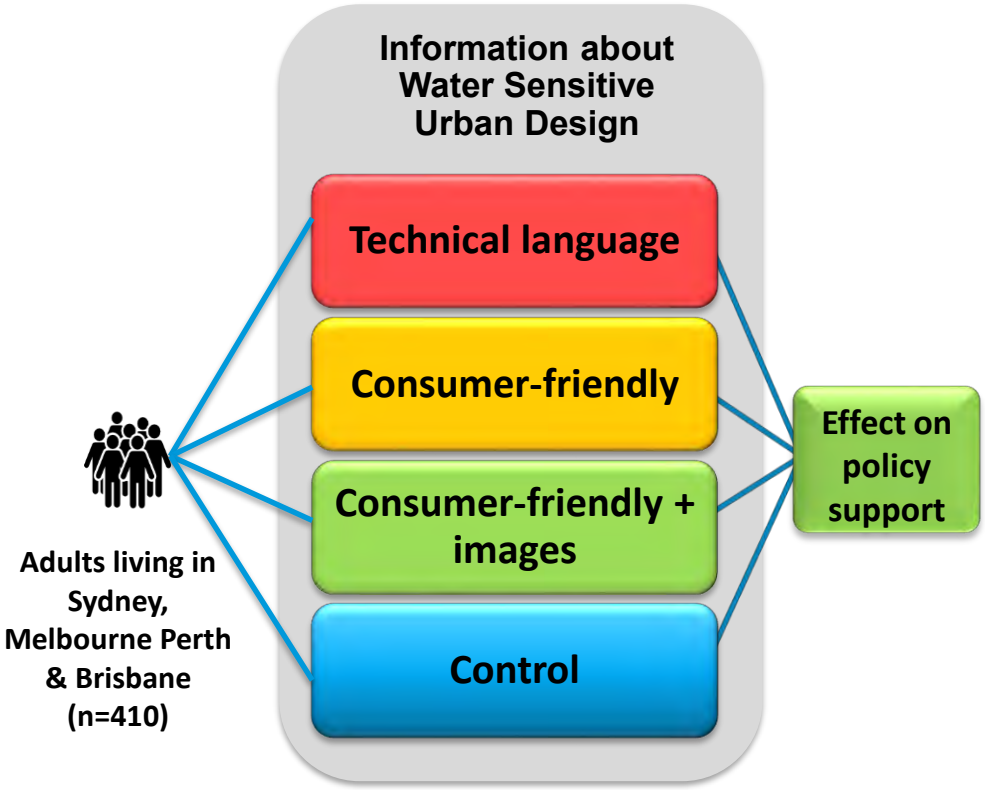
We presented a series of water-related terms

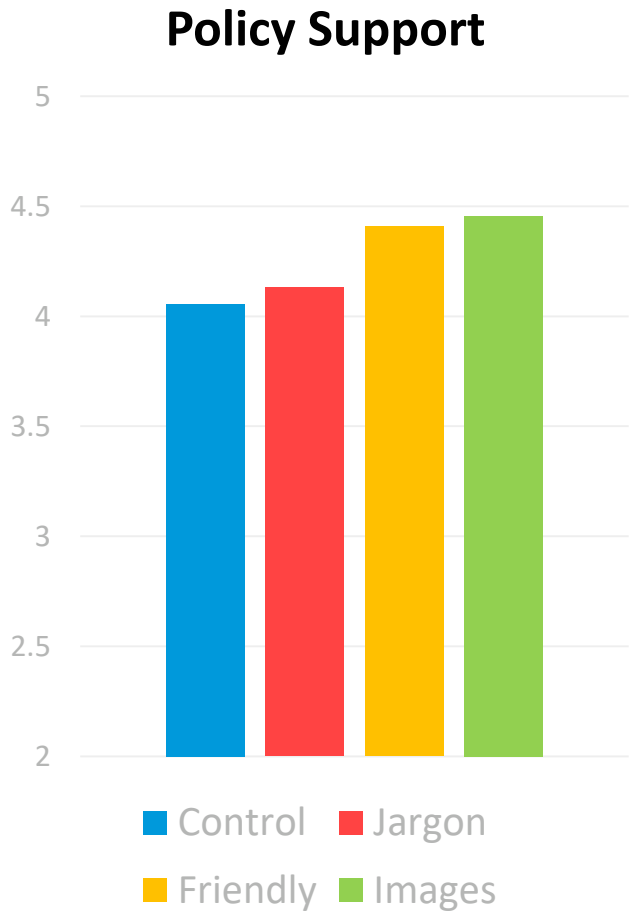
How well do you understand this term?

1	2	3	4	5
Not at all	A little	Moderately	Well	Very well



Does using jargon influence the effectiveness of messages?


Information about Water Sensitive Urban Design
Technical language
Consumer-friendly
Consumer-friendly + images
Control
Effect on policy support
Adults living in Sydney, Melbourne Perth & Brisbane (n=410)


Policy Support
5
4.5
4
3.5
3
2.5
2
Control
Jargon
Friendly
Images

Does using jargon influence the effectiveness of messages?

For brief communications

- Bill inserts
- Headings to capture attention

→ Avoid where possible

For longer communications

- Detailed sign content
- Fact sheets

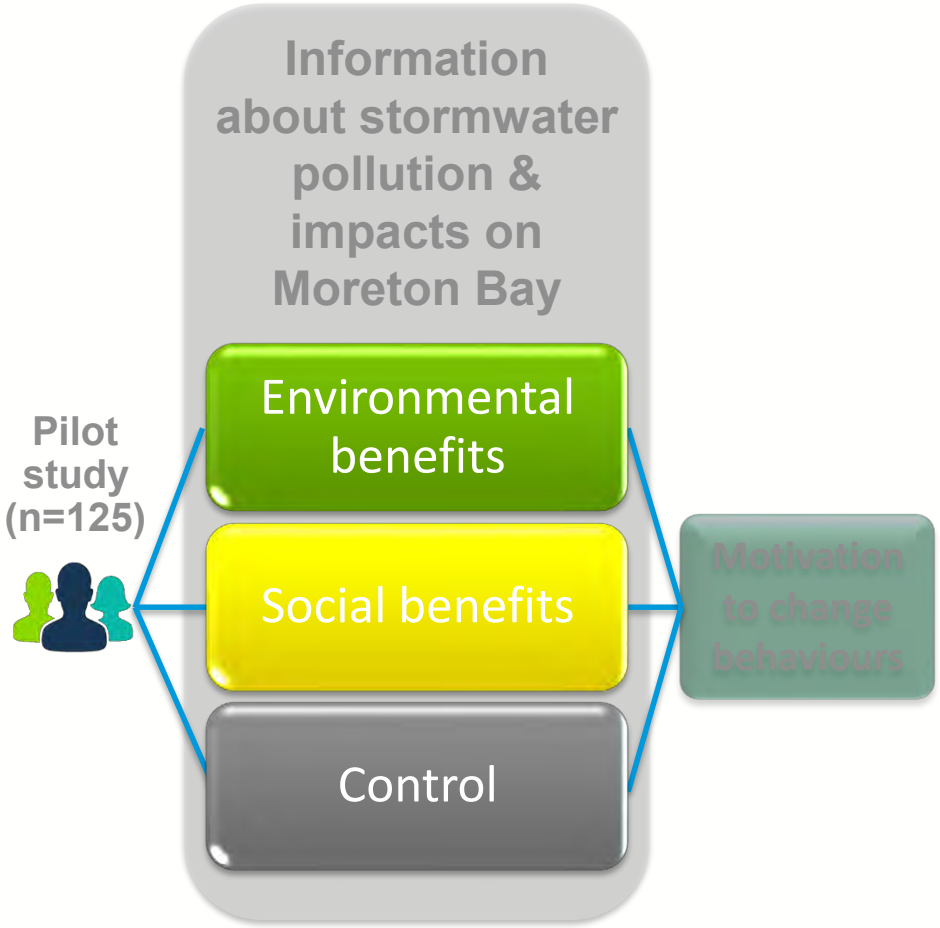
→ Don't assume understanding

- Explain concepts
- Minimise frequency

What words do people prefer?

Biofiltration	Urban heat island effect	Water sensitive city
‘natural filtration’	City climate	‘waterwise city’
‘natural pollutant removal’	Inner city warming	‘green city’
‘natural purification’	Hot city	‘water-friendly city’

Does aligning to different values effectiveness of messages?



Does aligning to different values effectiveness of messages?

Aligning with social values


Green & blue space


Recreational space


Ease of mobility


Social places


Meeting places


Culture & heritage

Aligning with environmental values

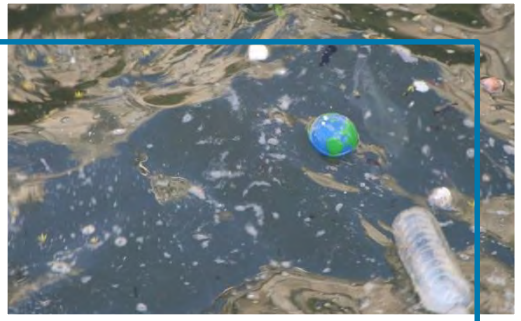

Swans


Catchments

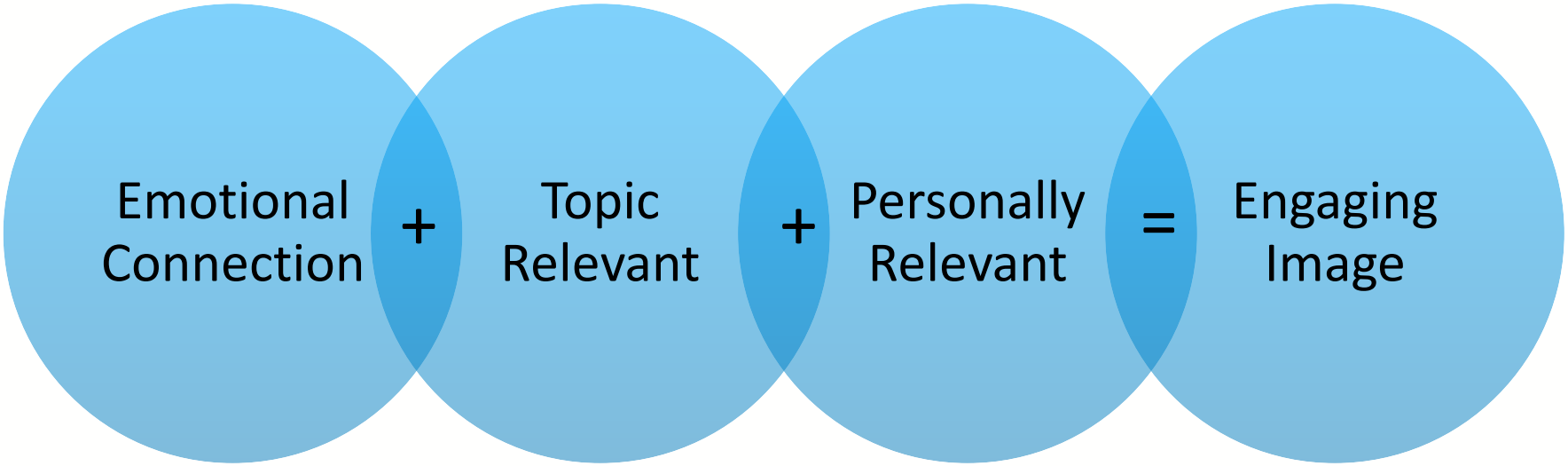

Water conservation

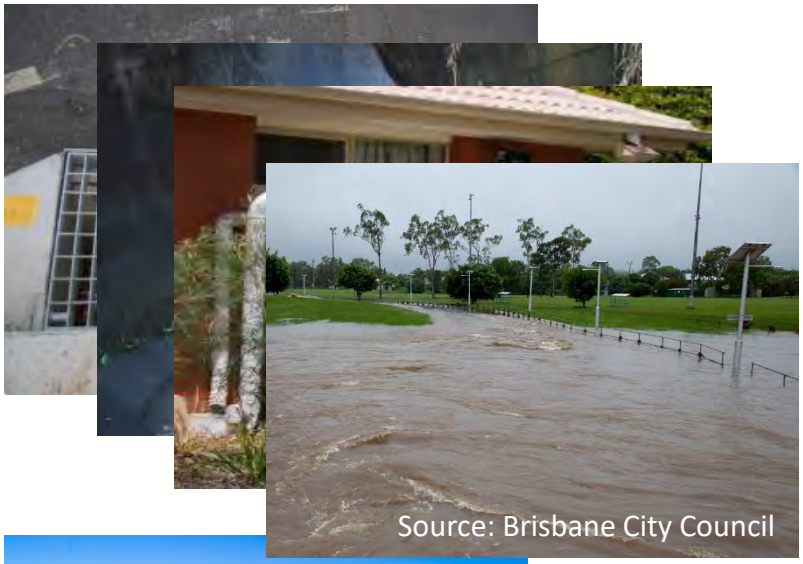

Dolphins

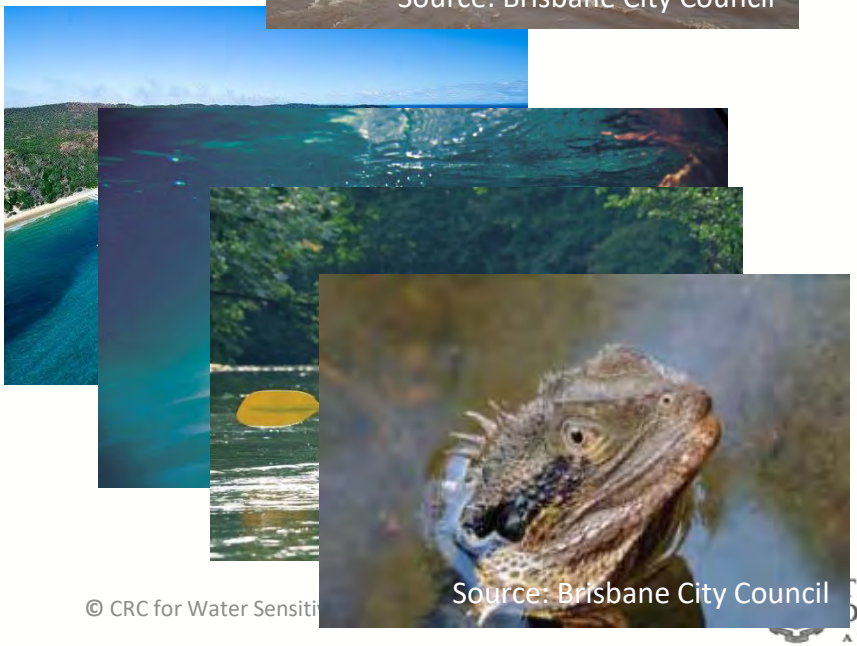

Swan River

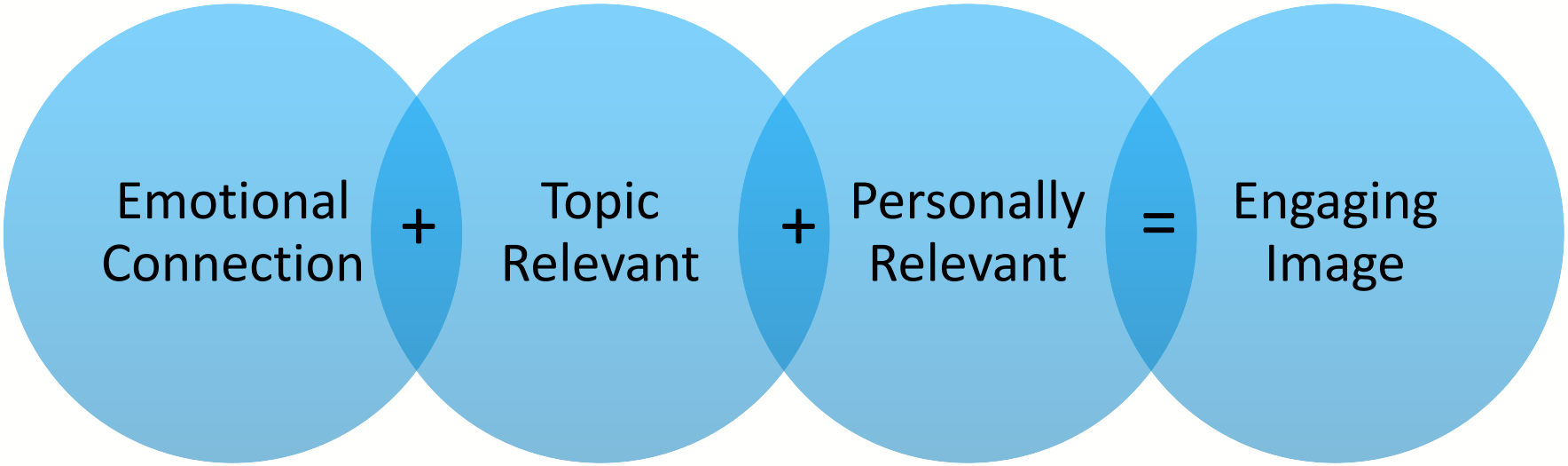

Water pollution

Do visuals change the effectiveness of messages?









Positive Emotion 

"Getting towards neutral – these are just more it's nice to be able to go for a walk in the urban space with different sort of uses of vegetation."

Topic Relevance 

"I just associate gardens with rain, and they need water"

Personal Relevance 

"Looks like a new estate, don't live in a new estate, but it's familiar"

Positive Emotion

"They're all clean water and natural, nice and clean and the way it should be"
"That's just a beautiful landscape, not that I'm a sea person"

Topic Relevance

"Not relevant to a city"
"Images are of out in the ocean, rather than stormwater"

Personal Relevance

"I grew up in North Queensland, so the coast and the environment [are important to me]"
"Beautiful, natural setting"

Positive Emotion

"Positive because it shows people working together to clean up the environment"

Topic Relevance

"Here is people tiding up after, picking up things that have washed down after flood"

Personal Relevance

"Appeals because I like to see kids involved in Clean up Australia Day"

"Looks quite familiar, living next to the river for a long time"

Positive Emotion 

"Pretty negative…it's just bricks"
"This throws me"

Topic Relevance 

"A missing paver, I can't see the relevance of this"
"Wouldn't effect stormwater in anyway"

Personal Relevance 

"Don't like it"
"These are things that you see in everyday life, it's not going to stand-out"

Positive Emotion

"Very nice that it's a bikeway along the Brisbane River that people can go out and enjoy riding and everything. I love that"
"I live in and love Brisbane"

Topic Relevance

"This shows a bridge where the water eventually flows…the links not terribly obvious"
"Because the Brisbane river flooded, it's relevant."

Personal Relevance

"Very relevant to me as I ride along the bike track"
"I know that images is of Brisbane"

Positive Emotion

"Unpleasant, because it's a lot of rubbish trapped and it's obviously there for that purpose. So the system is kind of working in that we have something in place to trap rubbish, but the rubbish is still there"

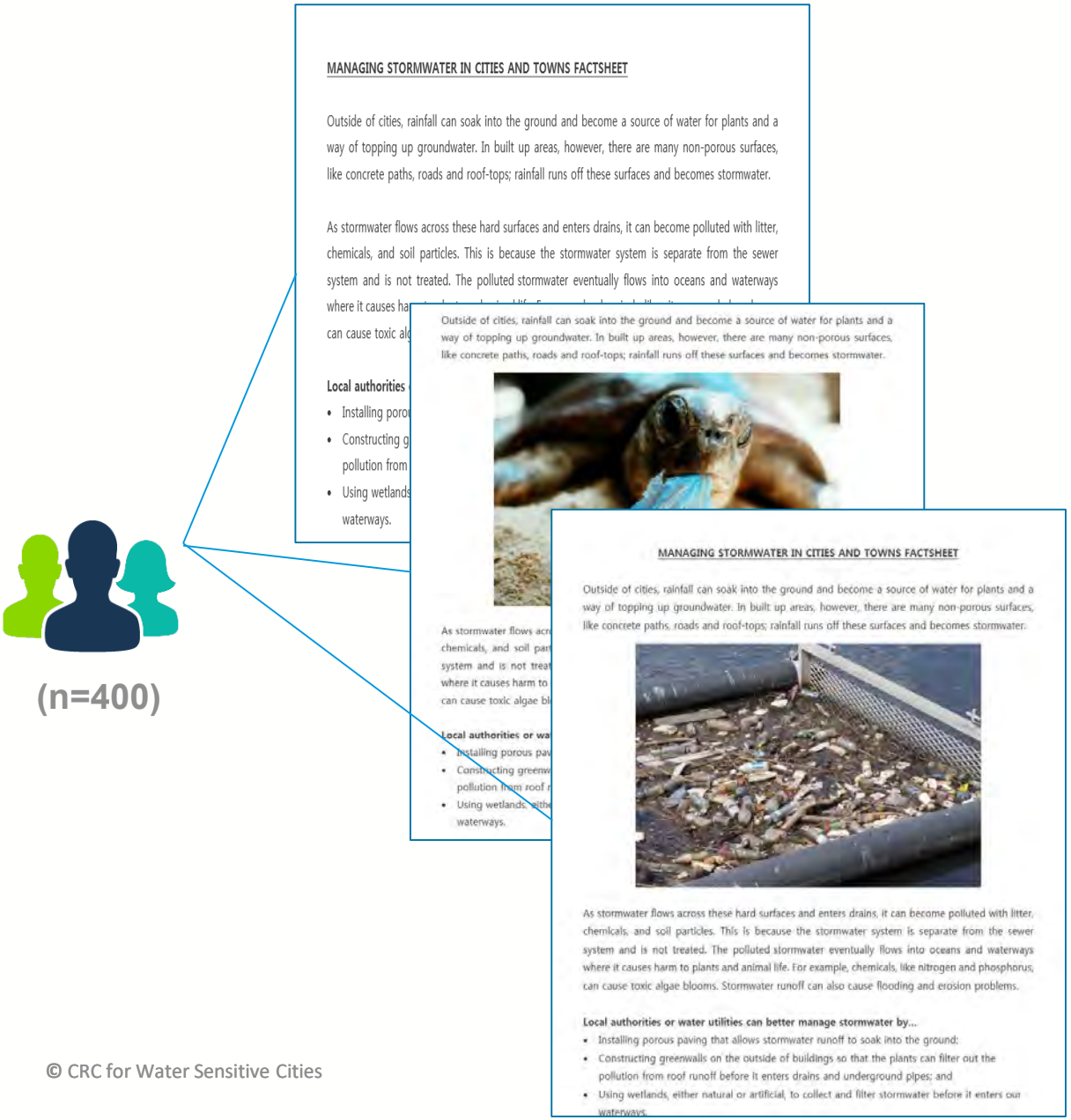
Topic Relevance

"The ones that are most relevant are ones with drains"
"More of these ugly grids, cement, they're an eye sore – very relevant."

Personal Relevance

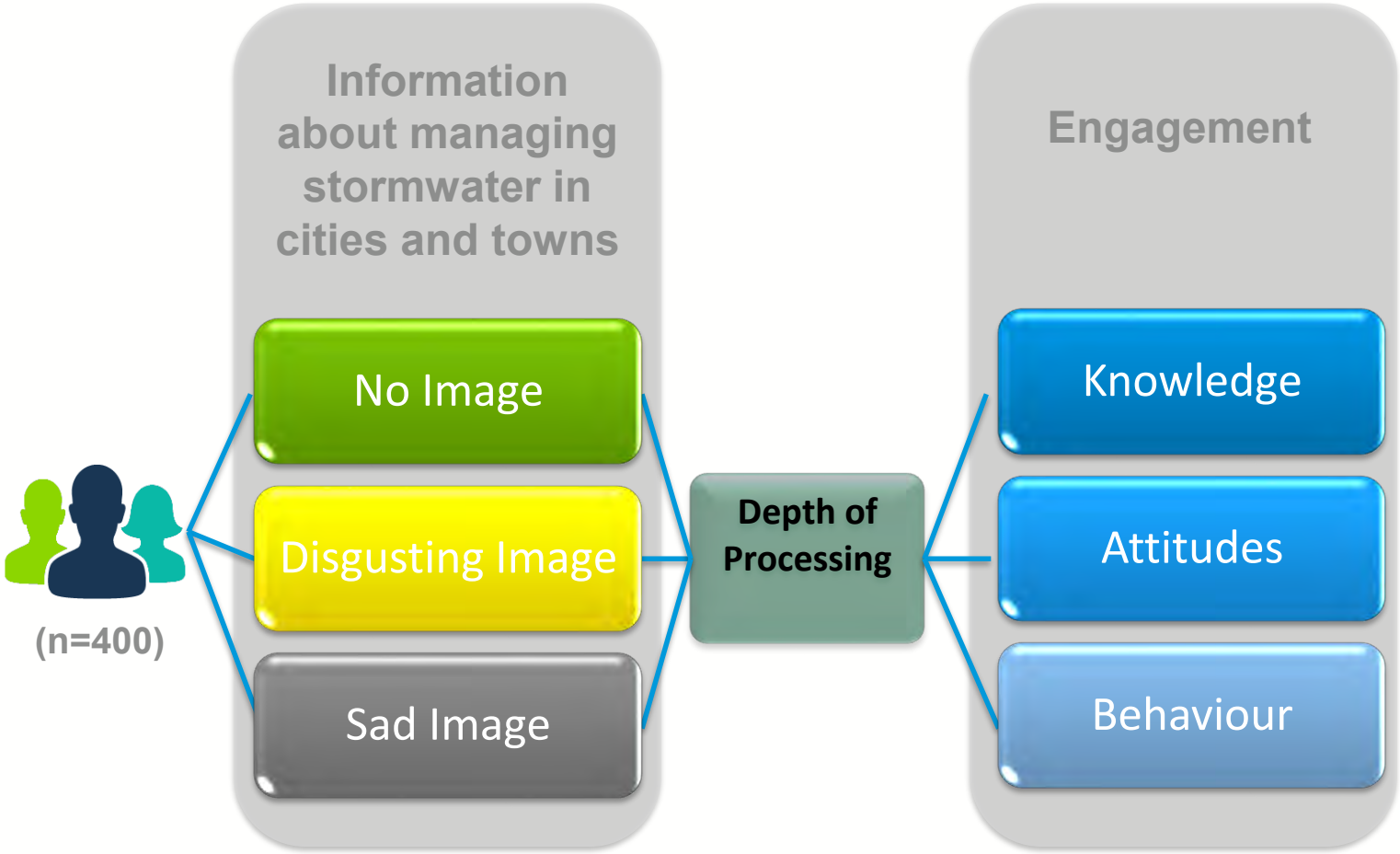
"Rubbish in the gutter…I hate that…it's least relevant to me because I do the right thing and encourage people to do the right thing"

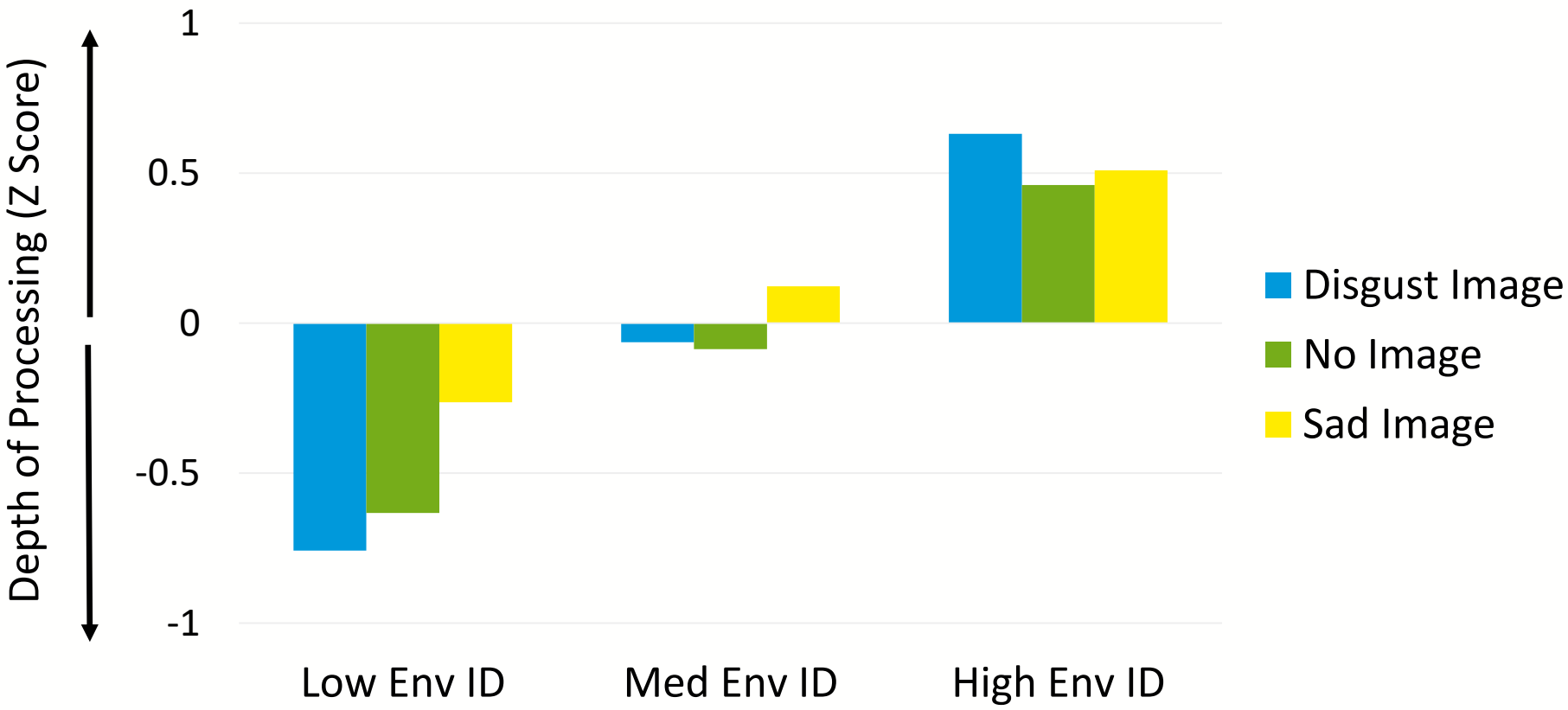
Do images that elicit different emotions change the effectiveness of messages?



(n=400)

CRC for Water Sensitive Cities





Do images that elicit different emotions change the effectiveness of messages?

YES!

"The single biggest problem in communication is the illusion that it has taken place"

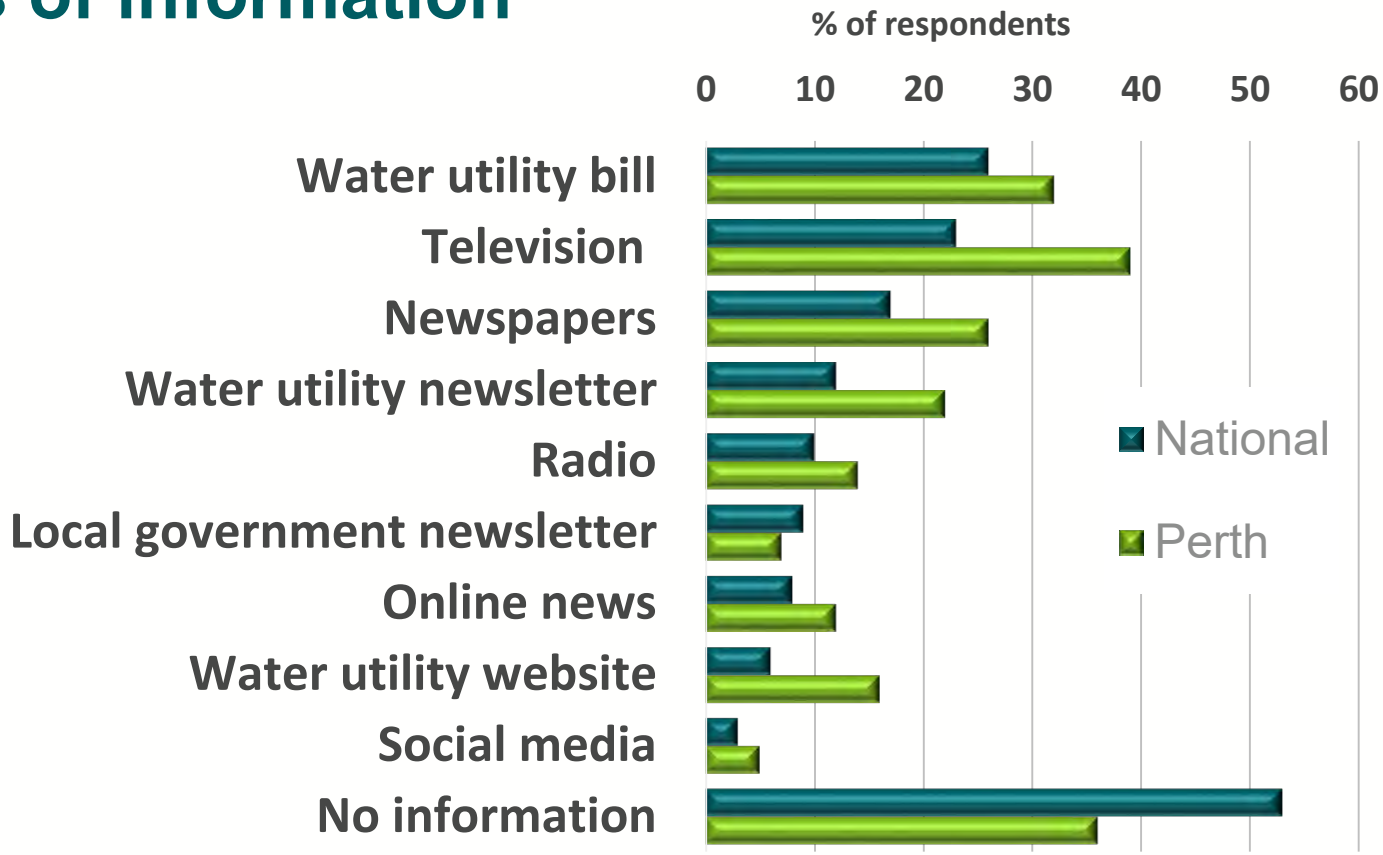
George Bernard Shaw

Diverse techniques

- Media campaigns
- Public meetings and workshops
- Educational events
- Consultation
- Persuasive communication
- Stewardship programs
- Participation programs
- Face-to-Face Programs

"Studies suggest that programs that encompass multiple approaches may be more effective" Pg. 21.

Sources of information



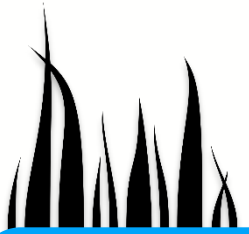
Use community leaders as spokepersons

Use community leaders as spokepersons

Build supportive partnerships

Use community leaders as spokepersons

Build supportive partnerships



Consider grass roots mobilisation

Know your audience

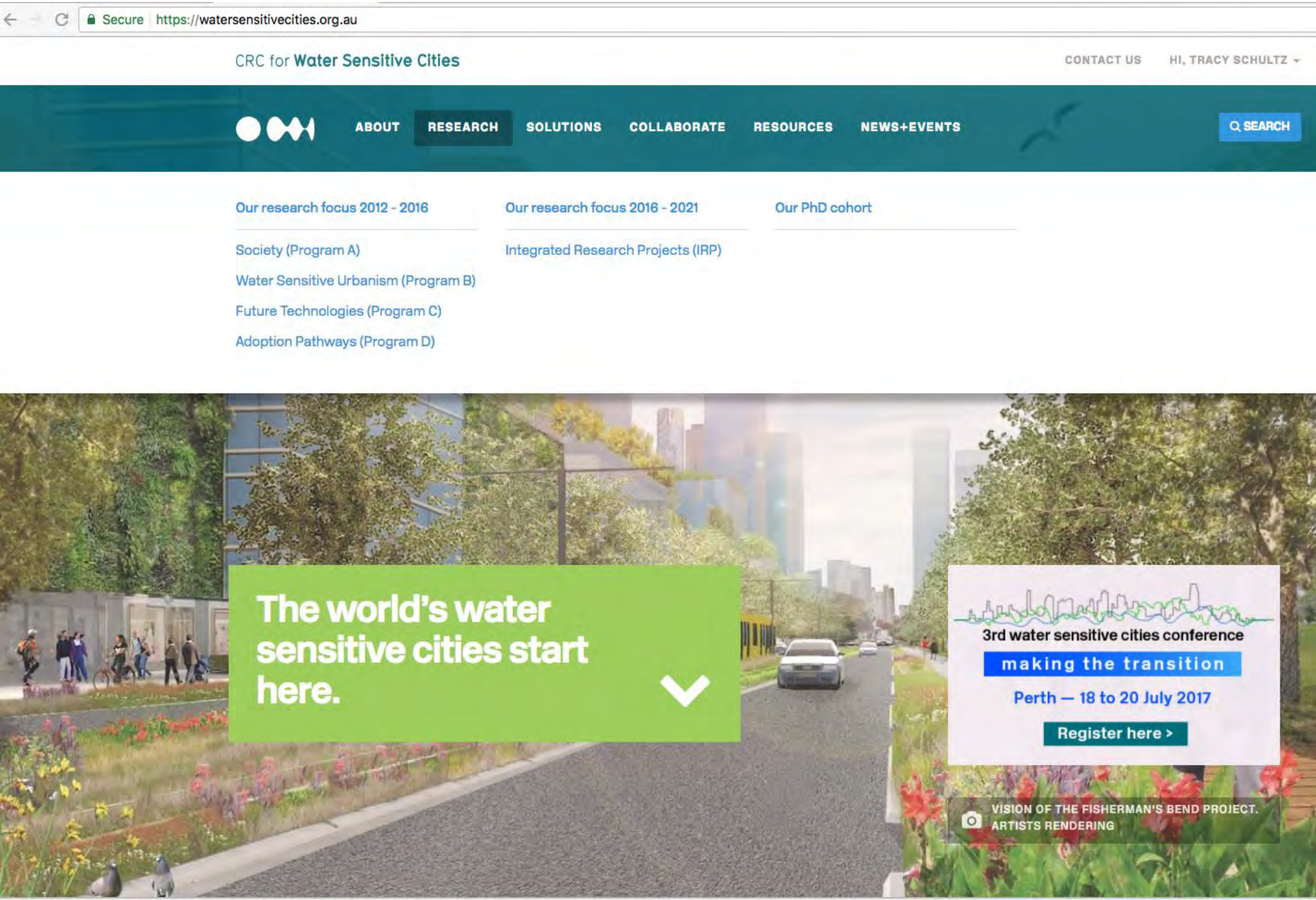
- Community profiles
- Water literacy

Frame the issue carefully

- Terminology
- Visuals
- Aligning to values

Use diverse mechanisms

- Old mechanisms
- New mechanisms


Secure https://watersensitivecities.org.au
CRC for Water Sensitive Cities
CONTACT US
HI, TRACY SCHULTZ
ABOUT
RESEARCH
SOLUTIONS
COLLABORATE
RESOURCES
NEWS+EVENTS
SEARCH
Our research focus 2012 - 2016
Society (Program A)
Water Sensitive Urbanism (Program B)
Future Technologies (Program C)
Adoption Pathways (Program D)
Our research focus 2016 - 2021
Integrated Research Projects (IRP)
Our PhD cohort
The world's water sensitive cities start here.
3rd water sensitive cities conference
making the transition
Perth — 18 to 20 July 2017
Register here >
VISION OF THE FISHERMAN'S BEND PROJECT. ARTISTS RENDERING

Coming soon…

Online data-base of community-friendly words and images

Funding	• Cooperative Research Centre for Water Sensitive Cities
Knowledge, jargon and focus groups	• Kelly Fielding, k.fielding@uq.edu.au • Angela Dean • Fiona Newton • Jo Lindsay • Helen Ross
Visuals	• Tracy Schultz, t.schultz1@uq.edu.au
Moreton Bay values	• Angela Dean, a.dean@uq.edu.au • Elizabeth-Rose Ahearn • Elinore Pryor • Kelly Garner