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Loo, S. et al. (2018) *Does anyone here speak water-ish?* – How the benefits of environmental flows get lost in translation

“Does anyone here speak water-ish?” – How the benefits of environmental flows get lost in translation

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Key Points

- The language and complexity of water management is excluding communities from understanding what environmental flows are and their benefits.
- Support for environmental water is multi-faceted and conditional.
- Presenting the right information and messaging is essential to increasing acceptance.
- A change to simplified language is required so a broad audience can better understand environmental water and its benefits.

Abstract

Social research commissioned by the Victorian Environmental Water Holder (VEWH) has found strong evidence that the language and complexity of water management is excluding communities from understanding what environmental flows are and their benefits. The startling levels of misunderstanding stem from impenetrable water language and a lack of community water literacy.

The low levels of water literacy in general, meant that survey participants did not have the basis for understanding environmental water and how it may assist with waterway management. For example, only 16% of participants were fully aware that Victoria’s waterways have been modified for human use. Additionally, while most participants could name at least one issue with waterways in their area, most did not think of environmental flows when asked how these may be fixed.

To help increase public acceptance of water for the environment, it will be essential to first increase levels of water literacy. Knowledge of water management and personal use of waterways can also increase support for water for the environment.

The VEWH aims to meet public need by improving the transparency around its decision-making and providing clearer, more accessible information about the rationale and benefits of environmental watering. To be successful, the water industry needs to break down verbal and intellectual barriers, simplify its management concepts and speak to people in language they understand.

Keywords

environmental water, environmental flows, water for the environment, communication, engagement, social research

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Introduction

Rivers, estuaries and wetlands are the lifeblood of many towns and communities. The health and wellbeing and prosperity of communities depends on healthy waterways. A survey in 2009 of 7,140 Victorians found that waterways are vitally important to community members, with 99 per cent of respondents having high aspirations for waterways (Pisarski and Cary, 2011).

Australia's use of water is a key matter of public interest that will only grow in importance as climate change progresses. Modelling predicts that streamflows could reduce by 50 per cent in some Victorian catchments by 2065 (Potter *et al.* 2016). This has serious consequences for everyone - households, industry, agriculture, recreation, cultural values, native plants and wildlife. Scrutiny of the management and value of water for the environment is only expected to increase. Hence, building public support for water for the environment is critical to the success and continuation of environmental watering programs.

A national survey of Australian's water literacy (Fielding *et al.*, 2015) found that while the majority of Australian's have good knowledge of some water issues, for example 74% have a general sense of how the water cycle works and 56% know where their drinking water comes from, there were some aspects of water management that were less understood, for example only 27% understood that domestic wastewater receives treatment before entering waterways and 41% understand that the amount of water available for use is finite. The survey did not explicitly explore knowledge and attitudes on water for the environment as it was mainly focused on acceptance of alternative water sources.

One of the golden rules of effective communication is to 'know thy audience' with a fundamental recognition that people hold divergent opinions, values and beliefs and have differing levels of knowledge on any one subject - and this certainly holds true for environmental water and water management in general. With this in mind, the VEWH commissioned Victoria's first state-scale market research focused on exploring the knowledge and attitudes that individuals may have about water for the environment.

The VEWH is seeking to enhance communications with its target audiences. To support this the present study aimed to:

- Gain an understanding of the general public's use of, understanding, attitudes, and perceptions towards waterways, environmental water and the current management practices of waterways in Victoria.
- Explore opportunities and barriers for communicating about, and encouraging understanding and acceptance of, environmental water among target audience groups.
- Test comprehension of language used to communicate environmental water matters.
- Segment audiences according to demographic, attitudinal or behavioural categories.

The study was finalised in June 2017 (ORIMA Research, 2017), with findings communicated to the VEWH's environmental water program partners to inform future communications and engagement opportunities.

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Methodology

Using both quantitative and qualitative research methods 1,590 Victorians were surveyed or interviewed for this study from February to April 2017 by ORIMA Research.

Qualitative research

A total of 96 people participated in the qualitative research component via six full focus groups, four mini focus groups and 19 in-depth interviews. The research was conducted in Melbourne, as well as four regional Victorian locations. VEWH and Catchment Management Authority (CMA) communications resources were tested in the qualitative research (e.g. media releases, fact sheets and the VEWH website).

The qualitative research was conducted with a representative group of stakeholders from across the spectrum of water users:

- **Victorian public** – this audience participated in focus groups and was segmented by age.
- **Recreational users** – recreational fishers, birdwatchers, hunters, boaters and riparian landholders.
- **Commercial users** – such as irrigators from a diversity of industries (e.g. dairy, cattle, crops, horticulture) as well as tourism operators.
- **Interest groups** – representatives from key bodies / organisations connected to Victorian waterway usage: an environmental education group; a hunting group; an angling group; a birdwatching group; a local council.
- **Aboriginal Victorians** – including Traditional Owners and recreational users of Victorian waterways.

The qualitative survey was undertaken to specifically understand the views of these different groups and to refine the questions for the quantitative survey.

Quantitative research

A total of 1,494 people participated in the quantitative research component. The quantitative study was statistically robust, with a 90 percent probability that the percentage results were within +/- 2 percentage points of the results that would have been obtained if all Victorians aged 18 years or more had responded. This is based on the assumption that a stratified random sample of participants provides a good approximation of an equivalent sample of the general population. The project was conducted in accordance with international quality standard *ISO 20252 Market, opinion and social research*.

The quantitative research consisted of:

- a general community survey comprising online and telephone surveys with individuals aged 18 years and over; and
- a CAPI (Computer Assisted Personal Interviewing) survey with a sample of Indigenous respondents aged 18 years and over.

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The general community quantitative survey results were weighted to align the sample distributions for gender, age and geographical location (metropolitan, inner regional and outer regional/remote) with their respective Victorian population benchmarks from ABS population estimates.

Indigenous survey sample

Face-to-face interviews with 75 Indigenous Victorians (including 25 Traditional Owners and 19 Elders) were undertaken. The Indigenous survey sample was selected via non-random community outreach. The results were indicative of Indigenous Victorians' perspectives but could not be statistically extrapolated to the underlying population of Indigenous Victorians due to the non-random nature of the participant selection. Hence, the data collected from Indigenous Victorians is not presented with the overall findings.

Collaborative approach

In developing and undertaking this study the VEWH attempted to be as collaborative as possible to ensure that the outcomes of the research were practical and useful for partners in catchment management authorities, water corporations and beyond. The steering group for the project included representatives from the Department of Environment, Land, Water and Planning (DELWP) and the CMA Victorian Waterway Management and Environmental Water Reserve Officers forums.

Additionally, the reference group included more than 60 representatives from most Victorian CMAs, Parks Victoria, DELWP, the Commonwealth Environmental Water Holder, and Murray Darling Basin Authority, among others. Representatives from Murray Lower Darling Rivers Indigenous Nations (MLDRIN) assisted in the roll-out of the research, particularly in specific research aimed at increasing input from Victoria's Aboriginal communities. VEWH shared the findings with stakeholders as they became apparent by organising teleconferences and presentations at key stages throughout the project.

Results

The study confirmed startling levels of misunderstanding that stems from complex water language. It was apparent that information is not accessible and language needs to be simplified. How information – especially scientific or technical information - is presented, or framed, can have a great impact on how it is interpreted and how it is used. To be successful, water managers need to break down these language barriers, simplify management concepts, and speak to people in language they understand. Most importantly, there is a need to understand the audience including their level of knowledge, key motivators and barriers.

Understanding and awareness about water for the environment, and water use and management, is low amongst most of the population. There is limited understanding that waterways have been modified for human use, so there is also limited understanding about why environmental flows are needed for rivers to survive and thrive.

Awareness and understanding

There were low levels of water literacy in general, which meant that participants did not have the basis for understanding environmental water and how it may assist with waterway management. For

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example, only 16% were fully aware that Victoria's waterways have been modified for human use. Additionally, while most participants could name at least one issue with waterways in their area, most did not think of environmental flows when asked how these may be fixed and only 5% mentioned environment related uses as a type of water use. Perceptions of water distribution were also poorly understood. Not surprisingly, household related uses dominated the unprompted mentions of water usage, as well as being perceived as the area of largest water consumption.

Only around one in six respondents (17%) reported that they had both heard of the term environmental water and knew about water being set aside for the environment. Awareness of environmental water was found to be higher in non-metropolitan areas (44% in outer regional / remote areas and 32% in inner regional areas) with only 11% awareness in metropolitan areas. The term 'environmental water' itself was often found to be confusing. The term 'water for the environment' was more positively received as being clearer. Awareness of the benefits was also low (Figure 1).

Given that the qualitative research found that understanding of water management practices in Victoria provided an important foundation for understanding the need for and use of environmental water it is not a surprise that awareness of environmental water benefits was also limited.

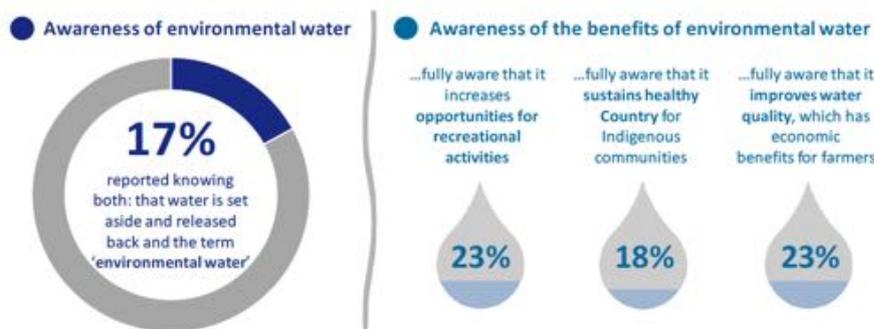


Figure 1. Public awareness of environmental water and its benefits in Victoria based on quantitative survey results.

The survey tested the understanding of many commonly used terms in catchment management public communication material. It was found that many terms were misunderstood by participants. For example, there was low understanding of the meaning of the following terms: riparian, freshes, dams, peak magnitude, finite, water deliveries, environmental watering, entitlements, dissolved oxygen, base flow, unregulated/regulated rivers, catchment, pulses, river reach, consumptive water, river flow and wetland flow and the volumetric terms GL/ML. Terms that were understood included: waterways, storages and reservoirs, water allocations, high flow, oxygen, water quality, salinity, megalitres and gigalitres. To avoid misunderstanding, use of technical or ambiguous terms should be minimised.

Perceptions and attitudes

Perceptions towards environmental water tended to be more positive than negative, with 80 percent of respondents listing at least one advantage to its use - largely related to supporting waterway, animal and plant health. This is compared with 49% who listed a disadvantage, with negative perceptions strongest amongst irrigator participants. The research found that support for environmental water was multi-faceted. Two thirds (66%) showed support for the concept of

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environmental water, however, this reduced to 48% who were supportive 'even if it affected them / their water use' – suggesting that support for environmental water was conditional (see Figure 2).

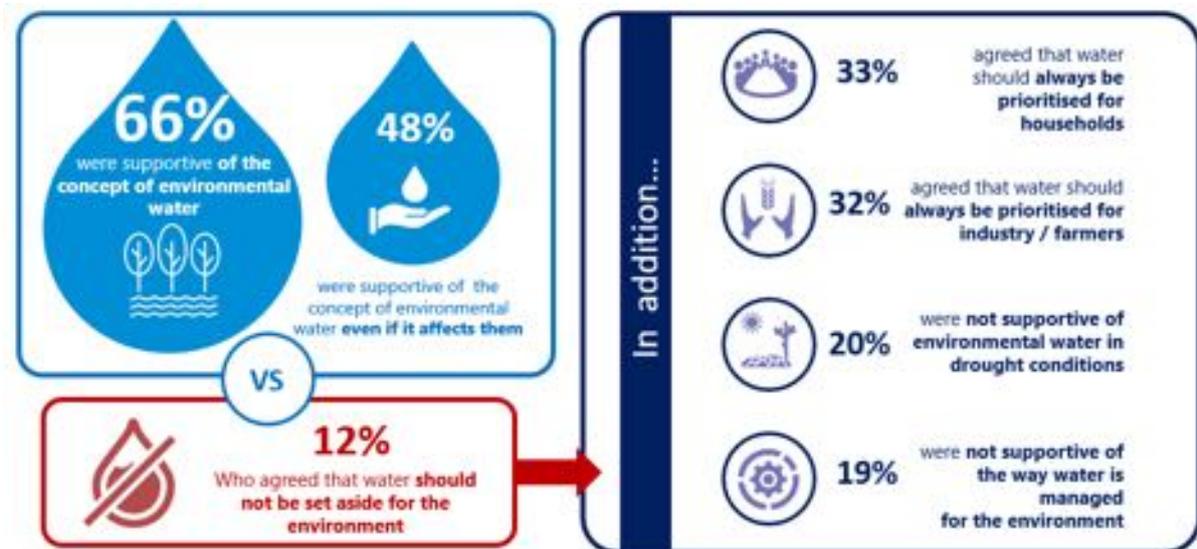


Figure 2. Percentage of public support for environmental water in Victoria based on quantitative survey results.

Upon learning more about environmental water and how it is currently managed, more respondents reported they would support environmental water 'even if it affected them / their water use' and less indicated disapproval for the way environmental water is currently being managed. A similar observation was made in the qualitative research when participants were exposed to messaging relating to environmental water. Many participants increased their level of support based on the additional information they were exposed to, which suggests that communicating more with the public about environmental water is likely to increase levels of support amongst the community. The level of support for the concept of environmental water was lower among respondents that have water entitlements, whereas recreational users of Victorian waterways were more supportive.

Audience segmentation

The research identified five broad segments, for which level of support for environmental water and engagement with waterways were the key defining factors – Advocates, Idealists, Naysayers, Sceptics and Ambivalents (see Figure 3).

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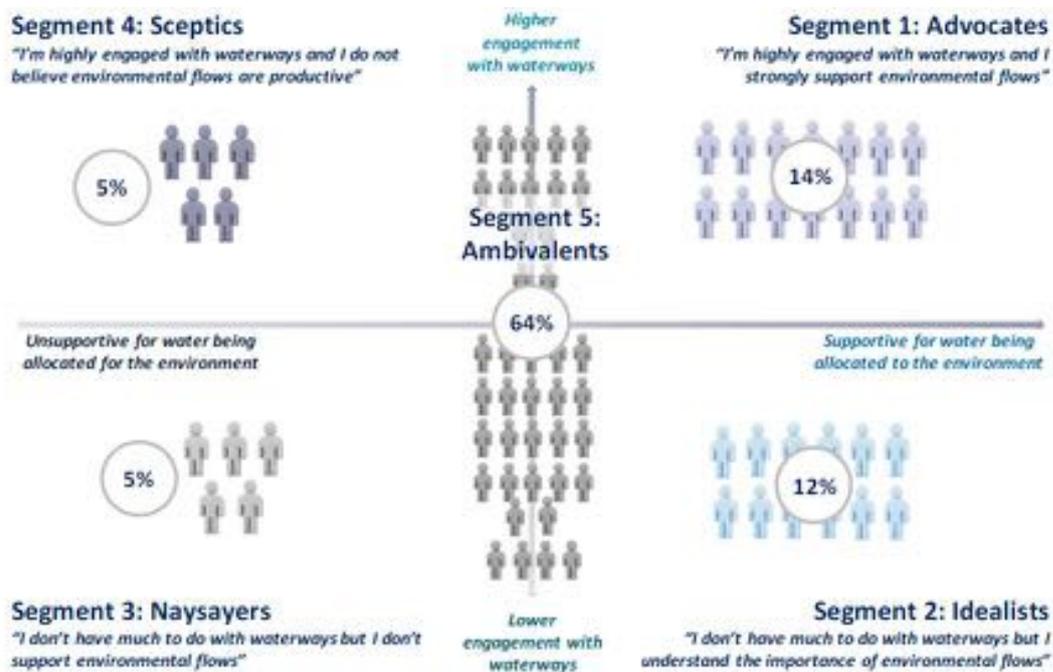


Figure 3. Broad audience segments in Victoria, based on level of support for environmental water and engagement with waterways.

The study found that exposure to information relating to waterway management and environmental water - particularly in relation to the need for and benefits to water users, as well as management processes - would help to build support and encourage acceptance of environmental water among Advocates, Idealists and Ambivalents, and to a lesser degree among Sceptics.

Advocates did not have any key barriers in their support for environmental water; however, the key motivators that enhanced support amongst this segment were environmental benefits, community benefits, commercial benefits, and recreational benefits. Idealists had a limited understanding and awareness of environmental water but were supportive, and are highly likely to be open and receptive to communications regarding environmental water.

Low levels of support for environmental water in the Sceptics segment stemmed from a dislike of the management and a perceived lack of community consultation. To reach this segment these barriers need to be overcome. After receiving some information on the subject matter, Naysayers demonstrated a significant positive shift in their attitudes toward being supportive of water being set aside, even if it directly affected their water use.

Ambivalents were characterised by their neutral support for water for the environment, and low engagement with waterways. Without a good foundation of awareness and understanding, this segment has rested on a neutral stance, rather than negative, suggesting that they have the potential to become an Advocate for environmental water with the right education (or an Idealist). Even more so than other segments, the opportunity for this segment lies in increasing awareness and understanding – which is currently very low.

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The respondents preferred communication channels to receive information regarding environmental water was water bills, followed by brochures, local water corporation newsletters and emails. Smaller portions mentioned their preferred sources as websites, social media and media in general.

Conclusion

This is the largest and most comprehensive social research project into water for the environment ever undertaken in Victoria, and it is a critical body of work for the industry. As climate change advances and water becomes scarcer, the use of water in Australia will continue to be a key matter of public interest. Scrutiny of the management and value of environmental watering is also expected to increase. The future for water needs to be one in which communities understand, accept, support and are actively involved in water for the environment.

This study has created a leap forward in getting the message out and getting it right, and creating more targeted communications which will leverage support for sustainable waterway management. By taking the 'guesswork' out of what those messages should be, who should be targeted and how, this study has provided the water industry with clear audience segments to focus our efforts on.

In summary, the key findings from the study were:

- To increase acceptance, it will be important to educate.
- A change to simplified language is required.
- Support for environmental water is multi-faceted and conditional.
- The Victorian public has an appetite for more information about water management and water for the environment.
- Presenting the right information and messaging is essential to increasing acceptance.

Support for environmental water and the sustainable management of waterways needs to be informed, influenced and nurtured to ensure a sustainable future for Victorian rivers and wetlands - a future that has strong backing from the community. This ground-breaking market research has provided a rigorous and defined understanding of the audience, awareness levels, understanding, and perceptions about water for the environment.

The findings of this study could have a range of applications to water management industry agencies in Victoria and nationally that are involved in environmental water, or are communicating about environmental water. This includes local waterway managers such as CMAs, water corporations, Department of Environment, Land, Water and Planning (DELWP), and Australian Government agencies such as the Murray Darling Basin Authority and the Commonwealth Environmental Water Holder.

For sustainable waterway management to continue for the long-term, public awareness and support will be key to its success.

Acknowledgments

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