



GenomeCanada

Individuals' Perceptions of Water and the Implications for Water Security



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Introduction

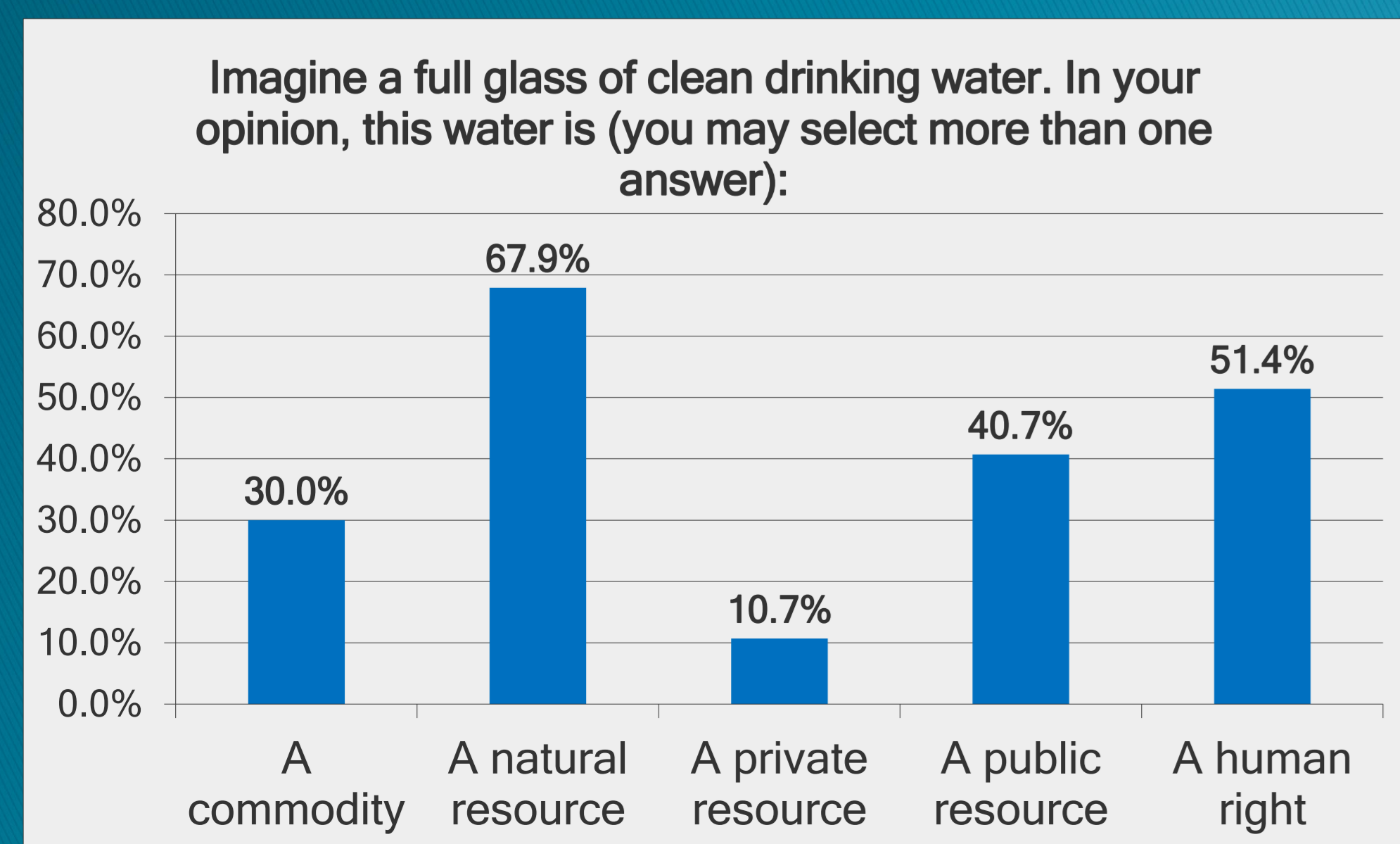
- Water is crucial for life, for both mankind and the environment
- Overconsumption leads to the depletion of clean water sources
- Under consumption is detrimental to health and wellbeing
- Perceptions of water may impact use, which impacts the overall water cycle

Methods

- Online mixed-methods survey
- 37 survey multiple choice, ranking scale and open ended questions on:
 - a) sentiments towards water
 - b) personal consumption habits
 - c) responsibility of providing clean water
 - d) water regulations
- Administered via snowball convenience sampling to:
 1. students from the University of Alberta and the University of Calgary
 2. individuals from rural Alberta and from around the world

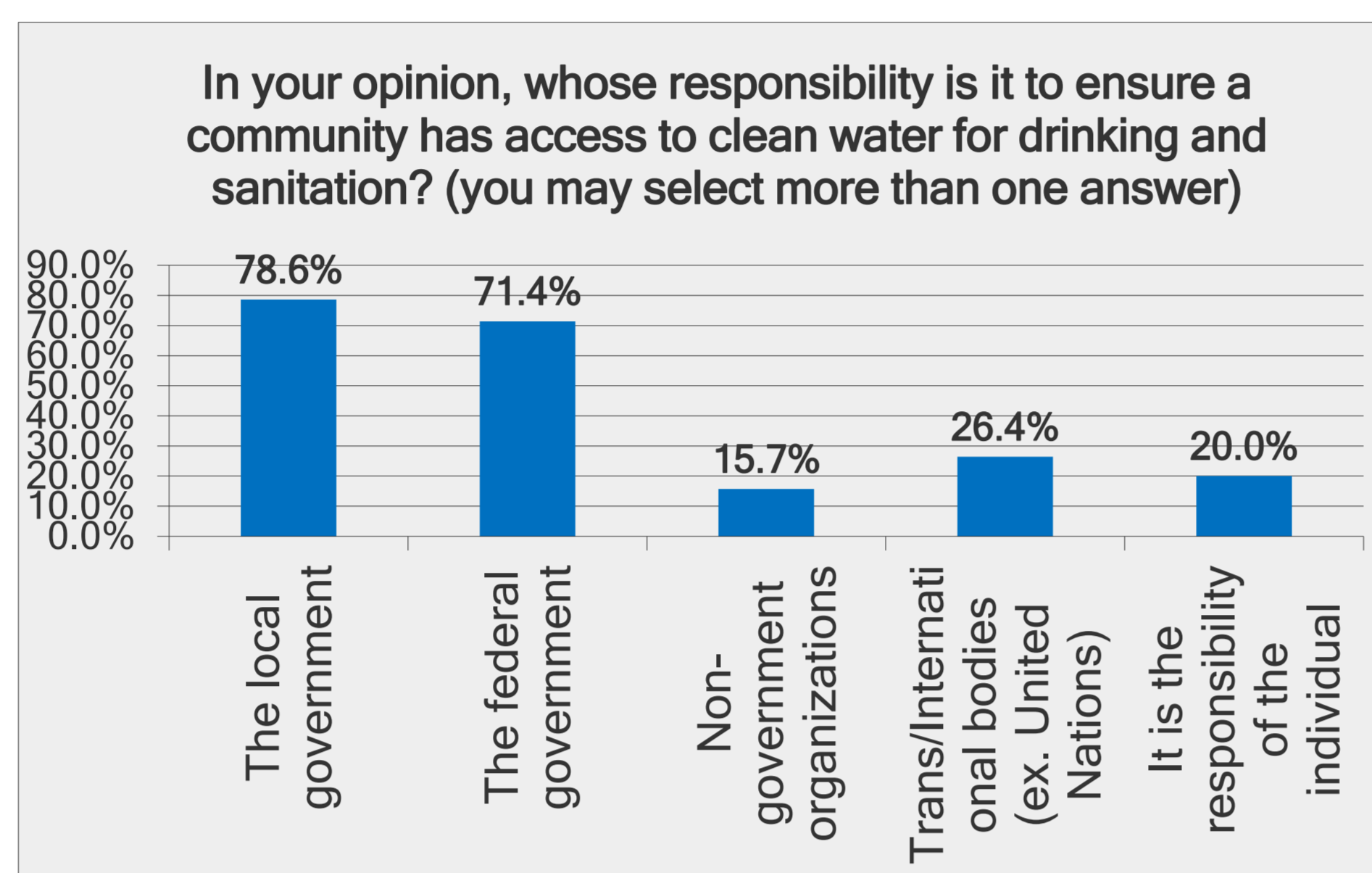
Perceptions of water

Question: How do perceptions influence beliefs and actions?



Results

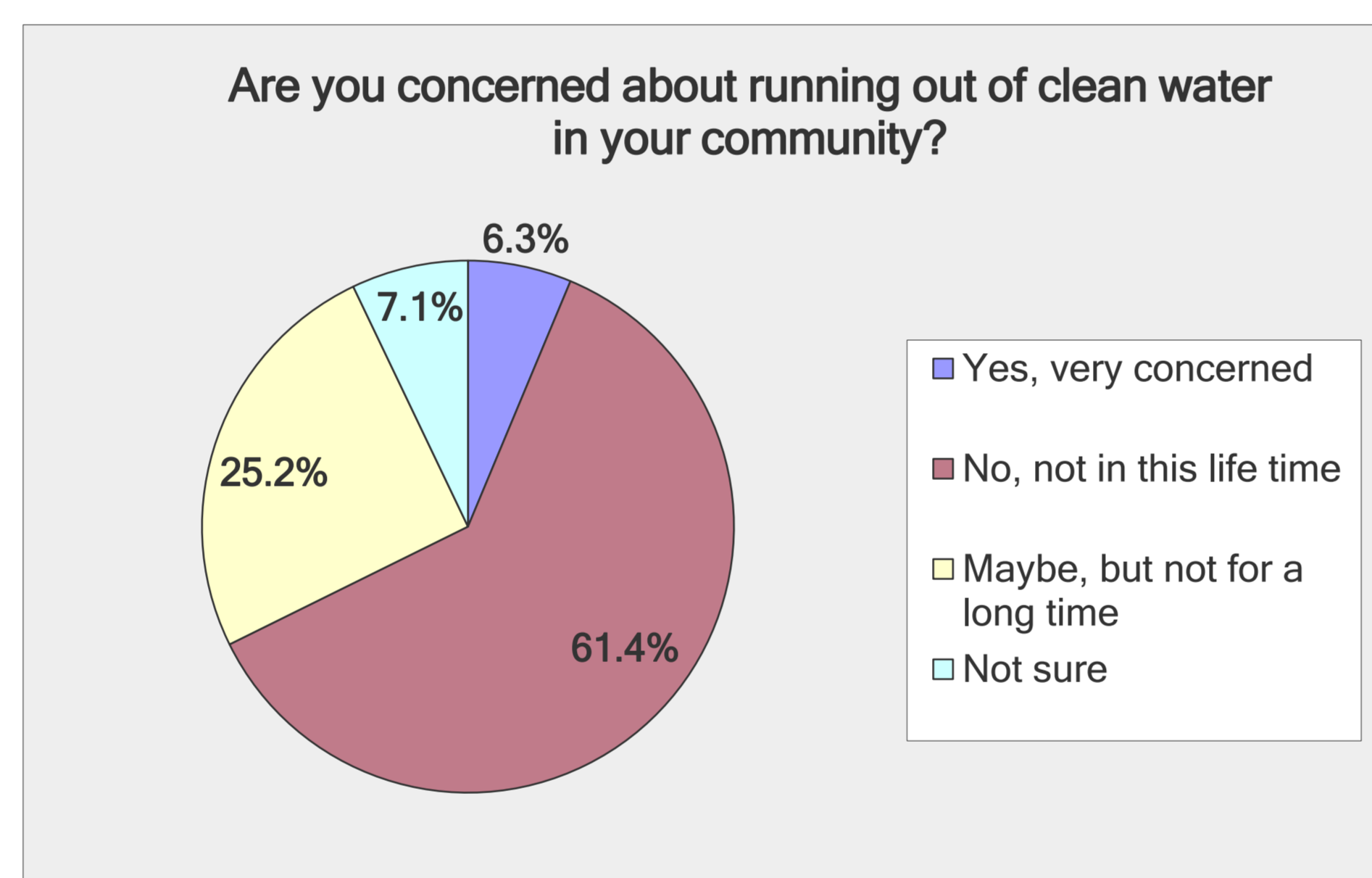
Theme: *Responsibility*



Discussion

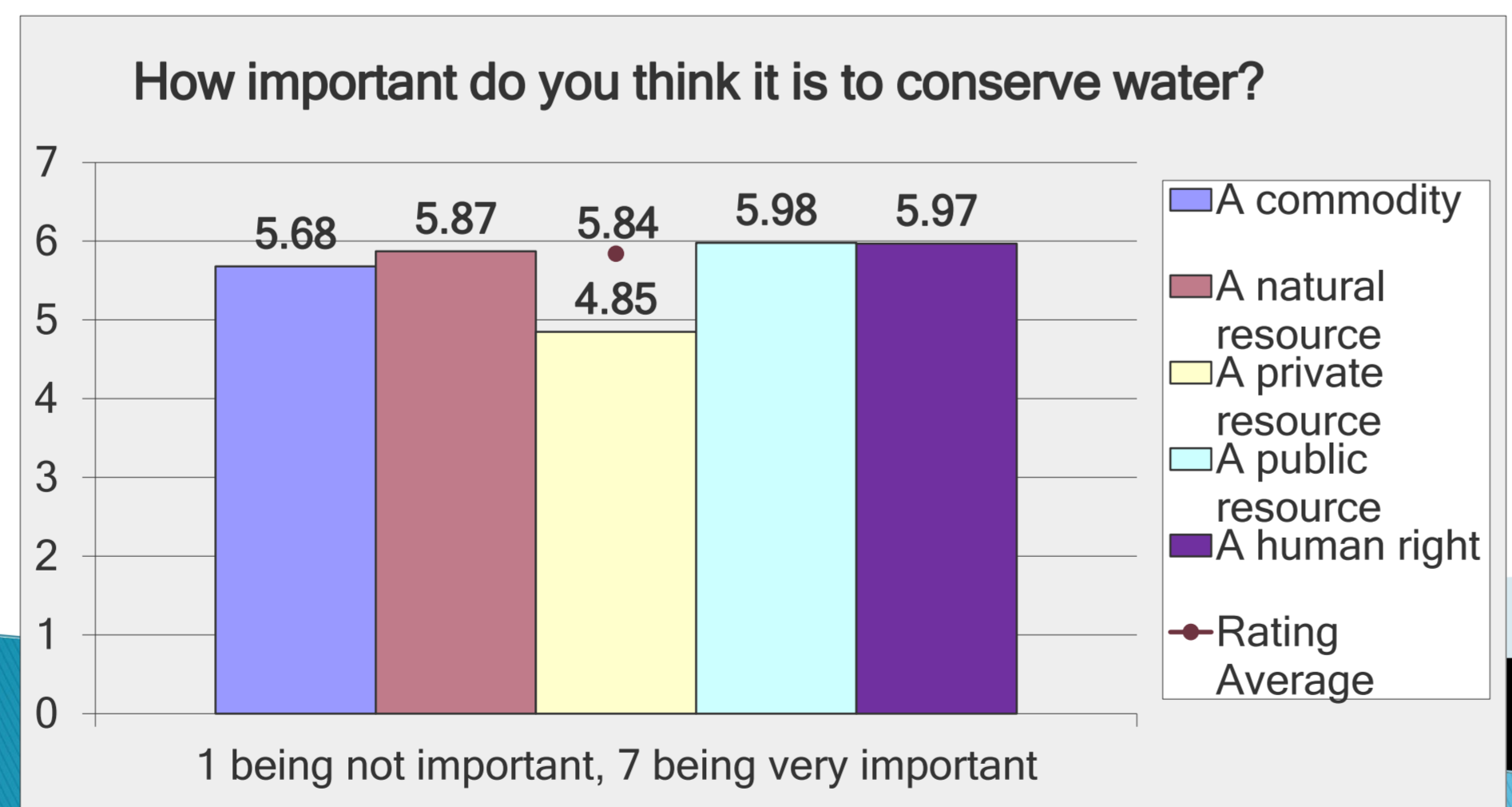
The behaviour of others is a commonly cited reason for a lack of personal responsibility and conservation effort, known as “perception of externalities” (1).
Government must remain responsible to ensure reasonable allocation and use.

Theme: *Scarcity*



While there is a lack of concern for the possibility of water scarcity, it is not reflected in the respondents' substantial average conservation efforts.

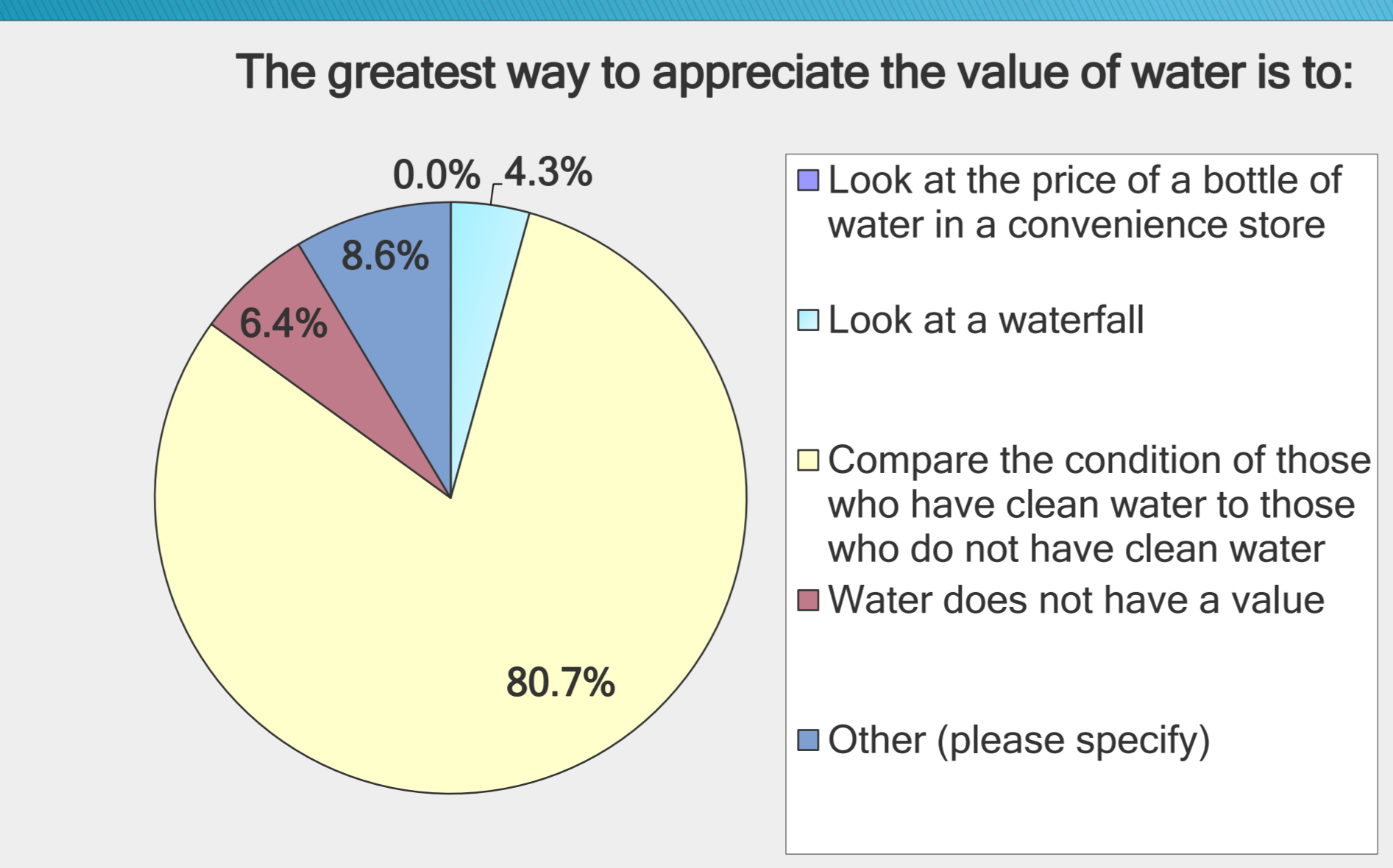
Theme: *Conservation*



Conservation efforts may be due to a perceived moral obligation; individuals feel obligated to act in environmentally friendly ways for ethical reasons (2, 3).

The unique results of those who think water is a private resource indicates a likely dichotomy between thinking that water can be owned versus thinking that water is an open resource.

Theme: *The value of water*



Based on the results, a policy which addresses water as a valuable natural resource may be effective in encouraging conservation; this is reinforced by research which suggests that conservation actions come from self-motivation to conserve a valuable resource (1).

Conclusion

Water issues are not often considered by the participants, and there is a large spectrum of beliefs about water consumption, conservation, control, and management which need further investigation. These beliefs we argue influence what clean water and sanitation policies will be enacted.

These beliefs have a direct influence on the willingness of and the ability to generate water security.

More work is needed to investigate the linkage between water perception and the development of water policies.

References

- (1) Corral-Verdugo V, Frias-Armenta M, Pérez-Urías F, Orduña-Cabrera V, Espinoza-Gallego N. Residential water consumption, motivation for conserving water and the continuing tragedy of the commons. *Environmental management*. 2002;30(4):527-35.
- (2) Wise Water Use 2011: Available from: <http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=F25C70EC-1>.
- (3) Syme GJ, Nancarrow BE, Seligman C. The evaluation of information campaigns to promote voluntary household water conservation. *Evaluation Review*. 2000;24(6):539-78.