



Public Perception

Unconventional
Water

What have YOU read?

Any surveys, polls, focus groups or research about Public Perception regarding:

- Use of desalinated water
- Treated and reused wastewater





What do we know?

Negative impressions about desalinated water and recycled wastewater can impede/obstruct progress with installation of unconventional water solutions

Good News: More People are thinking about Conservation

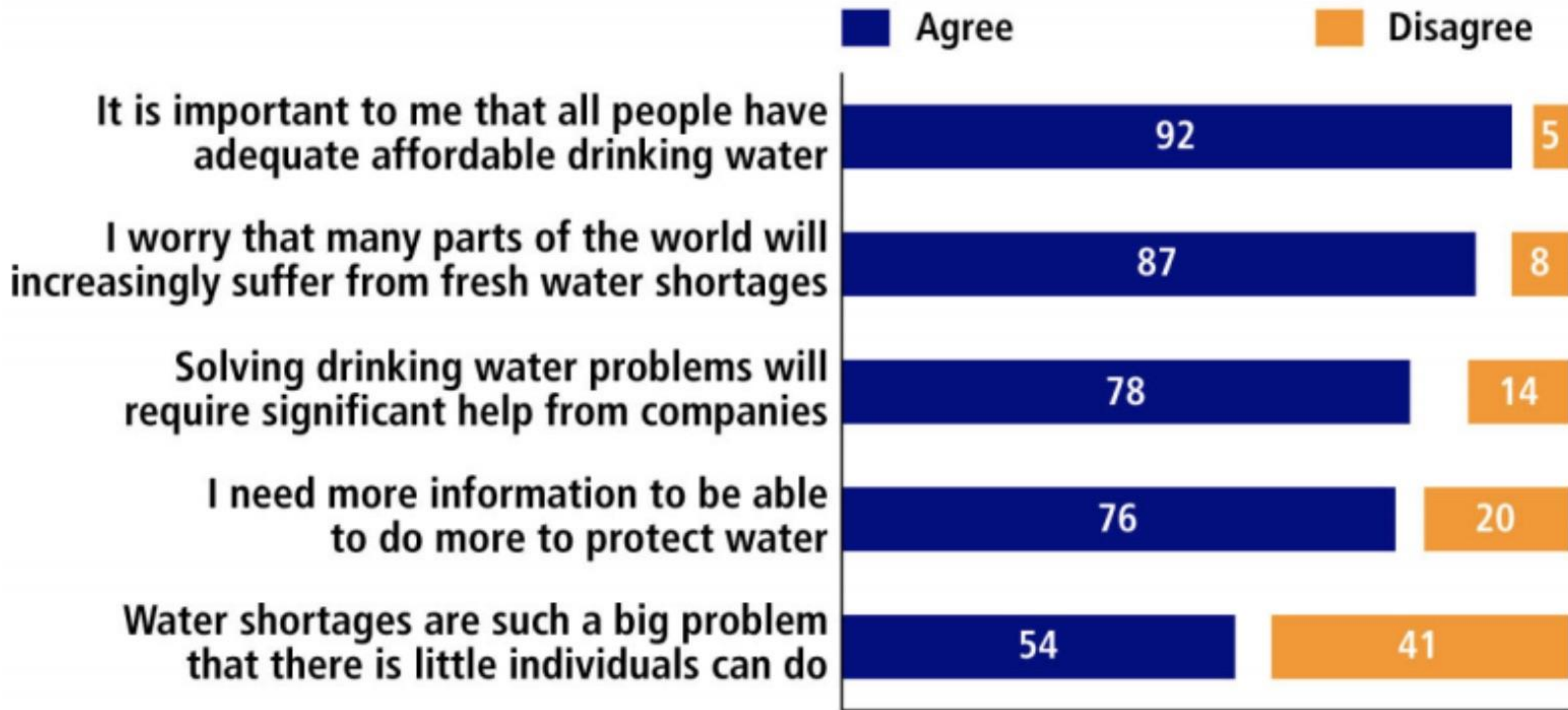
The number of people who consider themselves conservationists in the western U.S. is up from 63% in 2016, to 76% NOW.

- <https://waterpolls.org/conservation-in-the-west-poll-2018/>



- In 2009, a survey in each of 15 countries found that people around the globe see water as the planet's biggest environmental problem, outranking air pollution, depletion of natural resources, loss of habitat, and climate change.





It can be done! Other countries find Recycled/Reused Water Acceptable. The Survey ...

Favoring recycling water for drinking:

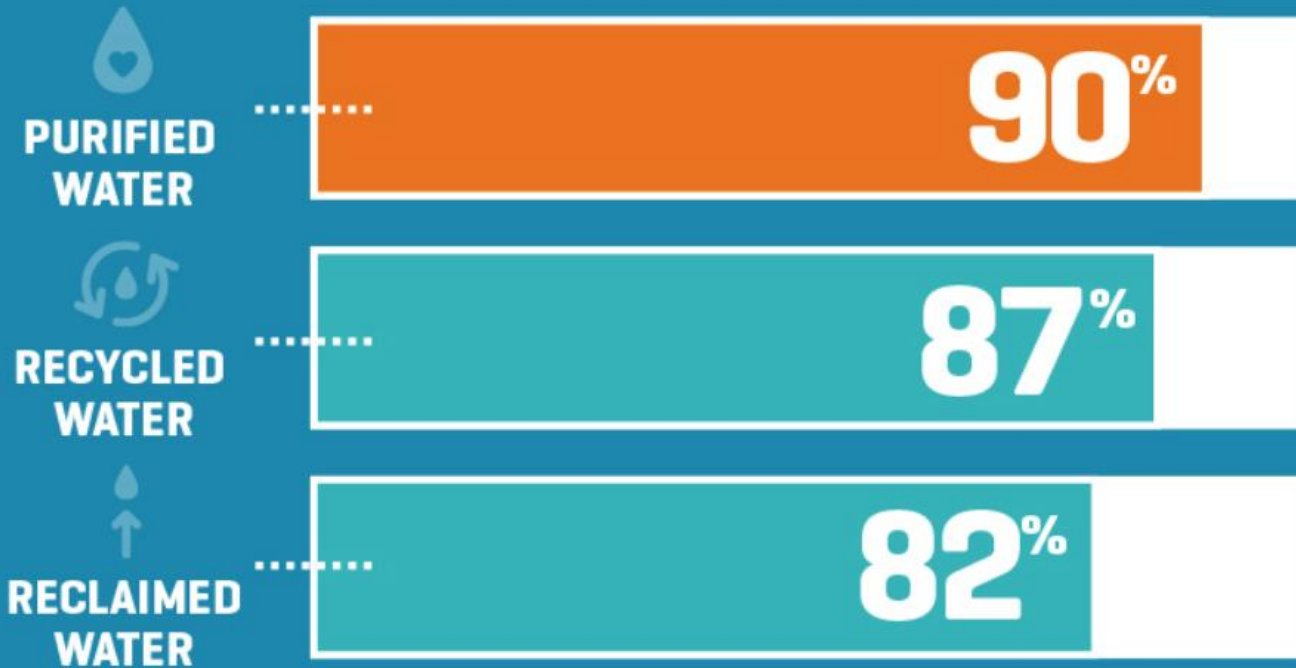
- Netherlands – 75%
- Spain – 73%
- United Kingdom – 67%

- <https://cordis.europa.eu/article/id/435516-europeans-say-yes-to-drinking-recycled-wastewater>



LABELS MATTER:

Referring to reused water as “**purified water**” garners stronger support for its use as an additional local water supply than “**recycled water**” or “**reclaimed water**.”




<https://waterpolls.org/recycled-water-public-opinion/>



People aren't dumb ...
They know there are differences in water.

*But incomplete knowledge leads to
misunderstanding the facts.*



A tall, rusted metal windmill stands in a dry, arid landscape. The windmill has a circular fan with many blades and a lattice tower. The ground is sandy and covered with sparse, low-lying green and brown shrubs. In the background, there are rolling hills under a clear blue sky with a few small clouds. A semi-transparent white circle is overlaid on the right side of the image, containing text.

Public clearly
discriminates between
recycled and
desalinated water.

Figure 1: Comparative perceptions / knowledge about environmental issues

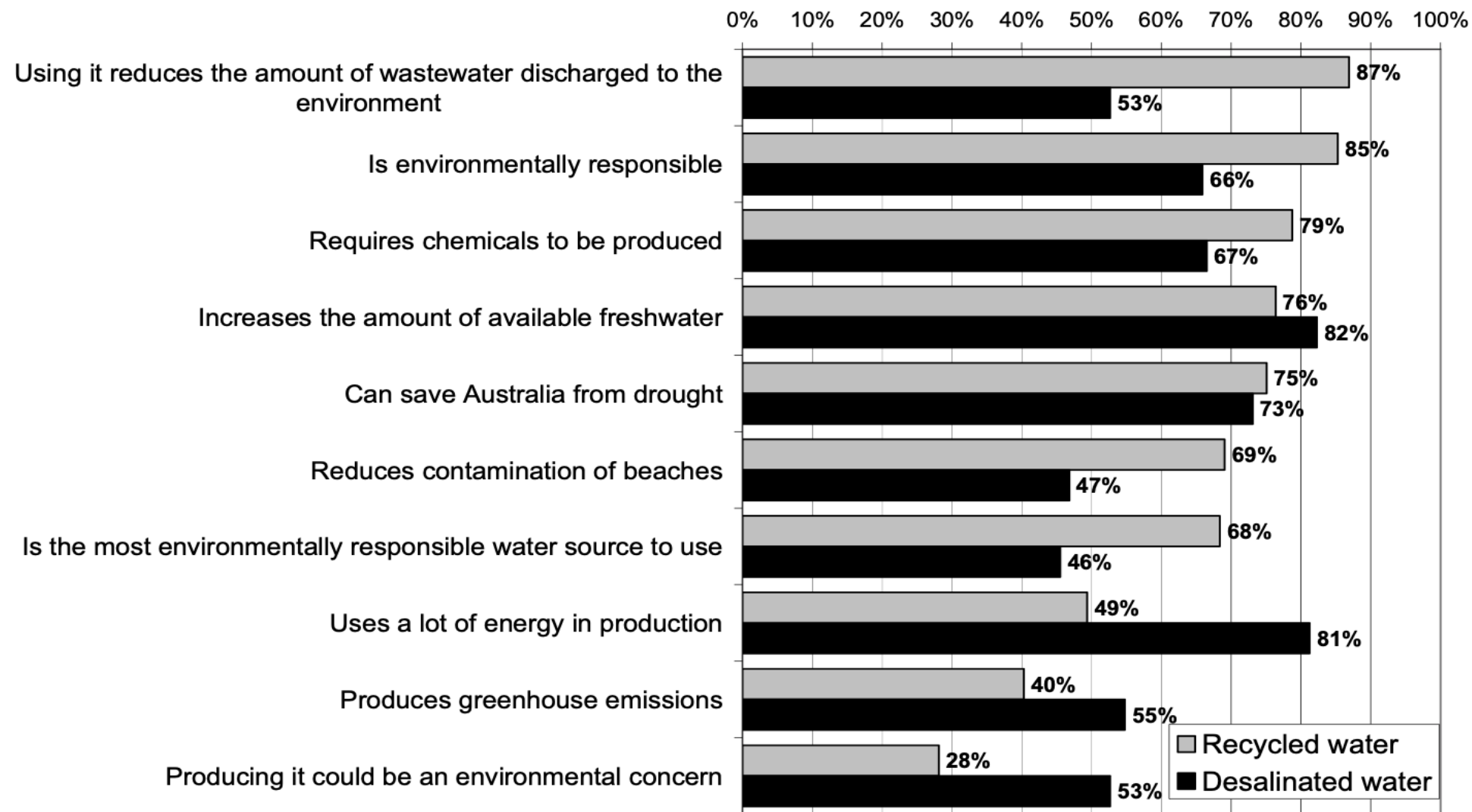


Figure 2: Comparative perceptions / knowledge about health issues

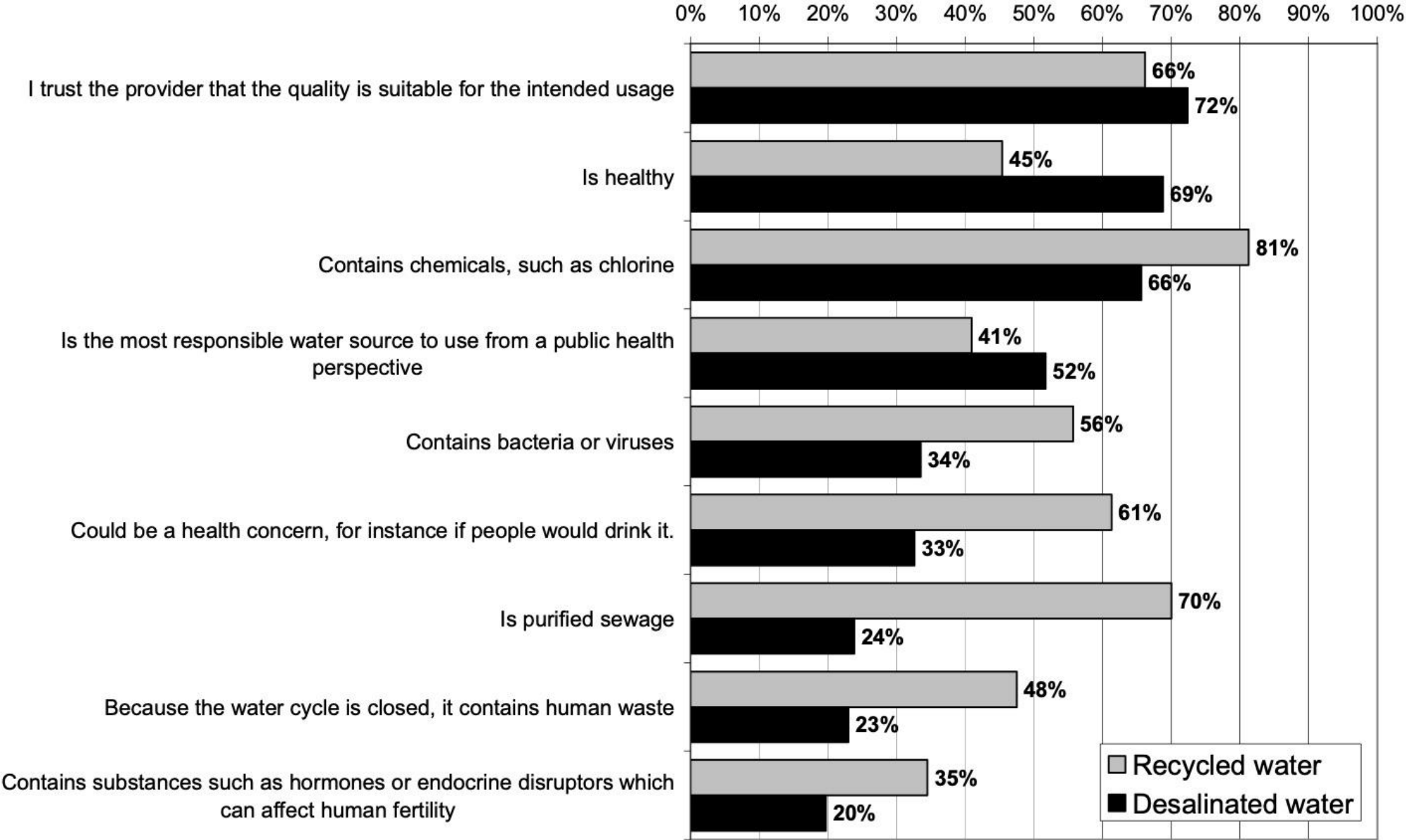
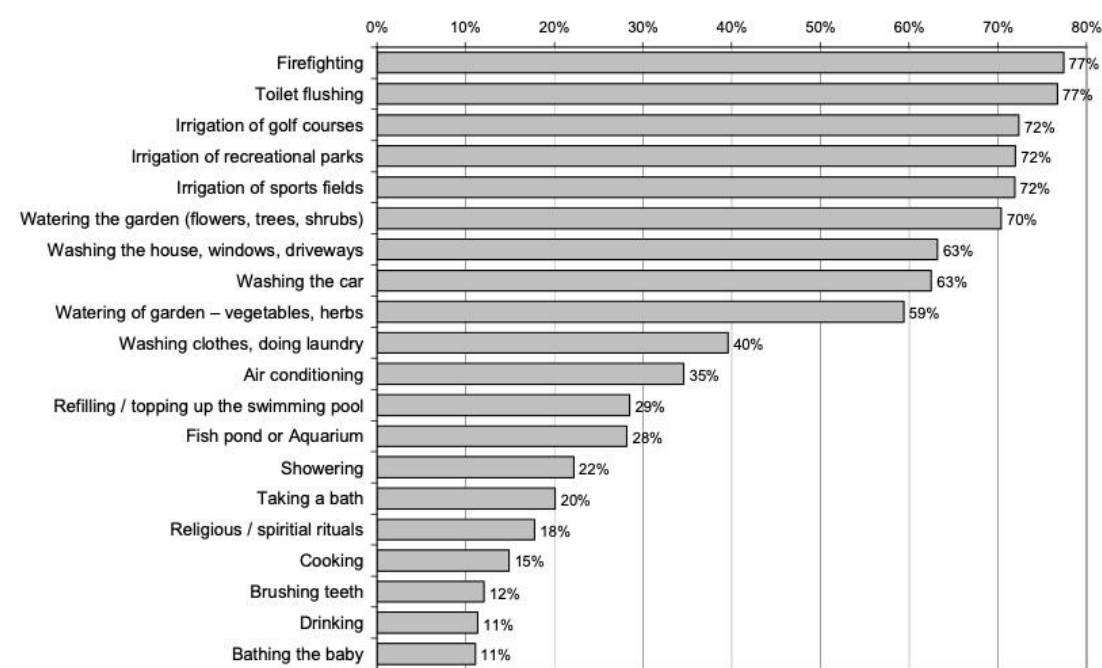
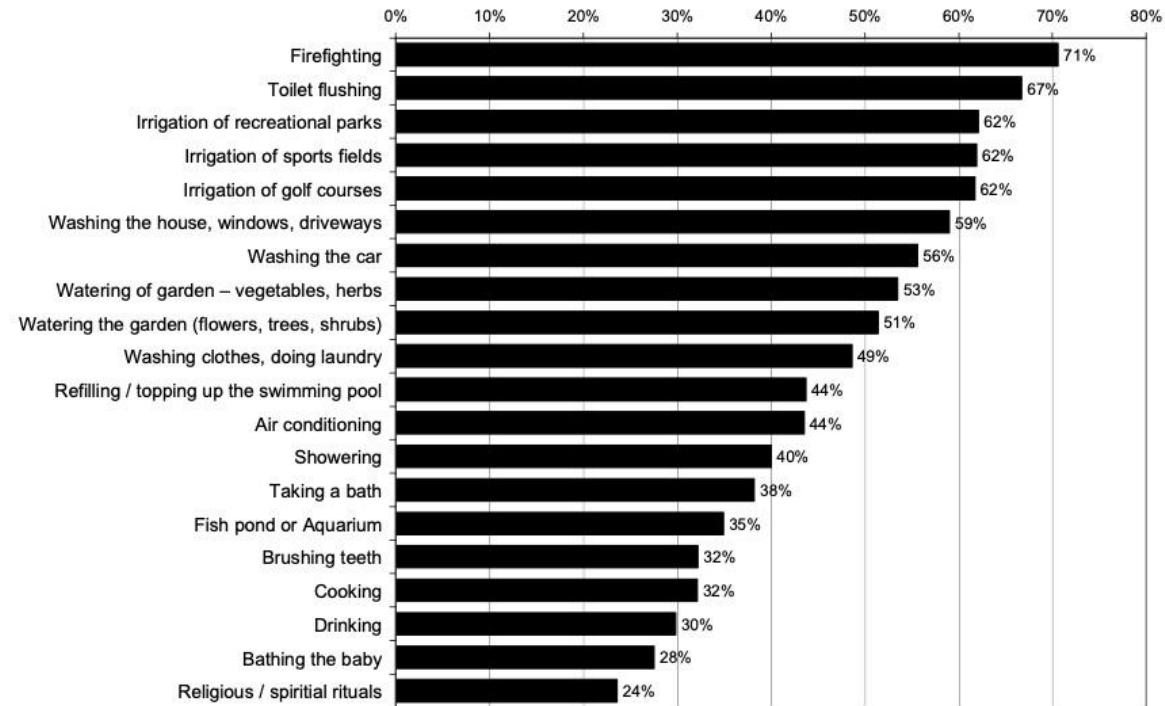


Figure 4: Comparative likelihood of use



Recycled Water



Desalinated Water

Comparison of water uses and order of adoption of recycled and desalinated water. While the absolute order shows the typical pattern of close to body uses being adopted last, the above pattern is mirrored in the ranking task: items such as watering the garden, irrigation of parks, and toilet flushing were adopted earlier in the case of recycled water; uses such as refilling the swimming pool, cooking and drinking were adopted earlier in the case of desalinated water.

- Responses indicate gaps in the general level of knowledge in the population,
 - Respondents believe that recycled water is the more environmentally friendly option,
 - Whereas desalinated water is perceived as less risky from a public health point of view.
 - Fewer reservations about desalinated water than recycled water.
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- Interestingly, however, the results indicate that it is not possible to state that either desalinated water or recycled water is generally perceived as preferable. Future work should investigate whether personal characteristics, such as the education level, prior experience with recycled or desalinated water, prior experience with drought etc. impact on the knowledge, perception and likelihood of use. Further, other water resources such as stormwater, yellow water (urine) and greywater need to be considered.



Knowledge helps Acceptability

- In El Paso, a demonstration facility successfully ran its course for eight months in 2016.
- Soon after, the city gained approval to develop a large-scale facility to carry out DPR, which will likely be finished in 2026 and produce about 10 million gallons of drinking water daily.
- 96% of citizens said they were supportive of the city's DPR plans **after visiting the demonstration facility**.
- <https://www.cnbc.com/2022/08/19/direct-potable-reuse-why-drinking-water-could-include-recycled-sewage.html>

A woman with red hair, wearing a white t-shirt and a green apron, is watering plants in a greenhouse. She is holding a yellow hose with a black nozzle. The greenhouse is filled with various plants, including potted flowers and hanging baskets. The background is bright and slightly blurred, showing more plants and the structure of the greenhouse.

What do growers think?

- Survey of 285 greenhouse growers across the U.S. to measure their knowledge, perceptions and willingness to use recycled water within greenhouse production.
- 73 % of respondents had not used recycled water. Most growers (**83 %**) expressed an initial willingness to use recycled water on nonfood crops such as ornamental plants. However, their willingness dropped to **36%** if recycled water could come in direct contact with food crops.

- <https://www.washingtonpost.com/politics/2021/11/29/recycled-water-can-boost-sustainable-agriculture-if-we-get-over-yuck-factor/>

What is Recycled? What is desalinated?

- Farmers surveyed had wildly different ideas about recycled water and desalinated water
 - What it is
 - Where it came from
 - How safe it is after treatment
 - How expensive it is
 - perceive that recycled water is produced and potentially unsafe.
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- <https://www.washingtonpost.com/politics/2021/11/29/recycled-water-can-boost-sustainable-agriculture-if-we-get-over-yuck-factor/>

Takeaways

- More people like to identify as environmentally friendly.
- Labels matter
- The media has helped make more people aware of the growing water crisis, but we still need to increase knowledge / understanding
- Information and experience create positive attitudes
- Europe may be ahead of USA in Recycling Perceptions
- **We need to seize the day -- We need aggressive information campaigns for farmers, industry and the public.**





Unconventional Water

- More outreach is needed to let public, farmers, and industry know that brackish water and wastewater can be TREATED and REUSED.
- Let's start with finding out what everyone Thinks now!