



Native American vs. Non-Native American Perspectives on Water System Sustainability

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Do Native American students assess the current state of the water system and prioritize future goals in the same way as non-Native American students?

In the study area of central Arizona, there is a significant Native American presence, living both on and off the reservation. Therefore, it is important to explore the **converging and diverging perceptions** of this underrepresented stakeholder with non-Native American residents for future policy directions because the **water system interacts regardless of political boundaries**.

Interviews

Interviews explored participants' experience with and knowledge of water in the Phoenix area.

Sample: Native American (NA; n=4); non-Native American (nNA; n=5)

Participants categorized the water statements based on:

- **Degree of current fulfillment**
 - Well fulfilled, somewhat fulfilled, not fulfilled, or unsure
- **Importance for achieving water resource sustainability in the future**
 - Most important, somewhat important, not important, or unsure

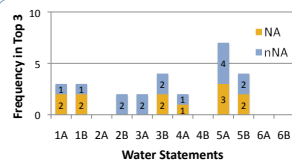
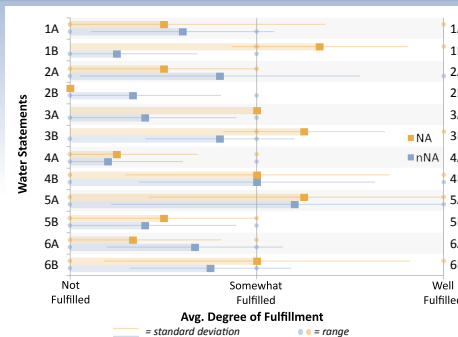
Interviewees explored the consequences of their water priorities by considering a scenario in which it was up to them to decide which of their **Top 3 statements** would receive funding from the State Legislature.

Sustainability Statements

- 1. Precaution & adaptation:**
 - (A) Anticipate & adapt to water shortages before they occur
 - (B) Have a flexible, long-term plan
- 2. Socio-ecological system integrity:**
 - (A) Minimize actions that degrade environment & cause human health impacts
 - (B) Dedicate water to maintain ecosystems
- 3. Resource efficiency & maintenance**
 - (A) Water efficiency
 - (B) Water levels maintained and managed
- 4. Socio-ecological civility & democratic governance:**
 - (A) Residents actively participate in decisions
 - (B) Needs & interests of all people considered & respected
- 5. Intergenerational & intragenerational equity**
 - (A) All residents have access
 - (B) Keep future generations in mind
- 6. Interconnectivity of global system**
 - (A) Effects of local use on outside systems
 - (B) Effects of outside systems on local use

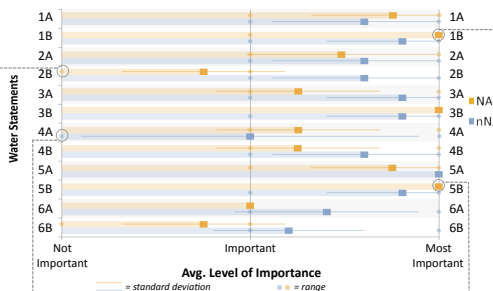
(statements shortened for poster)

Native American students perceive higher levels of long term planning (1B) and resource efficiency and maintenance (3A/B) and lower levels of socio-ecological system integrity (2A/B)



Both groups prioritize all residents having reliable access to water to meet their needs (5A)

Both groups rank global interconnectivity (6A/B) the lowest, but differ on supporting ecosystems (2B) and resident participation (4A)



"Whether I show up to a town hall meeting next week and voice my pretty unresearched opinion on water isn't going to make a big difference... All residents are not really needed."
"Things can still function without as much resident participation."

"If we are going to have children...make sure that what we're doing now doesn't make it worse for them."
"That's how tribal communities work, I don't really see that in Phoenix."

"I think there are more important things...We're so limited on what we have, and I guess we're more important than fish. It sounds horrible."

"It's important because we live in a desert, so it's kind of hard to just get water."

Limitations

Study Limitations:

- The small sample size of this pilot study (n=9) limits the conclusions that can be made from the data.
- Students attending a university cannot be considered representative of the larger Native American and non-Native American populations.

Material Limitations:

- A Native American participant pointed out that an appreciation for water and its value is not captured by the current water statements.

Social Norm Limitations:

- While most students agreed that resident participation is currently not being fulfilled, many did not think that widespread participation was necessarily important for a sustainable future. But in a current system where it is not the norm, the importance of participation (which numerous sustainability literature promotes) may not be appreciated.

Value of Diverse Views

In a diverse city such as Phoenix, we need to make sure that before we start creating solutions, everyone identifies the problems and possible solutions in a similar way. If not, we need to find ways to reconcile these differences.

From this pilot study, it seems that Native American and non-Native American students share many common levels of perception for both the current state of the water system (or the "problem") and prioritizing future goals (or the "solutions").

Further Study

- Increase study's sample size and scope
- Incorporate appreciation of water into principles and statements
- Explore other underrepresented stakeholders' perceptions and priorities

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