

Introduction

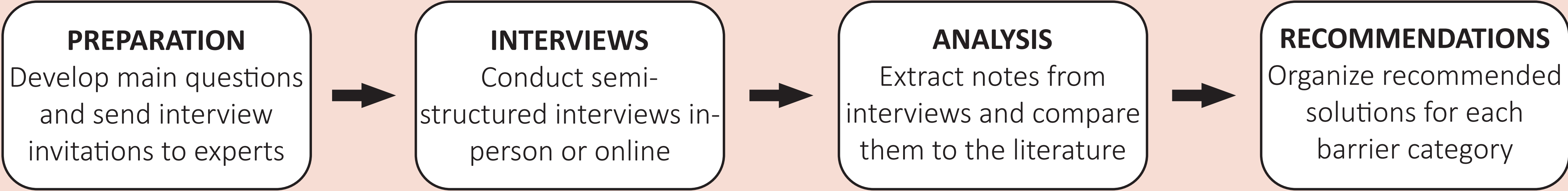
Declining water supplies in the region, coupled with a **high outdoor water use** of ~60% (US EPA, 2019; USGCRP, 2018) put future water availability at risk. **Yet, adoption remains low** for water conserving landscapes. Existing research has found barriers to implementation and recommended some solutions, but there are more obstacles and opportunities to address them.

Results

Uniting design professionals, policymakers, and other **stakeholders is critical** to form a cohesive vision **to advance water conservation** goals, giving place to more favorable regulations.

Methods

Research conducted in **Tucson, AZ**, following a **cross-sectional** research design with **two data collection periods** (Oct. 31 to Nov. 13, 2021 Feb. 1 to Feb. 22, 2022). Landscape architects, scientists, and ecologists working in Tucson were interviewed. Reviewed literature focused on public policy and public communication.



“Rainwater harvesting programs combined with xeriscape regulations and the use of reclaimed water for landscape irrigation have significantly reduced outdoor water use – the larger municipal use in Tucson” (Zuniga-Teran & Tortajada, 2021).

Conclusion

Though there are many barriers to making water conserving landscapes more widespread, there are many opportunities to mitigate them. **Collaboration, education, and innovation** are key to increase adoption of water conservation in urban landscapes.

References

Lundy, L., Lamm, A., Warner, L., & Lamm, K. (2016). Associating Importance with Behavior: Providing Direction for Water Conservation Communication. *Journal of Applied Communications*, 100, 44–56. <https://doi.org/10.4148/1051-0834.1229>

Kenney, D. S., Klein, R. A., & Clark, M. P. (2004). Use and Effectiveness of Municipal Water Restrictions During Drought in Colorado. *JAWRA Journal of the American Water Resources Association*, 40(1), 77–87. <https://doi.org/10.1111/j.1752-1688.2004.tb01011.x>

Spinti, J. E., Hilaire, R. S., & VanLeeuwen, D. (2004). Balancing Landscape Preferences and Water Conservation in a Desert Community. *HortTechnology*, 14(1), 72–77. <https://doi.org/10.21273/HORTTECH.14.1.0072>

US EPA. (2019). Outdoor Water Use in the United States. United States Environmental Protection Agency. <https://19january2017snapshot.epa.gov/www3/watersense/pubs/outdoor.html>

USGCRP. (2018). Fourth National Climate Assessment (pp. 1–470). U.S. Global Change Research Program, Washington, DC. <https://nca2018.globalchange.gov/chapter/3>

Yuma East Wetlands, Phases 1 and 2. (2014, January 16). Landscape Performance Series. <https://www.landscapeperformance.org/case-study-briefs/yuma-east-wetlands>

Zuniga-Teran, A., & Tortajada, C. (2021). Water policies and their effects on water usage: The case of Tucson, Arizona. *Water Utility Journal*, 28, 1–17.

CATEGORY	KEY BARRIERS	SYNTHESIS OF SOLUTIONS
Professional Practice	» Insufficient communication and collaboration	» Interdisciplinary collaboration and public engagement
Political	» Ineffective policies, lack of coordination, and hesitance to explore new solutions	» Innovative and adequate policies, educational programs, and collaborative efforts
Social	» Misinformation and disconnection with nature	» Better educational programs; high-quality green spaces
Economic	» Costs of maintenance and technologies; non-inclusive incentives; material availability	» Effective and fair incentives; set up funds and programs for landscape maintenance