

# Review of: "Non-revenue Water Reduction"

Holger Benavides-Muñoz<sup>1</sup>

<sup>1</sup> Universidad Técnica Particular de Loja

**Potential competing interests:** No potential competing interests to declare.

This reviewer appreciates the effort that the author invested in the manuscript titled "Non-revenue Water Reduction." Following this, this reviewer humbly wishes to offer the author some constructive feedback that should contribute to enhancing the quality and impact of your work.

- 1) The manuscript lacks a clear research gap and innovative hypotheses. I recommend identifying open questions to investigate, such as comparative evaluations of specific loss reduction tactics or economic quantification of SCADA impacts.
- 2) The Esna case study's disconnect from the core framework needs attention. Integrate the case analysis into the manuscript, ensuring it aligns cohesively with the objectives, theoretical framework, methodology, results, discussion, validation, and model sections.
- 3) The author should emphasize limitations, data uncertainty, and statistical significance testing. Provide a rationale for design choices and deepen comparisons against relevant literature, ensuring consistency between sections.
- 4) Simplify visual elements, ensure consistent formatting, and address contrast and font issues. For example, the color combination (yellow text on orange background), along with the text size, makes it challenging to read and interpret the figures.
- 5) Strengthen the citation of prior literature by explicitly linking concepts, expanding the literature review, and organizing references.
- 6) Introduce quantitative analytic models, equations, simulations, and statistical tests to substantiate methodology, framework, and outcomes.
- 7) Elaborate on the SCADA system setup, instrumentation, and data architecture. Provide more details on data analysis and NRW calculations.
- 8) Mention validation procedures for results and water balance calculations in the proposed Data and Methods section.
- 9) Enhance the textual discussion with data tables/figures. Provide precise statistics on NRW reduction through the SCADA system. Additionally, the author should consider comparing their results with those of similar cases published in the current specialized literature.

- 10) Consider integrating smart metering, real-time customer usage monitoring, and leakage isolation functionalities.
- 11) Transparently discuss limitations, including data biases, small sample size, external factors, and the lack of isolated mechanisms leading to NRW reduction.
- 12) Highlight standard methods for measurements and calibration. Report quantitative metrics for NRW analytics and independent verification procedures.
- 13) Future work: Looking into the limitations highlighted earlier, the author has the opportunity to delve into future studies.

Addressing these points will, in some way, enhance the quality and coherence of your manuscript.