

# Review of: "Non-revenue Water Reduction"

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

## FORMAL ASPECTS

- Good way of writing (length, layout)
- The subject of Non-Revenue Water (NRW) is interesting and lends itself to much and varied study since sustainable and reasoned water management is essential, especially in the context of smart cities
- It is not necessary to assess the paper's consistency with journal aims
- The style used allows clarity, incisiveness, and accuracy
- All figures in the article have low quality

## SECTION 1 - INTRODUCTION

- In this section, as in the whole paper, a coherent literature review is lacking: in order to create an adequate background and to realize an effective, focused, and comprehensive topic discussion, with scientific rigor, it is necessary to create a recent, critical review of the state of the art
- The topics covered (use of SCADA to reduce NRW and improve water system management) are presented with sufficient clarity, with a well-defined theoretical choice in the presentation
- The objectives are clear, the scope of the research, and the specific aspects analyzed are well defined (also in the abstract)
- Referring to the topic, perhaps it would be useful to provide a framework for governing water management practices in smart cities, ensuring right practices, data security, and accountability

## SECTION 2 - IMPLEMENTATION

- The methodology section is well written and understandable. However, this section is the one that needs the most improvement
- It would be better to improve the methodological clarity, with practical examples and a more balanced in-depth analysis: it would be helpful to provide more detail on the methodology used to integrate artificial intelligence and machine learning into SCADA systems
- Case studies or practical examples should be included to allow the methodology to not remain only theoretical (currently it looks like an algorithm with its steps) and it could enrich the reader's understanding of the application of these technologies
- It would be useful and intuitive to include a methodology flow chart

### SECTION 3 – RESULTS AND DISCUSSION

- Since there aren't any results from analyses performed and data to discuss, the discussion here also remains only theoretical
- It would be useful to include, at least, a more in-depth discussion of the limitations and potential challenges in implementing these technologies. It would improve the paper's balance
- What is the usefulness of Figure 4?
- Obviously, a comparison with previous studies lacks: including a more detailed comparison with similar studies would help contextualize the results (if they are inserted)

### SECTION 4 - RECOMMENDATIONS AND CONCLUSIONS

- This section is a consequence of the study carried out, so here in this section, the highlighted "shortcomings" are even more apparent
- A larger amount of data is suggested to be considered
- Overall, the study is useful and potentially expandable, also in relation to the Recommendations provided (again only theoretical)