Modelling spatiotemporal dynamics of groundwater vulnerability to contamination: a systematic review

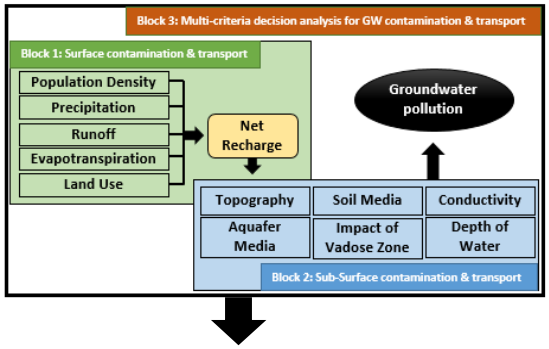
[1]Arghadyuti Banerjee, [1]Leo Creedon, [2]Noelle Jones, [3]Laurence Gill, [1]Aonghus Odomhnaill, [1]Salem Gharbia

[1]Atlantic Technological University, Sligo
[2]Atlantic Technological University, Galway City
[3]Trinity College Dublin, Dublin, Ireland
Corresponding author: arghadyuti.banerjee@research.atu.ie

OBJECTIVES

To assess the model parameterisation and computation by analysing the case studies.

To evaluate the recent developments in spatiotemporal assessment techniques for groundwater contamination.

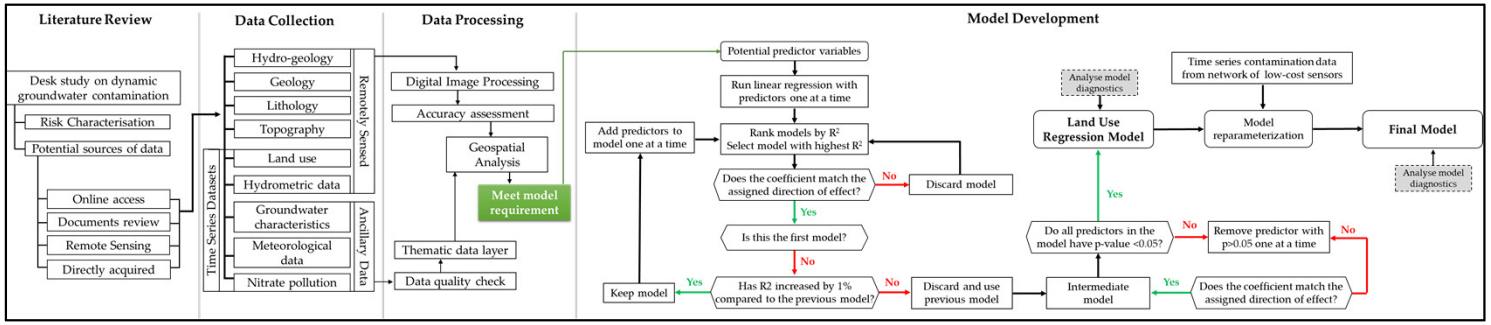


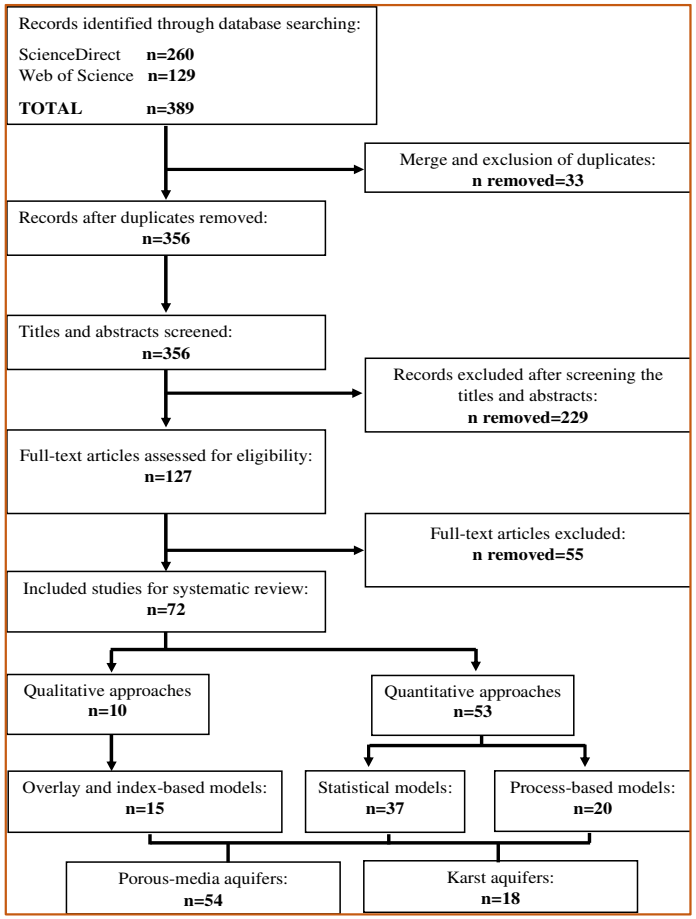
HIGHLIGHTS

- Systematic review of groundwater contamination vulnerability modelling techniques
- Evaluates past trends and current applications of modelling techniques
- Assessment of models for spatiotemporal dynamics of groundwater pollution risk
- Research gap in model optimization and setting up time-dependent driving factors

AIM

Developing a framework/decision support tool that will generate different probabilistic groundwater contamination scenarios considering nitrate as an indicator.





Banerjee, A.; Creedon, L.; Jones, N.; Gill, L.; Gharbia, S. Dynamic Groundwater Contamination Vulnerability Assessment Techniques: A Systematic Review. Hydrology 2023, 10, 182. https://doi.org/10.3390/hydrology10090182

This PhD project is funded by Connacht-Ulster Alliance (CUA) Bursary at Atlantic Technological University, Sligo.