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Mitigating the Global Potable Water Crisis: A Systematic Review of Emerging Urban Stormwater Conversion Technologies

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INTRODUCTION

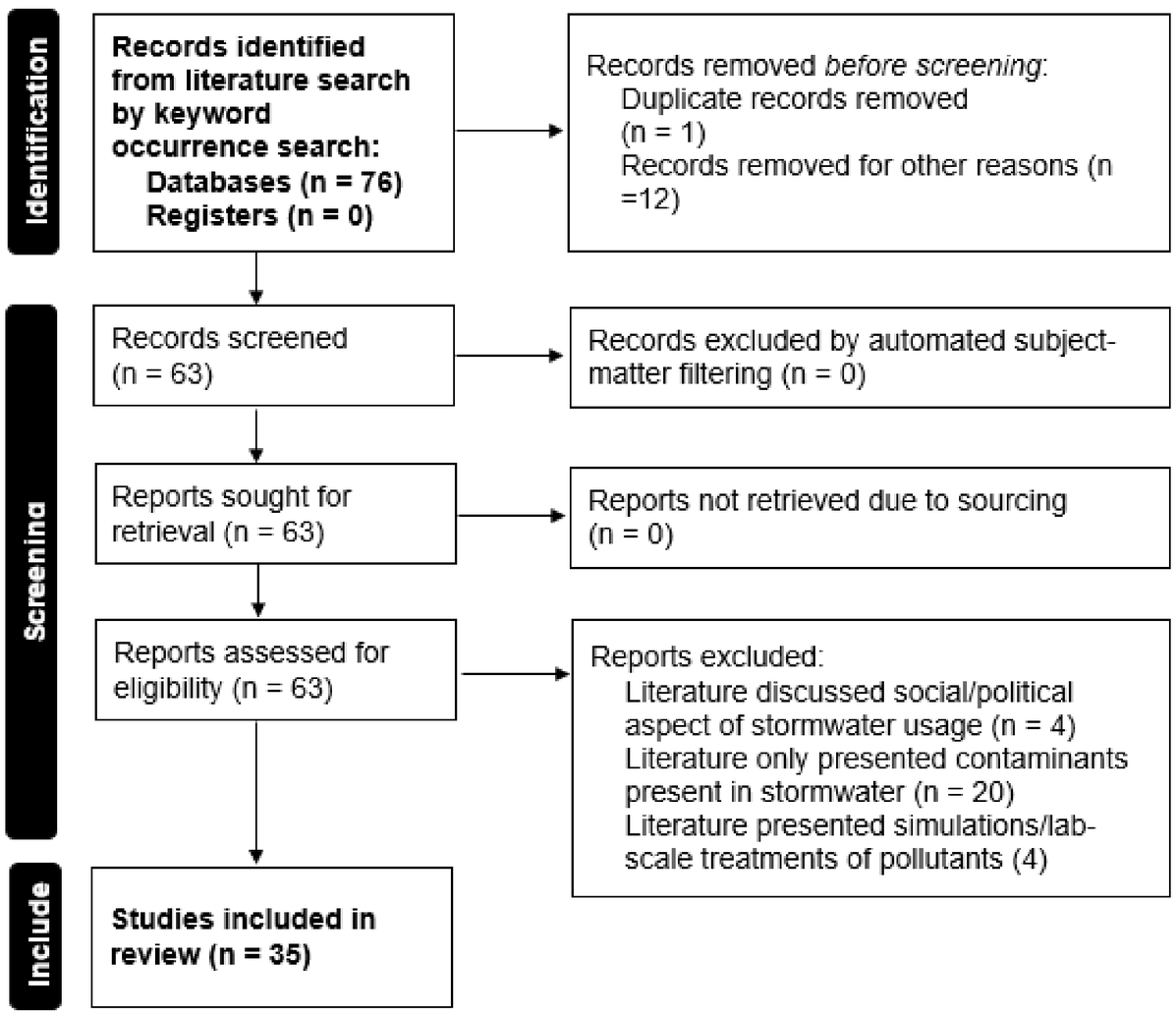
The ongoing global potable water crisis affects 46% and 26% of the global population due to having no safely managed water for sanitation and unsafe drinking water, respectively. While existing studies are focusing on treatment technologies for potable water, the research interests shifts toward the utilization of existing resources. This includes the analysis of the potential of urban stormwater as a source of potable water and the development of necessary technologies necessary to ensure safe drinking water from these resources.

METHOD

The review utilized the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines to identify the relevant literatures from the SCOPUS database for the topic of potable water production using emerging urban stormwater conversion technologies

Figure 1.

Identification of relevant literatures and studies for the systematic review



RESULTS & DISCUSSION

Figure 2.

Overlay visualization of co-occurrence bibliometric analysis of urban stormwater to potable water

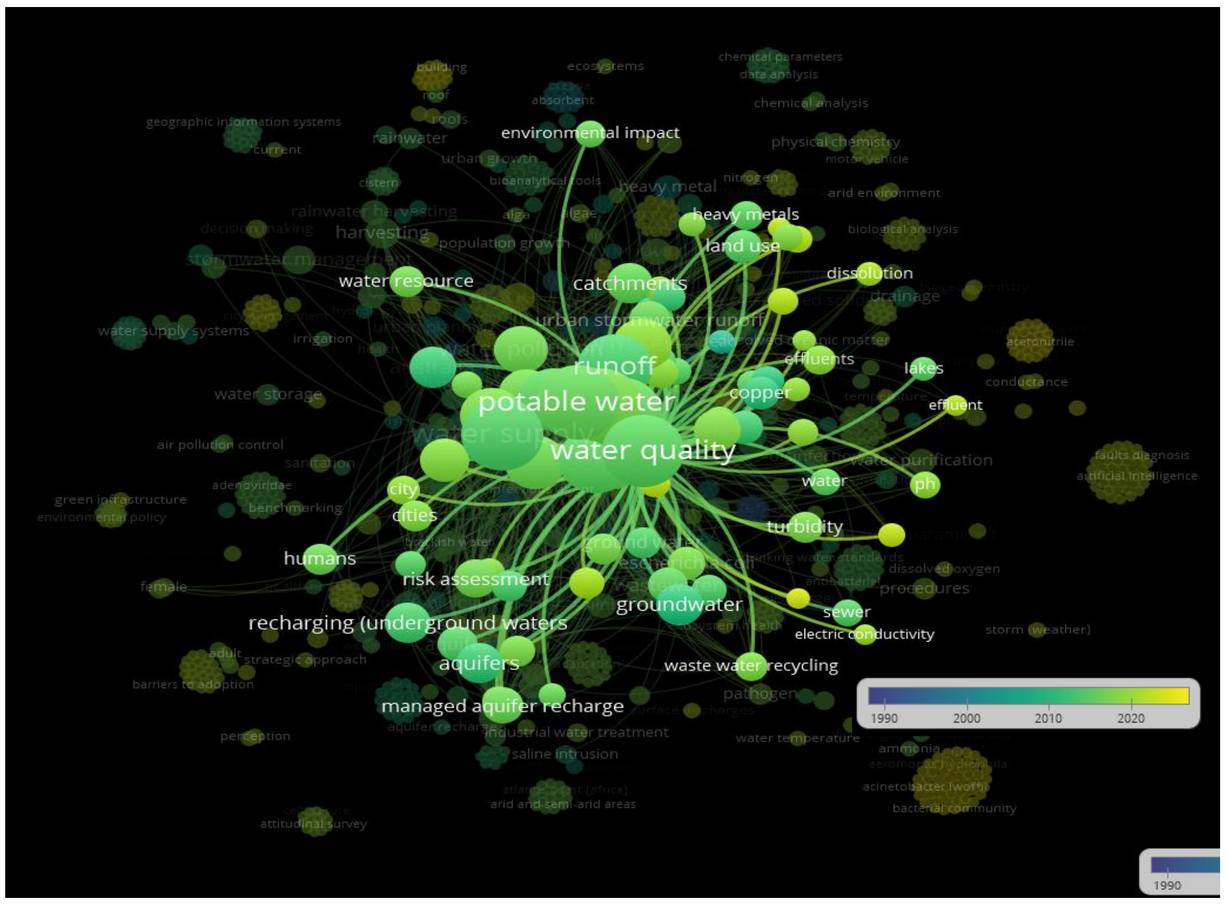


Figure 3.

Emerging trends in urban stormwater to potable water conversion technologies

RESEARCH GAP

The research shifts towards the idea of utilizing artificial intelligence and machine learning to optimize urban stormwater management systems, resource allocation efficiency and to develop an effective and efficient system in converting urban stormwater to potable water

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