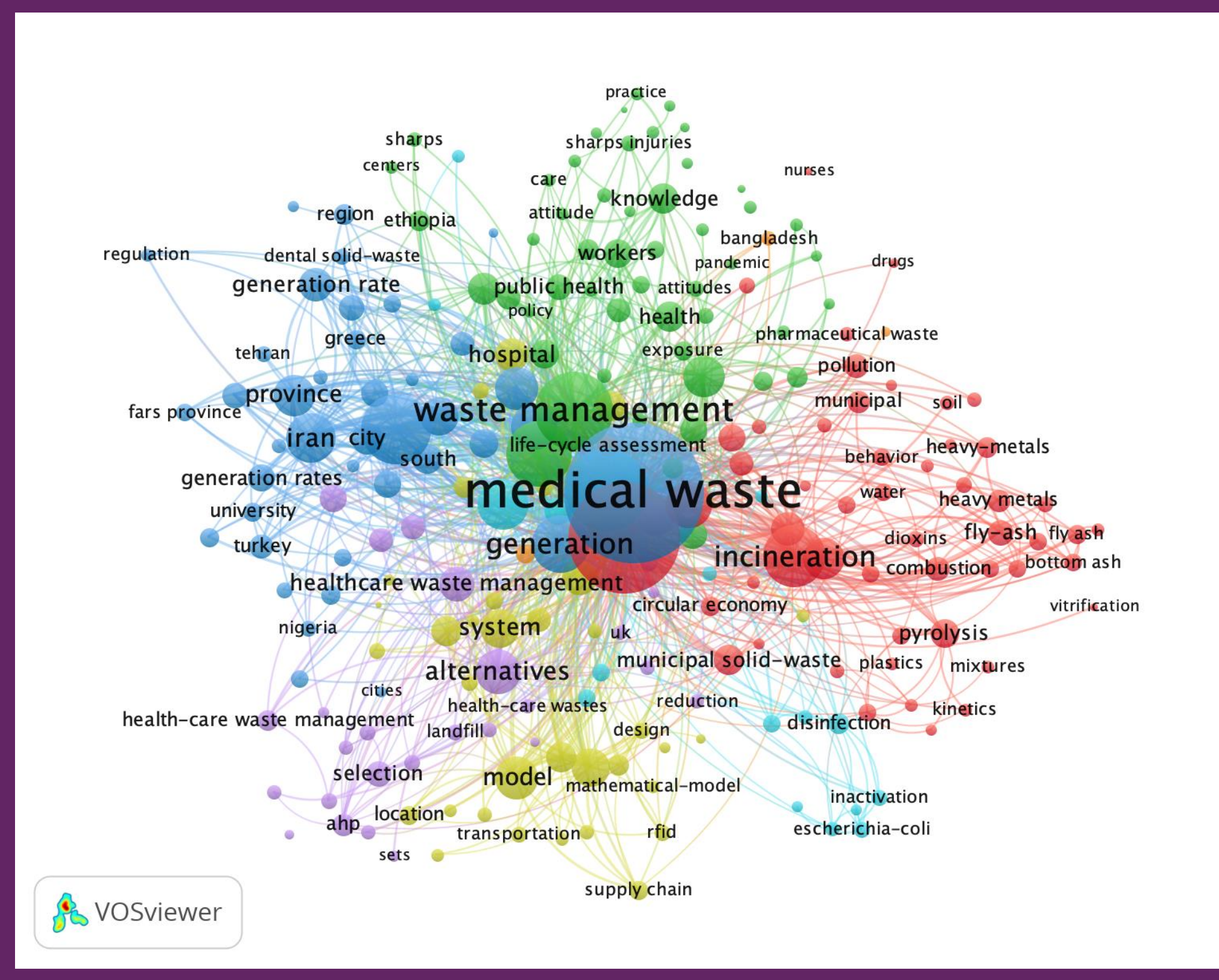


Further research is required regarding social aspects that affect the healthcare waste management

The results show that medical waste is a topic that is gaining more attention every year, especially last few years when issues related to COVID-19 were in focus. Handling and safety were also a significant part of the discussions. Results from data analysis show that material recovery and circular economy are the topics that have been less covered in existing research. This indicates a research gap and topics for further study in the field of medical waste management.

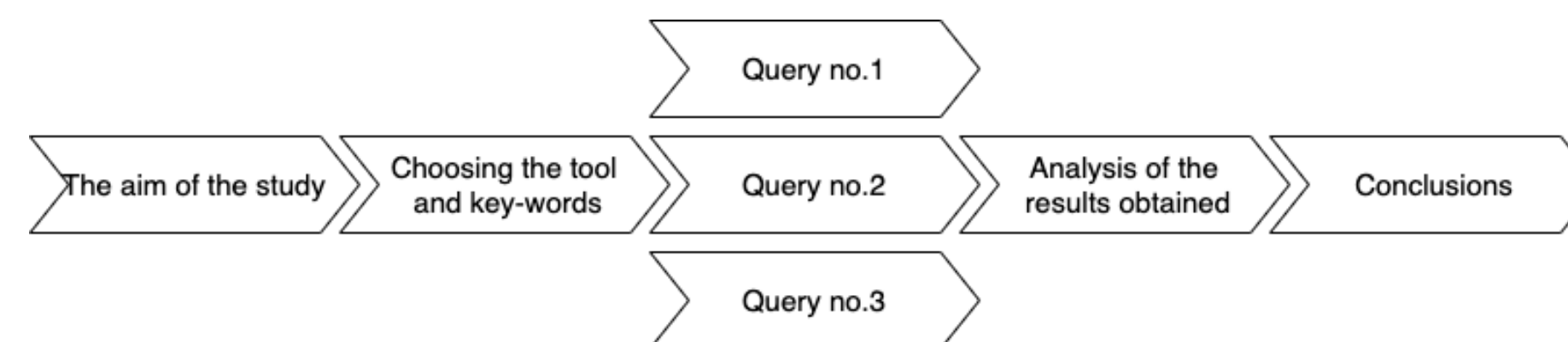


Introduction

The circular economy is a solution for reducing the impact of societies on the environment and replacing the landfilling approach, which takes the materials out of the circulation, with other more sustainable solutions. This study focuses on a minor part of the waste stream, which has changed due to the COVID-19 pandemic - the health care waste. A bibliometrics analysis method is applied to present an overview of health care waste management research. A Web of Science database is used to obtain the articles for bibliometric analysis. The program VOSviewer is used to analyze connections between articles for keywords, date of publishing, and origin.

Methods

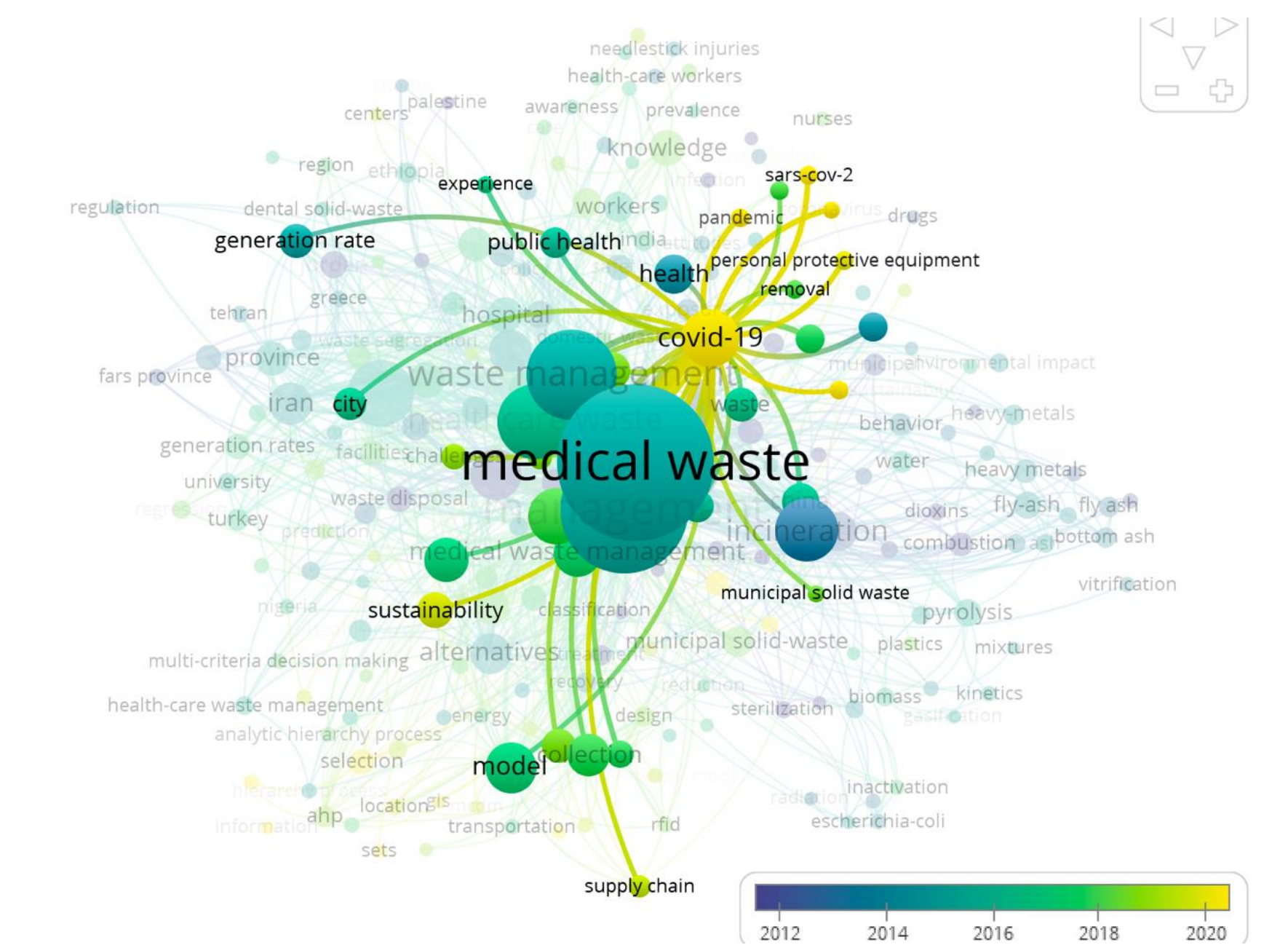
Bibliometric analysis was applied for four queries with keywords: «medical waste» or «healthcare waste» together with four different options: «management», «social life cycle analysis», «circular economy» and «recovery».



Articles, proceedings papers and reviews were included. The time of publishing was not limited.

Results

The search results for all four queries have shown that the main research has been carried out on the topics of logistical issues, the safety of workers, management systems and modules, incineration, and other medical waste treatment methods. The influence of the COVID-19 pandemic has taken part in medical waste research, highlighting issues related to personal handling of the waste, emissions, and alternatives.



The top countries that have produced research on these topics are China, Iran, Turkey, and Greece. The top keywords with the higher number of occurrences are medical waste, waste management, incineration, healthcare waste emissions, and alternatives.

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