Escuela Superior Politécnica del Litoral

PARES o NONES
Un break científico

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GOOGLE EARTH ENGINE: A GLOBAL ANALYSIS AND FUTURE TRENDS

PROBLEM

The continuous increase in the volume of geospatial data has led to the creation of storage tools and the cloud to process data. Google Earth Engine (GEE) is a cloud-based platform that facilitates geoprocessing, making it a tool of great interest to the academic and research world.

MAIN OBJETIVE

This article proposes a bibliometric analysis of the GEE platform to analyze its scientific production.

Figure 1. Evolution of scientific production on GEE.

PROPOSAL

The methodology consists of four phases:

The first phase corresponds to selecting "search" criteria.

The second phase focused on collecting data during the 2011 and 2022 periods using Elsevier's Scopus database.

Software and bibliometrics allowed to review the published articles during the third phase.

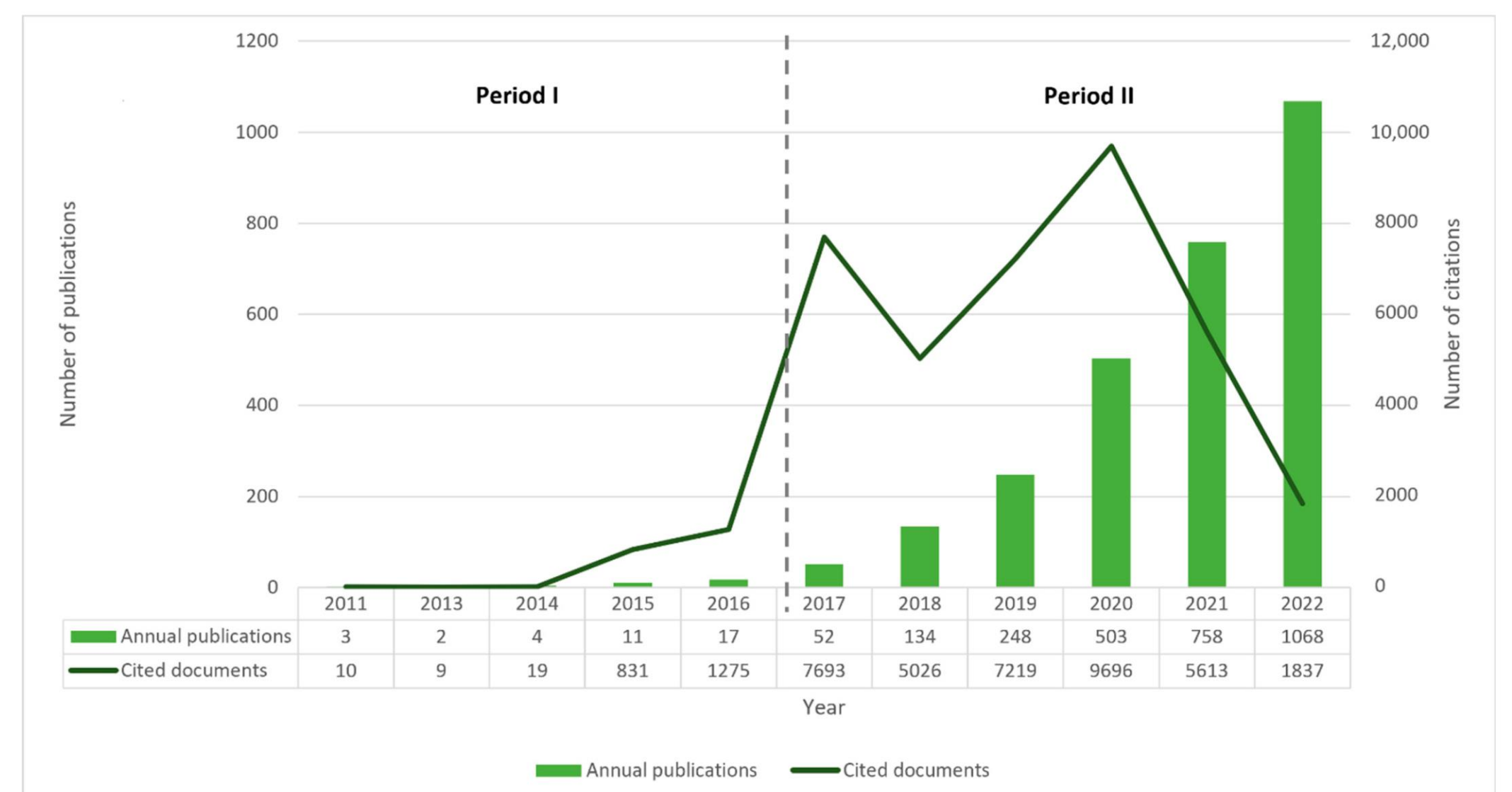Finally, the results were analyzed and interpreted in the last phase.
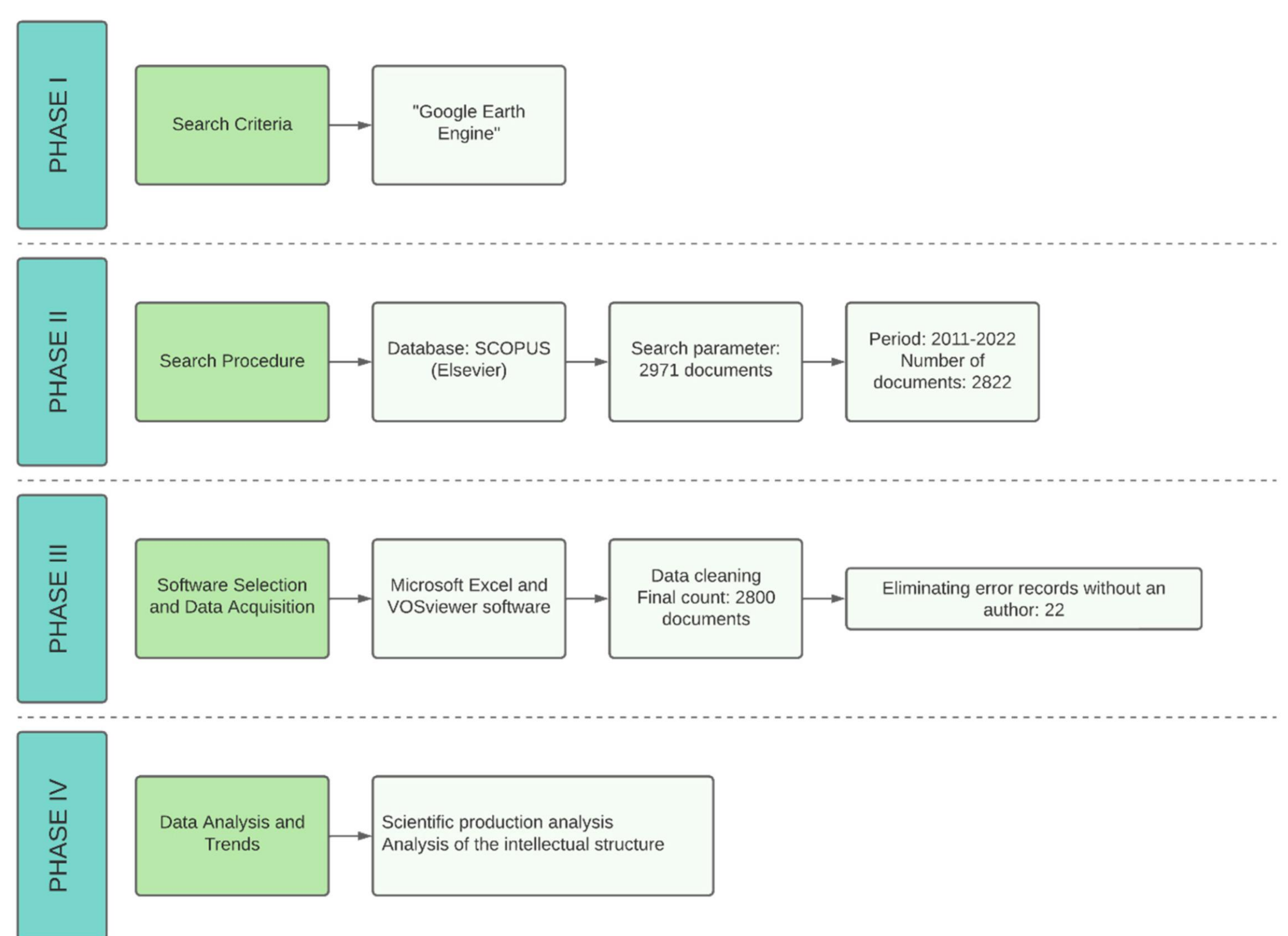

Figure 2. Scheme of the methodology applied in this research.

RESULTS

The research found 2800 documents that received contributions from 125 countries, with China and the USA leading as the countries with higher contributions supporting an increment in the use of GEE for the visualization and processing of geospatial data.
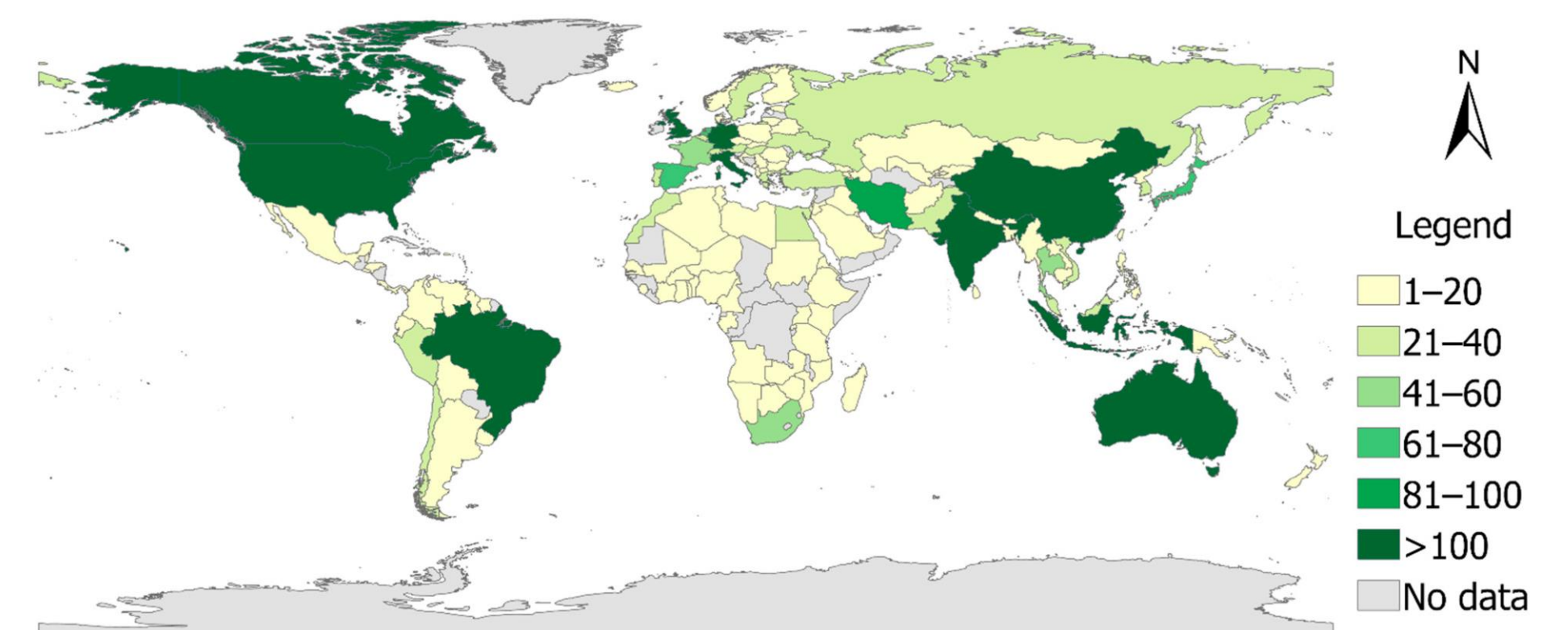

Figure 3. Map of countries that have conducted studies using the GEE platform, according to the number of publications
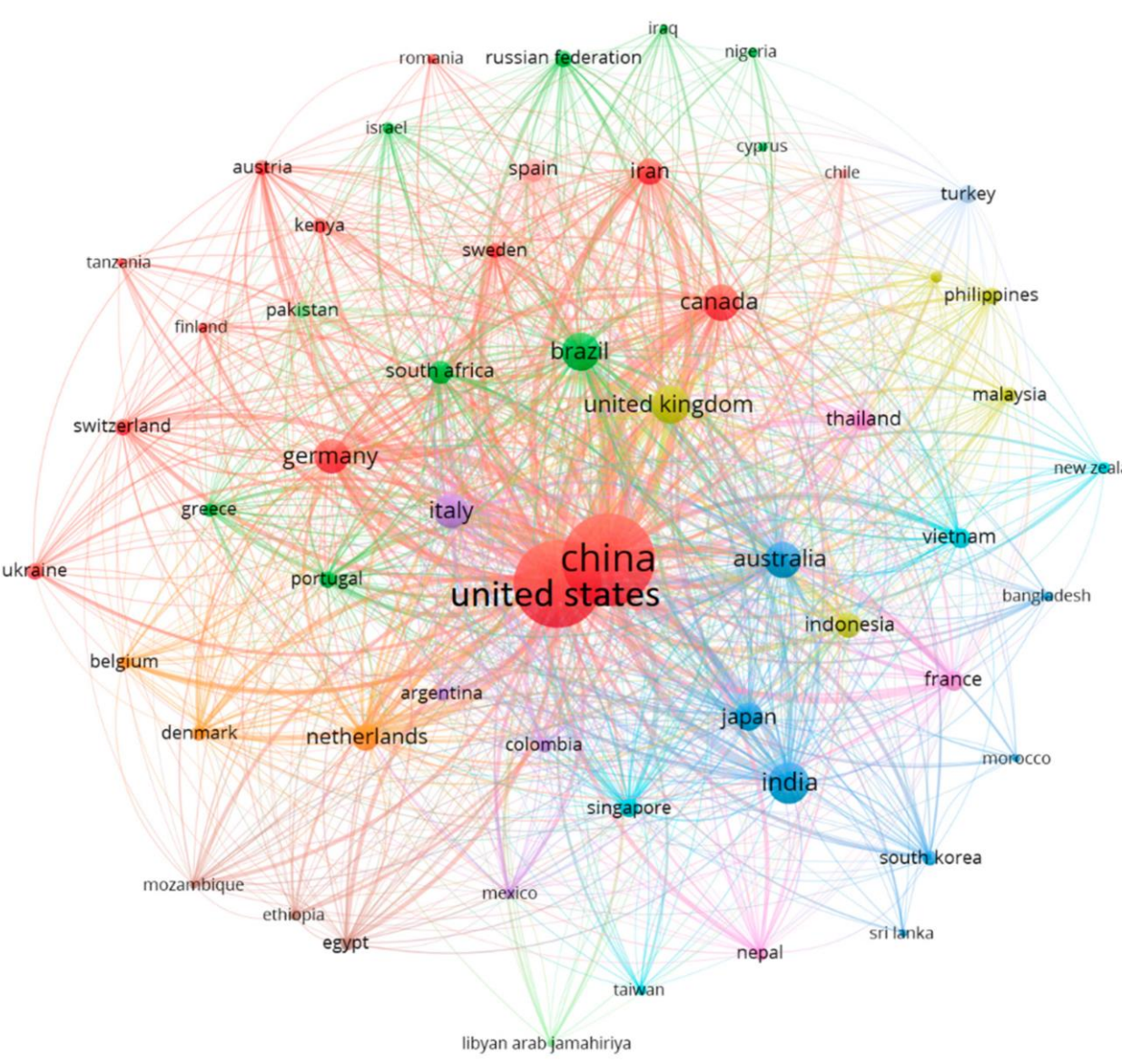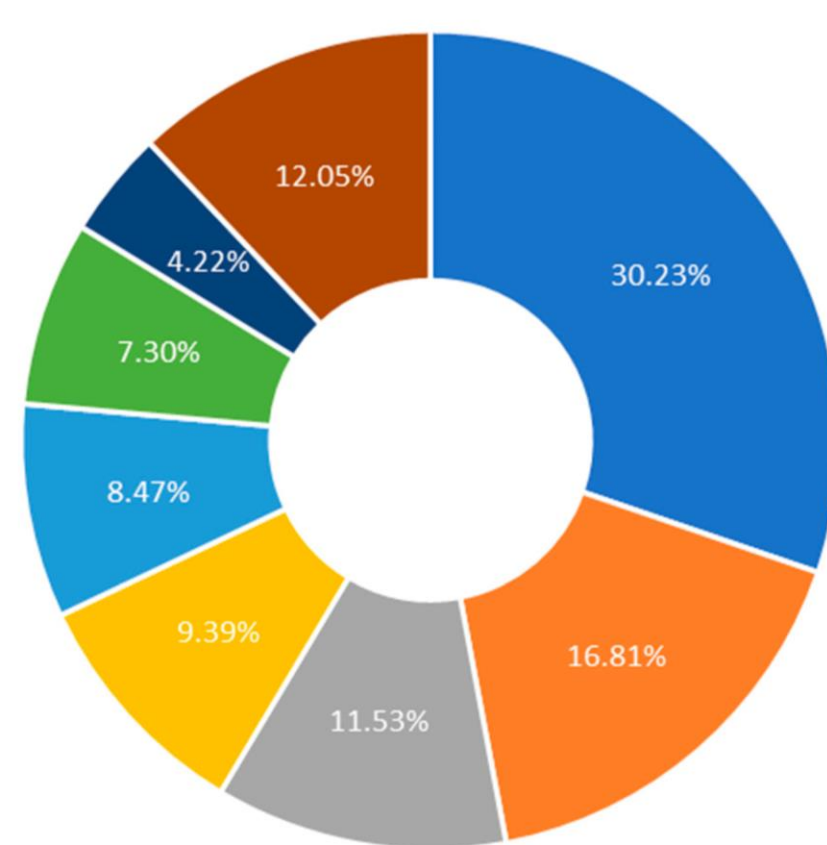

Figure 4. Countries network.

Figure 5. Main subject areas of GEE research in Scopus.
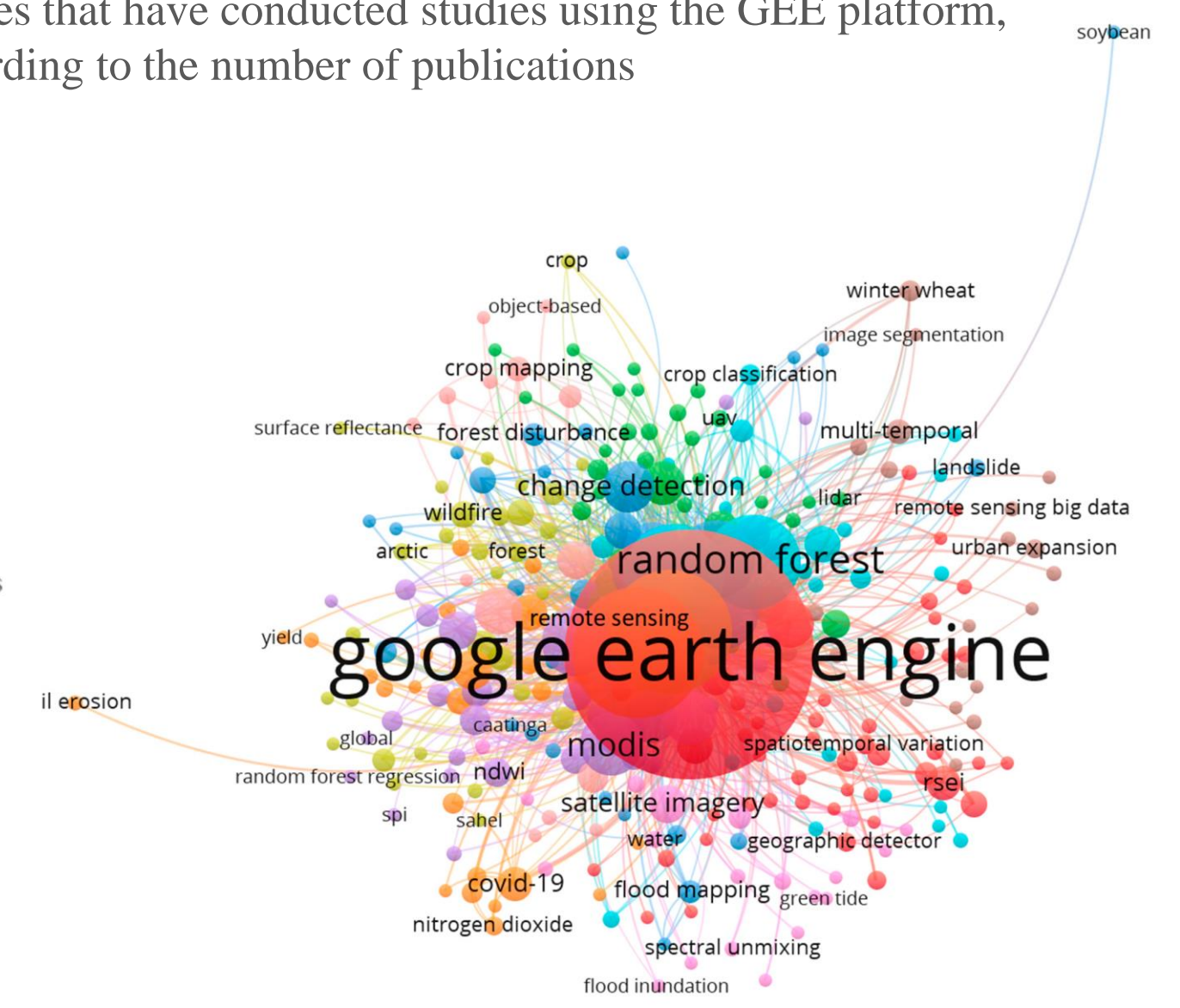

Figure 6. Co-occurrence author keyword network.

CONCLUSIONS

- The results showed that scientific evolution is a growing trend, as evident by the contribution of 125 countries and 398 journals.

- GEE has proven to be an emergent web platform with the potential to manage big satellite data easily.

- GEE is considered a multidisciplinary tool with multiple applications in various areas of knowledge, such as earth and planetary science, environmental sciences, computing, agriculture, biology, and engineering, among others.

ACKNOWLEDGMENTS

Google Earth Engine: A Global Analysis and Future Trends

Google Earth Engine: A Global Analysis and Future Trends
by Andrés Velastegui-Montoya, Néstor Montalván-Burbano, Paúl Carrión-Mero, Hugo Rivera-Torres, Luís Sadeck and Marcos Adami

Remote Sensing Newsletter

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Google Earth Engine: A Global Analysis and Future Trends
by Andrés Velastegui-Montoya, Néstor Montalván-Burbano, et al.
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