AIR QUALITY IN AFRICA: A BIBLIOMETRIC REVIEW

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1.- INTRODUCTION

Air pollution is considered to be the world's largest environmental health threat and the fourth factor for premature death. Thus, it causes 6.67 million premature deaths (1.1 million in Africa) (WHO, 2019). Despite this clear evidence, many African countries do not have air quality stations and therefore air pollutant concentrations are not available, making air pollution assessment difficult (Agbo et al., 2021). In this literature review, it was necessary to characterize the level of knowledge on air quality in the 54 African countries and its evolution over the last decades. This will allow us to identify the main areas lacking information on air pollution levels and, with it, establish priorities when developing this type of studies.

2.- METHODOLOGY

The data were obtained from *Web of Science*. The last entry was July 30, 2023. And with them, a first analysis has been made to show the evolution of the number of publications until 2022. They have also been grouped according to several criteria: impact and contaminating sources, authors' nationality. For this classification, studies on air quality published from 2000 to 2022 have been considered.

KEYWORDS criteria: aerosol, particulate matter, air quality, air pollution, biomass burning + country names/Africa.

3.- RESULTS AND CONCLUSIONS

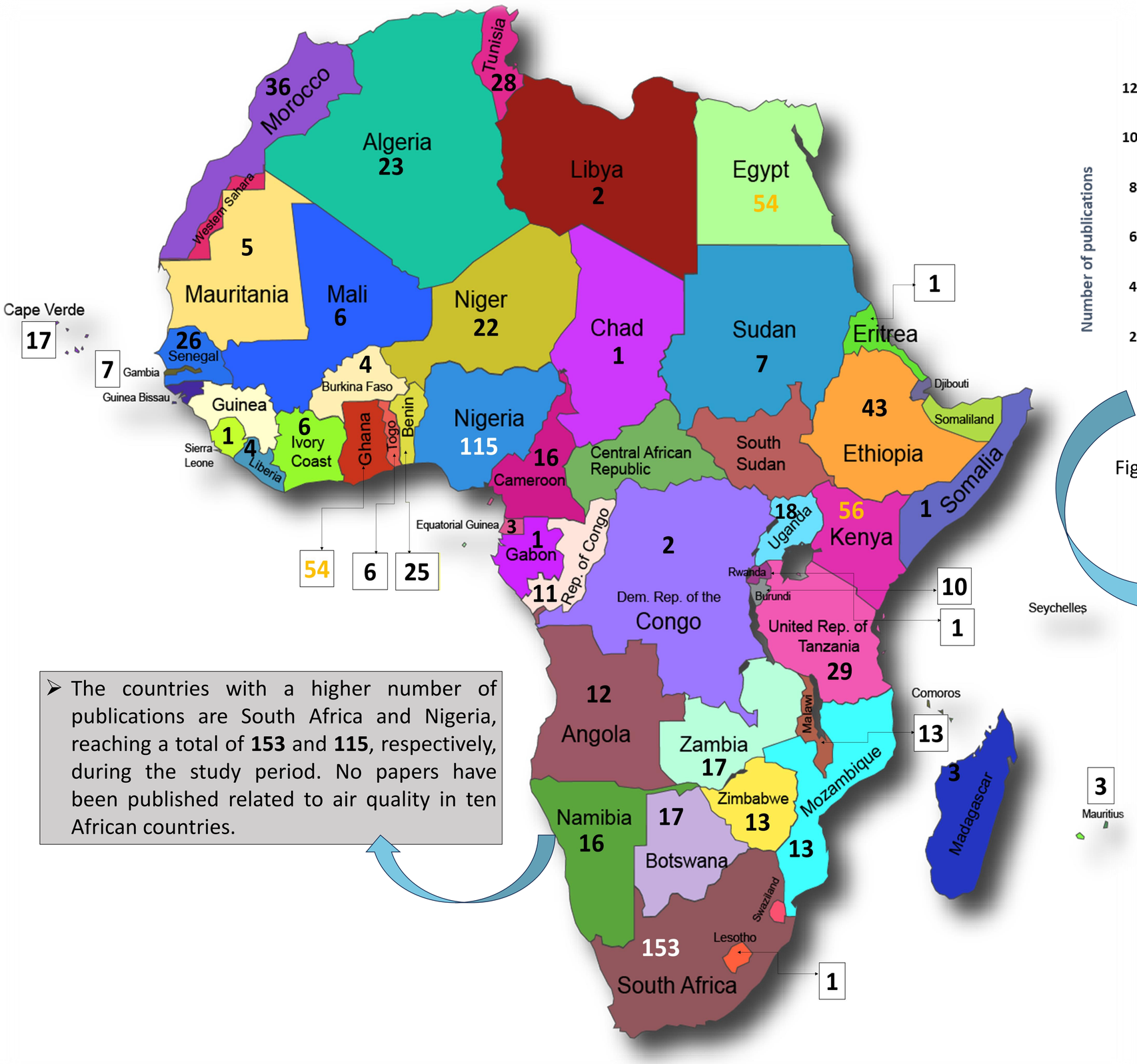


Figure 1: Number of air quality publications in different African countries from 2000 to 2022.

- The countries with a higher number of publications are South Africa and Nigeria, reaching a total of **153** and **115**, respectively, during the study period. No papers have been published related to air quality in ten African countries.

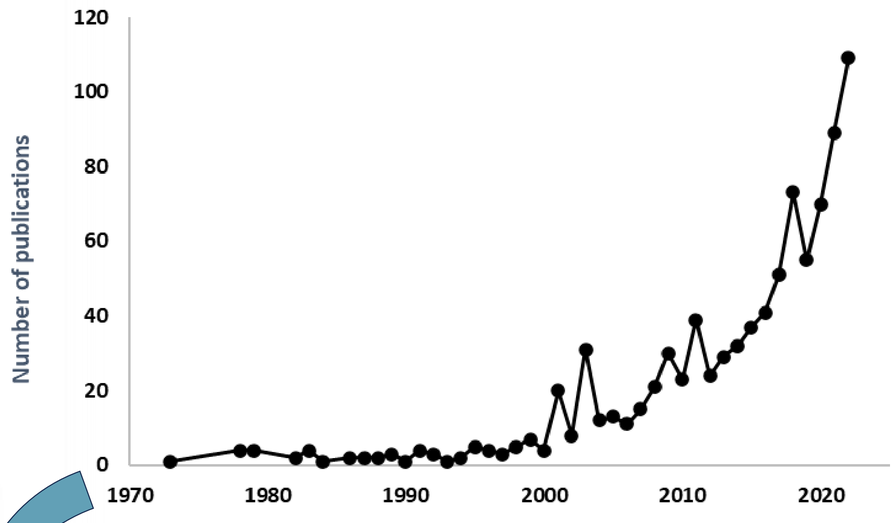
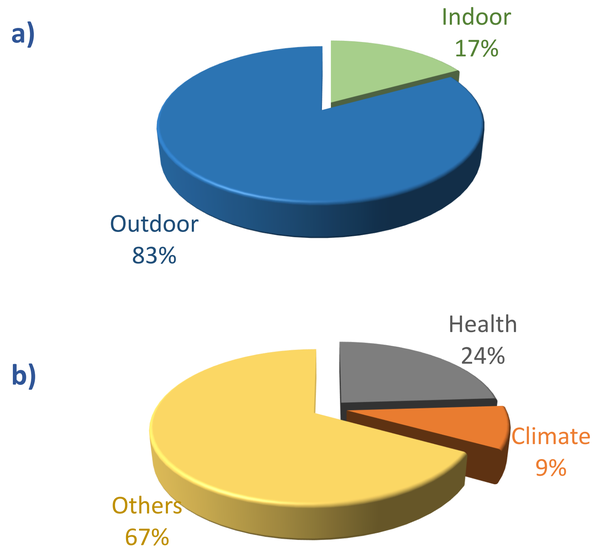


Figure 2: Evolution of articles published on air pollution in Africa from 1975 to 2022.

- From 2000, a significant increase in the number of publications was registered, reaching a maximum of **109** in 2022.



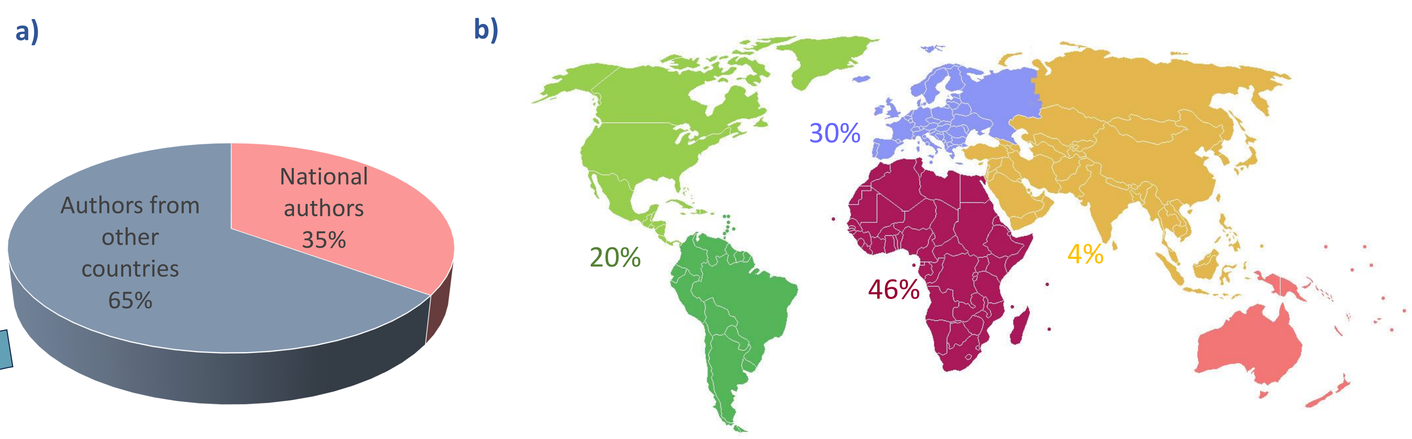


Figure 3: Percentage of publications according to the nationality of the authors: a) native authors and authors from other countries and b) authors according to continents from 2000 to 2022. Percentages have been calculated over a total number of publications of 804.

- Authors from other countries predominate over national ones.
- The largest number of authors are from Africa, followed by Europe and America.

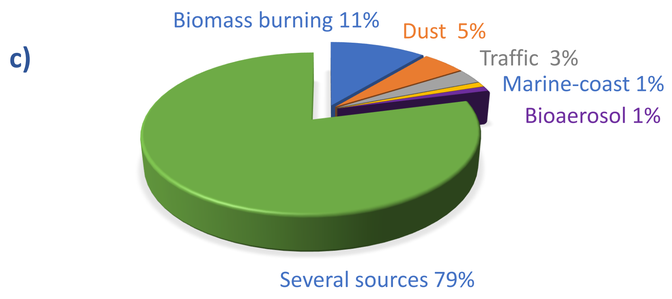


Figure 4: Percentage of publications according to (a) indoor or outdoor environment; (b) the impact they cause; and (c) the sources of emissions, from 2000 to 2022. Percentages have been calculated over a total number of publications of 804.

- Outdoor studies predominate over indoor ones.
- Health-related studies are frequent.
- The percentage of papers related to several sources stands out.

5.- References

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6.- Acknowledgements

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