

# TOWARDS UNDERSTANDING ASSOCIATIONS BETWEEN AIR POLLUTION AND MIGRATION: GEOSPATIAL ANALYSIS



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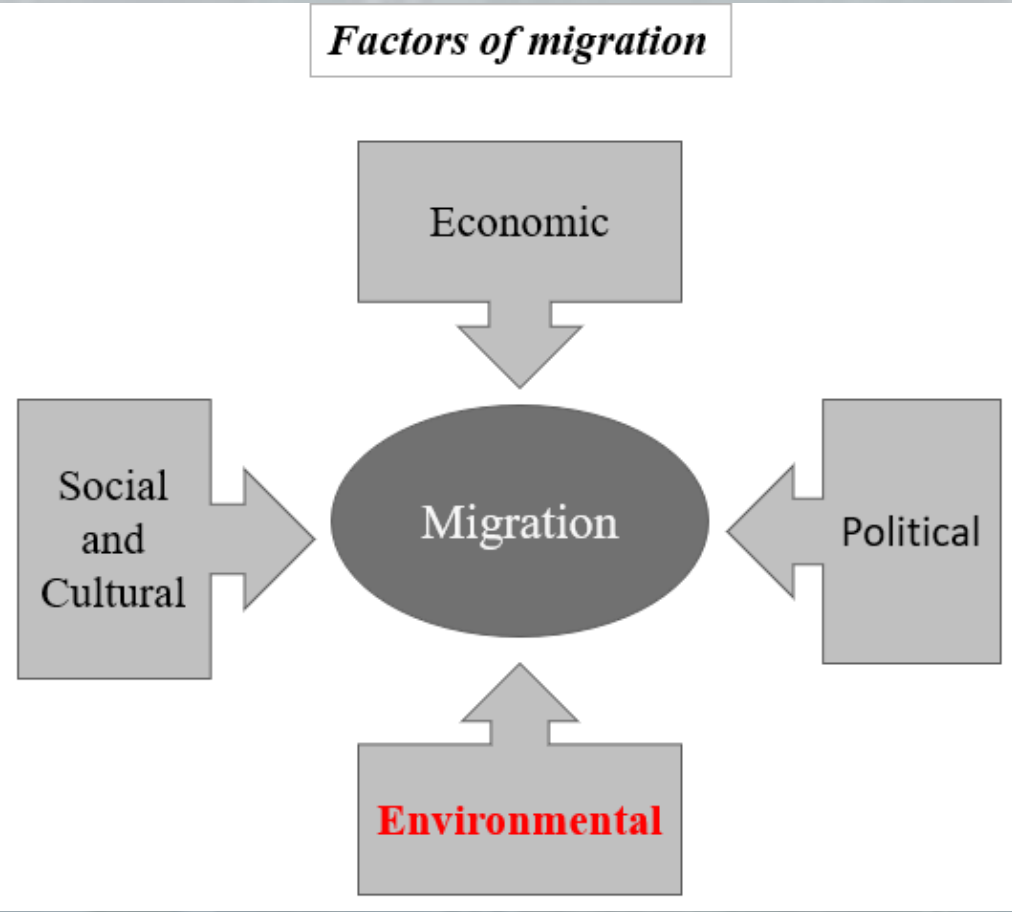
## Introduction

### Background

Air pollution, as one of the major environmental issues, influences migration intentions, shapes migration patterns, and determines the nature of migration cycles. As such, it has the potential to drive mass migration in the future (Nguyen et al., 2022; Shen et al., 2023).

### Aim of the research

The aim of this paper is to examine the relationship between air pollution and international migration on a global scale in 2024.



## Methodology

### Study area

Global perspective: 137 countries and territories

### Data

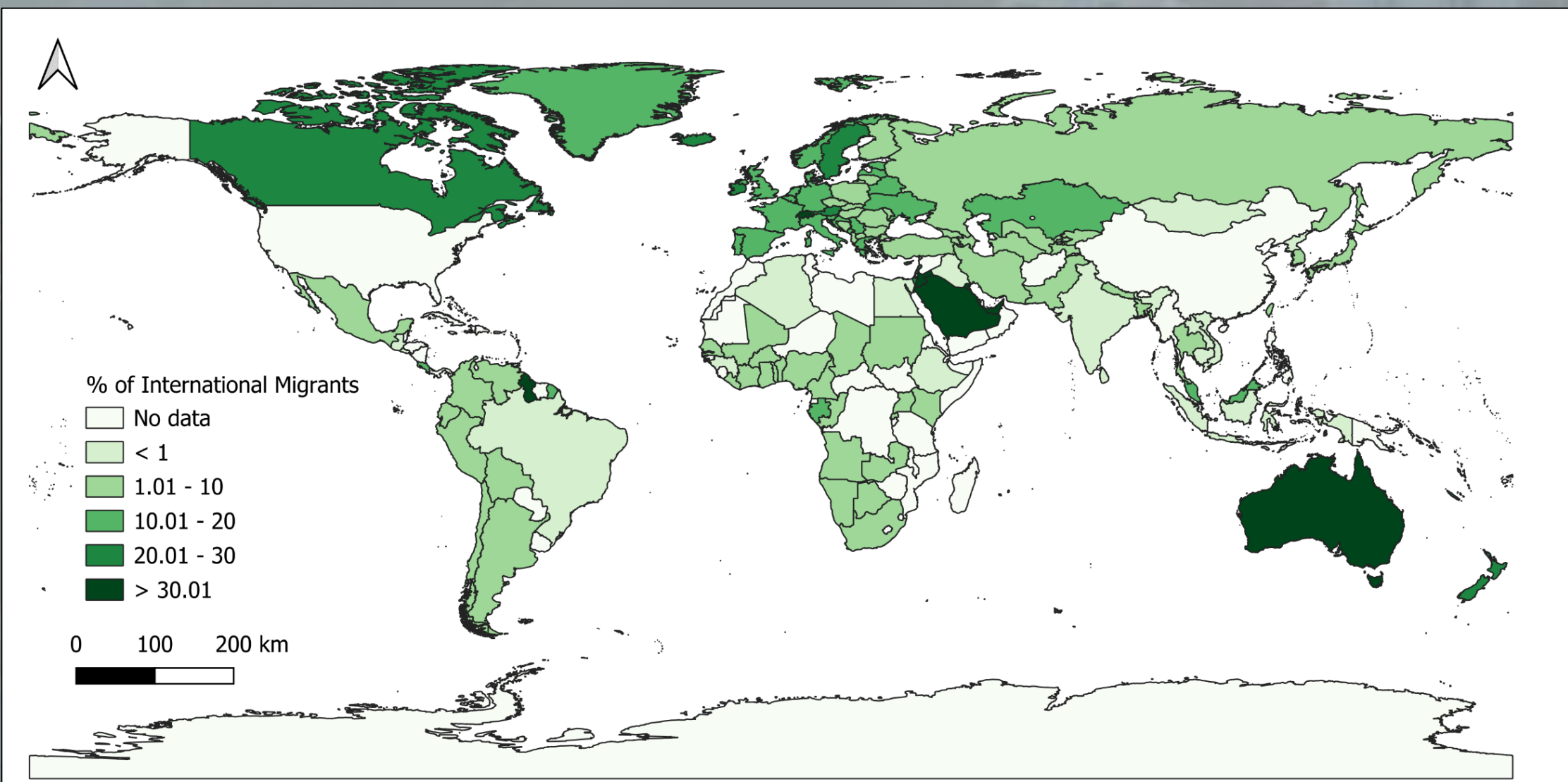
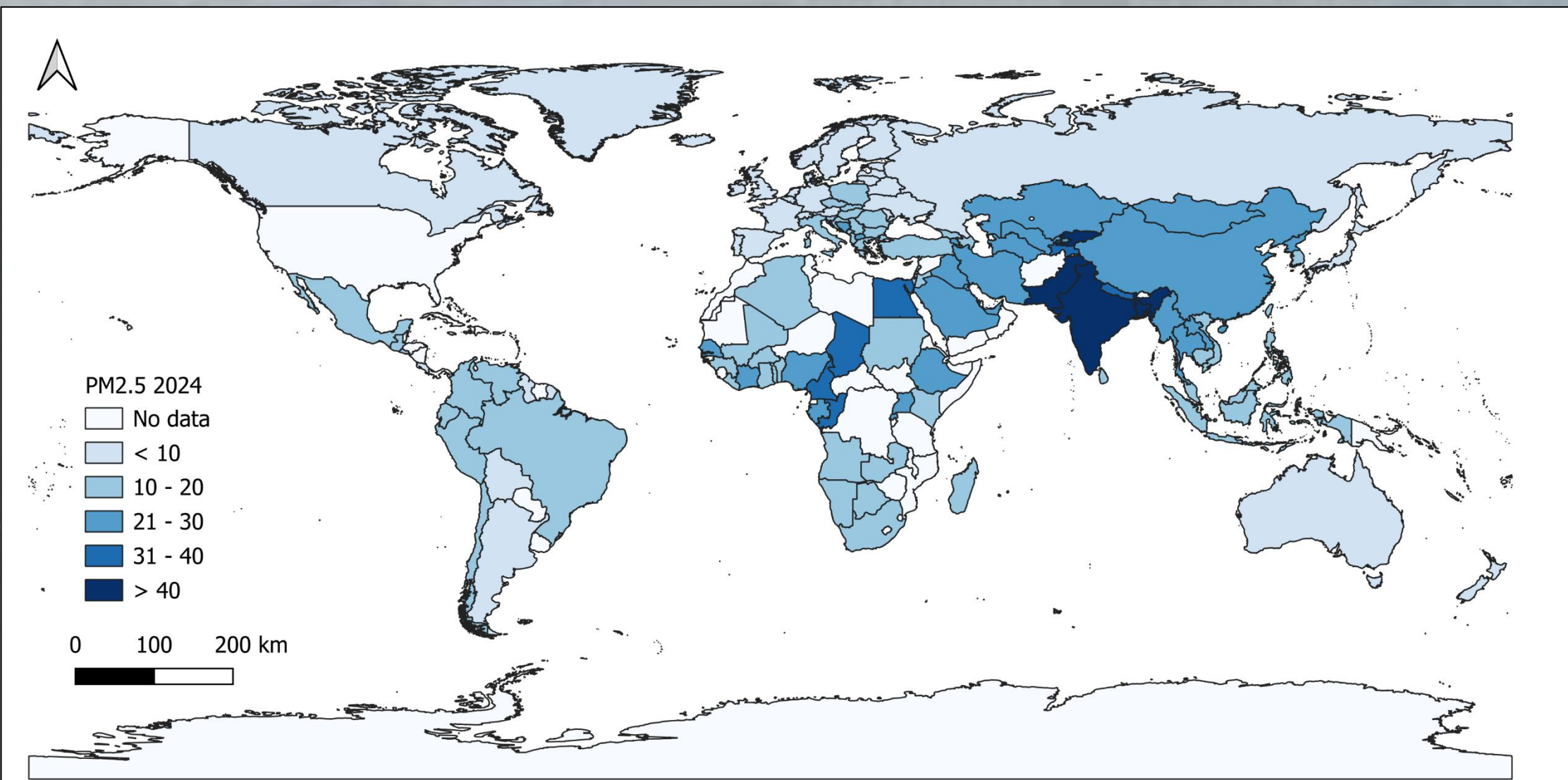
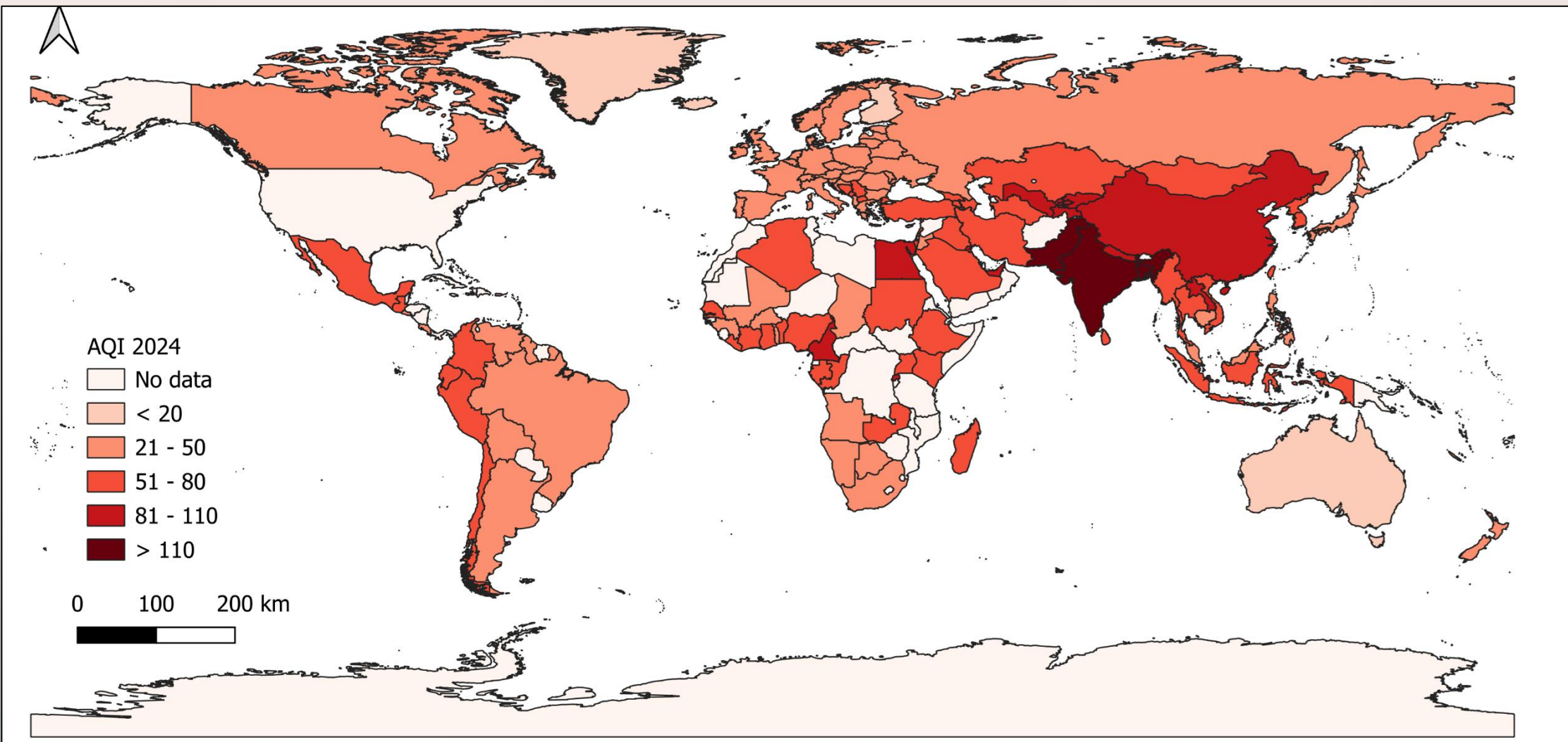
AQI.in (AQI, PM2.5)  
<https://www.aqi.in/>

United Nations (International migration)  
<https://www.un.org/en/>

### Methods

Statistical procedures, Kruskal-Wallis test  
SPSS, QGIS

## Results



AQI/ % of international migrants	N	M	Asymp. Sig.	df	Kruskal Wallis H
0-1	19	62	0.000	4	42.420
1.01-10	64	54.5			
10.01-20	26	36			
20.01-30	13	29			
>30	15	37			
Total	137	49			

PM2.5/ % of international migrants	N	M	Asymp. Sig.	df	Kruskal Wallis H
0-1	19	20	0.000	4	41.439
1.01-10	64	16.5			
10.01-20	26	9			
20.01-30	13	8			
>30	15	11			
Total	137	14			

## Discussion and conclusion

- Countries with the lowest share of international migrants tend to face the highest levels of air pollution. In contrast, countries with better environmental conditions attract the most international migrants.
- Challenges in addressing air pollution and migration.
- Air pollution, migration patterns and sustainable development.
- Connections between air pollution, and social and economic factors.

## References

- Shen, F., Wang, Q., Zou, J., Yan, H., & Wang, B. (2023). Air Pollution and Migration Decision of Migrants in Low-Carbon Society. *Int. J. Environ. Res. Public Health*, 20, 870. <https://doi.org/10.3390/ijerph20010870>
- Nguyen, Q.L., Singh, A., Jain, S., Roychowdhury, A. & Dasgupta, A. (2022). Air pollution and emigration behaviors – evidence of an urban area in a developing economy. SSRN. <http://dx.doi.org/10.2139/ssrn.4005727>

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