

# Final Project Report

## MEPC 83 – Country Submissions Analysis

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### Introduction

The project traces environmental justice within the submissions made at the International Maritime Organization’s 83rd Marine Environment Protection Committee and locates the countries making the submissions on the map

### Objective

- Identify environmental justice themes within MEPC 83 submissions
- Map the countries that submitted documents to show geographic patterns of participation.

### Data Sources

- Documents of the International Maritime Organization
- code-cooccurrence data from Atlas.ti

## Data Processing

Data processing was done for co-occurrence matrix exported from Atlas.ti using several R libraries, including readxl, readr, dplyr, tidyr, stringr, and janitor. The data is imported from Excel, and R processing standardizes column names, removes empty rows and columns, and replaces missing numeric values with zeros. Data processing includes renaming the first column to Framework and reshapes the wide co-occurrence matrix into a long, tidy format with Framework, Cooccurrence, and Frequency columns, keeping only positive frequencies. Additional text cleaning removes bullets, grade labels (e.g., “Gr=12”), underscores, line breaks, and unnecessary spaces, while applying title case formatting. The cleaned dataset contains 382 co-occurrence records used in the analysis. The cleaned, organized dataset is then exported as a CSV file for further analysis. Further, the countries that submitted that data have been spatially analysed and mapped.

## Main Findings

**Figure 1**

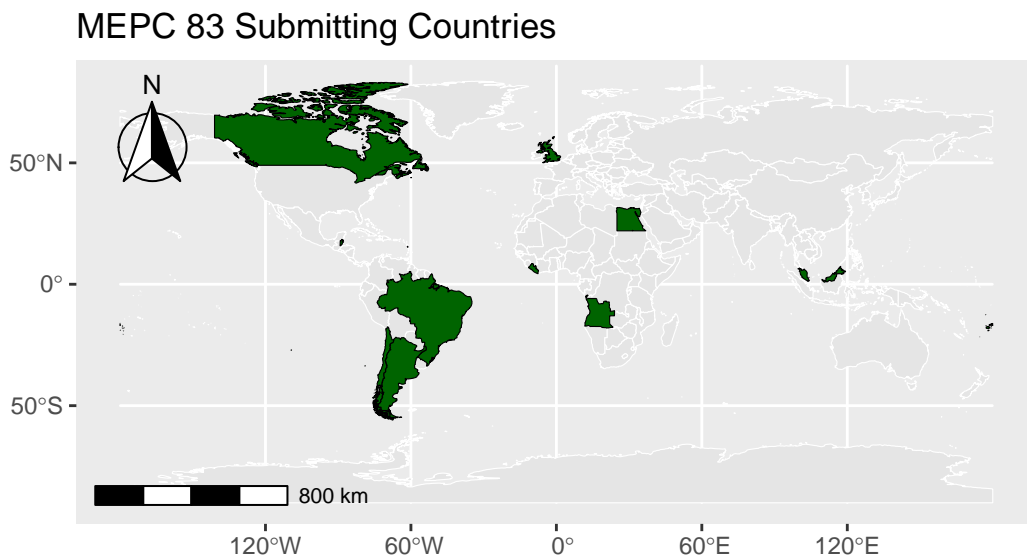


Figure 1: Countries that submitted documents for MEPC 83 (Net Zero Framework).

**Figure 2**

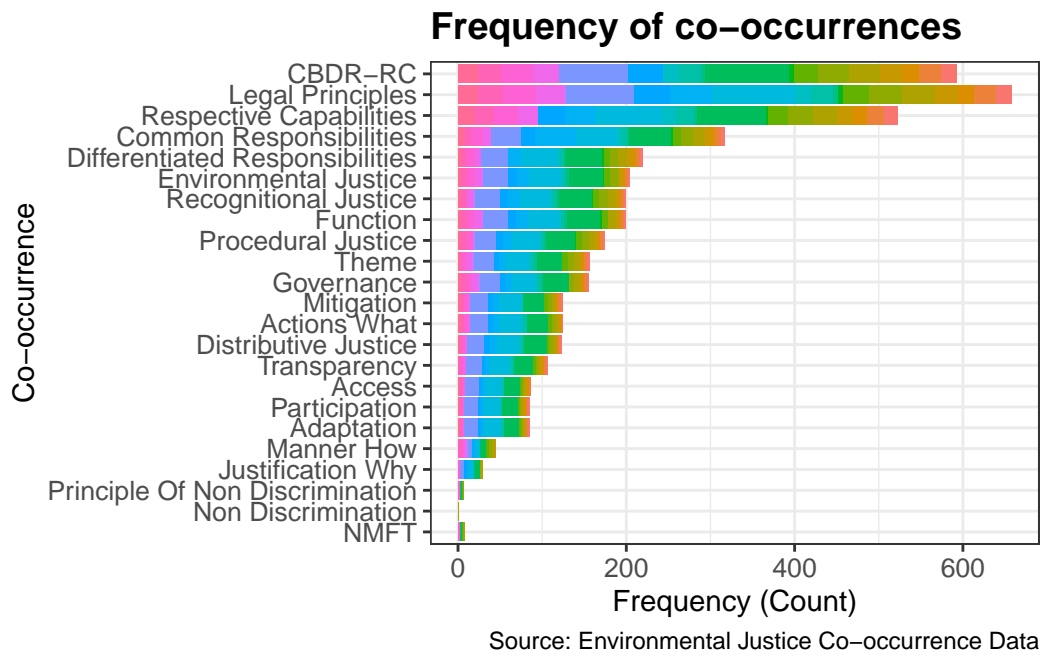


Figure 2: Bar Chart on the frequency of co-occurrences of Environmental Justice

## References

- Documents of the International Maritime Organization