

# Working towards a better understanding of Western Indian Ocean deep sea ecosystems

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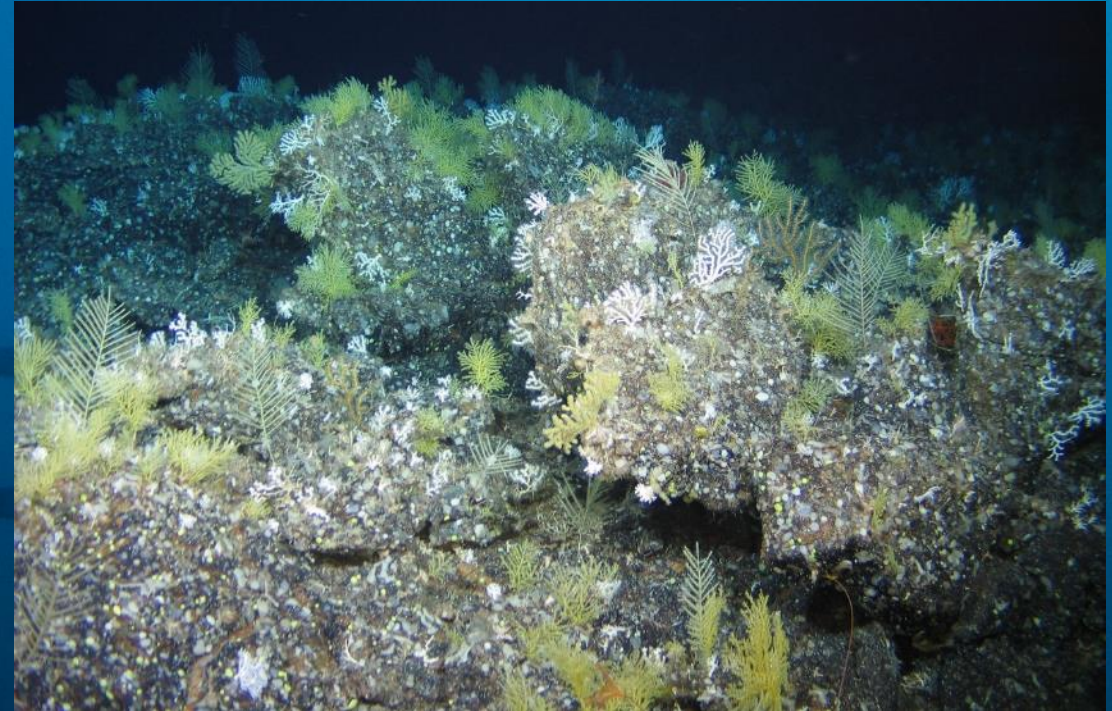
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# Background and rationale

## The deep sea- why care?

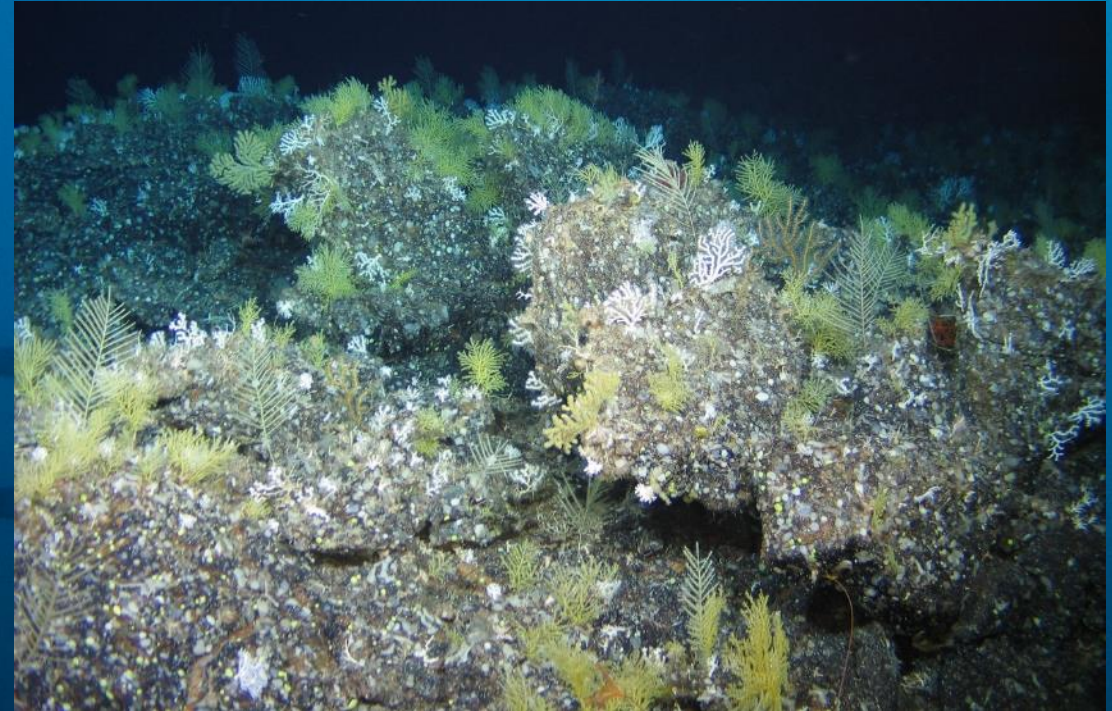
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- 95% of habitat space on the planet
- Many different habitats with associated benefits
- Remote but not pristine



# Background and rationale

## The deep sea- why care?

- > 200 m
- 95% of habitat space on the planet
- Many different habitats with associated benefits
- Remote but not pristine
- Not possible to be confident that knowledge from other regions is appropriate to assist policy makers



## Linkage to regional and global processes

- All contracting parties of the Nairobi Convention have an exclusive economic zone that includes deep sea space
  - .....but most deep sea is in the High Seas



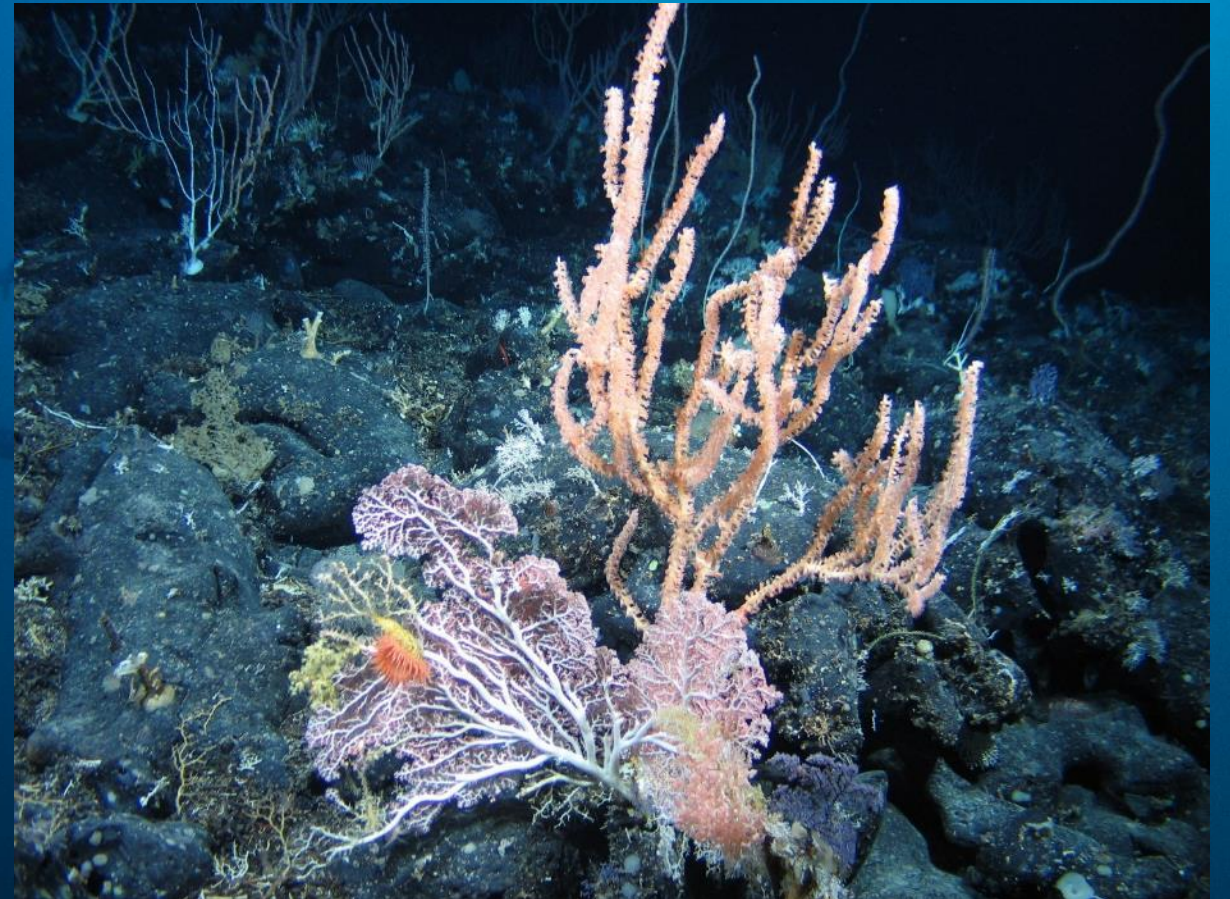
Convention on  
Biological Diversity



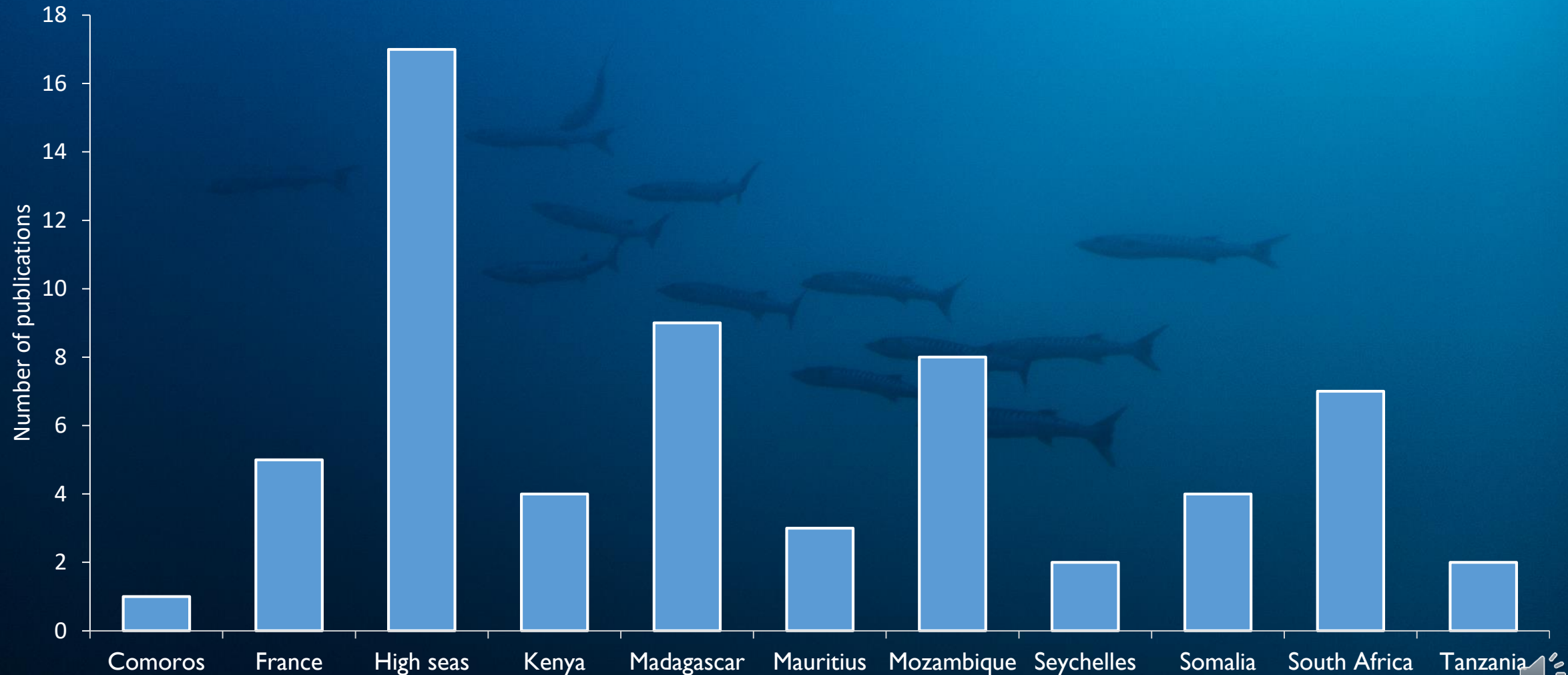
# Subject matter

## Methods

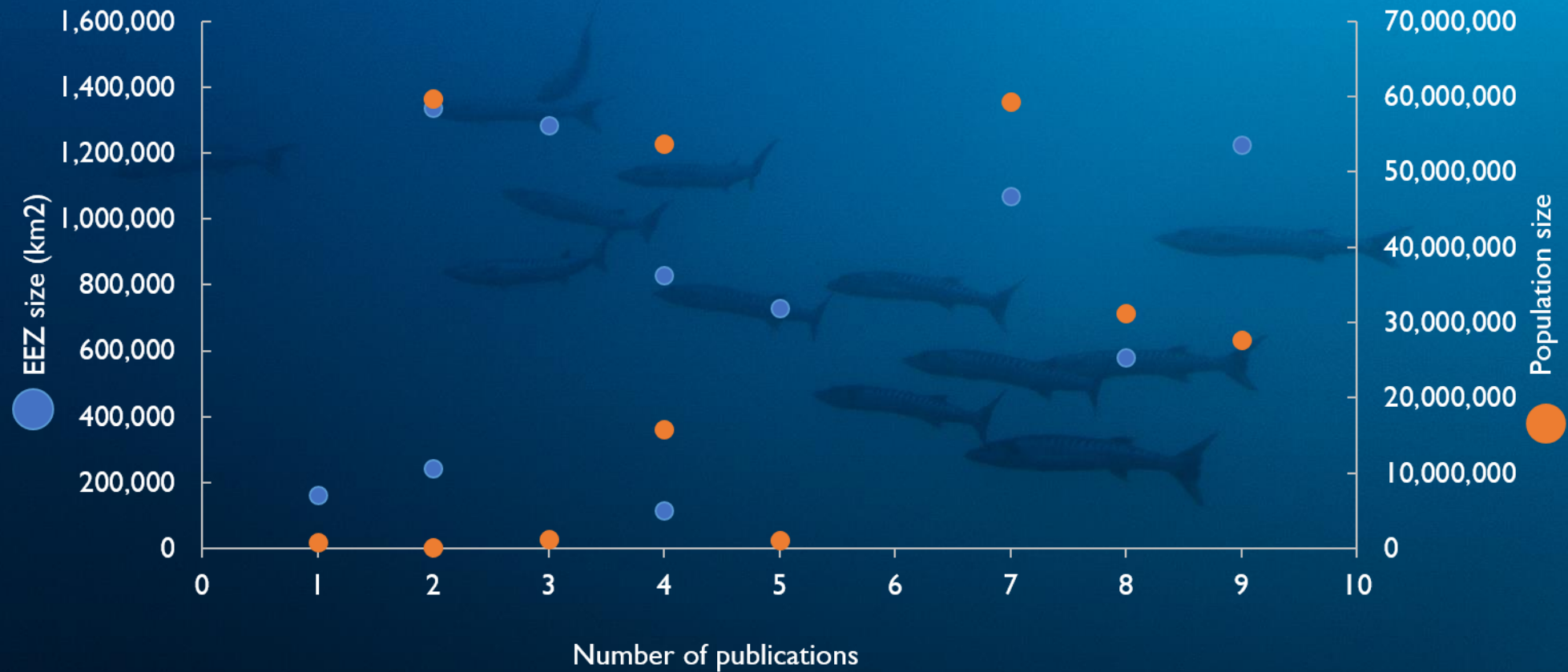
- Preliminary literature review using
  1. [deep sea] or [deep-sea] **and**
  2. [Western Indian Ocean] or one of the contracting parties of the Nairobi Convention **and**
  3. [ecology] or [biology]= **62** papers
- Each screened for relevance  
= **43** papers



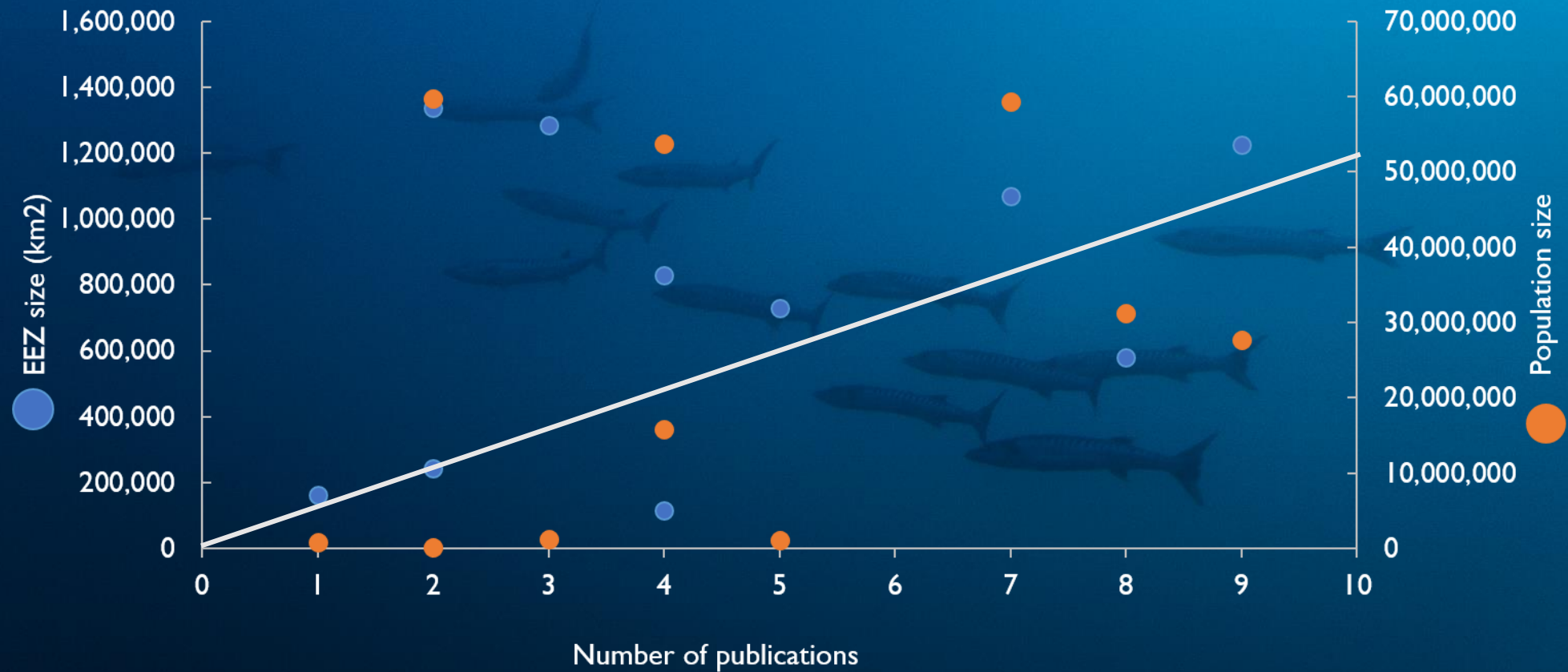
# Number of peer-viewed publications on deep sea biology that have been conducted across WIO nations.



# Correlation of deep-sea publication with EEZ and population size of WIO nations.

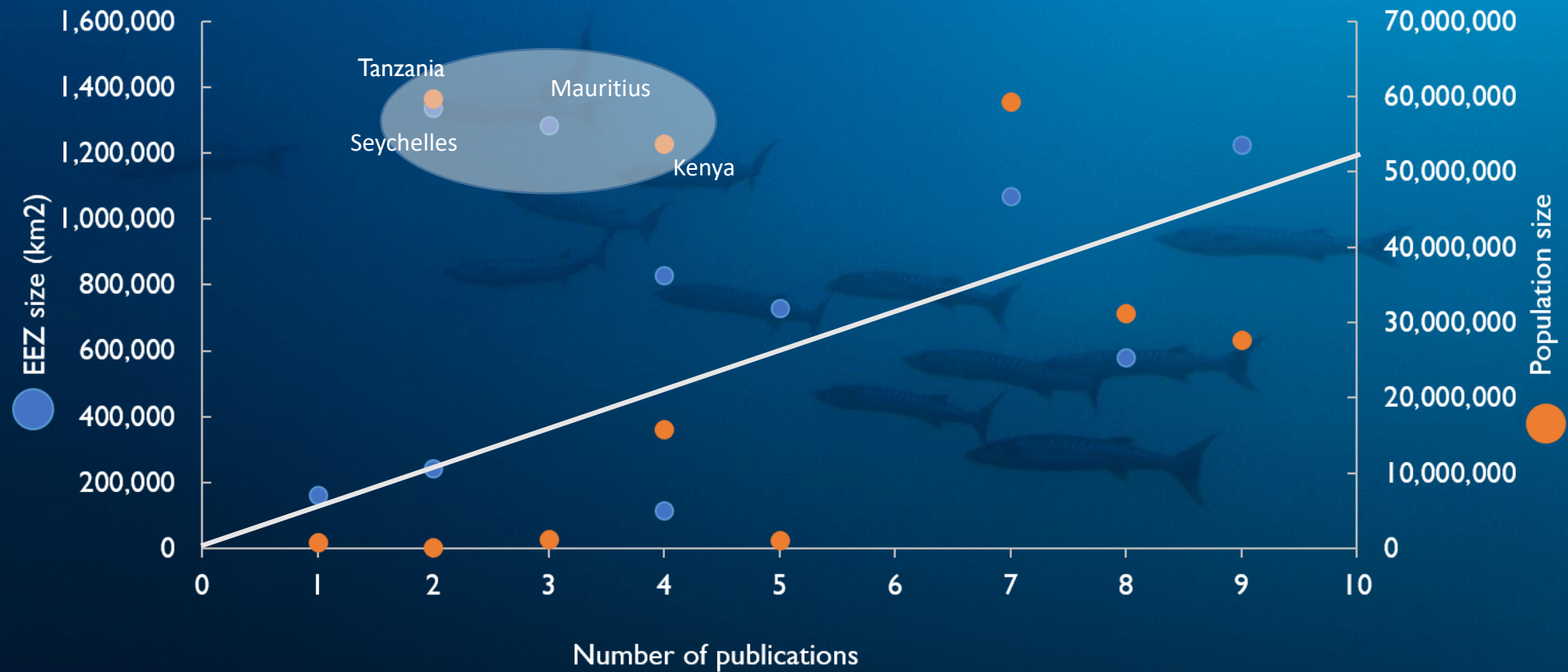


# Correlation of deep-sea publication with EEZ and population size of WIO nations.

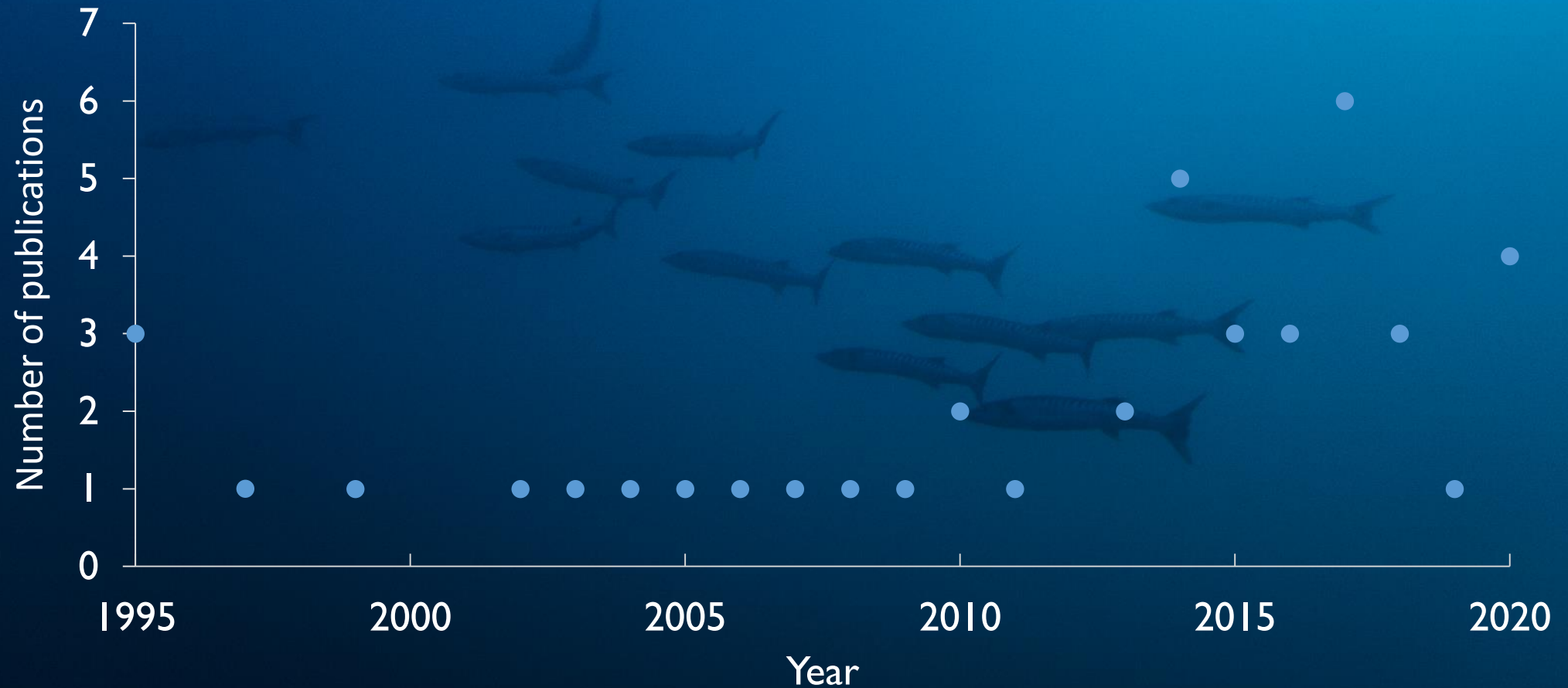




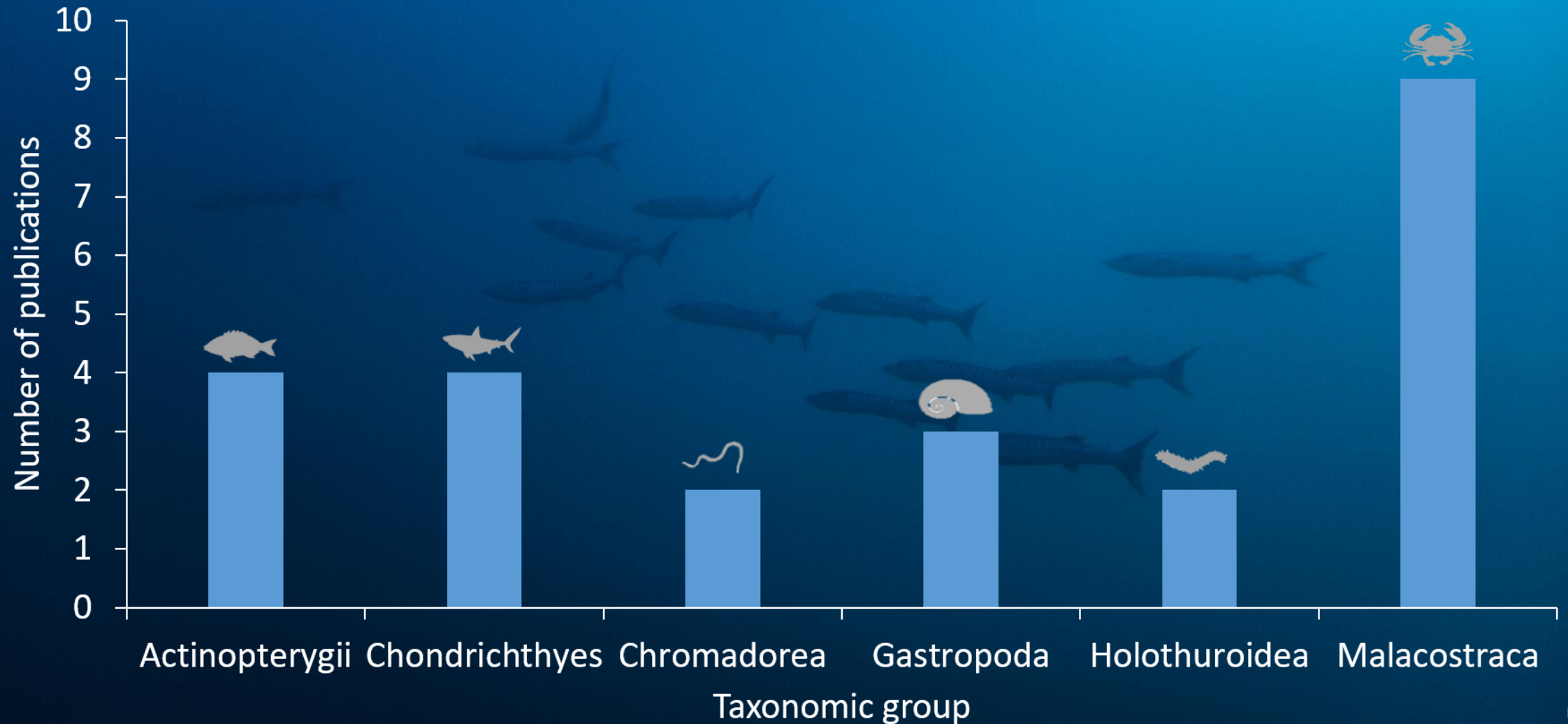
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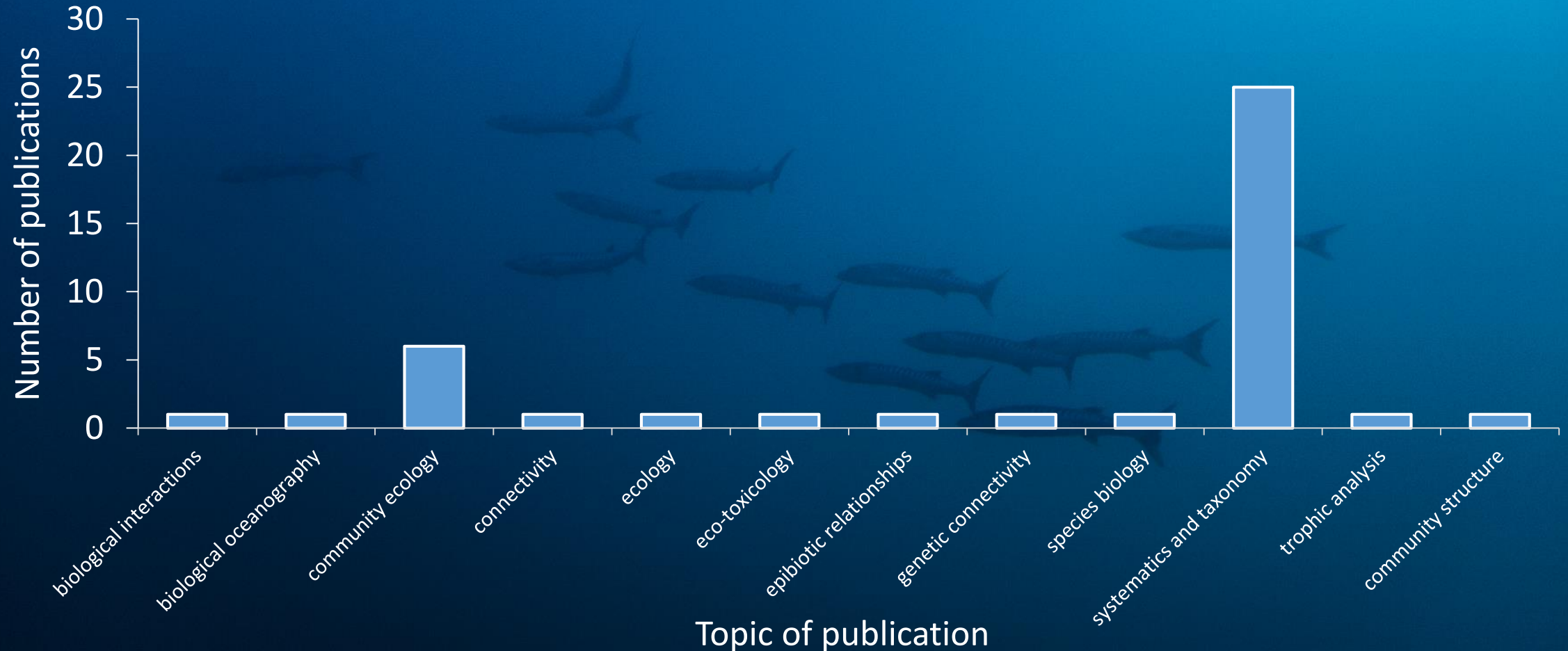
Change in WIO focused deep sea publications from 1995 to 2020.  
1995 was the date of the earliest study



# Number of papers per taxonomic group drawn from surveys of the WIO



# Types and proportion of deep sea biology studies conducted in the WIO



# Summary

- All regions, taxa and field of study are under-represented in published literature on the deep sea biology of the Western Indian Ocean.
- The extensive nature of this knowledge gap means a lack of usable information is available for policy makers



# Recommendations

## Technical

- The services of the deep sea, provided by ecosystems and organisms that inhabit them should be communicated to parties. Opportunities could be available through WIOMSA, FARI or other suitable organisations. This work supports the UN Ocean Decade draft V2.0 objectives 3.1 and 3.2.



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- The services of the deep sea, provided by ecosystems and organisms that inhabit them should be communicated to parties. Opportunities could be available through WIOMSA, FARI or other suitable organisations. This work supports the UN Ocean Decade draft V2.0 objectives 3.1 and 3.2.
- A comprehensive review of deep sea biological data (inc. grey literature and traditional knowledge) should be conducted to provide knowledge gaps and to help prioritise activities. This work supports the UN Ocean Decade draft V2.0 objectives 1.1, 1.3 and 2.2.



# Recommendations

## Policy

- A deep sea working group should be established within the mechanism of the NC, to lead the advancement of deep sea research and data usage in the WIO. This work supports the UN Ocean Decade draft V2.0 objective 2.





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## Policy

- A deep sea working group should be established within the mechanism of the NC, to lead the advancement of deep sea research and data usage in the WIO. This work supports the UN Ocean Decade draft V2.0 objective 2.
- Parties should continue to have strong representation in the BBNJ negotiations. The deep sea is valuable for the prosperity of NC nations now and in the future.



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