

4-5 OCTOBER 2023  
LE HAVRE

---

**WHICH PLACE FOR SMALL SEAPORTS IN THE MARITIME NETWORK?  
A CASE STUDY IN THE ADRIATIC SEA USING AUTOMATIC  
IDENTIFICATION SYSTEM DATA**

---

ARNAUD SERRY



# Introduction

The largest maritime ports, with very large tonnages, lie at the heart of research questions.

However, despite the process of port concentration, this system is also characterized by the permanence of small or medium-sized ports, often specialized, which perform more local functions and mainly serve smaller hinterlands.

The first objective is to define what a small port is, especially by using a documentary study.

The second one is to present some preliminary results of a research on the situation of small ports in the Adriatic Sea using mainly Automatic Identification System (AIS) data

# Theoretical approach of an unexplored issue

## Differences between large and small ports

	Large ports	Small Ports
Scale economies	Scale advantages in port activities	Limited scale advantages
Hinterland	Good international accessibility, congestion problems	Local and regional accessible hinterlands
Land	Land scarcity, due to expansion	Land available
Port policies	Expansive public and private policies	Flexible and more pragmatic policies

Source: Author, according to De Langen, 1998.

# Theoretical approach of an unexplored issue

Some elements of comparison between large and small ports

Criteria	Big ports	Small ports
Size	Big	Reduced
Traffic	Important	Weak
Regular lines destination	National or international	Regional or local (feeders)
Goods origin / destination	National or international	Local
Port functions	Specialisation and spatial separation of functions	Versatility, concentrated functions on a small area
Finality / goal	Profitability / expansion	Viability of services
Port metabolism	Rigid / numerous actors / binding normative framework	Flexible / few actors / predominance of the "arrangement"

Source: Author, according to Dupont 2016

# From theory to Adriatic sea

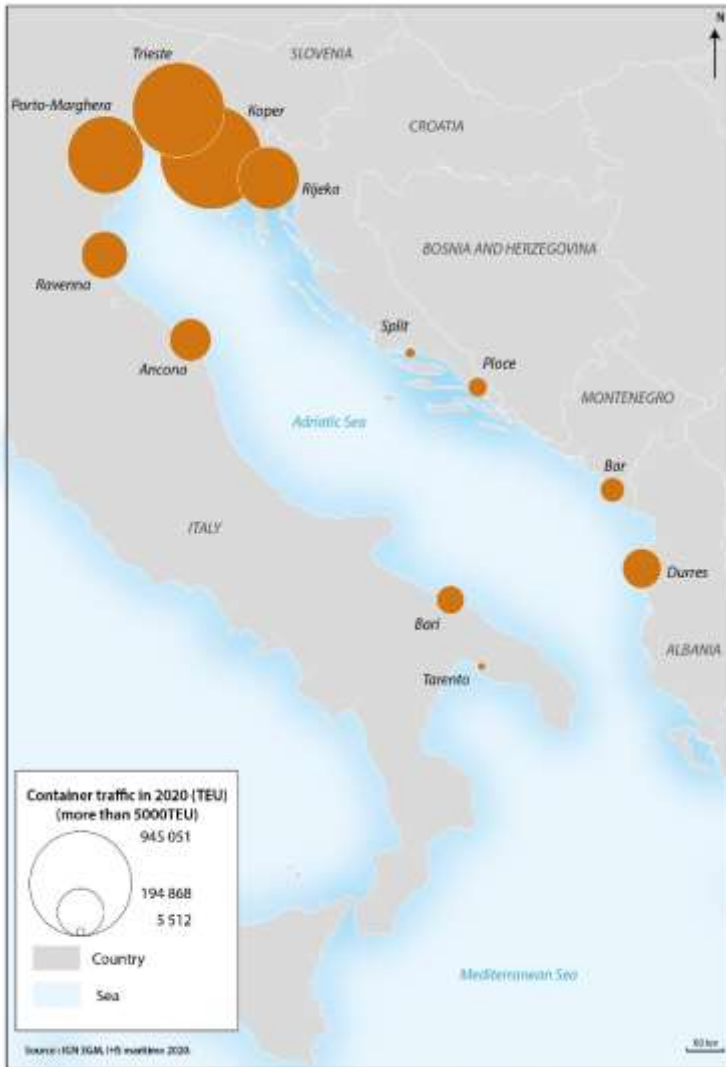
To summarize, there seems to be **a consensus on a few elements**:

- small seaports handle smaller ships, generally on short and medium routes
- have lower cargo traffic
- serve their regional hinterland.

On a **regional scale**, it is **difficult to integrate all the comparative elements** mentioned above.

We have chosen to focus our study on the positioning of **ports in maritime networks**, in terms of their traffic and their integration into regular lines.

# Adriatic containerised network



## Traffic of studied ports (2020)

	Traffic total (tonnes)	Traffic conteneurisé (EVP)
Bar	2 044 000	53591
Durres	3881976	138477
Ploce	3559000	33955
Split	2913509	9400
Données de 2019		

Source : port authorities, Eurostat

# Using AIS data

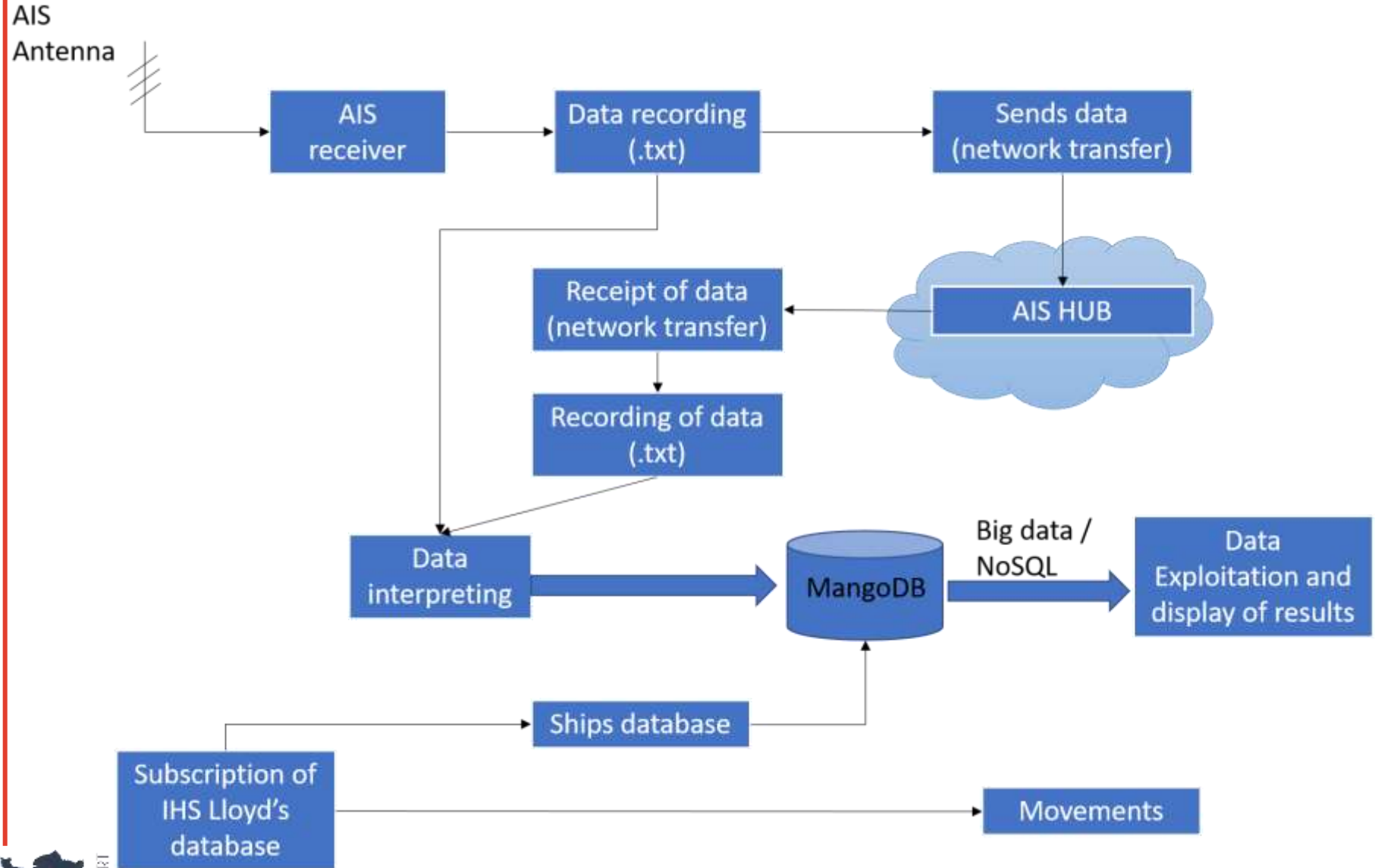
To summarize, there seems to be a **consensus on a few elements**:

- small seaports handle smaller ships, generally on short and medium routes
- have lower cargo traffic
- serve their regional hinterland.

On a **regional scale**, it is **difficult to integrate all the comparative elements** mentioned above.

We have chosen to focus our study on the positioning of **ports in maritime networks**, in terms of their traffic and their integration into regular lines.

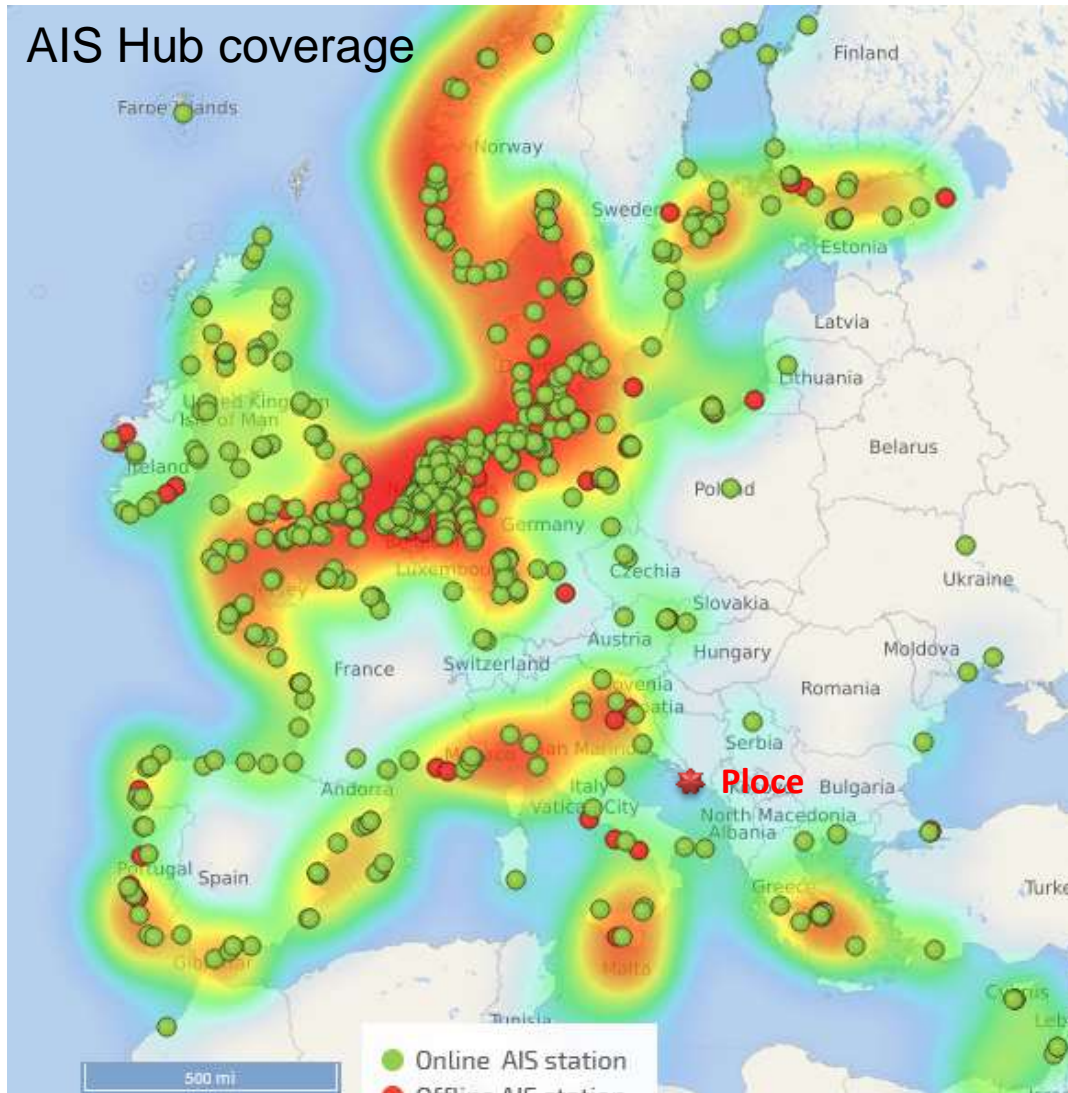
# Analysis of MARitime CIRculation (CIRMAR)



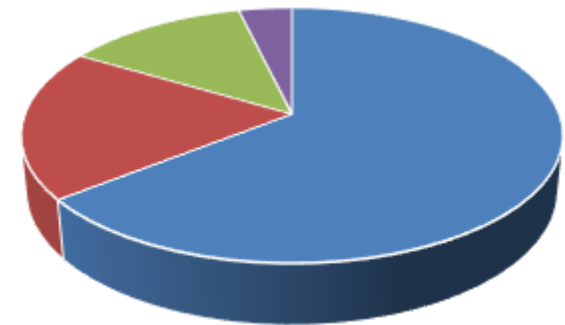


# What about data ??

## AIS Hub coverage



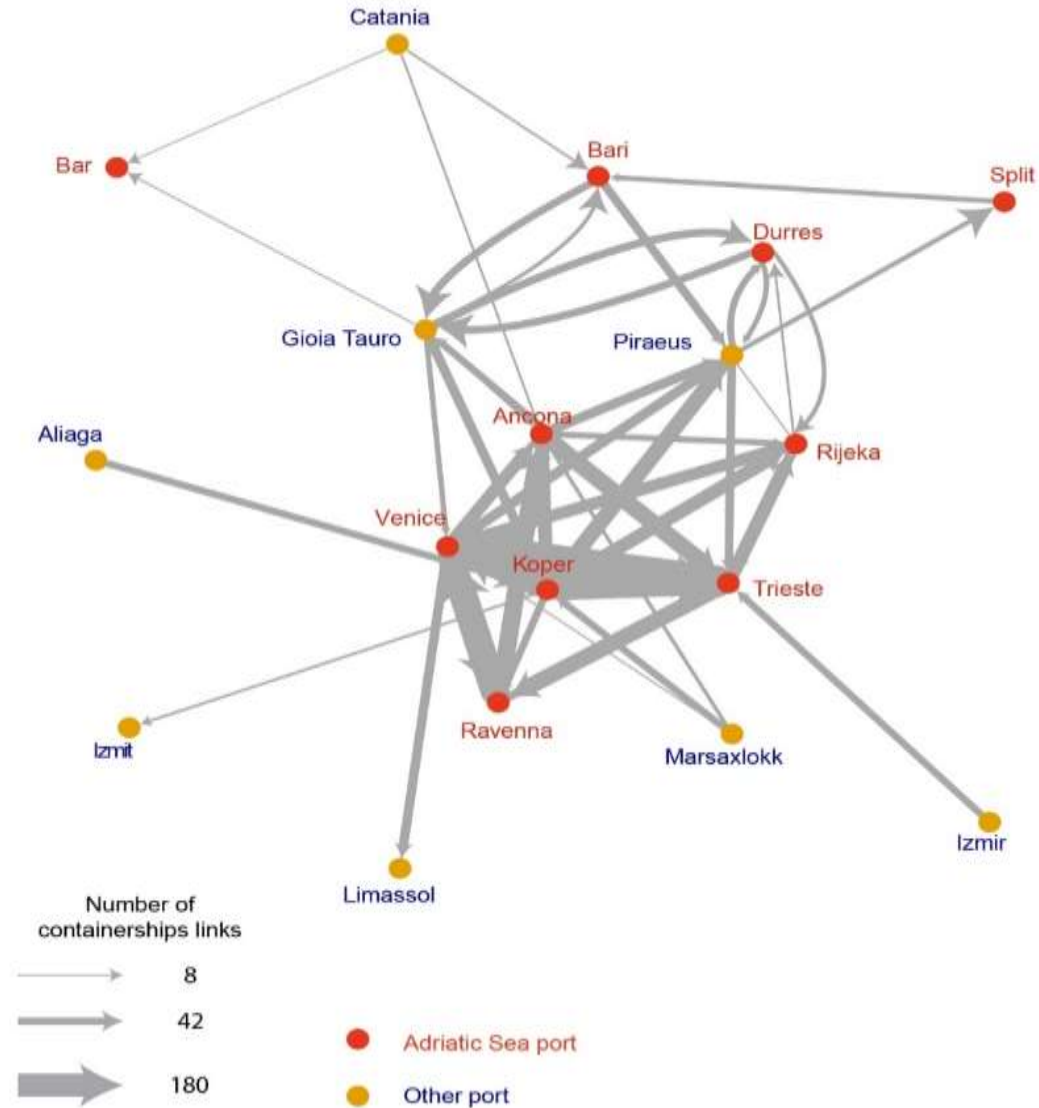
## Share of port calls



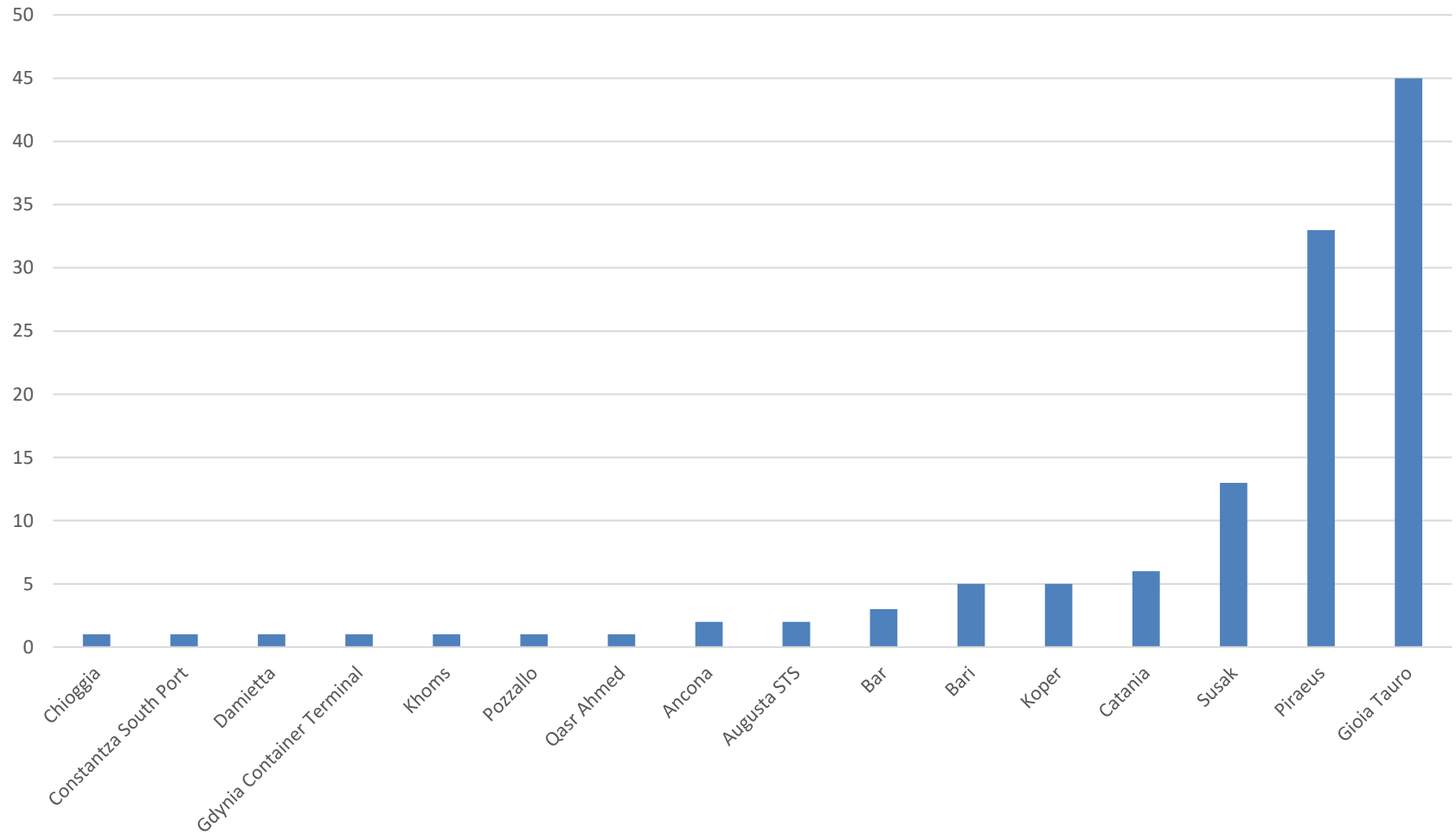
■ Durres ■ Split ■ Bar ■ Ploce

<https://www.aishub.net/coverage>

# Adriatic containerised network

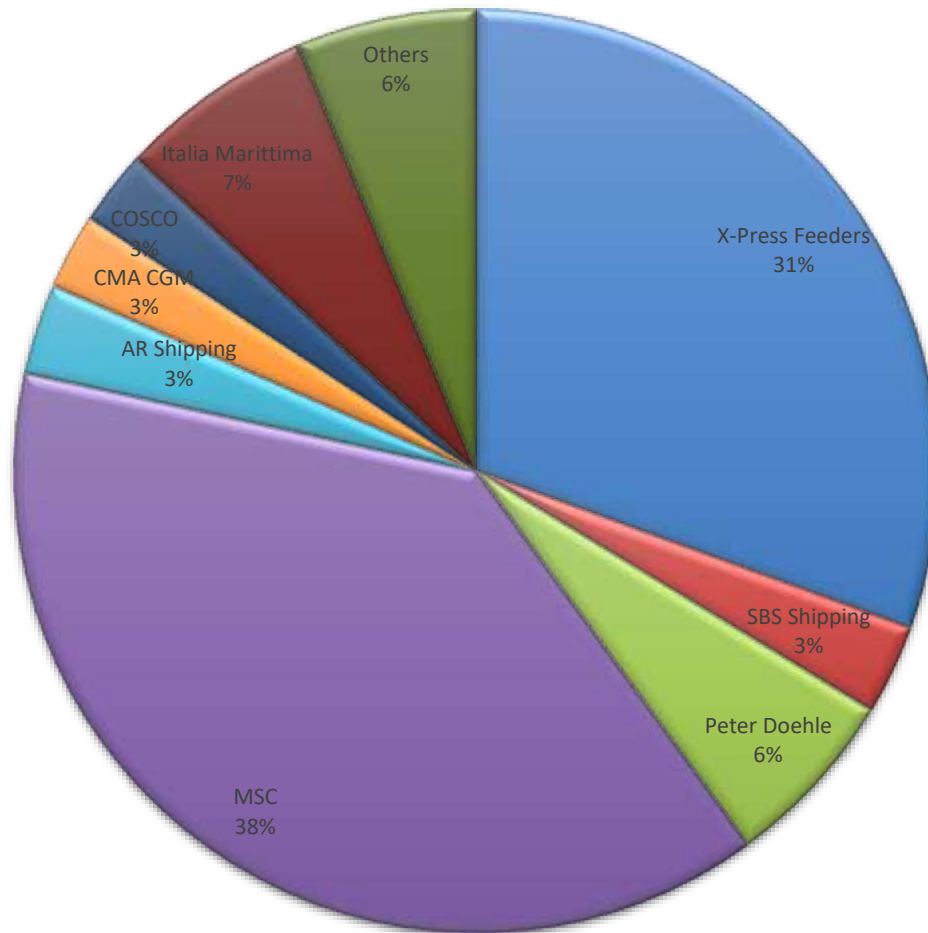


# Port of origin of ships calling in Durrës in 2020.



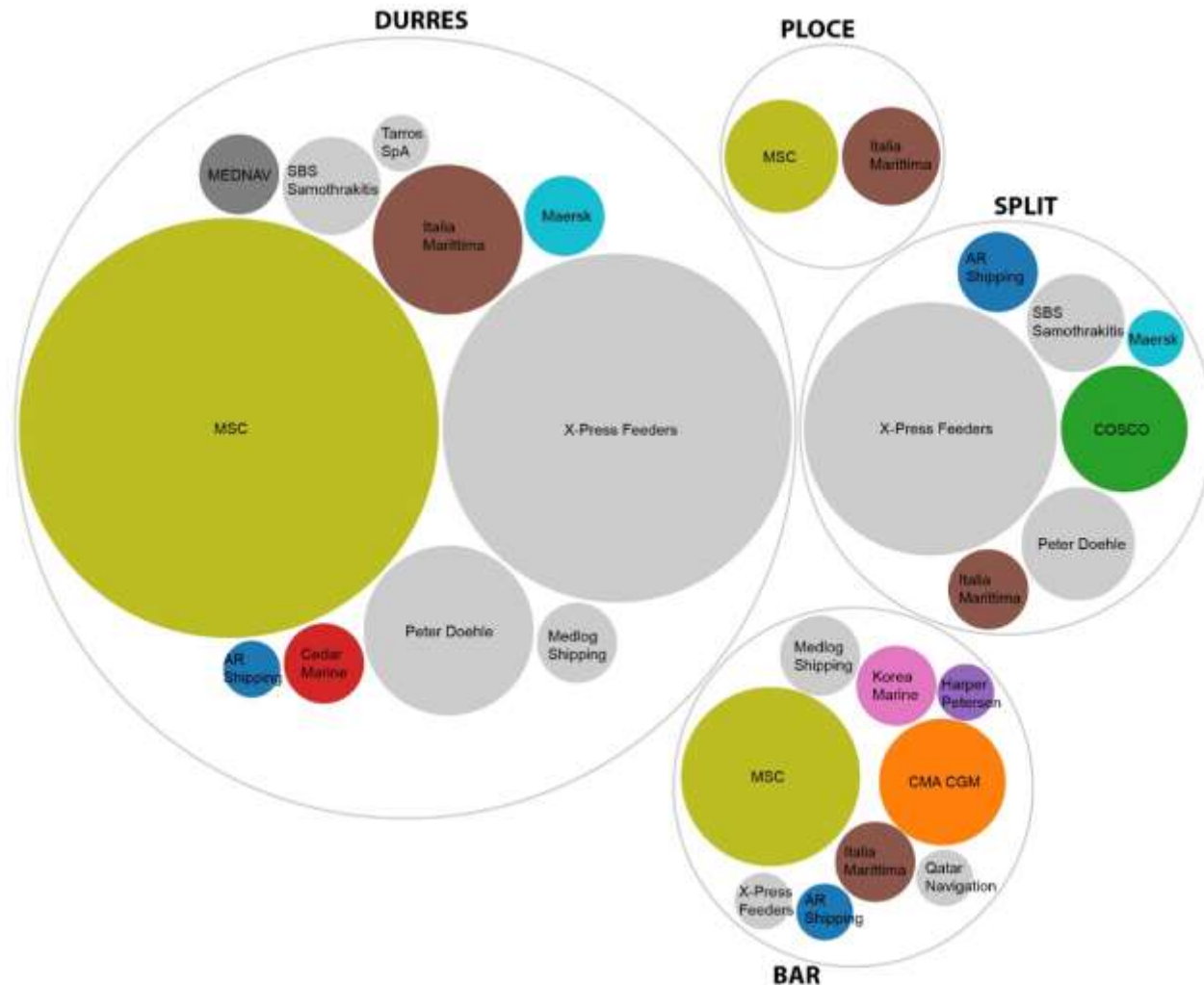
# Shipping companies in Adriatic small ports

Operators in Adriatic studied ports.



# Shipping companies in Adriatic small ports

Structure of port calls by operators in small Adriatic ports.



# Conclusions ?

Giving a precise definition of what a small port is seems more complicated than expected.

Because of their diversity and the relative lack of interest in them, their study remains complex and must integrate most of the criteria mentioned in the first part of this presentation.

It would seem complicated to generalize from this work on the Adriatic alone. The diversity of situations and territorial configurations suggests that "extensive" comparative studies are an appropriate approach to the geography of small ports.



# Thank You !

arnaud.serry@univ-lehavre.fr



**UMR IDEES CNRS**

Université du Havre / 25, rue Philippe Lebon / Le Havre