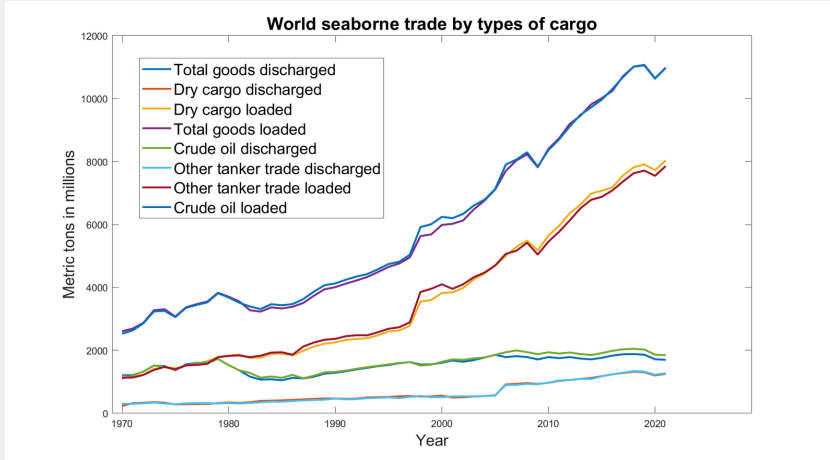
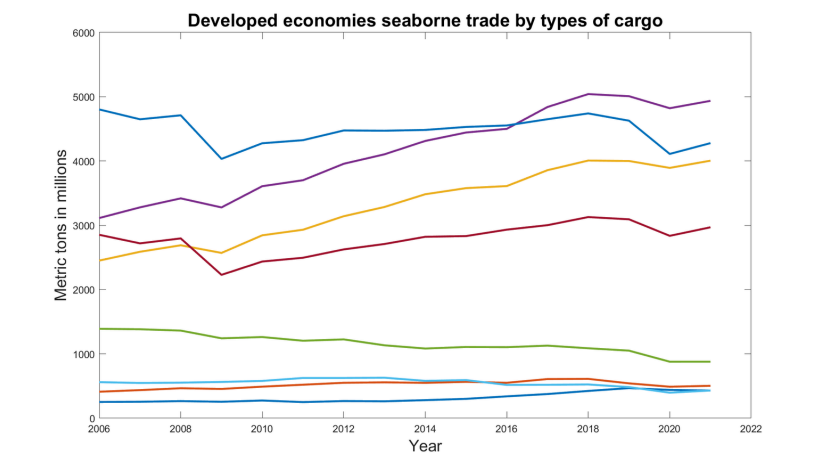


# Maritime transport

Mar Gil, Carlos Sevilla y Manuel Sellés.



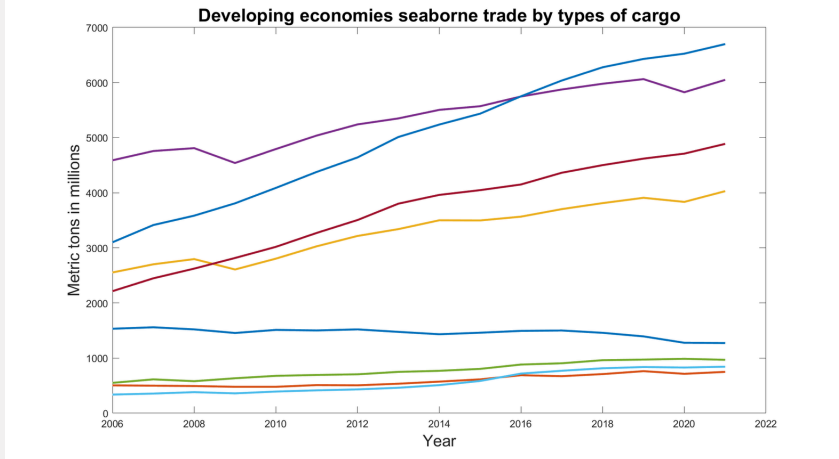
Another aspect brought to light is that there has been a recent shift in the trade balance between exports and imports in both developing and developed economies. However, this shift has been in opposite directions. This reversal is likely attributed to the surge in containerized exports from developed nations, shaping the dynamics of maritime trade.



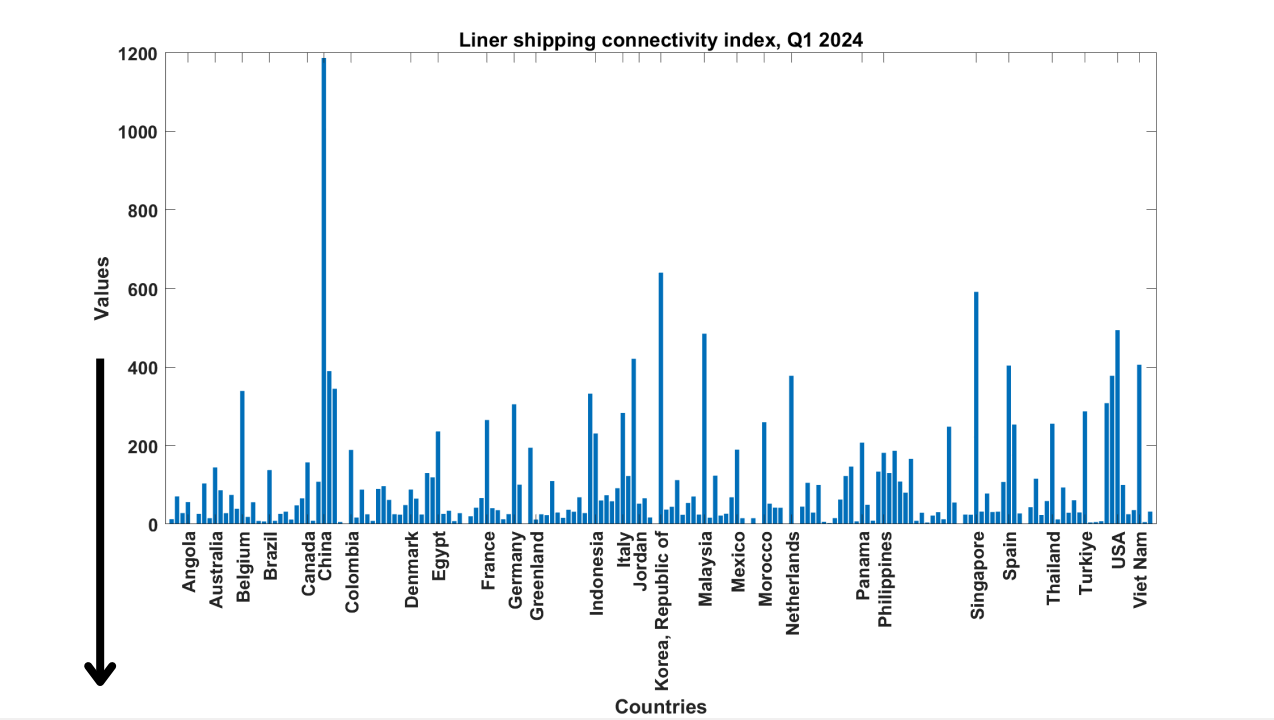
## What Winds of Change Does Seaborn Trade Bring?

Seaborn Trade

First and foremost, we can observe an exponential growth in maritime commerce over the years. However, in recent years, while imports have stabilized in developed economies, they continue to grow linearly in developing economies.



Additionally, both in the global maritime trade graph and in that of developed economies, we can easily observe the impact of the 2008 financial crisis or the COVID-19 pandemic, with a sharp decline in trade. Lastly, in developed economies, due to advances in renewable energy, the importation of fossil fuels, specifically oil (green line), is decreasing.



Liner shipping connectivity index is based on how well connected is the country/port based on different parameters

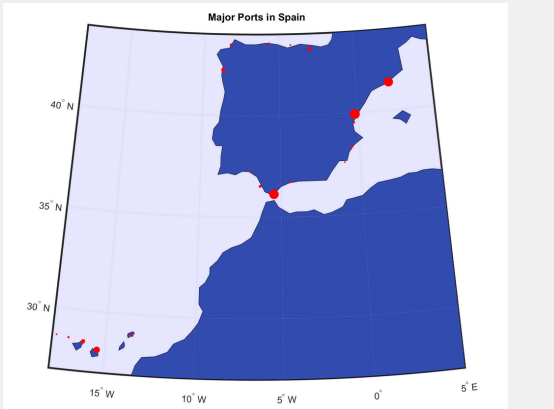
## What Country Dominates the Global Maritime Transport Scene?

As seen in the graph, China stands out as the country with the strongest and most extensive maritime transport network, followed by other nations such as Malaysia, Singapore, South Korea, and the United States. Spain ranks as the eighth economy with the most robust maritime connectivity, significantly above the average.

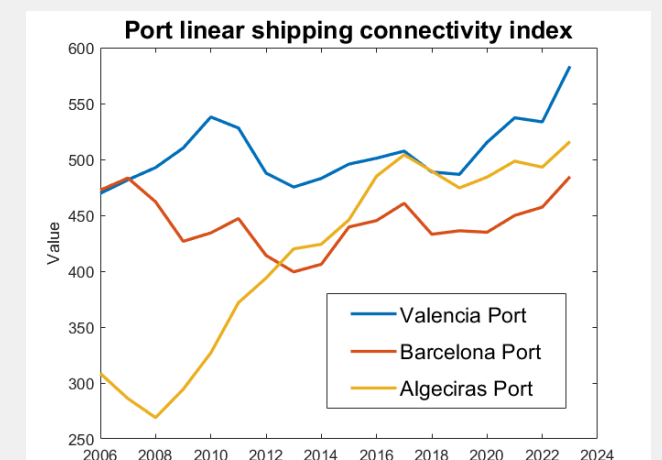
## From Ports to Prosperity: Unveiling the Links Between Connectivity and Prosperity

Upon analyzing the various ports represented on the map by red dots of varying sizes, which indicate their significance in maritime trade, three ports stand out above the rest: Barcelona, Valencia, and Algeciras.

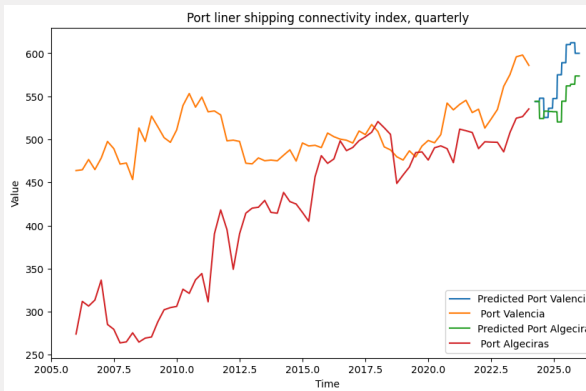
These ports have an enormous impact on their respective city's economies, as well as on that of the country.



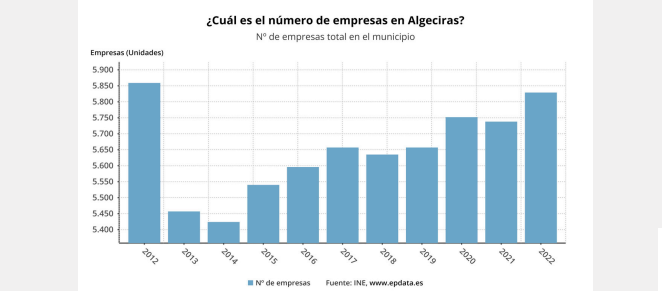
In this graph, we can see how the importance of the three selected ports has changed over the years. We observe that the port of Barcelona has remained stable, while the port of Algeciras has grown linearly, and the port of Valencia has been growing exponentially in the last few years.



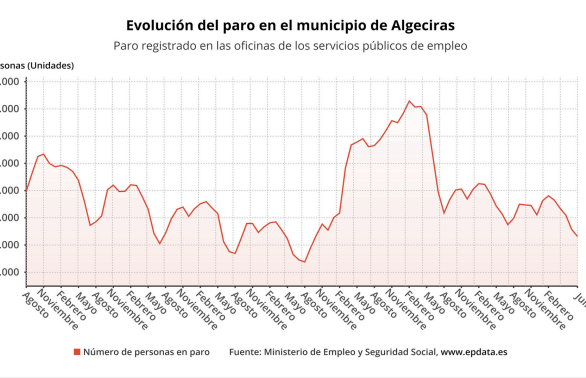
Due to the continuous growth of these two ports, we have predicted using neural networks how their influence on maritime commerce will continue to develop in the coming years. The results obtained have matched our assumptions. The port of Valencia will continue to grow at an accelerated pace, which seems logical considering the expansion project of the port of Valencia. Similarly, the port of Algeciras will also continue to grow due to its strategic position.



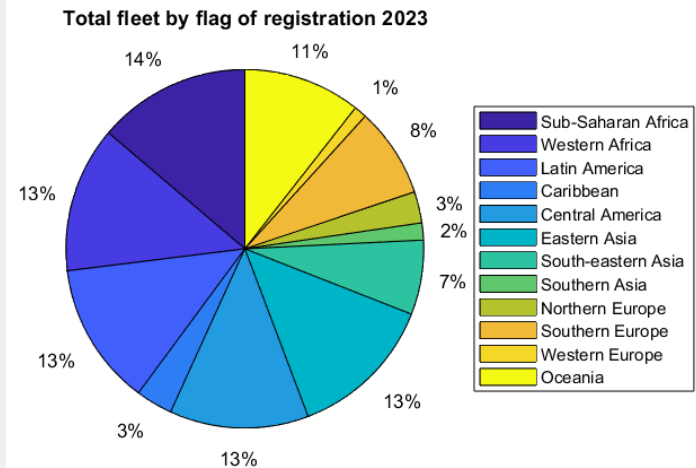
In this bar chart provided by the INE, we can see how the growth of the port of Algeciras aligns with the increase in the number of companies in the city and thus with its economic development. The logical explanation for this development is the steady increase of maritime transport.



Furthermore, the continuous growth of the port has generated many job opportunities, which is reflected in the city's unemployment rate. Of course the only exception to this trend has been like everywhere else in the world, the unemployment rate increased during the COVID-19 crisis.



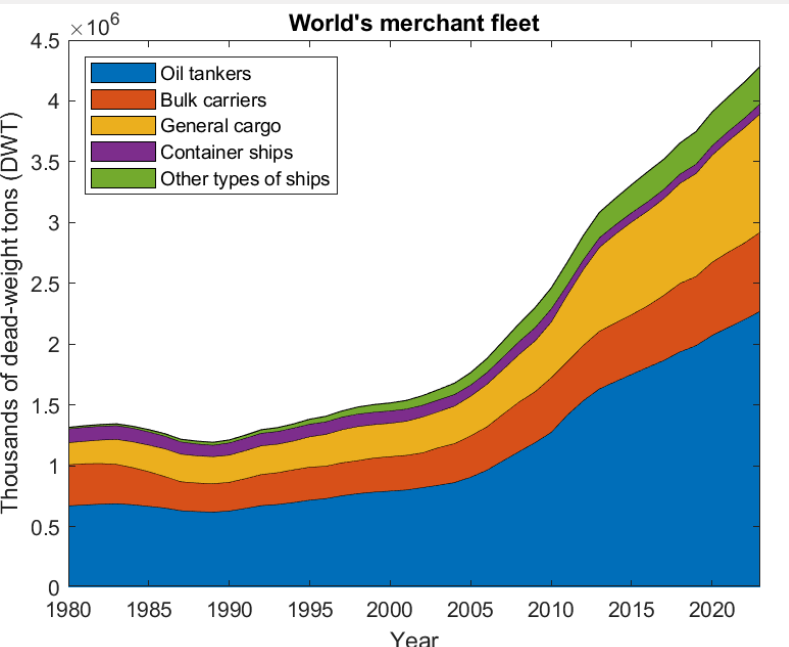
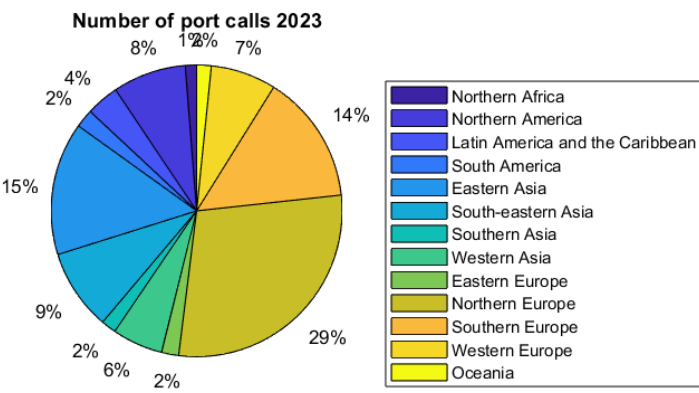
## Do tax advantages influence fleet registration?



Places that represent less than 1% have been excluded from the graphics.

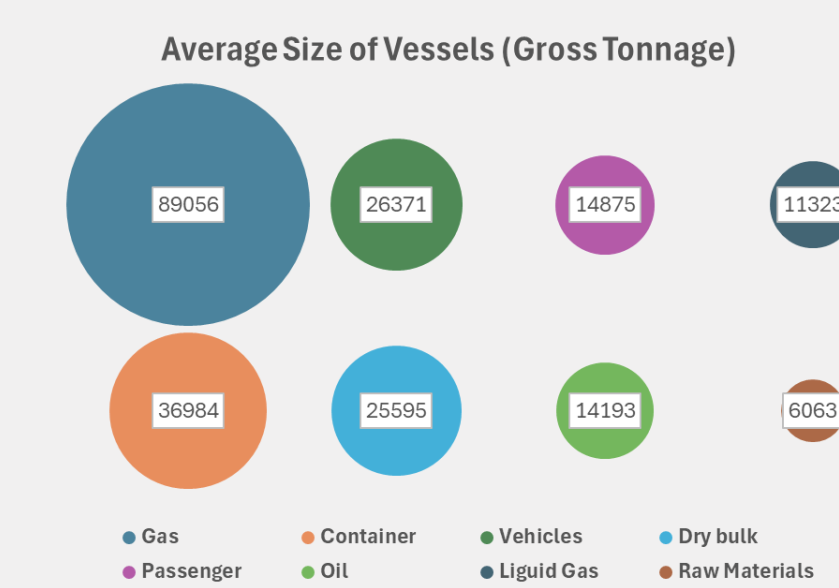
Most of the fleet is registered in places with tax advantages for sailors like Panamá (Central America), Liberia (Western Africa), Marshall Islands (Oceania), and Bahamas or Caiman Islands (Caribbean).

These places do not get as many port calls as other ports in the world; that is because sailors do not really trade there; they only register their ships there for economic reasons.



## What maritime vessels command the market landscape?

There have been more fleets of oil tankers than the other types together since 1980, as our industrialized society depends on oil. In 2010, there was an increase in the fleet of general cargo ships, overreaching bulk carriers' fleets due to globalization. These ships are more versatile and can operate in more ports than bulk carriers, which have a higher risk of cargo damage.

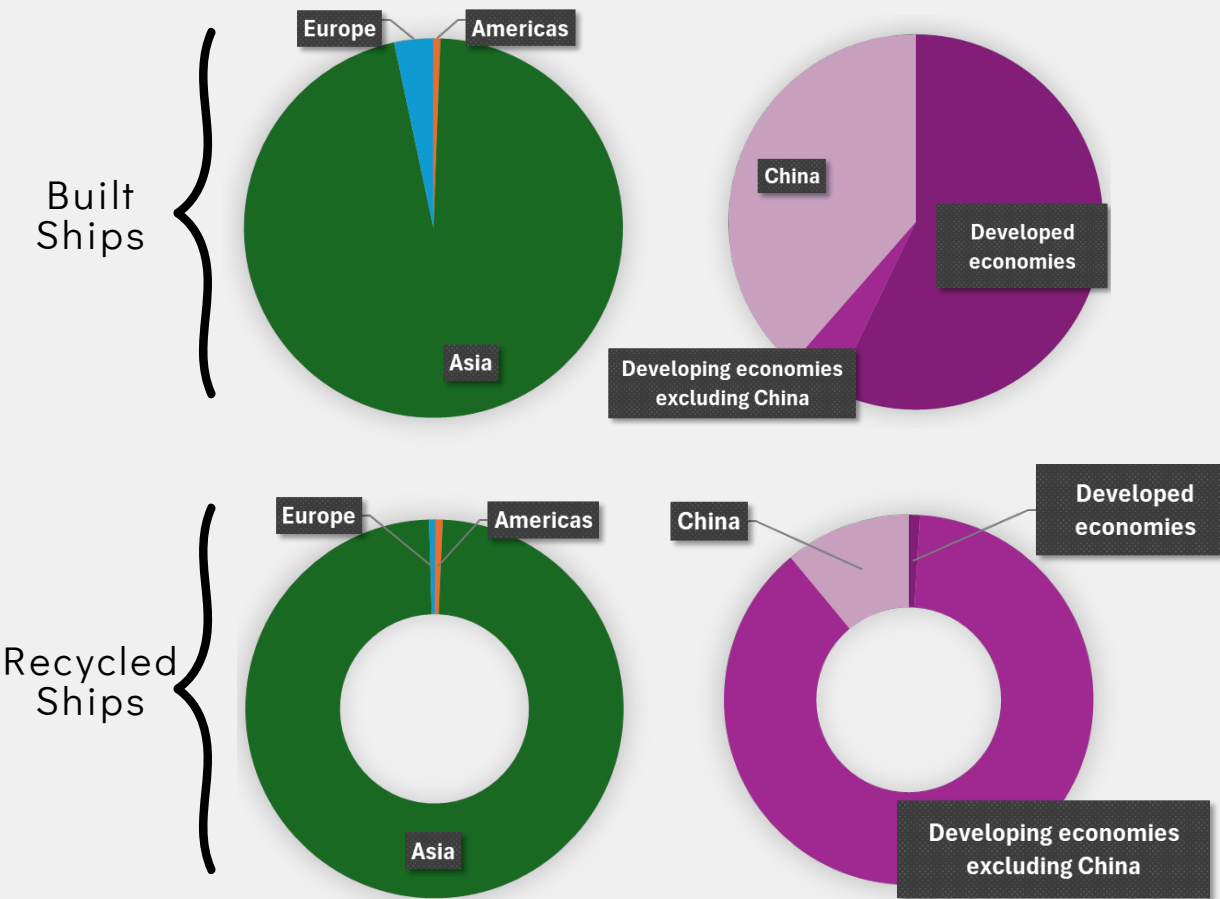


## What do the heaviest ships carry?

Suprisingly, the ships that are the heaviest, are carrying gas. Currently it is one of the major sources of energy. These vessels weigh more than 100 times as much as raw material vessels.

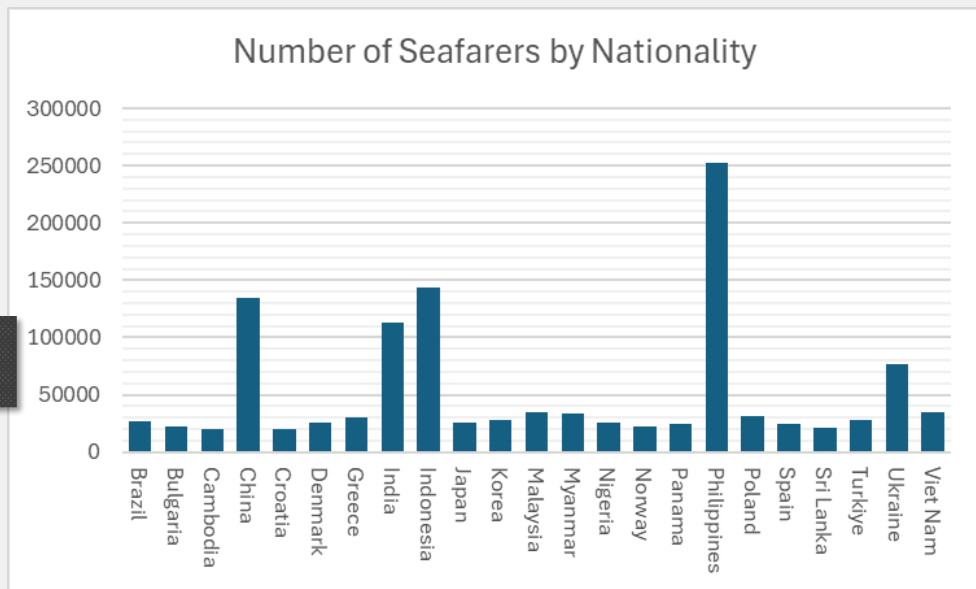
## Contrast between built & recycled ships

Because the average age of a ship is 17.5 years, it is necessary to have recycling plans for it. This data represents a summary of the 2014-2022 period. The mean amount of shipbuilding in the world was 62 Million Gross Tonnage. Whereas the average amount of ship recycling in the world was 18 Million Gross Tonnage. That means that we have to raise awareness about the need to recycle ships in future years. Furthermore, we can see in the pie charts that while the majority of boats are built in developed countries, the greatest recycling is happening in developing countries. This shows how developed economies leave problems to others.



## Vocation for the sea

It is amazing how the population of the Philippines has an outstanding calling to work on the sea. The Philippine seafarers represent 13% of total employees working in the oceans and ports. It is clear that the majority of this population works abroad, due to the low connectivity index of the Philippines, as we see above in the graph of "Linear shipping connectivity index".



This picture only shows the Nationalities that represents more than a 1% in total number of seafarers.

## Who chooses maritime transport jobs?

#Seafarers 2021	Change 2015-2021	Nationality
2193	1160.3%	Cameroon
24487	925.4%	Spain
7987	637.5%	Arab Emirates
1892725	14.9%	World

## Who prefers other jobs?

901	-81.4%	Honduras
474	-82.1%	Kiribati
3601	-89.6%	Italy