

**NORTH-SOUTH  
MARITIME CARGO TRANSPORT FLOWS  
OF THE GTMO 5+5 COUNTRIES**

**2010**

**CETMO**

**October 2013**



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## 1. INTRODUCTION

This note describes the main characteristics of maritime cargo transport flows between the southern GTMO 5+5 countries (Algeria, Libya, Mauritania, Morocco and Tunisia) and the northern countries (France, Italy, Malta, Portugal and Spain) in 2010.

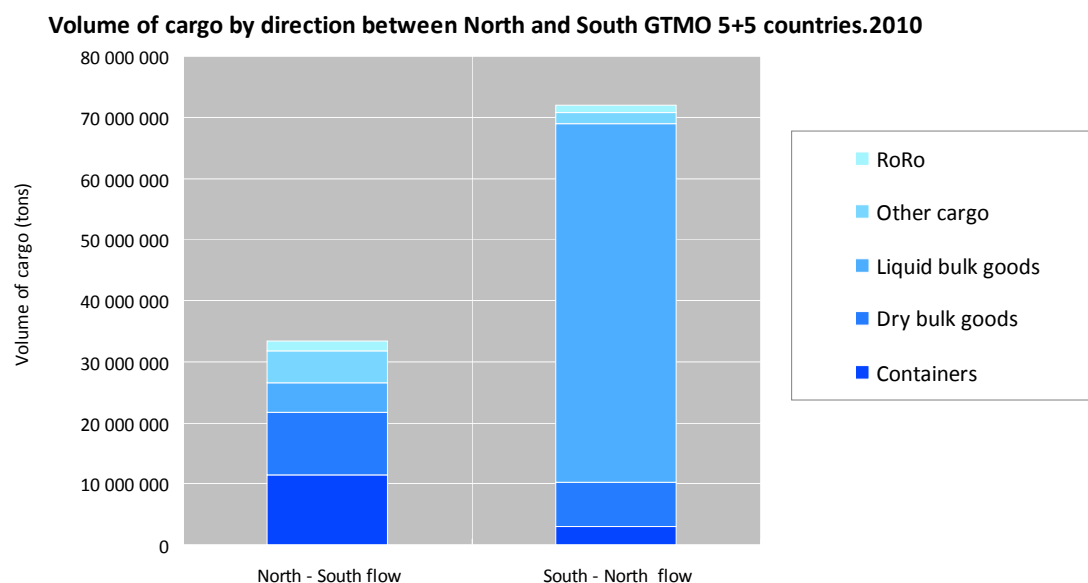
Based on the volume of goods exchanged in tonnes between the ports of these two groups of countries, this report first provides a brief description of these relations in general terms. It then analyses relations between the two groups of countries in terms of the total volume. Finally, a more detailed analysis is provided of the most important European GTMO 5+5 ports in flows with Maghreb countries based on the total volume and type of cargo.

This analysis was done using data obtained from Eurostat, which provides data by product and destination of the goods handled by European ports and it is introduced in CETMO – INFRA 2010.

## 2. MARITIME CARGO TRANSPORT FLOWS BETWEEN MAGHREB GTMO 5+5 COUNTRIES AND EUROPEAN COUNTRIES

### 2.1. Goods flows overview

In 2010, the volume of goods exchanged by maritime transport by southern GTMO 5+5 countries with northern countries is 105 million tonnes. As shown in graphic I, this volume can be broken down as 33 million tonnes corresponding to north-south flows and 72 million tonnes corresponding to south-north flows.



Graphic I. General representation of North-South maritime cargo transport flows. Source: CETMO – INFRA. 2010.

Goods distribution is very unequal in the south-north direction, in which 81% corresponds to bulk liquids. North-south flows clearly dominate in terms of containers (35%) and bulk solids (30%).

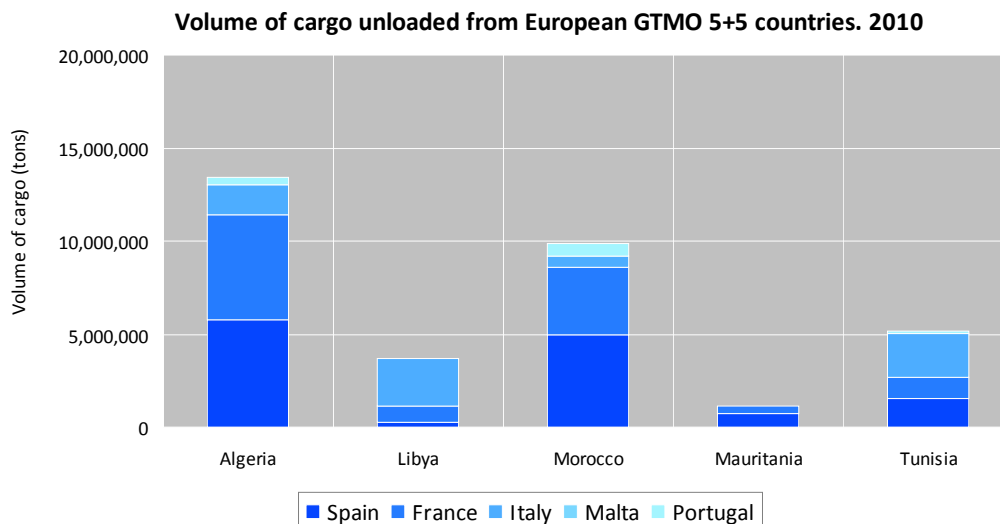
Comparison of the two flows reveals a major imbalance in terms of volume, with much higher South-North flows (72 million tonnes) than North-South flows (33 million tonnes). The main cause is the high volume of bulk liquids (59 million tonnes) sent from the southern GTMO 5+5 countries to the northern countries. This imbalance is inverted when bulk liquids are removed from this analysis, which gives a result that is much higher in north-south flows (23 million tonnes) than south-north flows (13 million tonnes).

## 2.2. Flows between northern and southern GTMO 5+5 countries

Below is a graphic of the flows involving maritime cargo transport for each Maghreb GTMO 5+5 country with the European countries broken down by loaded and unloaded cargo.

### - North-South goods flows

An analysis of Graphic II on flows of maritime cargo transported from the European countries and unloaded by Maghreb GTMO 5+5 countries indicates the following general features:



Graphic II. Volume of maritime transport cargo sent from European countries and unloaded in the Maghreb GTMO 5+5 countries (t). Source: CETMO – INFRA. 2010.

Of the Maghreb ports, those in Algeria receive the most goods from European GTMO 5+5 countries. The volume (13 Mt) represents 40% of all the goods unloaded by the Maghreb countries. The ports in Morocco come in second place (10 Mt) with 30%. Spain and France are the main countries of origin: 43% of the goods unloaded in Algeria come from Spain and 42% from France; 50% of the goods unloaded in Morocco come from Spain and 37% come from France.

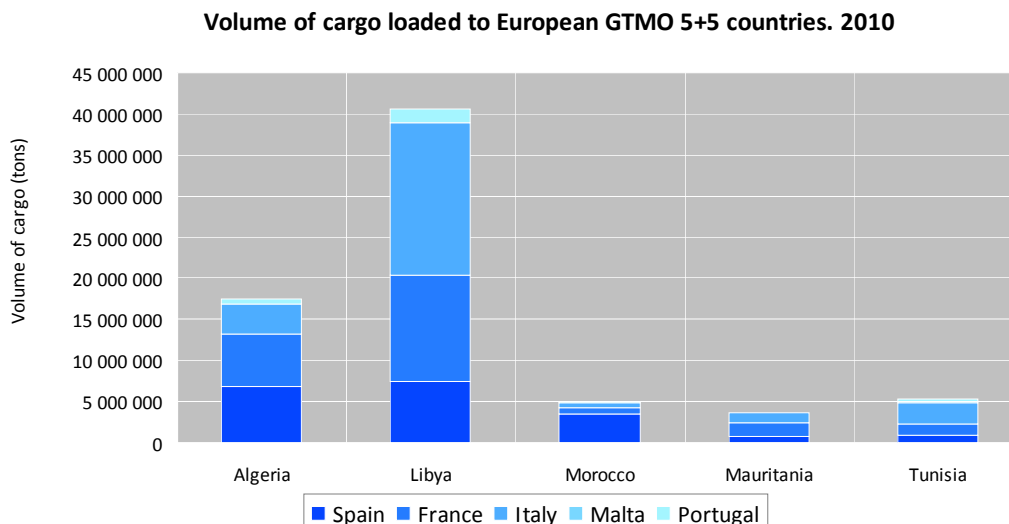
Volumes of goods flows from Tunisia (5 Mt) and Libya (4 Mt) are at a secondary level and represent 16% and 11%, respectively, of total goods unloaded by the Maghreb countries. Their goods come mainly from Italy: for Tunisia, they represent 46% of the total and for Libya they represent 68%.

Finally, the volumes for Mauritania are much lower than those for the other countries. The country's one million tonnes of goods represent 3% of all goods unloaded by the Maghreb countries, and Spain and France are the main countries of origin (97% of goods unloaded in Mauritania).

For maritime cargo flows from the European GTMO 5+5 countries to the Maghreb countries, Spain, with 13 Mt, is the country that sends the most goods to the Maghreb. France comes in second place with 12 Mt, followed by Italy with 7 Mt. The sum of their volumes represents 96% of all goods sent by maritime transport to the Maghreb countries.

### - South-North goods flows

Graphic III shows the maritime cargo transport flows loaded in Maghreb GTMO 5+5 countries whose destination is a European GTMO 5+5 country. An analysis of the figure reveals the following:



Graphic III. Volume of maritime transport cargo loaded in Maghreb GTMO 5+5 countries whose destination is a European GTMO 5+5 country (t). Source: CETMO – INFRA. 2010.

Of the Maghreb ports, those in Libya send the most goods to European GTMO 5+5 countries. Its nearly 41 million tonnes account for 56% of total goods sent by the Maghreb countries. The main destination is Italy (46% of the total sent by Libya), followed by France (32%) and Spain (18%).

In second place are the flows from Algeria (17 Mt), which account for 24% of the total sent by the Maghreb countries. The main destinations are Spain (39%), France (37%) and Italy (21%).

Finally, the flows sent by Tunisia (5 Mt), Morocco (5 Mt) and Mauritania (4 Mt) are much lower. The sum of these flows does not represent 20% of the total goods sent by the Maghreb countries. The main destinations vary depending on the country; for Morocco, 69% is sent to Spain; for Tunisia, 49% is sent to Italy; and for Mauritania, 46% is sent to France.

Maritime goods transport flows from the Maghreb GTMO 5+5 countries to European countries stand out for the flows sent to Italy, with 27 Mt (19 Mt of which come from Libya), followed by France, with 23 Mt and Spain, with 19 Mt. Therefore, 96% of the goods loaded at Maghreb ports are sent to these three countries.

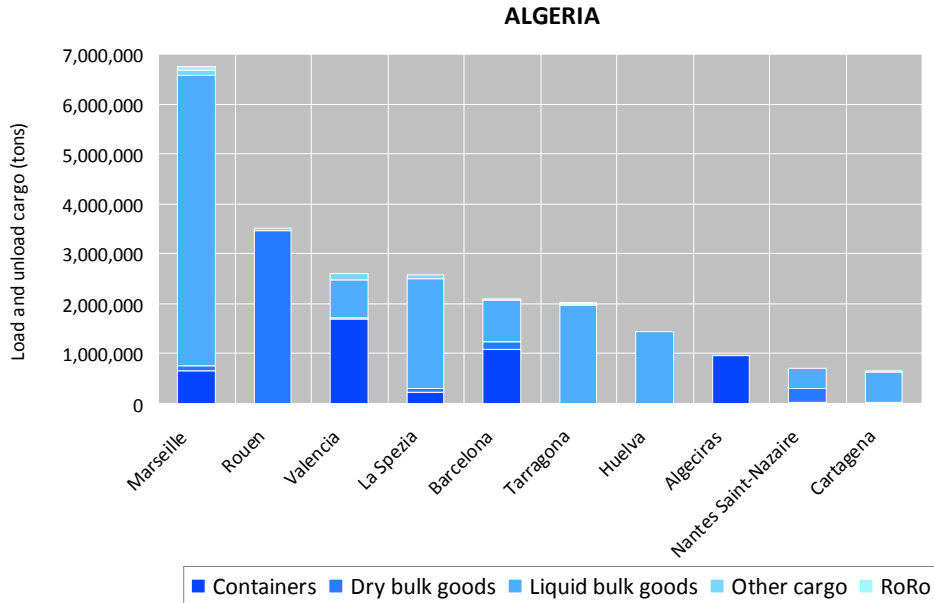
### 2.3. Flows between the Maghreb GTMO 5+5 countries and European ports by the type of cargo

This section describes the most important European GTMO 5+5 ports in terms of maritime cargo transport flows for each southern GTMO 5+5 country. The data shown correspond to total goods flows and are broken down by type of cargo. When it was considered noteworthy, the direction of these goods flows is indicated, even though it does not appear in the figures.

#### - Algeria

In flows from Algeria to European GTMO 5+5 countries, of note is the high amount of bulk liquids sent by Algeria. These flows account for 57% of all goods exchanged between Algeria and the European GTMO 5+5 countries. Further behind in second place are solid bulk goods, with 18%, and containers, with 16%.

Graphic IV on the 10 most important European GTMO 5+5 ports in terms of goods flows with Algeria reflects the following main features:



Graphic IV. Maritime cargo transport flows between Algeria and the European GTMO 5+5 countries by type of cargo (t). Source: CETMO – INFRA. 2010.

The port that exchanges the most goods with Algeria is Marseille, with a volume of nearly 7 Mt. As with the ports of La Spezia, Tarragona, Huelva and Cartagena, the predominant type of cargo is bulk liquids and virtually all of it is sent from Algeria.

The second-most important port is Rouen, with a flow of nearly 4 Mt. 99% of this flow is bulk solids and all of it is sent to Algeria.

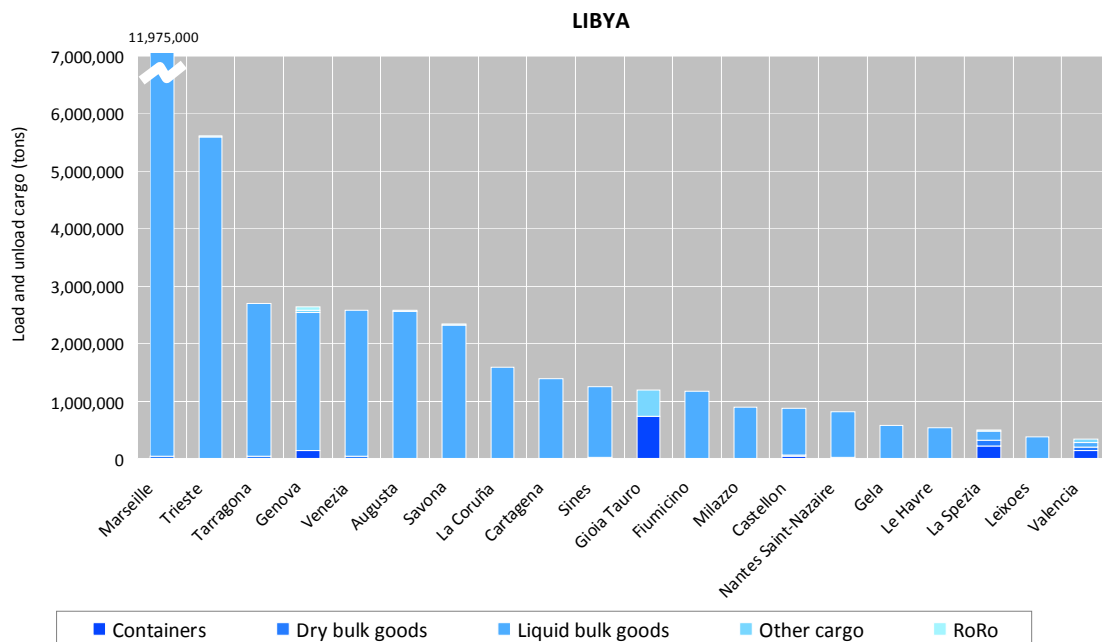
The port of Valencia, with nearly 3 Mt, is the third-ranked port in terms of flows with Algeria; containers are the main type of cargo (65%). The same is true of the ports of Barcelona and Algeciras, where containers account for 51% and 99%, respectively, of the goods. A detailed analysis shows that close to 90% of these containers are loaded and sent to Algeria.

**- Libya**

The predominant type of cargo in flows between Libya and the European GTMO 5+5 ports is clearly bulk liquids, which account for 92% of the total. All the other types of cargo have much lower flows; of note in this group are containers, with 3%.

Graphic V shows the 20 most representative European GTMO 5+5 ports in terms of flows with Libya. Because of the uniformity of goods transported, it was necessary to show the results for more ports. An analysis highlights the following main points:





Graphic V. Maritime cargo transport flows between Libya and the European GTMO 5+5 countries by type of cargo (t).  
Source: CETMO – INFRA. 2010

Of the main ports exchanging goods with Libya, in first place is the port of Marseille, which, with 12 Mt, handles more than twice as much cargo as Trieste, the second-ranked port, with nearly 6 Mt. The two ports account for 40% of all goods exchanged with Libya. Further behind are the ports of Tarragona, Genoa, Venice and Augusta, each with flows close to 3 Mt.

In all these ports, the percentage of bulk liquids is around 99%, except for Genoa, with 90% (the remaining 10% is divided equally between containers and the other three types of cargo). Practically all of these bulk liquids (97%) are sent from Libya to the European GTMO 5+5 countries.

The graphic also shows a much less significant secondary flow of containers. They come mainly from Gioia Tauro, La Spezia, Valencia and Genoa. The four move up to 86% of container flows, virtually all of which travel from north to south.

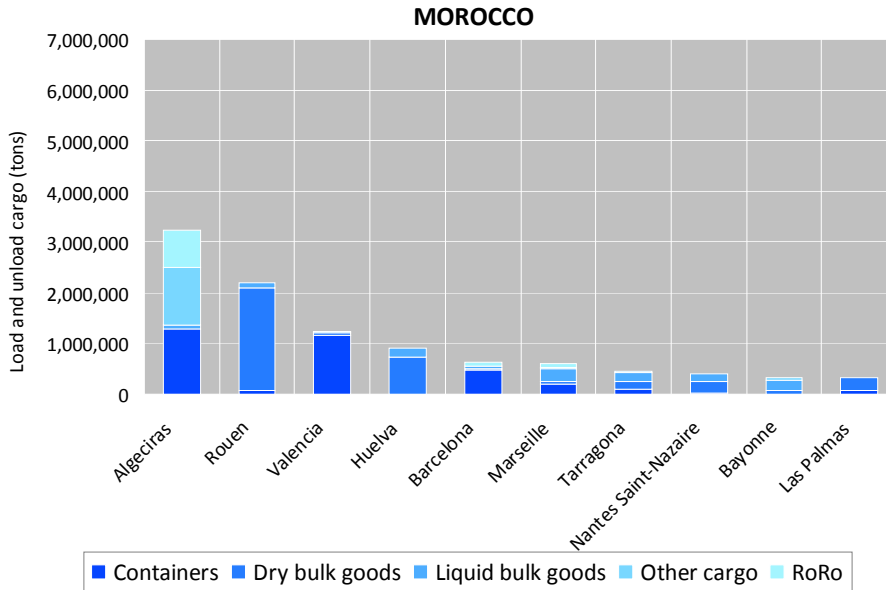
**- Morocco**

In flows between Morocco and the European GTMO 5+5 ports, two types of cargo stand out: bulk solids and containers. 33% and 31%, respectively, of all goods exchanged between Morocco and the northern GTMO 5+5 countries belong to these types.

Graphic VI shows the 10 most important European GTMO 5+5 ports in terms of the volume of goods flows with Morocco. An analysis of the figure reveals the following:

The port that exchanges the most goods with Morocco is Algeciras, with slightly more than 3 Mt. The predominant types of cargo are containers (40% of all cargo), other types of cargo (35%) and RoRo (23%). These goods are divided into two nearly equal parts of loaded and unloaded goods.

Rouen is in second place, with a flow of slightly more than 2 Mt, in which bulk solids are the predominant type, with 92%. Virtually all of it is sent from the port of Rouen to Morocco. Valencia is in third place, with a clear dominance of containers (94%), most of which are sent to Morocco.



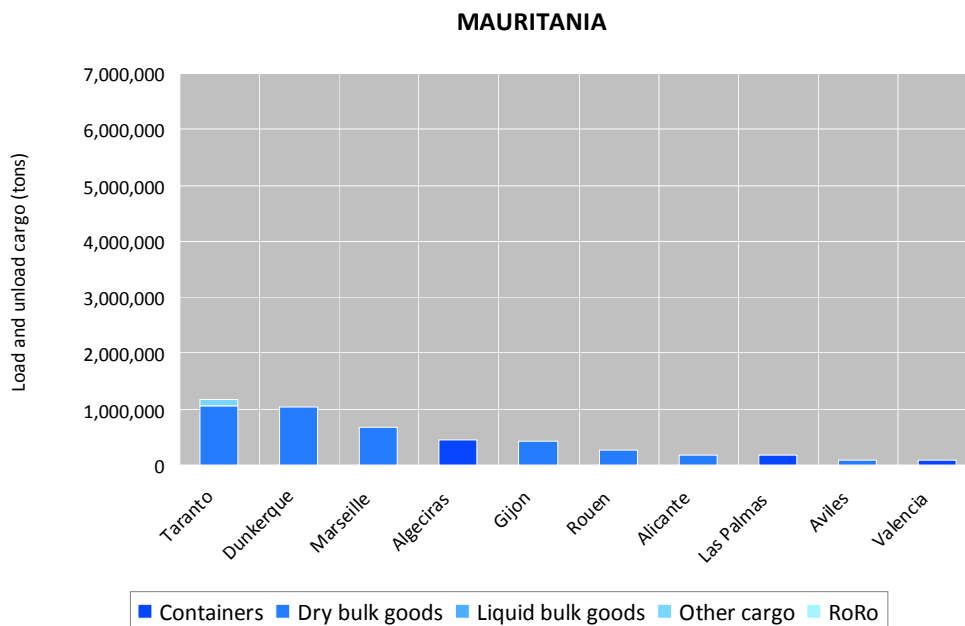
Graphic VI. Maritime cargo transport flows between Morocco and the European GTMO 5+5 countries by type of cargo (t). Source: CETMO – INFRA. 2010.

The following stand out with lower flows: Huelva, with a predominance of bulk solids (81%); Barcelona, with containers (79%); and Marseille, with different types of cargo, especially bulk liquids (40%), containers (33%) and, to a lesser degree, RoRo (13%).

- **Mauritania**

In flows from Mauritania to European GTMO 5+5 countries, of note is the high amount of bulk solids exported by Mauritania. These flows account for 81% of all goods exchanged between Mauritania and the European GTMO 5+5 countries. In second place is containers flows, which account for 16%.

Graphic VII shows the 10 most important European GTMO 5+5 ports in terms of the volume of goods flows with Mauritania. The following features can be taken from the figure.



Graphic VII. Maritime cargo transport flows between Mauritania and the European GTMO 5+5 countries by type of cargo (t). Source: CETMO – INFRA. 2010.

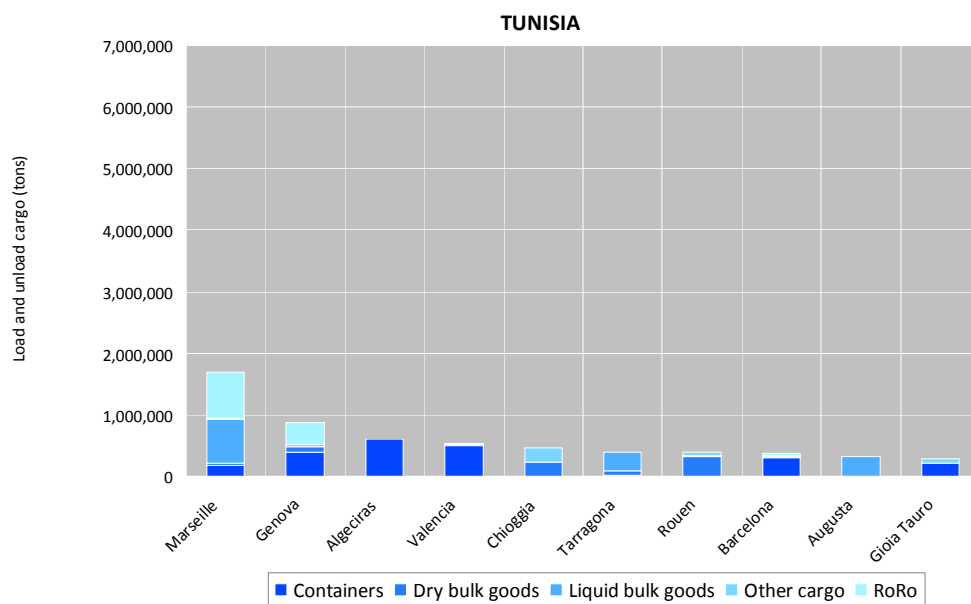
The ports of Taranto, Dunkirk and Marseille are the most representative in terms of flows with Mauritania, with each accounting for nearly one million tonnes. The predominant type of cargo is bulk solids (90% to Taranto and 100% to Dunkirk and Marseille). Of note is the fact that between 99% and 100% of the flows of this type of cargo through the three ports mentioned are in the south-north direction, as in the case of the port of Gijon. At the ports of Rouen and Alicante, however, all the bulk solids are sent to Mauritania.

The port of Algeciras is ranked fourth, with flows of 0.5 Mt. As with the ports of Las Palmas and Valencia, the predominant type of cargo is the container. The three ports handle 95% of the containers that arrive in Mauritania from the GTMO 5+5 countries. The direction of flows is very evenly distributed in Algeciras. However, at the ports of Las Palmas and Valencia, south-north flows predominate.

**- Tunisia**

The distribution of goods exchanged by Tunisia with the European GTMO 5+5 countries is quite uniform. It can thus be observed that 30% of the goods transported are bulk liquids, 25% containers, 20% bulk solids, 14% RoRo and the remaining 11% other types of cargo.

Graphic VIII shows the 10 most important European GTMO 5+5 ports in terms of the volume of goods flows with Tunisia. An analysis of the figure reveals the following:



Graphic VIII. Maritime cargo transport flows between Tunisia and the European GTMO 5+5 countries by type of cargo (t). Source: CETMO – INFRA. 2010.

The European port that exchanges the most goods with Tunisia is Marseille, with a volume of nearly 2 Mt. The predominant type of cargo is RoRo (44% of total cargo) and bulk liquids (42%). The direction of RoRo flows is evenly distributed. However, virtually all of the bulk liquids are sent from Tunisia to Marseille.

Genoa is in second place with considerably lower flows (nearly 1 Mt) and a clear dominance of containers (45%) and RoRo (42%). The loaded and unloaded flows of these two types of cargo are very balanced.

Most of the flows of containers come from Spanish and Italian ports. Algeciras (0.6 Mt), Valencia (0.5 Mt) and Barcelona (0.3 Mt) for the Spanish ports; and Genoa (0.4 Mt) and Gioia Tauro (0.2 Mt) for the Italian ports. In general, nearly all of these containers are sent to Tunisia.

## 2.4. Conclusions

The analysis of the country-country flows between the Maghreb and European GTMO 5+5 countries reveals the existence of a major imbalance in maritime transport goods flows in terms of the direction of the flow. The volume loaded at Maghreb ports is considerably higher than the volume loaded at European GTMO 5+5 countries. This imbalance is largely caused by bulk liquids, mainly from Libya and, to a lesser degree, Algeria. However, when this type of cargo is left out of these flows, it can be observed that this imbalance is inverted and the volume of north-south flows is much higher than the south-north flows.

Also of note is that the importance of the geographic proximity between countries plays a determining role in flows. It can therefore be seen that goods exchanged with Spain and France predominate in the Western Maghreb GTMO 5+5 countries. However, when the Eastern Maghreb is analysed, Italy is the European GTMO 5+5 country that exchanges the most goods with this region.

These flows between countries are also characterized by the predominance of one type of cargo or another, depending on the flow. Flows between European GTMO 5+5 countries and Libya are almost exclusively bulk liquids, which is also the dominant cargo in flows with Algeria. Flows with Mauritania are strongly characterized by bulk solids and a secondary flow of containers from Spanish ports. Finally, flows with Morocco and Tunisia show a more heterogeneous distribution.

The volume of goods exchanged between the countries and the predominance of certain goods over others in these exchanges is certainly a reflection of the specialization of the European ports in terms of the flows themselves and the type of cargo.

It can thus be observed that the ports of Marseille and Tarragona are more specialized in bulk liquids and are more important in countries where that type of cargo predominates, such as Algeria, Libya and, to a lesser degree, Tunisia.

On the other hand, in flows with Morocco and, to a lesser degree, Algeria, where bulk solids and containers predominate, the ports of Algeciras, Barcelona and Valencia take on greater importance because they specialize in containers. The importance of proximity in this case is noteworthy. Of the three ports mentioned, the port of Valencia is the leader in terms of flows with Algeria, and Algeciras is the leader in terms of flows with Morocco. In the case of Morocco, it can also be observed how proximity determines where RoRo flows take place, in that Algeciras handles nearly all flows of this type of cargo.

In Tunisia, where RoRo is of great importance in terms of the volume of flows compared to other countries, the ports of Marseille and Genoa predominate due to their proximity and specialization in this type of cargo.

The port of Rouen is another example of specialization, in that nearly all of the goods it handles are bulk solids. The ports of Taranto and Dunkirk, which also specialize in bulk solids, are very important for exchanges of this type of cargo with Mauritania.