

AIR PASSENGER FLOWS
IN THE GTMO 5+5 COUNTRIES

2010

CETMO

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Avenue Josep Tarradellas, 40, mezzanine

08029 Barcelona, Spain

☎ (34) 93 430 52 35

☎ (34) 93 419 92 37

cetmo@cetmo.org • www.cetmo.org

1. INTRODUCTION

This report analyses the main features of air passenger flows in both directions between the North and South countries of the GTMO 5+5 in 2010.

First, the flows between the countries are presented to give a general overview of the flows under study and their evolution. Next, we list and describe the major airports in the GTMO 5+5 North countries that handle the most passengers in flows with the countries of the South. The next section does the same for airports in the countries of the South. To conclude the descriptive part of the report, we present and describe the routes between airports that carry more than 50,000 passengers. Finally, we present a brief commentary on the main conclusions to be drawn from the information presented.

This report is based on data contained in CETMO-FLUX 2010 passenger data. Practically all data presented in this database and show in this report come from *Eurostat*. *Eurostat* provides data on passenger flows for European airports in relation to other countries around the world and on the most important routes. Comparison of these data with those provided by the airports allowed us to confirm a high degree of consistency between the two types of sources, although in some cases data from the airports had to be used, since *Eurostat* left out some routes with a significant volume of passengers.

2. AIR PASSENGER FLOWS IN THE GTMO 5+5 COUNTRIES

In 2010, the volume of air passengers in both directions between the North and South countries of the GTMO 5+5 is **16.7 million** passengers, representing 69% of the total number of passengers travelling by sea and air between the North and South countries of the GTMO 5+5. Figure I details these flows in map and table form, showing the overall flows between countries.

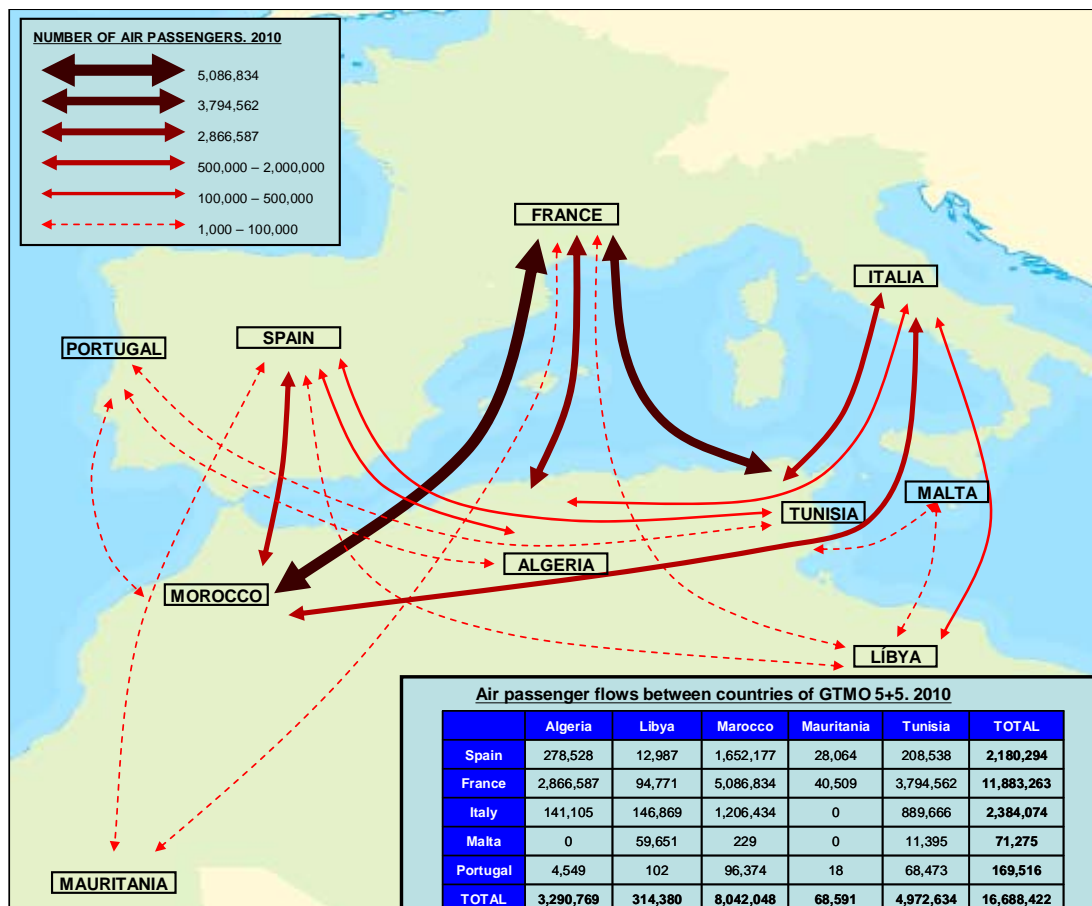


Figure I. Representation of air passenger flows in both directions between the North and South countries of the GTMO 5+5. Source: CETMO-FLUX 2010 passenger data.

It can be observed that flows are highly concentrated in France. With a volume of nearly 12 million, France moves 72% of all air passengers between the North and South countries of the GTMO 5+5. Its flows with Morocco are the most notable (5 million passengers), followed by Tunisia (3.8 million) and Algeria (2.9 million).

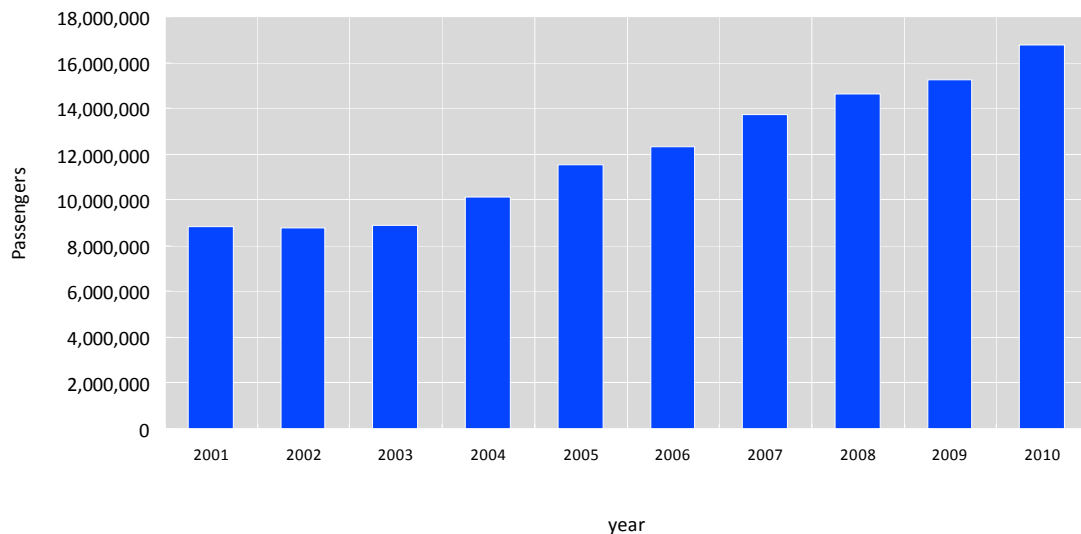
Among the Maghreb countries, Morocco handles the most passengers, with a total of 8 million. As mentioned, its flows with France stand out, accounting for 63% of these passengers. With lower volumes, but also notable, are Morocco's flows with Spain (1.6 million) and Italy (1.2 million).

Tunisia also handles a large passenger flow (5 million), of which 76% come from its flows with France. Other notable flows with a much lower volume exist with Italy (0.9 million) and, secondly, Spain (0.2 million).

The volume handled by Algeria (3.2 million) is also of considerable significance for flows between the GTMO 5+5 countries. France is once again the country that accounts for the majority of this volume (88%). Considerably lower volumes are handled in Algeria's flows with Spain (0.3 million) and Italy (0.1 million).

Flows between Libya and other GTMO 5+5 countries are not as notable as those of the previously mentioned countries, with 314,000 passengers being handled by Libya in these flows. Of note is that France is no longer the main origin/destination, but rather 46% of passengers come from flows with Italy (147,000 passengers). The next most significant volumes were observed in flows with France (95,000) and Malta (60,000).

Evolution of air passengers flows. 2001 - 2010

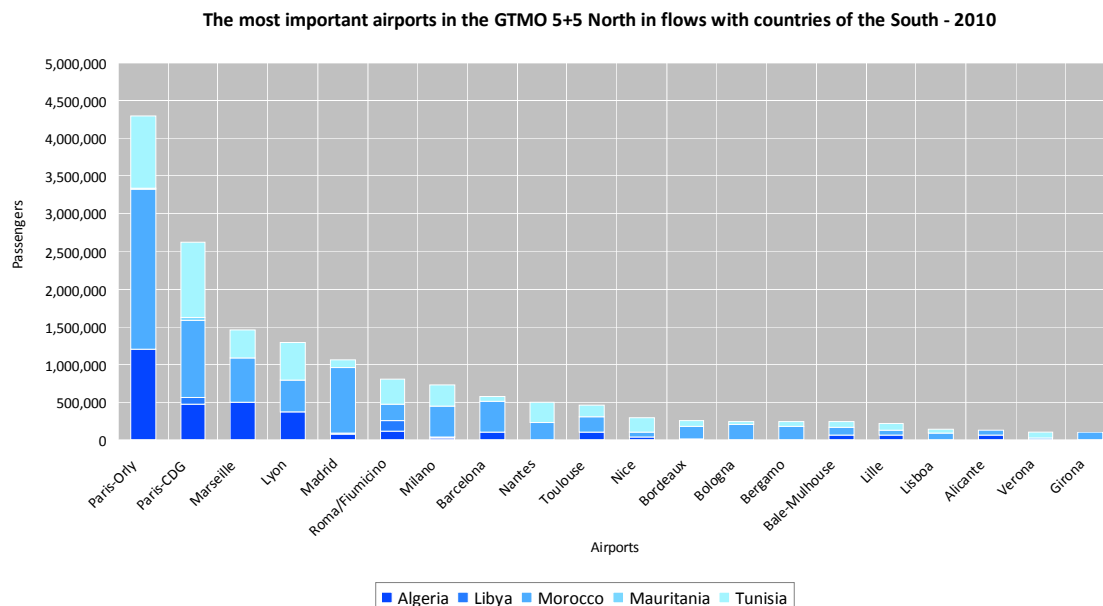


Graphic I. Evolution of air passenger flows between the North and South countries of the GTMO 5+5
Source: Eurostat

The evolution of passenger flows in recent years has shown a trend towards growth. Graphic I shows a clear increase in the number of passengers during this period, with the figures observed in 2010 being nearly double those from 2001. In the first three years of the period (2001-2003) the flow was stable and it was not until 2004 that there was a gradual increase in the number of passengers, with an average annual increase of just over one million passengers (1.1 million).

2.1. The most important airports in the GTMO 5+5 North countries in flows with the GTMO 5+5 South

The following main features can be observed by analysing graphic II showing the airports in the GTMO 5+5 North that handle the largest volume of passengers in flows with the countries of the South.



Graphic II. The most important airports in the GTMO 5+5 North in flows with the countries of the South (all routes considered). Source: CETMO-FLUX 2010 passenger data.

It can be observed that the flow is highly concentrated in 10 main airports: Paris-Orly, Paris-CDG, Marseille, Lyon, Madrid, Rome-Fiumicino, Milan-Malpensa, Barcelona, Nantes and Toulouse. With a total volume of nearly 13.8 million, these airports handle 83% of all air passengers in both directions between the North and South countries of the GTMO 5+5.

The airports in Paris stand out far above the others: Paris-Orly and Paris-CDG handle 4.3 million and 2.6 million passengers, respectively. Thus, two airports account for 41% of the total volume of air passengers between the North and South countries of the GTMO 5+5. The Paris-Orly airport mainly interacts with Morocco (49% of the total), followed by Algeria (28%) and Tunisia (22%). At Paris-CDG, Morocco also takes the most passengers (39%), followed by Tunisia (38%) and Algeria (18%).

The flows between Paris-CDG and Mauritania are noteworthy; of all the passengers travelling between Mauritania and the North countries of the GTMO 5+5, nearly 50% go through this airport.

The most important airports after those in Paris are also French: Marseilles and Lyon, with 1.5 million and 1.3 million passengers, respectively, demonstrate the great importance of French airports in air passenger flows between the North and South countries of the GTMO 5+5. Morocco is the leading Maghreb country with flows to the Marseille airport, and Tunisia is the most important for the Lyon airport. In both cases, these countries account for over 40% of the airports' total flows to Maghreb countries.

The Madrid airport (1 million passengers) and the Barcelona airport (0.6 million) are the most important in Spain. Among the Maghreb countries, Morocco is their main destination, accounting for 82% from Madrid and 69% from Barcelona.

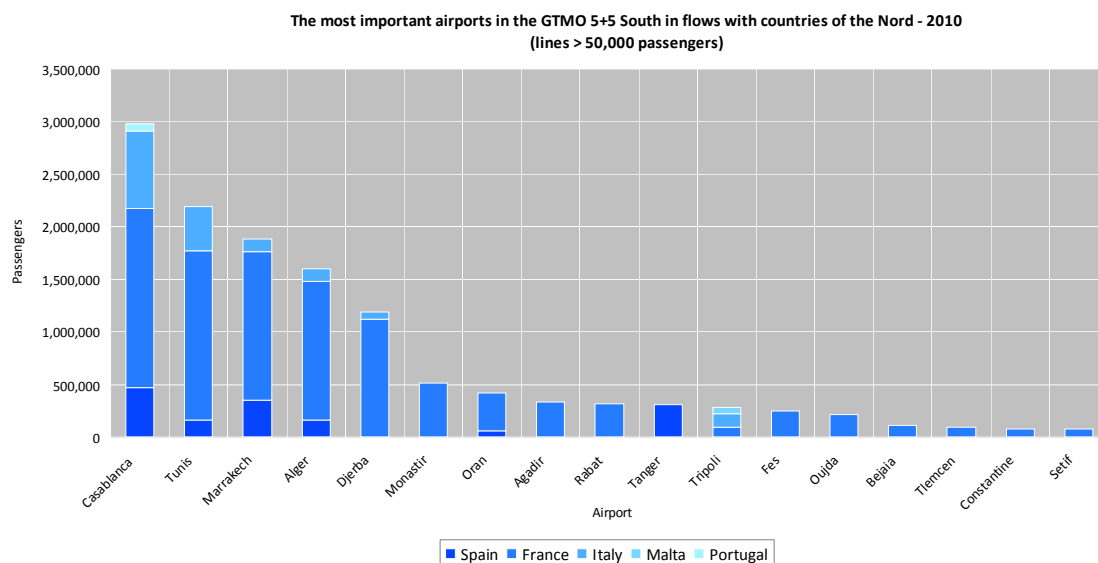
Rome and Milan are the most important for Italy, handling 0.8 million and 0.7 million passengers, respectively. Rome's airport is linked primarily with Tunisia (42%), and Milan's with Morocco (56%).

Rome's airport stands out as the main airport interacting with Libya; 41% of the passenger flows between Libya and the North countries of the GTMO 5+5 go through this airport.

Lisbon's airport is the most heavily used in Portugal. It handles 143,000 passengers, or 85% of all passengers between Portugal and the Maghreb. Morocco, with 63% of all passengers, is the main GTMO 5+5 country interacting with this airport.

2.2. The most important airports in the GTMO 5+5 South countries in flows with the GTMO 5+5 North

Graphic III shows the most important airports in the GTMO 5+5 South countries in flows with the countries of the North. For the analysis of these flows, in the absence of more detailed data, only those routes with a volume of over 50,000 passengers have been considered.



Graphic III. The most important airports in the GTMO 5+5 South in flows with the countries of the North (routes with over 50,000 passengers considered). Source: CETMO-FLUX 2010 passenger data.

There is a high level of concentration in 5 airports: Casablanca, Tunis, Marrakech, Algiers and Djerba. Between 60% and 95% of the volume handled by these airports on routes with more than 50,000 passengers comes from flows with France.

France is also the GTMO 5+5 North country that interacts the most with airports of lesser importance in the Maghreb, with volumes that, in most cases, represent 100% of the routes with more than 50,000 passengers. The only exceptions in this regard are the Tangier and Tripoli airports. All of Tangier's routes with more than 50,000 passengers interact with Spanish airports and represent a very high volume of flows between Spain and the Maghreb countries. As for Tripoli, it interacts mainly with airports in Italy and, to a lesser extent, France and Malta.

Regarding flows with Spain and Italy, it can be seen that the flow is concentrated mainly in the major airports in the Maghreb. Flows between the Maghreb and Portugal follow a similar pattern, with Casablanca being the only airport in the Maghreb with a route to Portugal with more than 50,000 passengers.

2.3. Main air passenger routes of the GTMO 5+5 countries

The two maps below show the routes with more than 50,000 passengers between airports in the North and South countries of the GTMO 5+5. Its analysis reveals the following main features.

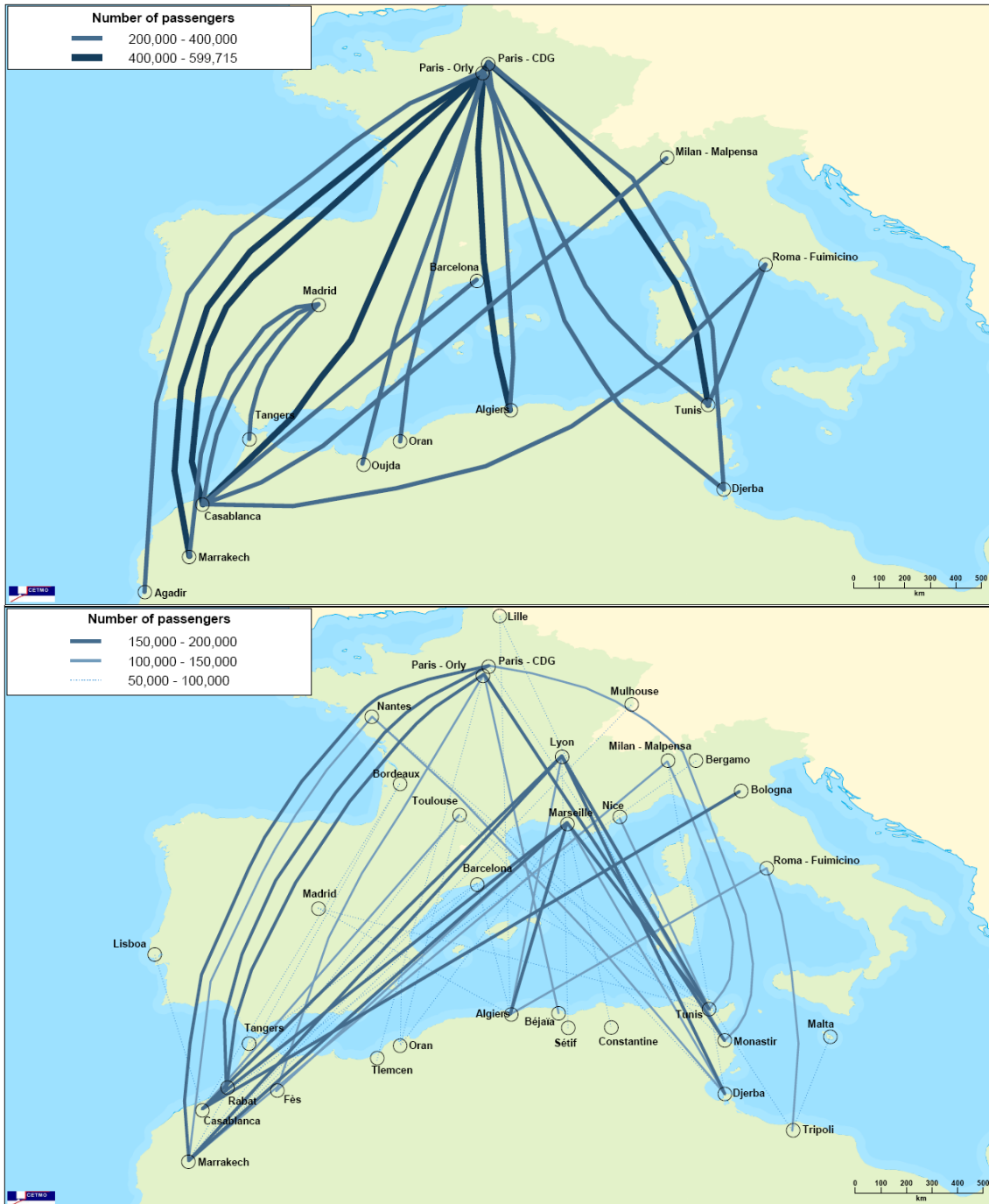


Figure II. Main air-passenger flows. Routes with over 50,000 passengers. 2010. Source: CETMO-FLUX 2010 passenger.

It can be seen that the routes with the highest volume of passengers (>400,000 passengers) are concentrated in a few airports. Among these, those having the airports of Paris as origin or destination stand out in terms of volume and number. In the case of Paris-Orly, its main flows are with the airports of Casablanca, Marrakech, and Algiers; for Paris-CDG, the most important routes are with the airports of Tunis and Casablanca.

Other routes with lower, but still significant volumes (>200,000 passengers) are seen at the airports of Madrid, with routes to Tangier, Casablanca and Marrakech; Barcelona and Milan-

Malpensa, with major routes to Casablanca; and Rome-Fiumicino, which has two important routes to the airports of Tunis and Casablanca.

As for the routes of lesser importance, they are seen mainly between the previously mentioned major airports of the Maghreb and secondary airports in the GTMO 5+5 North. The airports of Marseille and Lyon stand out in this regard as they are involved in a significant number of these routes. The major airports of the Maghreb with which they interact are those in Marrakech, Casablanca and Tunis, as well as Algiers (for Marseille) and Djerba (for Lyon).

Of particular interest are the flows between the airports of Malta and Tripoli, which is the only route with more than 50,000 passengers in Malta and accounts for 84% of the flows between this country and the Maghreb countries.

2.4. Conclusions

Passenger flows between the North and South countries of the GTMO 5+5 are concentrated in terms of countries, with France being the country with the most volume, and in terms of airports and routes, with a small subset of airports and routes accounting for the majority of the flows.

The concentration in the GTMO 5+5 North is very evident, with France handling the majority of the flows, while in the countries of the South there is no such concentration.

In terms of airports, one or two airports generally handle most of the flows in each country, with the exception of France. France has four airports serving significant volumes of passengers, although the two airports of Paris stand out considerably above the others.

These patterns are also reflected in the routes. The majority of the flows are concentrated in a set of routes between the countries' major airports, most notably routes with the airports of Paris as their origin or destination.