# METHODOLOGY FOR TERRITORIALISATION OF MARITIME TRANSPORT

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# SUMMARY

The methodology for calculation of maritime transport tonne-km and passenger-km and their 'territorialisation' to the countries, presented below, has been developed by Eurostat.

- '**Territorialisation principle**' means that only freight and passenger transport performed within the territory of a country is considered. In terms of maritime transport, 'territorialisation' means that the transport performed is allocated to the countries on each maritime transport route based on the distance passed through their Exclusive Economic Zones (EEZ).
- **The aim of territorialisation** is to compare shares of each transport mode into the total transport performance in the European Union and also at national level. This is called the 'modal split' between the different transport modes.
- 'Territorialisation' is straight-forward for transport by road, railway and inland waterways, as it takes place on the territory of a country. The calculation is more complex for maritime and air transport, which only uses airport or port infrastructure in the country where the transport starts (origin) and where it ends (destination), and merely passes through the national waters or airspace of other countries on the route.
- **'Transport performance'** is measured in tonnes-kilometres (tkm) for freight and passenger-kilometres for passengers (pkm). A tonne-kilometre is defined as one tonne of freight transported for one kilometre; a passenger-kilometre is defined as one passenger transported for one kilometre. The total tkm or pkm on an maritime journey are, first, calculated based on passengers/freight transported between pair of ports and a distance matrix; and, then, the calculated tkm/pkm are 'territorialised' by allocating them proportionally to the countries, according to the distance passed in the EEZ of each country.
- Eurostat maintains a database of distances (distance matrix) between EU ports, and between EU ports and main world-wide ports on the basis of the 'most likely' sea routes used by vessels. These routes are defined on the basis of vessel position data (Automatic Identification System (AIS) data) transmitted by vessels equipped with transponders. The algorithm used for the "most likely" route calculations chooses the shortest route possible between the points with the highest density of AIS observations.
- Eurostat uses the available EEZ mapping from Flanders marine institute VLIZ (http://www.vliz.be/en) with the following disclaimer: **"The designations employed and the presentation of material on the map do not imply the expression of any opinion whatsoever on the part of the European Union concerning the legal status of any country, territory or area or of its authorities, or concerning the delimitation of its frontiers or boundaries."**
- **It must be highlighted that the 'territorialised' maritime transport performance is a *concept used mainly for comparing the transport modes' activity at countries' level. The resulting data are not comparable with statistics on energy consumption in transport or with GHG emissions as these are based on different methodologies. Thus the use of these data, namely in the determination and fulfilment of environmental goals, is to be avoided.***

# 1 INTRODUCTION

The main cornerstone for the EU transport policy is the White Paper 'Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system'[1], adopted in 2011. The White Paper lists ten goals for a competitive and resource efficient transport system in Europe. In order to monitor progress towards certain of these goals, comprehensive and comparable data on passenger-km and tonne-km by distance travelled is needed for all modes of transport.

The transport statistics data collection, in its significant part, is based on legislation applied by EU Member States, European Free Trade Association (EFTA) countries and certain candidate countries. Transport performance is measured in tonne-km (for freight transport) or in passenger-km (for passenger transport). However, the legislation for collecting data on the different transport modes varies to some extent, reflecting the peculiarities of the specific transport modes and to the data needs for each mode.

# 2 MODAL SPLIT INDICATORS: WHAT DATA ARE NEEDED FOR TRANSPORT MODES

## 2.1 MODAL SPLIT INDICATORS

Modal split indicators (MSI) are defined as the share of each mode of transport in the total transport performance, measured in tonne-kilometres or passenger-kilometres. MSI measure the composition of transport performance, i.e. the importance of each mode of transport for the total freight or passenger transport, and the evolution over time in the share of each transport mode.

## 2.2 TERRITORIALITY PRINCIPLE

Dependent on the transport mode in question, transport performance is reported by the countries according to the **"territoriality principle**" (rail and inland waterways) or is 'territorialised' by Eurostat from the detailed region-to-region data (road freight). In practice, only the transport performance that takes place on the territory of the country, performed by any operator (domestic or foreign) is taken into account by territorialised transport statistics. In the case of international transport, only the leg of the journey that takes place within the territory of the country is considered.

Within the frame of transport statistics, according to the 'territorialisation principle', only freight and passenger transport performed within the territory of a country is considered. This also includes all parts of cross-border transport performed on the country's territory, irrespective of whether the journey is only crossing the territory or whether its origin or destination lies within the country.

[1] https://ec.europa.eu/transport/themes/strategies/2011_white_paper_en

Rail and inland waterways statistics, as they are reported by the countries to Eurostat according to the legal acts on statistics in force[2], are already reported following the 'territoriality principle'[3] and data refer only to transport performance that has taken place on the territory of the countries.

In contrast, road freight transport is currently collected[4] on *all* movements of vehicles registered in the reporting country (i.e. the 'nationality principle'), whether these are carried out within the territory of the country or abroad. Road freight transport data, particularly for international transport, need to be recalculated according to the "territoriality principle". This is done by Eurostat on the basis of journey-related data, with the help of a distance matrix that models the most likely route taken (the fastest route). This allows cross-border transport journeys to be 'cut' into national legs for each country of the route[5].

Furthermore, the data collections[6] on air and maritime transport cover passengers and freight transported between a pair of airports or ports, without having data reported in tonne-km or passenger-km.

Consequently, the main challenge in calculating modal split is being able to use coherent data series across the different transport modes, based on methodologies that are as comparable as possible.

# 3 MARITIME TRANSPORT STATISTICS

## 3.1 MARITIME TRANSPORT DATA COLLECTION

Eurostat collects **maritime transport data expressed in tonnes and in number of passengers (excluding cruise passengers) between pairs of ports** according to Directive 2009/42/EC.

The scope of the statistics covered by the Directive refers to the carriage of goods and passengers by seagoing vessels calling at ports in the territories of the reporting countries. Usually, maritime transport takes place between two ports. However, the scope of this Directive also explicitly includes goods:

- Shipped to offshore installations;
- Reclaimed from the seabed and unloaded in ports.

The basic concept is that maritime transport relates to the carriage of goods or/and passengers by sea for commercial purposes. According to the Directive, vessels with a gross tonnage of less than 100 may be excluded from the data collection. The scope of the Directive explicitly excludes bunkers and stores supplied to vessels. Indeed, bunker fuel for ships, ship's stores of maintenance equipment, food and supplies are excluded from the concept of carriage of goods, since these are related to the operation of vessels.

The legal act specifically states that detailed reporting (on transported passengers/cargo between pairs of ports) should be done by **handling more than one million tonnes of goods ("main port for goods") or recording more than 200 000 passenger movements ("main passenger ports") annually**. Detailed data can be provided for smaller ports on voluntary basis.

Thus the coverage of estimates for tonne-km and passenger-km are always restricted by the reporting obligations of the countries. In addition, it is also restricted only to data on passengers and freight provided by the reporting to Eurostat countries and it will always exclude the transport performed between two ports of non-reporting countries (e.g. between ports of the UK, Russia or Brazil).

[2] Regulation (EC) 91/2003 and Regulation (EC) 1365/2006, respectively

[3] Transport taken place on a territory of a country

[4] Regulation (EU) 70/2012

[5] http://ec.europa.eu/eurostat/statistics-explained/index.php/Freight_transport_statistics_-_modal_split

[6] Regulation (EC) No 437/2003 and Directive 2009/42/EC

### 3.2 DISTANCES AND CALCULATION OF TONNE-KM AND PASSENGER-KM

In addition to these data on volumes of freight and number of passengers transported, the distance over which they are transported and the resulting transport performance data in tonne-kilometres and passenger-kilometres are also useful to measure the transport activity.

For this purpose, Eurostat developed a distance matrix for maritime transport, that contains segments of the port-to-port routes, based on the distance performed in the Exclusive Economic Zones (EEZ) of the countries crossed. This allows the calculation of passenger-km and tonne-km; when the distance between two ports is known (input in the matrix) and the number of passengers or the volume of the freight forwarded on this route is reported, the transport performance (tonne-km and passenger-km) can easily be calculated.

However, as explained above, the transport performance can be computed only for ports that provide detailed reporting (transport between pairs of ports) according to the legal act; small ports may not be included in the calculation.

### 3.3 ATTRIBUTION OF CALCULATED TONNE-KM AND PASSENGER-KM AT COUNTRY LEVEL

The distance matrix enables the calculation of passenger-km and tonne-km. However, a methodological approach is needed for 'attributing' the calculated tonne-km and passenger-km to the specific countries. This approach should, irrespective of the peculiarities of maritime transport, produce 'territorialised' tonne-km and passenger-km that are as comparable as possible to the existing transport performance data (i.e. road, rail, inland waterways and air transport).

Eurostat developed **a 'territorialisation' tool that, for each pair of ports, would calculate the distance performed in the EEZ of the countries crossed**. This would break down the calculated transport performance (tonne-km and passenger-km, respectively) to each country. This tool has been integrated in the distance matrix.

## 4 DISTANCE MATRIX/TERRITORIALISATION TOOL

### 4.1 GENERAL PRINCIPLES

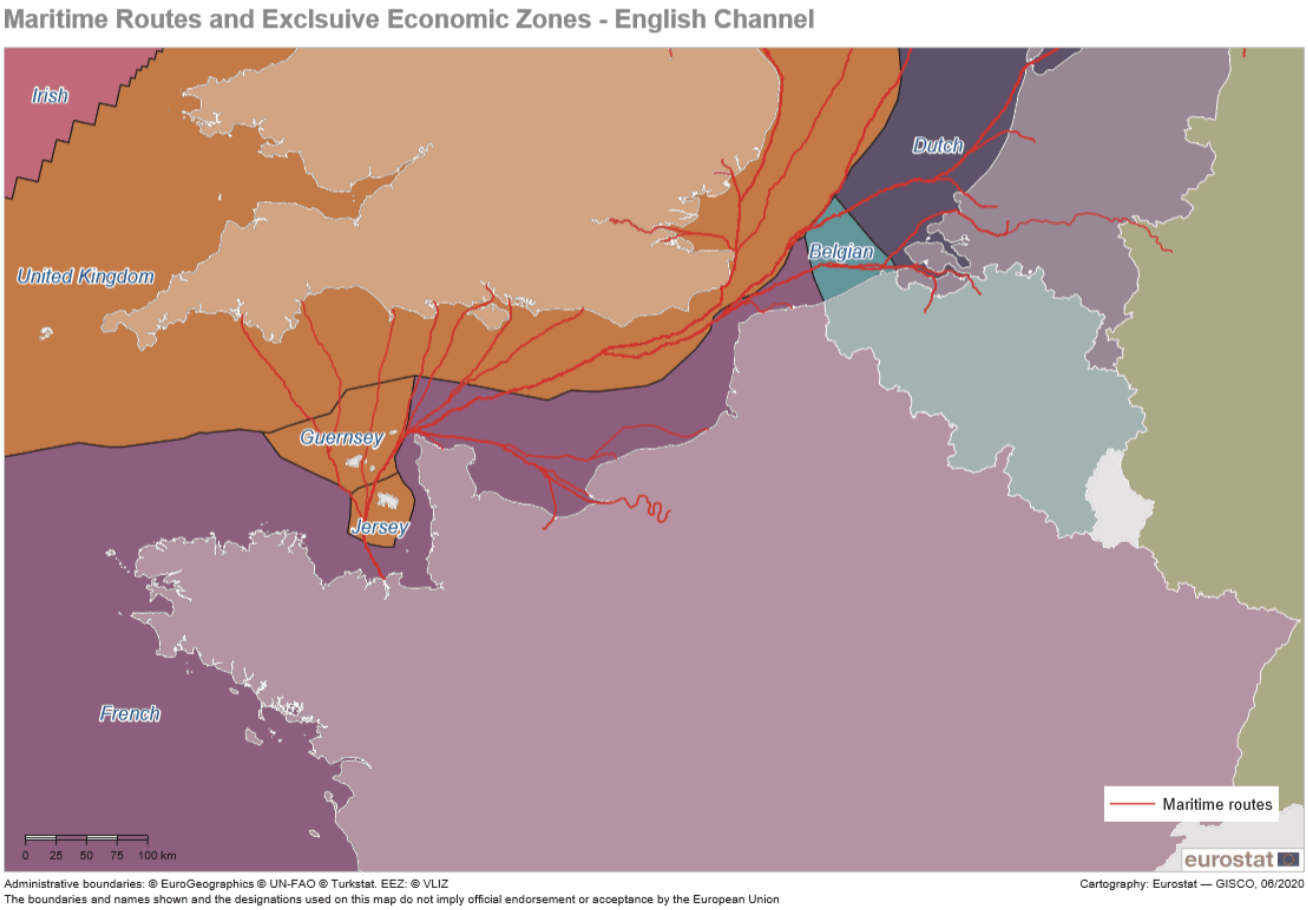
Eurostat developed a distance matrix on the basis of the 'most likely' sea routes used by vessels, in order to allow calculation of tkm and pkm for maritime transport. These routes are defined on the basis of vessel position data (Automatic Identification System (AIS) data) transmitted by vessels equipped with transponders. The algorithm used for the "most likely" route calculations chooses the shortest route possible between the points with the highest density of AIS observations. **Thus, the algorithm to determine the maritime routes takes into account both the distance and the frequency of usage of that route-segment. This principle is applied equally for all routes, including for example, the English Channel, or any outermost territories (map 1 as an example).**

In order to attribute transport performance at country level, Eurostat further extended the matrix with breaking the port-to-port route into segments according to the distance performed in the EEZ of the countries crossed. The breaking down according to the segments was done following the EEZ shown on map 2 hereafter.

**The distances of joint regime areas or overlapping claim areas are individually identified in the distance matrix.**

The distance matrix/territorialisation tool has been developed on the basis of the main features described in the following sections.

*Map 1: Example of routes in the English Channel based on AIS data*




### 4.1.1 EXCLUSIVE ECONOMIC ZONE

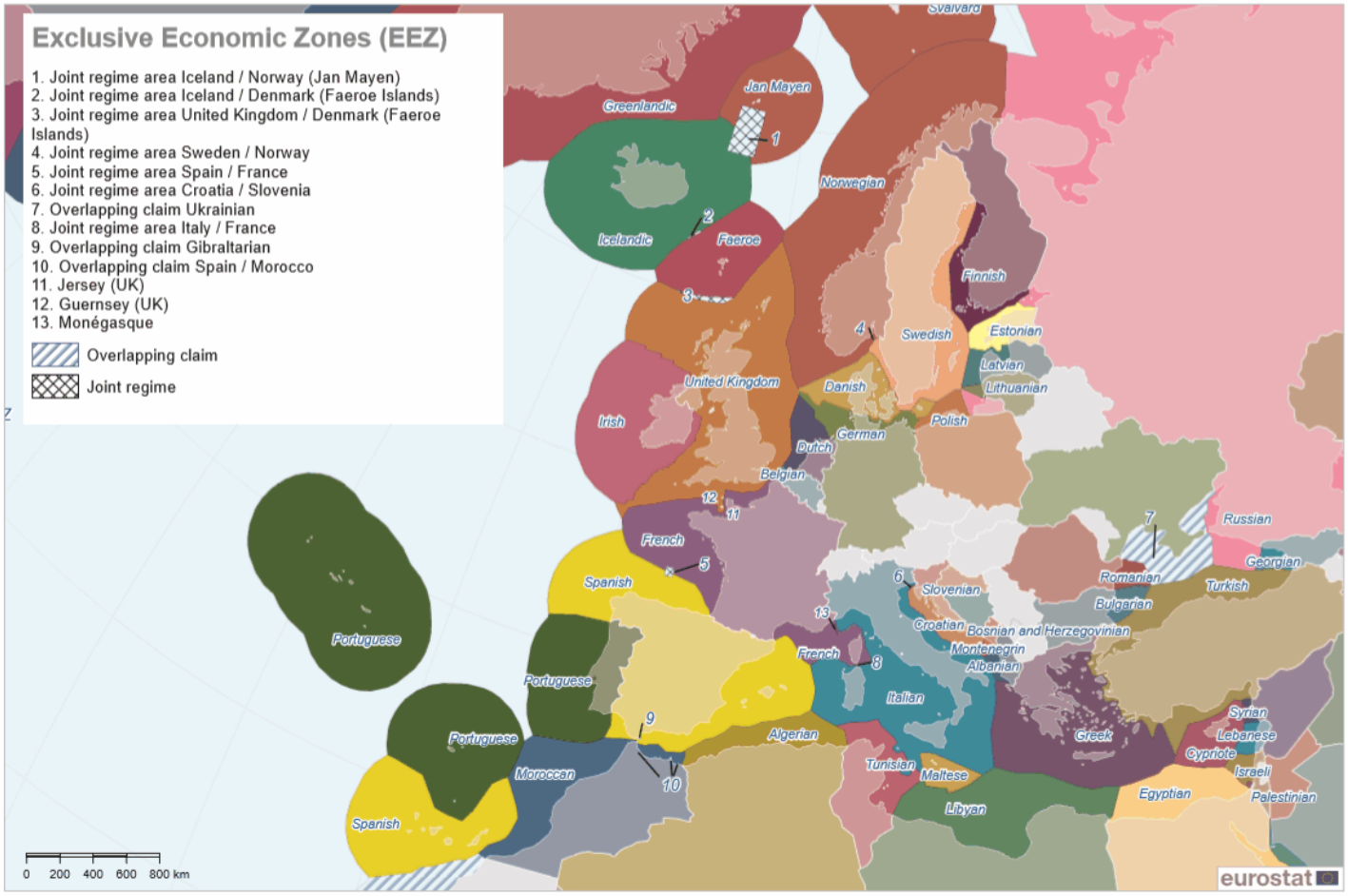
'Exclusive Economic Zone' (EEZ) is an area where a coastal state assumes jurisdiction over the exploration and exploitation of marine resources in its adjacent section of the continental shelf, taken to be a band extending 200 miles (370.4 km) from the shore.

Eurostat uses the available EEZ mapping from Flanders marine institute VLIZ (http://www.vliz.be/en) with the following disclaimer: **"The designations employed and the presentation of material on the map do not imply the expression of any opinion whatsoever on the part of the European Union concerning the legal status of any country, territory or area or of its authorities, or concerning the delimitation of its frontiers or boundaries."**

The available EEZ areas have been used in the distance matrix to produce estimates for statistical purposes. Thus, a map with a disclaimer should always accompany any of these estimates for the purpose of good understanding of the methodology behind the data and the boundaries in the use of such data.

Map 2 illustrates the EEZ for the EU Member States and neighbouring countries.

*Map 2: Exclusive Economic Zones* [7]




Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat. EEZ: © VLIZ

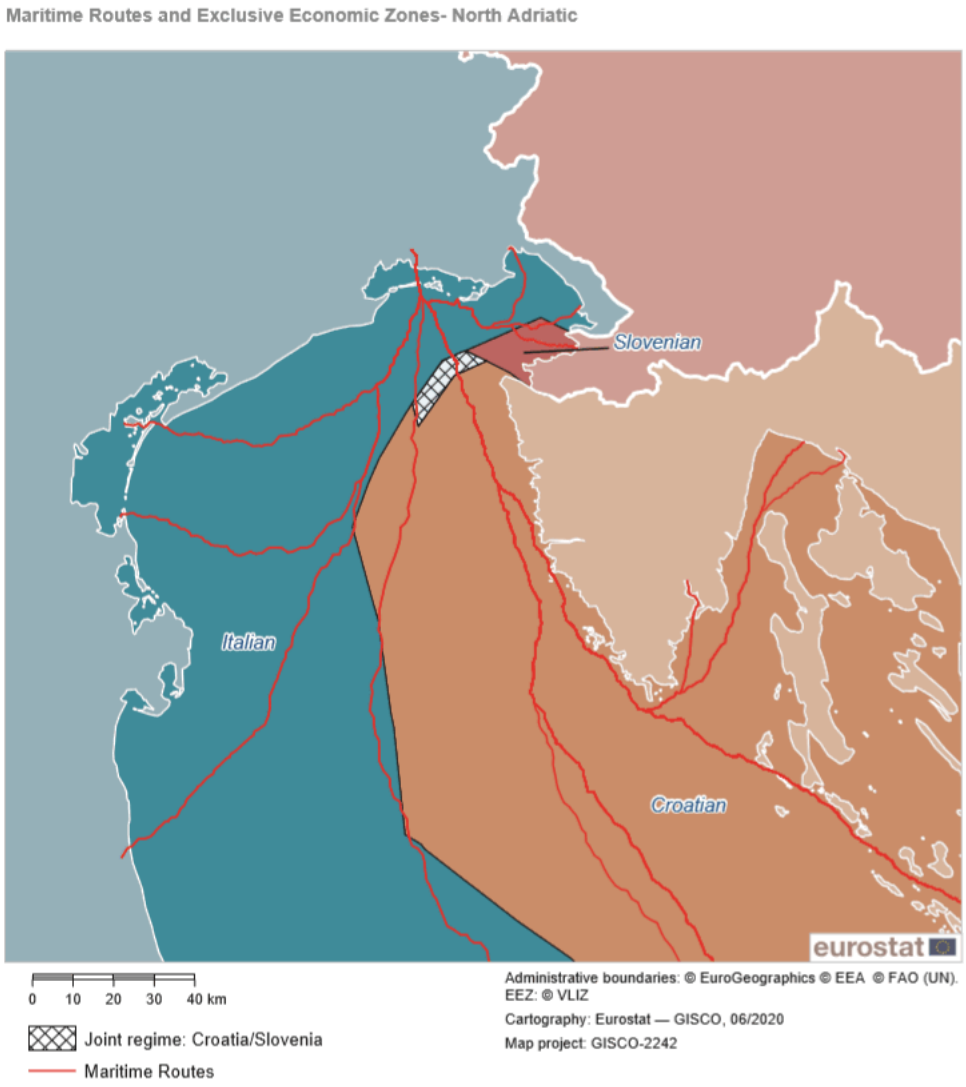
Cartography: Eurostat — GISCO, 06/2020

The designations employed and the presentation of material on the map do not imply the expression of any opinion whatsoever on the part of the European Union concerning the legal status of any country, territory or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Map 3 illustrates an example of joint regime area by Croatia and Slovenia. In case a journey passes through the joint regime area, this part of the journey is not attributed to any of these countries.

[7] This map is intended for illustration purposes only

*Map 3: Example of routes in joint regime area by Croatia and Slovenia based on AIS data*




### 4.1.2 COUNTRIES COVERAGE OF TERRITORIALISATION TOOL

The total distance between a pair of ports is broken down into distances in the EEZ of the countries crossed during the journey between this pair of ports. The territorialisation tool covers:

- EU Member States with a coastline (no coastline in Czechia, Luxembourg, Hungary, Austria and Slovakia)
- EFTA countries: Norway and Iceland
- The United Kingdom
- Candidate and potential candidate countries: Albania, Montenegro and Turkey
- Other non-EU countries (e.g. Antigua and Barbuda, Barbados, Djibouti, Algeria, etc.)

In addition, the distance in international waters is also provided.

Distant EU territories / overseas territories and collectivities are considered part of the respective EU countries. These 'outermost regions' include:

- French Overseas Departments: Martinique, Guadeloupe, French Guiana, Réunion and Mayotte; French overseas community: Saint-Martin;
- French overseas collectivities: e.g. French Polynesia;
- Portuguese autonomous regions: Madeira and the Azores;
- Spanish autonomous community of the Canary and Balearic Islands.

In case waters are subject to an overlapping claim (e.g. Gibraltar, Ceuta, Melilla) or are a joint regime area (e.g. Faeroe islands, Svalbard and Jan Mayen), the distance in these waters are not allocated to any of those countries. For example, Gibraltar is neither allocated to Spain nor the United Kingdom but is flagged as a distinct record in the matrix.

## 4.2 COMPLETION OF THE MATRIX

When combining the distance matrix with passengers and freight transport statistics provided by port pairs, sometimes a distance cannot be found out for some of them in the distance matrix. The reasons for this are, for instance, cases when either the loading or the unloading port is reported as unknown, or the port code (UN/LOCODE) is not recognised by the tool (wrong or outdated code, or a port that is not (yet) covered by the distance matrix).

The territorialisation tool has been further developed by prioritising the port pairs with the largest traffic in terms of freight ad passengers.

In order to include in the calculations as many port pairs as possible, Eurostat has attributed distances to routes for which no distance was available in the developed distance matrix. The following cases have been covered:

- When the reporting port is the same as the partner port:
  - A standard distance of **25 kilometres** is used for freight and allocated to the concerned country
  - A standard distance of **150 kilometres** is used for passengers and allocated to the concerned country, except for Germany for which a distance of 40 kilometres is used
- For national port-port routes involving aggregates extraction areas
  - A standard distance of **50 kilometres** is used and allocated to the concerned country
- For national port-port routes involving dropping areas on water's edge
  - A standard distance of **50 kilometres** is used and allocated to the concerned country
- For national port-port routes involving ship to ship transfer
  - A standard distance of **25 kilometres** is used for freight and allocated to the concerned country
- For national port-port routes involving offshore installations

  - A standard distance of **50 kilometres** is used for Ireland and the Netherlands and allocated to the concerned country
  - A standard distance of **150 kilometres** is used for the other countries and allocated to the concerned country, with some exceptions
  - For Norway and Sweden, longer distances than 150 km have been used in specific cases. The distance used has been allocated to the concerned country.
- When one of the ports is unknown but the MCA is known
  - Distance to a 'reference port' in the country in question is used, provided that the distance for the route in question is available in the matrix. The port with the largest volume of traffic in the MCA is selected as a 'reference port'. The reference port can be different for freight or passengers.

The reference ports have been selected based on the 2005-2019 data (freight and passengers, separately) reported by the countries (EU + NO + UK + ME from 2018 and TR from 2008).

## 4.3 COVERAGE OF THE MATRIX

There are still some port pairs for which the distance is not available in the distance matrix. These pairs are not taken into account in the calculations.

When considering the respective maritime transport categories on the basis of total gross weight of goods reported by the countries over the period 2008-2020 (=100%), the situation is:

- National (domestic) transport: 96.0% of total national tonnage is covered
- Intra-EU transport: 95.6% of total intra-EU tonnage is covered
- Extra-EU transport: 96.8% of total extra-EU tonnage is covered

Routes where partner is completely unknown (ZZ01, ZZ02, ZZ09) represents 1.6% of total tonnage over the period 2008-2020.

Overall, 94.6% of the total tonnage over the period 2008-2020 is covered.

For passenger transport (excluding cruise passengers), on the basis of the number of passengers (excluding cruise passengers) reported by the countries over the period 2008-2020 (=100%), the situation is:

- National (domestic) transport: 99.1% of total national passengers covered.
- Intra-EU transport: 98.6% of total intra-EU passengers.
- Extra-EU transport: 98.3% of total extra-EU passengers.

Routes where partner is completely unknown (ZZ01, ZZ02, ZZ09) represents 0.04% of total tonnage over the period 2008-2020.

Overall, 98.9% of the total passengers over the period 2008-2020 is covered.

# 5 METHODOLOGY

## 5.1 CALCULATION OF PASSENGER-KM/TONNE-KM

Eurostat uses a distance matrix containing segments of port-to-port routes, based on the distance performed in the EEZ of the countries crossed in order to **calculate tonne-kilometres or passenger-kilometres**.

**Tonne-kilometres** are calculated by multiplying the tonnes reported at port-to-port level by the distances from the distance matrix.

**Passenger-kilometres** are calculated by multiplying the number of passengers reported at port-to-port level by the distances from the distance matrix.

## 5.2 EXCLUSION OF DOUBLE COUNTING

When declarations on the number of tonnes/passengers between a pair of loading/embarking and unloading/disembarking ports (A and B) are available from both ports, the transport performance for this pair is calculated on the basis of the inward traffic (unloading) for each of these ports, in order to avoid double counting:

- *Transport performance between A and B = (inwards of A + inwards of B) * (distance between A and B)*

  *where:*
  *- 'inwards of A' is traffic from B to A reported by A, and*
  *- 'inwards of B' is traffic from A to B reported by B.*

If the declaration is available from only one of the two ports (for example, port A; i.e. the inward traffic was not declared by the partner port B), the transport performance is calculated on the basis of the inward and outward traffic of the declaring port A for jouneys to port B:

- *Transport performance between A and B = (inwards of A + outwards of A)* (distance between A and B)*

  *where:*
  *- 'inwards of A' is traffic from B to A reported by A, and*
  *- 'outwards of A' is traffic from A to B reported by A.*

## 5.3 SHORT SEA SHIPPING

**Short sea shipping**, abbreviated as SSS, is the maritime transport of goods over relatively short distances, as opposed to the intercontinental cross-ocean deep sea shipping. In the context of European Union (EU) transport statistics it is defined as maritime transport of goods between ports in the EU (sometimes also including the EFTA countries, the United Kingdom and candidate countries) on one hand, and ports situated in geographical Europe, on the Mediterranean and Black Seas on the other hand, i.e. ports in

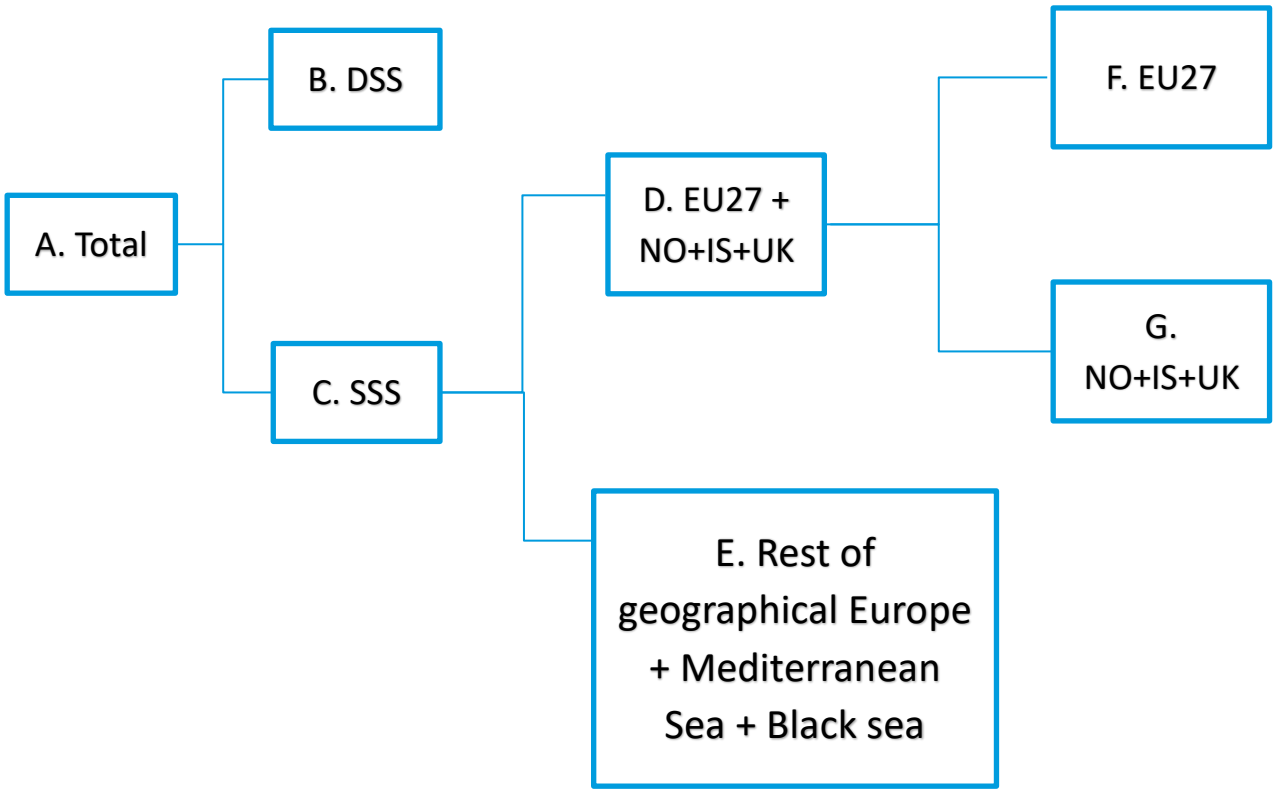
- EU maritime countries
- EEA countries (Iceland and Norway)
- The United Kingdom
- Candidate countries
- The Baltic Sea area (Russia)
- The Mediterranean Sea area (Albania, Algeria, Bosnia–Herzegovina, Egypt, Israel, Lebanon, Libya, Morocco, Occupied Palestinian territory, Syria, and Tunisia);
- The Black Sea area (Georgia, Moldova, Russia and Ukraine).

The definition of short sea shipping is derived from the Communication of the Commission COM (1999) 317 on the development of Short Sea Shipping in Europe. In consequence, the concept of short sea shipping includes both regular short sea shipping and feeder services (short sea shipping between ports in order for freight to be consolidated or redistributed to or from a deep sea service in one of the ports in a network (hub ports).

Please note that ports located in Morocco–West Africa, Egypt–Red Sea, Israel–Red Sea and Russia–Barents and White Seas are not part of the European short sea shipping area.

**Deep sea shipping (DSS)** refers to the maritime transport of goods on intercontinental routes, crossing oceans; as opposed to short sea shipping over relatively short distances.

**Overview short/deep sea shipping**




## 5.4 CALCULATION OF THE AGGREGATES

Passenger-kilometres and tonne-kilometres are calculated with the following breakdowns at country or EU level:

- **At EU level**

For both total transport and for Short Sea Shipping:

| EU | Only the part of the EEZ of the crossed EU's countries is considered |
|---|---|
| **NATIONAL** | Includes: **National transport**<br><br>This is transport between two ports located in the same EU Member State |
| **INTRA-EU** | Includes: **International intra-EU transport**<br><br>This is transport between EU Member States, excluding national (domestic) transport |

| | |
|---|---|
| **EXTRA-EU** | Includes: **International extra-EU transport**<br><br>This is transport between EU Member States and non-EU countries. |
| **TRANSIT** | Transport **between non-EU countries** that passes through the EEZ of one or more Member States, without loading/embarking or unloading/disembarking at their ports. This is based on data from the non-EU countries that report data to Eurostat (currently NO, ME (from 2018) and TR (from 2008). Data reported by the UK are not taken into account. |

- **At country level**:

For both total transport and for Short Sea Shipping:

| Reporting country | Only the part of the country's EEZ crossed is considered |
|---|---|
| **NATIONAL** | Includes: **National transport**<br><br>This is transport between two ports located in the country |
| **INTRA-EU** | Includes: **International intra-EU transport**<br><br>This is transport between the concerned country (EU Member State or NO, ME and TR) and an EU Member State [excluding national (domestic) transport]. |
| **EXTRA-EU** | Includes: **International extra-EU transport**<br><br>This is transport between the concerned country (EU Member State or NO, ME and TR) and non-EU countries [excluding national (domestic) transport] |
| **TRANSIT** | Transport **between other countries** (**EU countries or non-EU countries** reporting data to Eurostat) that passes through the EEZ of the Member State, without loading/embarking or unloading/disembarking in its ports. This is based on data from the other EU Member States and the non-EU countries that report data to Eurostat (currently NO, ME (from 2018) and TR (from 2008). Data reported by the UK are not taken into account. |

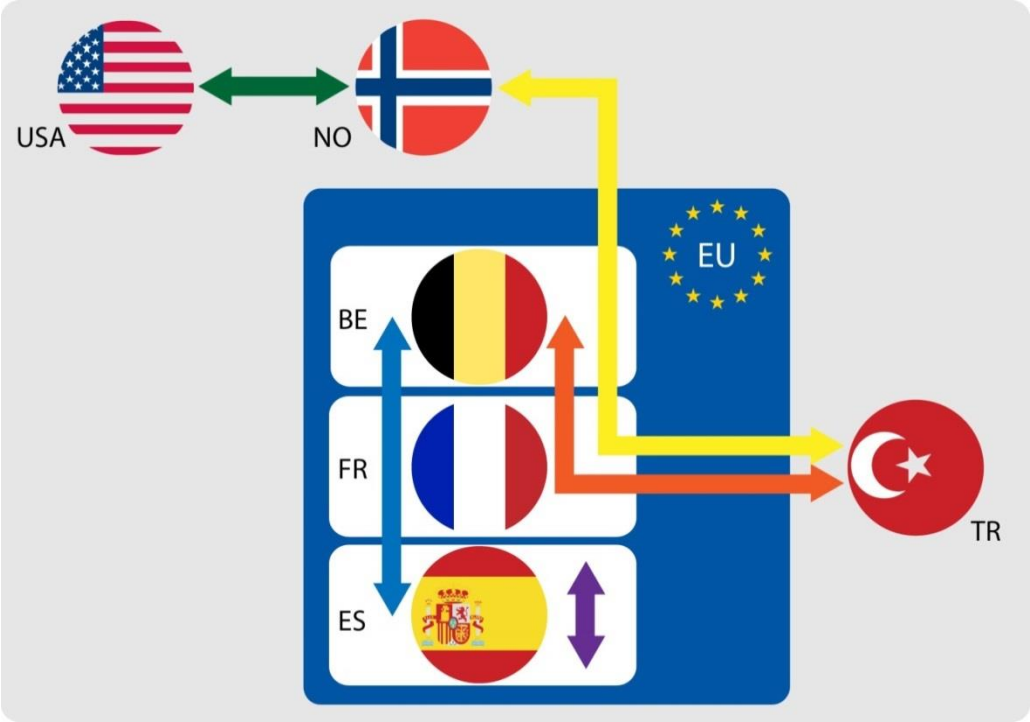
Some concrete examples of are given in section 6.

The total tonne-km and passenger-km calculated for the EU aggregate are equal to the sum of the Member States totals. However, the sum of the presented breakdowns of the Member States are not equal to the respective breakdowns for the EU aggregate as the concept differs. For better understanding, please, refer to the diagram on the next page.

The calculations of tonne-km and passenger-km for the Member States or for the EU, are based on all data reported to Eurostat that covers as well some non-EU countries, except data reported by the United Kingdom until reference period 2019. **It is important to bear in mind that the category 'Transit' is particularly influenced by the availability of data for non-EU countries and their inclusion or not in the calculations.** For example, for the EU27 aggregate, the exclusion of the data reported by the UK from the calculations has as for effect a reduction on total tonne-km between 0.5% and 1% in the period 2005-2019, while for the category 'transit' it reaches between 15%-30% for the period 2005-2007 and between 1% and 3% for the period 2008-2019. The impact on total passenger-km corresponds to a reduction between 0.1% and 1.4% in the period 2005-2019, while for the category 'transit', the reduction is around 100% for the period 2005-2007 and between 2% and 25% for the period 2008-2019.

These concepts are further illustrated in the following diagram, which also highlights the similarities and differences in calculating the 'territorialised' aggregates for maritime transport performance at EU level and at individual country level:

**Diagram illustrating the different types of transport/routes**




**At EU level:** tkm/pkm are attributed as **Intra-EU transport**

**At country level:**
- tkm/pkm are attributed proportionally to **Belgium and Spain** as **Intra-EU transport** (origin/destination)
- tkm/pkm are attributed proportionally to **France** as **Transit** (only transit)

**At EU level:** tkm/pkm are attributed as **national transport**

**At country level:**
- tkm/pkm are attributed to Spain as national transport

**At EU level:** tkm/pkm are attributed as **Extra-EU transport**.

**At country level:**
- tkm/pkm are attributed proportionally to **Belgium** as **Extra-EU transport** (origin/destination)
- tkm/pkm are attributed proportionally to **France** as **Transit** (only transit)
- tkm/pkm are attributed proportionally to **Turkey** as **Extra-EU transport** (origin/destination)

**At EU level:** tkm are attributed as **Transit**.

**At country level:**
- tkm/pkm are attributed proportionally to **Belgium** and **France** as **Transit** (only transit)
- tkm/pkm are attributed proportionally to **Norway** and **Turkey** as **Extra-EU transport** (origin/destination)

**At EU level:** No tkm/pkm are attributed if no EEZs of EU countries are crossed.

**At country level:**
- tkm/pkm are attributed proportionally to **Norway** as **Extra-EU transport** (origin/destination)

## 5.5 DISTANCE CLASS

As an example of further use of the territorialised data on maritime transport performance can be also produced according to the distance classes. The data according to these distance classes can be calculated on the basis of detailed port-to-port data reported by the countries and the maritime distance matrix.

**In such cases, each route is attributed to a distance class on the basis of the *total distance for this route* (port pair) according to the distance matrix.**

**Examples:**

- Journey between **Le Havre** and **Barcelona**

  Total distance: 3 345 km; the Member States EEZs crossed during this journey are: FR, ES and PT.

  The three countries will be attributed tonne-km/passenger-km proportionally, depending on the distance performed on their respective EEZ according to the territorialisation tool of the maritime distance matrix. These tonne-km/passenger-km can be categorised in the distance class **'300 km or more for all these countries**, as the **total distance between this specific pair of ports is longer than 300 kilometres**.

- Journey between **Antwerpen** and **Rotterdam**

  Total distance: 202 km; the Member States EEZs crossed during this journey are: BE and NL.

  The two countries will be attributed tonne-km/passenger-km proportionally, depending on the distance performed on their respective EEZ according to the territorialisation tool of the maritime distance matrix. These tonne-km/passenger-km can be categorised in the distance class **'Less than 300 km' for both of these countries**, as the **total distance between this pair of ports is shorter than 300 kilometres**.

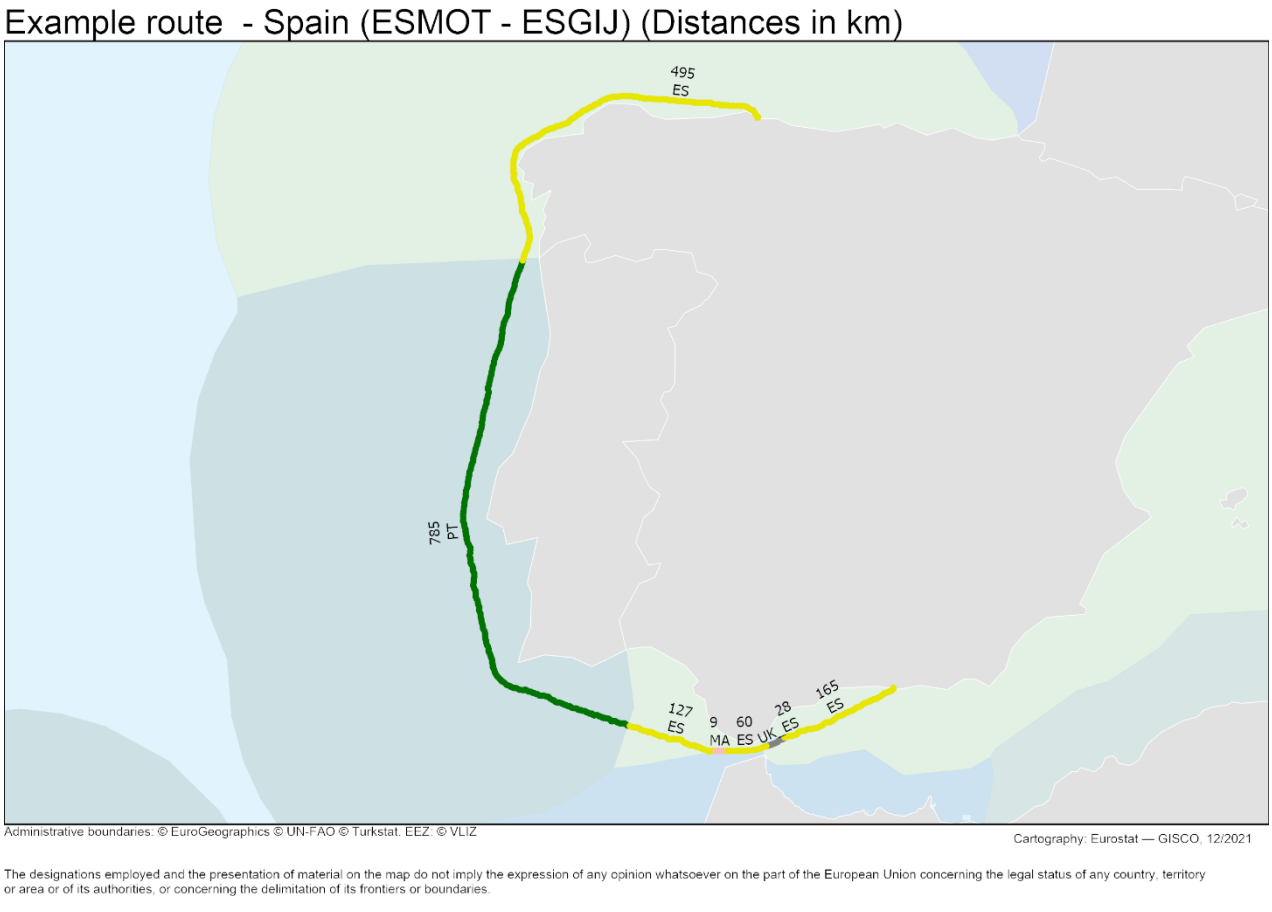
# 6 EXAMPLES

The following section presents a number of examples that illustrate how the territorialisation tool is used and how the territorialisation principles are applied in practice to attribute tonne-km and passenger-km at country and EU level. The examples below cover also cases where EU and countries are attributed tonne-km and passenger-km as 'transit'.

## 6.1 NATIONAL (DOMESTIC) TRANSPORT

National (domestic) transport is defined as transport where loading and unloading port are located in the same country. Depending on the journey path, the distance covered can be in its entirety on the waters of the country in question or a part of such a national route may pass over the waters of neighbouring countries.

**Map 4: Example of journey between ESMOT Motril and ESGIJ Gijon both located in Spain**




Total distance: 1 609 km, crossing over Spanish, Portuguese, Moroccan and Gibraltar waters.

This is an example where a part of a national route crosses waters of neighbouring countries:

- 787 km on Spanish waters
- 785 km on Portuguese waters
- 9 km on Moroccan waters
- 28 km on Gibraltar waters (territory claimed by Spain and the UK)

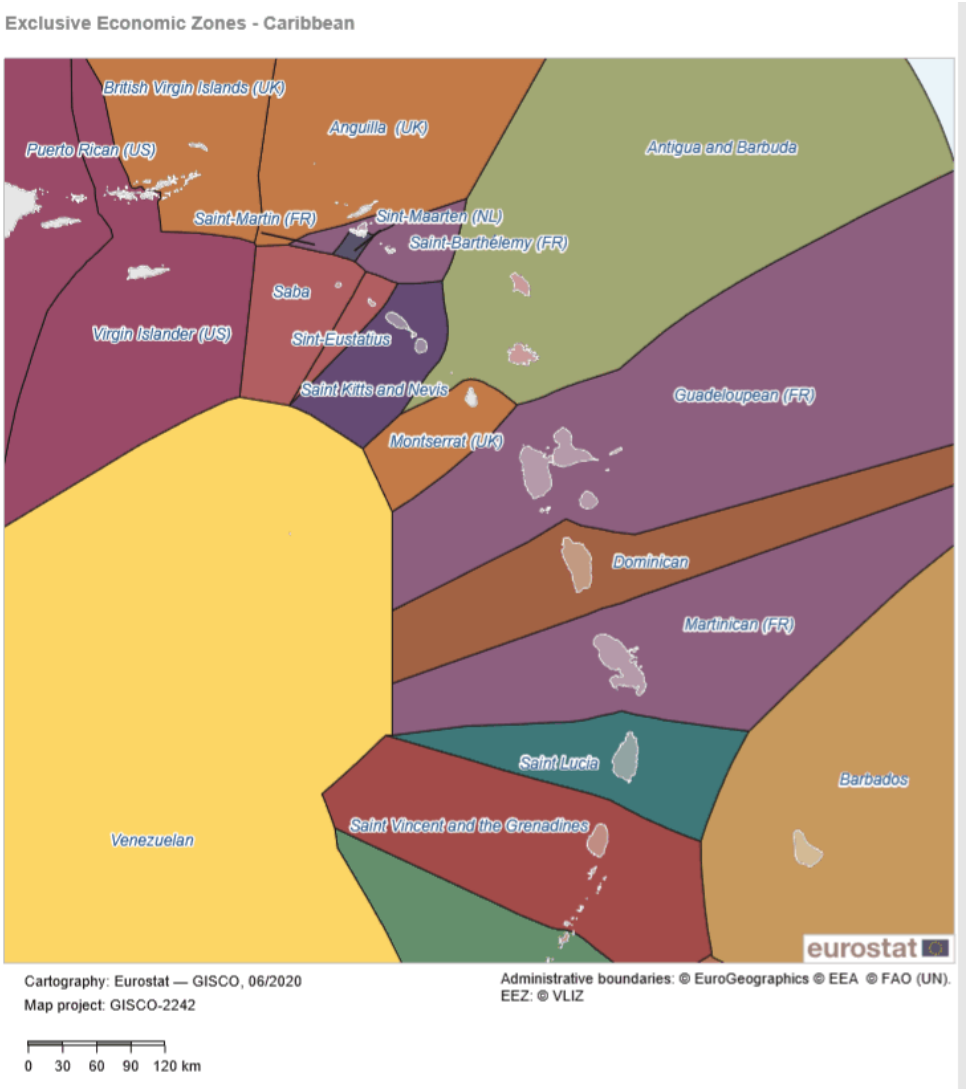
If, for a given year, 1 million tonnes are registered on this route:

- Attributed to Spain (classified as 'national'): 787 million tonne-km
- Attributed to Portugal (classified as 'transit'): 785 million tonne-km
- NOT attributed to any of these countries: 9 + 28 = 37 million tonne-km
- **Total attributed to EU for this route (classified as national):**
  787 + 785 = **1 572 million tonne-km**

This example illustrates that the transport performance of national (domestic) journey is not necessarily attributed at 100% to the EU Member State/country concerned.

A specific case of national transport concerns distant EU territories / overseas territories (example in map 5 below), as for example, French overseas department (example of EEZ below). Route passing through EEZ in this case is attributed as national transport to France.

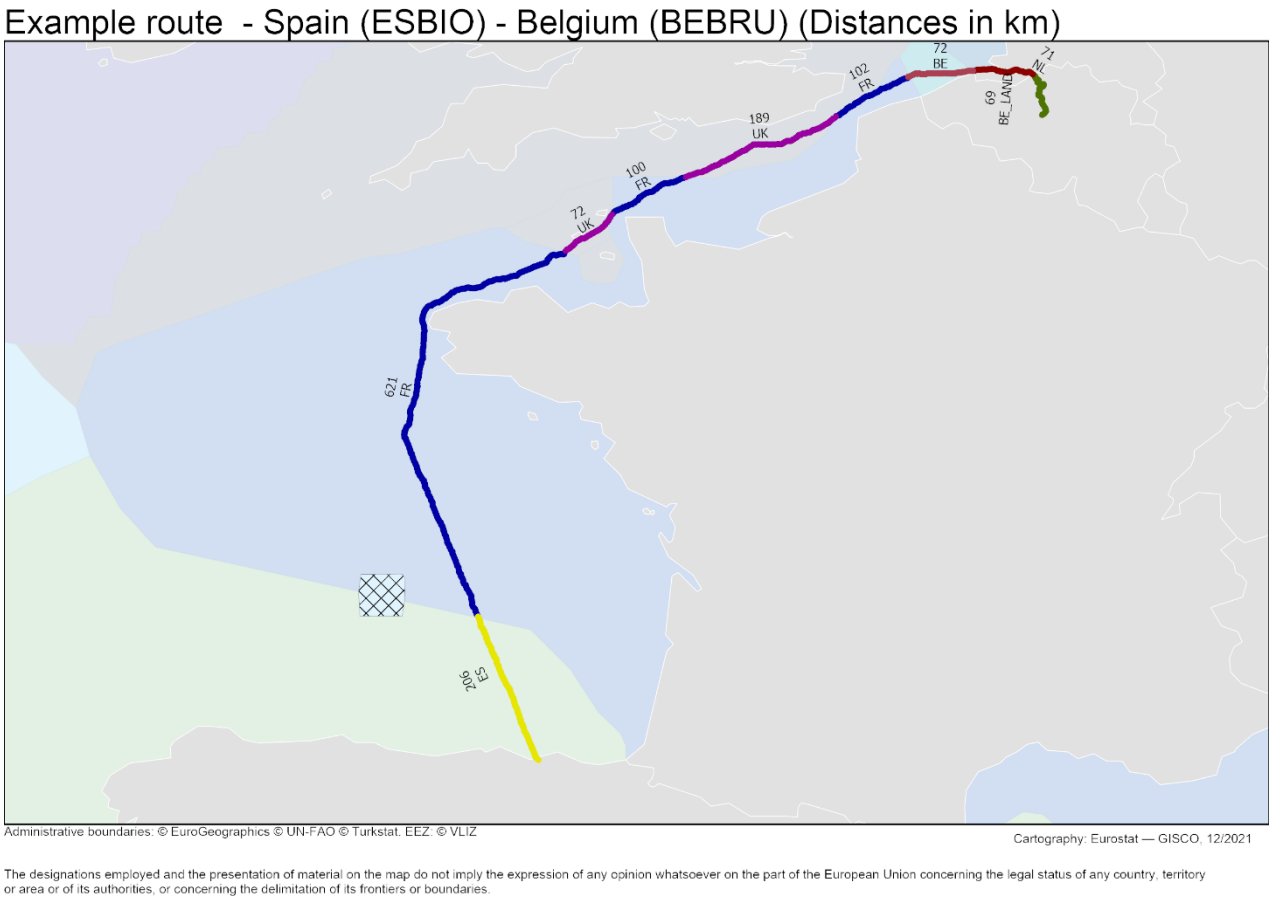
**Map 5: EEZ in the Caribbean where French overseas departments are located**



## 6.2 INTERNATIONAL INTRA-EU TRANSPORT

International intra-EU maritime transport is defined as transport between ports located in different EU Member States.

**Map 6: Example of journey between ESBIO Bilbao (Spain) and BEBRU Bruxelles (Belgium)**




Total distance: 1 502 km, crossing over Spanish, French, UK, Belgian and Dutch waters.

This is an example where a part of a route crosses waters of:

- 206 km on Spanish waters
- 823 km on French waters
- 261 km on UK waters
- 71 km on Dutch waters
- 141 km on Belgian waters (including inland waters)

If, for a given year, 1 million tonnes are registered on this route:

- Attributed to Spain (classified as 'intra-EU'): 206 million tonne-km
- Attributed to France (classified as 'transit'): 823 million tonne-km
- Attributed to the Netherlands (classified as 'transit'): 71 million tonne-km
- Attributed to Belgium (classified as 'intra-EU'): 141 million tonne-km
- NOT attributed to any of these countries: 261 million tonne-km

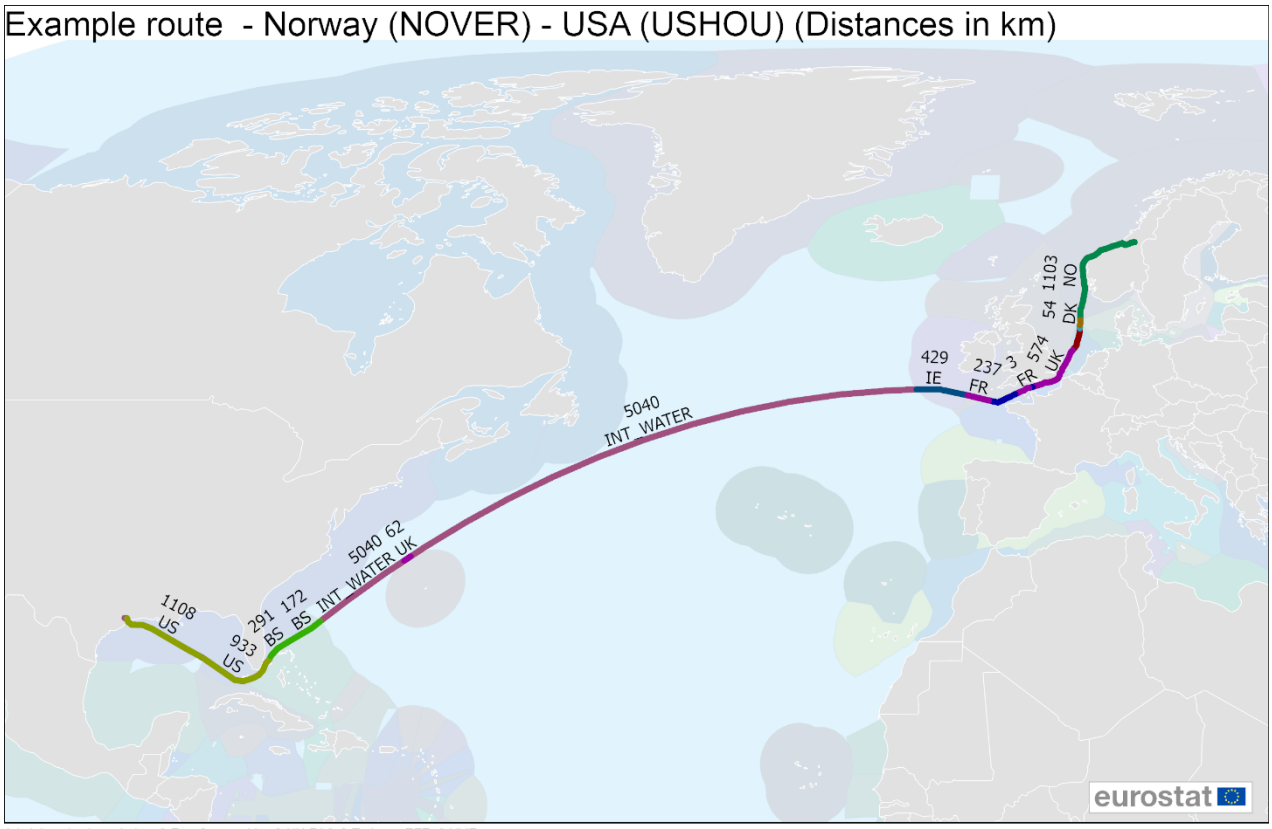
- **<u>Total attributed to EU for this route (classified as intra-EU)</u>:**
  206 + 823 + 71 + 141 = **1 241 million tonne-km**

## 6.3 INTERNATIONAL EXTRA-EU TRANSPORT

International extra-EU maritime transport is defined as transport between a port located located in an EU Member States and a port in a non-EU country.

Moreover, for any other non-EU reporting country (e.g. Norway), Eurostat includes similar cases in the category of 'extra-EU' for simplification of the presented breakdowns.

**<u>Map 7: Example of journey between NOVER Verdal (Norway) and US03 – Gulf of Mexico</u>**




The port Houston (USHOU) is used as reference for the distance involving ports located in the Gulf of Mexico (US03).

<u>Total distance</u>: 10 771 km, crossing over Norwegian, Danish, French, UK, Irish and other non-EU countries waters, as well as international waters.

This is an example where a part of a national route crosses waters of neighbouring countries:

- 1 103 km on Norwegian waters
- 54 km on Danish waters
- 574 km on UK waters
- 240 km on French waters
- 429 km on Irish waters
- 8 371 km on other non-EU countries waters or international waters

If, for a given year, 1 million tonnes are registered on this route:

- Attributed to Norway (classified as 'extra-EU'): 1 103 million tonne-km
- Attributed to Denmark (classified as 'transit'): 54 million tonne-km
- Attributed to France (classified as 'transit'): 240 million tonne-km
- Attributed to Ireland (classified as 'transit'): 429 million tonne-km
- NOT attributed to any of these countries: 574 + 8371 = 8 945 million tonne-km
- **Total attributed to EU for this route (classified as 'transit'):**
  54 + 240 + 429 = **723 million tonne-km**