# Trade and Investment Requirements for Zero Carbon

# Technical Annex:
# Trade Analysis Methodology and Additional Tables

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## Annex 1 – Methodology

This first annex outlines the methodology to create a UK Trade Carbon Footprint database, based primarily on UK customs declarations datasets for 2019.

This analysis is to determine the international transport element of the UK's trade carbon footprint. This analysis does not include the greenhouse gas emissions embodied in the products imported or exported. This also excludes the onward freight of internationally transported goods within either the UK or other countries. This analysis is restricted to the flow of goods - the impact of services imported or exported (e.g. the activities of the financial services in London) are not included.

The units of this methodology are generally kilometres (km), tonnes (t)[1] and tonnes of carbon dioxide equivalent emissions (tCO₂e). Carbon dioxide equivalent means the total greenhouse gas emissions, expressed in terms of carbon dioxide emissions.

The overall methodology is set out in four sections as follows:

1. Creation and validation of database from UK customs declarations;

2. Assessment of Carbon Intensity of Different Transport Modes;

3. Analysis of Distance of UK International Trade; and how these are used for

4. Analysis of UK Trade Carbon Footprint for the UK's imports and exports.

## 1. Creation and validation of database from UK customs declarations

### *Creation of Core Database*

Green House downloaded the customs declarations tables for 2019 for the UK from the UK HM Revenue and Customs Statistics Unit website[2] on 20 February 2020 and imported these into a MariaDB[3] database. This includes trade within the European Community[4] (SMKM & SMKX tables) and all of the countries beyond the European Community (SMKI and SMKE tables), which are referred to in this report as the 'Rest of the World'. Whilst these are imported as separate tables (imports from within the EU; imports from outside the EU; exports to within the EU; and exports to outside of the EU) these have been brought together to consider overall imports and exports.

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[1] Amount of goods is also expressed in thousands of tonnes (kt) and millions of tonnes (Mt)

[2] The UK HM Revenue and Customs Trade Statistics unit publish and host UK trade statistics data at https://www.uktradeinfo.com/Statistics/Pages/DataDownloads.aspx.

[3] See maria https://mariadb.com/DB.

[4] Trade within the European Community is that between the UK and the other 27 countries of the European Union.

These datasets categorise goods by commodity type. This is a hierarchical classification system for commodity codes. This has a high level of classification from 01 to 99 which form the first two digits of a nine digit code which breaks down in four different levels, to around 10,000 distinct commodity codes.[5]

The raw imported data downloaded for analysis includes that for each month of 2019 together with January 2020 (which included some early data corrections). Each of these tables is about 300MB as they contain one row per import/export declaration. Therefore running queries on them or using client view and filter functions (which essentially do the same thing but hide the SQL) are very slow. It is also unhelpful that EU and Rest of the World imports and exports are in different tables and use different column names for the same data. To resolve this import and export aggregation queries were used to create an overall imports table and an overall exports table.  These combined the EU and Rest of the World records into a standardised set of column (field) names, with a reduced set of fields (relevant to this analysis) and groups records that were for the same commodity being moved by the same transport mode, imported or exported from the same country. This reduced the overall raw uktradeinfo data files into a manageable data set.


### *Database validation*

The database created was validated in a number of separate steps. This included comparison of a data table downloaded from the UK HM Revenue and Customs trade statistics website[6] with the results generated by the database created to house the uktradeinfo data. The total deviation of the database created was tested separately for EU and Rest of the World imports and exports separately, as follows:

|  | £ | kg |
|---|---|---|
| Export test database – Total | 199183473391 | 47557870883 |
| Export test database - Difference (%) | 1.07% | 0.095% |
| Import test database – Total | 277467405580 | 170133799231 |
| Import test database - Difference (%) | 0.66% | 0.359% |
| EU-27 export test database  - Total | 168678178424 | 106701908526 |
| EU-27 export test database - Difference (%) | -0.69% | 0.000% |
| EU-27 export test database  - Total | 168678178424 | 106701908526 |
| EU-27 export test database - Difference (%) | -0.69% | 0.000% |

The above validation showed a lower error for kg as opposed to £ value data. As it is the weight of goods traded that is used for this analysis this was not considered

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[5] See details of the classification system used for UK imports and exports at https://www.gov.uk/guidance/finding-commodity-codes-for-imports-or-exports.
[6] See https://www.uktradeinfo.com/Statistics/BuildYourOwnTables/Pages/Table.aspx.

significant. Spot checks suggest that this variation is most likely due to scheduled and unscheduled corrections to the uktradeinfo data, which have not been subsequently propagated to the database created and suppression of the value of a limited number of uktradeinfo declarations.

### Goods Re-imported and Re-exported

Goods re-imported and re-exported are included in the uktradeinfo datasets but have not been separately analysed. This is where goods are shipped internationally for some kind of processing, only to be then shipped back again for sale. Examples of this include the practice of shipping of UK apples to South Africa to be waxed, before shipping them back before sold as UK produce[7] or North Sea shrimps being shipped to and from Morocco for peeling[8].

### Potential overestimate of tonnage of trade

The amount of products is based on the mass of trade in kg based on the quantity field in the uktradeinfo product declarations. In almost every category of trade this is correct. There are a limited number of exceptions to this, including postal packages (commodity code 992099000), where no weight is given.

### Underestimate of tonnage of trade

Some items recorded in the uktradeinfo data do not report the country, commodity code and/or the amount of product (tonnage). In other cases there are minor anomalies in the data, which do not report any change in tonnage. These anomalies were assessed for the four uktradeinfo datasets (EU imports, EU exports, rest of the world imports and rest of the world exports).

Analysis of the anomalies in the trade dataset identified an additional £10 billion of exports and £8 billion of imports. The most significant of these is a category called 'Transactions of Low Value' which may also relate to international mail. Other trade of significant value where no country and/or tonnage is identified includes arms industry related imports and exports. These items are not included in the analysis, as have items where the transport mode is categorised as 'mail'. Similarly vehicles that are driven in/out of the UK by their owners are not included in this analysis.

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[7] See Gould (2006) *Giant Strides.* Guardian, UK.
[8] See Kasraoui, S (2020) *Morocco's COVID-19 Lockdown Sparks Peeled Shrimp Shortage in Belgium.* and *The Bulletin (2017) Belgium's 'fresh' North Sea shrimp are anything but, expert says.*

## 2. Assessment of Carbon Intensity of Different Transport Modes

The two main additions to the core database described above were metrics for the carbon intensities of different transport modes and the distances between countries, which are set out in this and the following section respectively. The way we have addressed the absence of reporting of transport mode for trade movements between the EU-27 and UK is then included in section 4. Together these enabled the carbon footprint of the trade movements to be determined.

There are many different references for the carbon intensity of international transport, both top-down estimates (based on overall fuel use) and bottom up estimates (based on the fuel efficiency of each vehicle travelled. But these are not always accurate, and little work has been done to correlate these with each other:

- **Top-down estimates.** The UK government reports annually the amount of kerosene in aviation and fuel oil used in shipping, based on refuelling in the UK. However, this does not give a clear value for air freight as the aviation total also includes passenger flights and some planes carry both passengers and freight. For shipping the total for freight transport is not necessarily accurate as it does not link to what is traded, or where it originates.[9]

- **Bottom-up estimates.** In theory the total fuel use for international freight transport could in theory be calculated from actual fuel efficiency figures for different transport mode, attributed to freight. However, the data for this was inconsistent, where it exists at all. For example, there is a real shortage of accurate data on the fuel efficiency of shipping, as noted by Halim et al (2018)[10]. Similarly, the mix of passengers and freight on many flights complicates the attribution of emissions to airfreight.

In the absence of recent and internationally recognised methodologies for the above and to ensure our methodology aligns to the government calculations of carbon emissions, we have chosen to base our analysis on the UK government's published carbon emission factors for freight transport (BEIS, 2019)[11], as set out in Table 4.1 of this Technical Annex. The way that we have applied different emission factors for different transport modes are set out in the sub-sections below.

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[9] The Committee on Climate Change (2011) *Review of Shipping Emissions.* notes that, "at the UK level bunker fuel estimates are likely to be imperfect, given that a significant amount of UK seaborne trade is transhipped via other EU ports where refuelling may take place: of the 180 million tonnes imported to the UK in 2006, around 30 million tonnes of this arrived via EU ports and 13 million tonnes were transhipped via non-EU ports."

[10] Halim R.A., Kirstein, L., Merk, O. and Martinez, L.M., (2018) Decarbonization pathways for international maritime transport: A model-based policy impact assessment. *Sustainability*, *10*(7), p.2243

[11] BEIS (2019), 'Greenhouse Gas Reporting: Conversion Factors 2019' (accessed May 2020).

## *Shipping emissions*

Although the uktradeinfo datasets only define shipping as two transport modes: general shipping and containerised shipping. However, we have sub-divided the general shipping of different commodities (see Table 4.1) to reflect the significant variation in transport emissions associated with different types of shipping (e.g. an oil tanker emissions are significantly lower than is typical for container freight). [12] Therefore we have used the lower carbon intensity figures from BEIS (2019) for the shipment of bulk materials (e.g. grain, timber, chemicals, iron ore and coal), bulk liquids and oil tankers, compared to that for general, ferry and containerised freight. The product categories were reassigned from general shipping to specific categories of shipping as follows:

- Crude oil

- Bulk material shipments of the following:

    - Grains (excluding rice);

    - Other bulk foods (sugar, soya beans, animal feeds, palm kernels);

    - Fertilisers;

    - Ores, solid fuels (e.g. coal, coke), salt, earth, stone and sulphur;

    - Timber, woodchips, sawdust, and paper pulp;

    - Unprocessed fibres (wool, flax, hemp, cotton etc.); and

    - Metal & scrap metal (excluding stainless Steel & manufactured metal parts).

- Bulk shipment of liquids: principally chemicals, natural gas and liquid fuels but also some drinks (e.g. beer).

- Vehicle transport

These different greenhouse gas emission factors were applied for the average shipment size[13] for each individual commodity type for each country source or destination. This means that in some cases all product movements might be classified as general shipments, whereas a number of the larger shipments should be categorised as bulk shipments. Overall this should improve the estimate of carbon intensity of shipping different product types, compared to applying a single factor to all of the different types of shipping (which would overestimate the carbon intensity of shipping crude oil, for example).

## *Aviation emissions*

The BEIS carbon intensities are different for short haul and long haul airfreight. Long haul is defined as any airfreight with a distance greater than 3700km. In reality more

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[12] BEIS (2019) emission factors for shipping are based on International Maritime Organisation (2009) Second IMO GHG Study 2009. This confirmed (paragraph 9.6) that these emissions calculations are based on the net weight of cargo containers.
[13] At least 500 tonnes for bulk materials and 100 tonnes for bulk liquids.

goods may be short haul (i.e. have higher emissions) if they are not flown directly to/from the UK to the source/destination of imports/exports. For example, if flowers are flown from Ethiopia via the Netherlands and then on to the UK, the UK-Ethiopia distance would under-estimate the transport emissions. So this estimate of aviation freight emissions is likely to be conservative.

### Road and Rail Emissions

The carbon intensities for generic freight movements from the BEIS (2019) dataset were used in both cases. The amount of road and rail was limited due to a limited breakdown of EU-wide customs declarations by transport mode (the countries with whom the UK has most international trade that is not flown or shipped), so overall carbon intensities were used in both cases.

### Fixed Installations (e.g. Pipelines, Channel Tunnel) and Exceptions

Travel through the Channel Tunnel via road or rail is included in the overall estimate of road and rail transport (mainly with the EU-27, although this includes a limited amount of trade that then continues further, such as direct trains from London to China).[14]

The one mode of transport included in the uktradeinfo, but without a carbon intensity published by BEIS (2019) is for movement of goods by pipeline (and also electricity). However, as the only pipeline imports and exports are relatively short distance these have been excluded from the carbon footprint analysis.[15]

Goods where the mode of transport is not defined are considered to be shipping.

### Accuracy of Transport Carbon Intensity Factors Used

The BEIS (2019) methodology does include the impact of different utilisation rates for vehicles/vessels of different size. However, as it is not product specific and as the customs declaration does not include the weight of packaging the carbon footprint of some commodities may be underestimated in two different ways: firstly where volume not tonnage governs freight utilisation and secondly where packaging is a significant element in the total weight of product shipped. In the case of bulk materials and liquids this will not have a significant impact. However, for heavily packaged items this could be significant.

**Freight utilisation by volume.** Our analysis does not consider the potentially higher emissions associated with shipping low-density products (e.g. insulation material or those with a low packing density) where the freight utilisation is determined by the space required rather than weight of the product traded.

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[14] Dunmore, D., Preti, A. and Routaboul, C., 2019. The "Belt and Road Initiative": impacts on TEN-T and on the European transport system. *Journal of Shipping and Trade, 4*(1), p.10.
[15] Oil and gas pipelines run from the Norwegian continental shelf to the East coast of England and from Bacton oil terminal in England to Zeebrugge in Belgium.

**Packaging.** Although the weight of a heavy-goods-vehicle or container is included in the BEIS (2019) metrics used, the weight of packaging around a product is not included in the weight of a customs declaration. For example, the weight of tinned products does not include the weight of the tin itself, and the shipment of a bottle of wine, will not include the weight of the glass bottle. The degree to which this under-estimates the total shipped tonnage is not known.

# 3. Analysis of Distance of UK International Trade

## *Shipping Distances*

The CERDI database has been used to determine the shipping distances for goods.[16] This is set out for each country in Table 4.3. Anomalies are described after this table. This dataset has been correlated to the uktradeinfo data set, using the ISO3166 table from IBAN to convert Alpha-3 to Alpha-2 country codes to shipping distance for different countries.

## *Distance Anomalies*

Most of the trade between the UK and countries outside of the EU is either shipped or air freight so using a shipping distance or the distance between capital cities (as that is the location for many countries airports, and overall errors are likely to balance) seems a reasonable assumption. One possible exception is France, where the location of trade (e.g. how much trade is from which ports/airports) is more significant) will make a greater difference due to the shorter overall difference to the UK. A more detailed analysis of trade movements between the UK and France would be useful in exploring this further.

## *Underestimate of distances travelled*

The estimate of distance in the database are underestimates for four reasons as set out below: exclusion of overland distance from landlocked countries; exclusion of domestic element of international freight (in UK, and overseas); exclusion of overall transport impacts where goods are sold/purchased via an intermediate country; and exclusion of full transport impact of multi-stage supply chains.

**Land-locked countries.** We have only considered one transport mode for each import or export. As a result our estimates do not include the overland transport

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[16] See https://hal.archives-ouvertes.fr/halshs-01288748v1 and https://zenodo.org/record/240493#.XrKhpi-ZOL4. The CERDI database also includes the road distances that need to be added on to the distance shipped for landlocked countries and capital-port distances for all countries, although this was not used in this analysis.

from landlocked countries to ports (e.g. exports by sea to Ethiopia will be to the port in Kenya, and not include road or rail transport onward to Ethiopia).

**Domestic element of international freight.** Also, the domestic element in the country imported from or exported to has not been included. The International Transport Forum (2015)[17] estimates that the domestic leg of global supply chains account for around 10% of the tonne-km and around 30% of carbon emissions of international trade. They note that this is typically higher in countries that dominate the UK's trade (9% of tonne-km for China, 14% of tonne-km for India and 15% of tonne-km for the USA). The proportion of UK domestic freight that is moving goods imported or exported is also not included. Including these domestic transport impacts of international freight would significantly increase the overall trade carbon footprint – but unlike international shipping and aviation these amounts are already included in each country's reported territorial emissions of greenhouse gases.

In each case the origin country of goods is assumed to be the country from where it is shipped to the UK. This is not always the case. Two significant examples of where that is not the case where identified through the project: trade that involves sale/purchase at an intermediate country and multi-stage supply chains.

**Sale/purchase of goods at an intermediate country.** UK trade statistics only show where goods are sourced or sold to. If this includes transhipment (e.g. changing planes or ships en-route) this is included. However, if goods are sold or processed on route from their source or ultimate destination this is not reflected in the customs declarations, resulting in an under-reporting of the overall trade carbon footprint. Analysis of rose and mango imports to the UK identified roses and mangoes listed as originating in France and the Netherlands, whereas the trade shipments and commentary of those countries noted that most of these products exported to the UK were imported, then sold and then shipped on. In this case that is because we bought the goods from a Dutch or French firm, who sourced the goods themselves from their global supply chain, or in the case of flowers, bought them at an international flower auction in the Netherlands.

**Multiple steps in global supply chains.** Analysis of the supply chain for clothes (termed apparel in trade statistics) showed that the UK customs declaration is from where the garments were made, before shipping for consumption in the UK. However, research identified that typically this only accounts for one third of the total transport carbon footprint of textiles – as this should also include the journey from source material to make yarn and fabric, to the transport to where garments are made. Often these are made in different locations, far from each other. In some cases this is reflected in UK imports to be incorporated into products for subsequent exports, which blurs the boundaries between imports and exports, and reaffirms the decision taken to export both imports and exports, as both need to be decarbonised, and these are not only both linked to the UK economy and consumption patterns, but to each other.

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[17] The International Transport Forum (2015) The Carbon Footprint of Global Trade: Tackling Emissions from International Freight Transport.

# 4. Analysis of UK Trade Carbon Footprint for UK Imports and Exports

The above elements combine to form a new database that enables data to be manipulated and analysed to determine the trade transport carbon footprint for UK trade (imports and exports).

This section discusses three final aspects of this data analysis:

- Firstly, how the transport carbon footprint for trade between the UK and European Community (EU-27) was calculated;

- Secondly, how the database was used; and

- Thirdly, a recommendation for benchmarking of the results, which should help to determine the extent to which the constraints and limitations discussed above under-estimate the carbon footprint of the UK's trade.

## *Calculation of carbon footprint of trade between UK and the EU-27*

The uktradeinfo dataset does not include the mode of transport for most trade within the European Community (i.e. between the UK and the other 27 EU countries). However, the overall trade carbon footprint for UK-EU trade was still able to be determined using additional data from the Eurostat COMEXT database. While the trade declaration for trade between the EU-27 and the UK is broken down by level 1 (i.e. 1-99) commodity code[18], because of variation of how these COMEXT statistics are recorded between different EU countries it does not include all types of trade with all countries (around 20 of the 27 EU countries made significant trade declarations within COMEXT) so this dataset does not directly correlate with the individual records in the uktradeinfo dataset.

Declarations for EU country trade with the UK from COMEXT database were used to calculate average T-km modal splits (see below) using the sum of all custom declaration records for 2019 and the same direct distances to the UK used for the uktradeinfo analysis.

| Total-tkm | Sea-tkm | Road-tkm | Railway-tkm | Fixed-tkm | Air-tkm |
|-----------|---------|----------|-------------|-----------|---------|
| 100.00% | 85.67% | 9.56% | 0.65% | 0.00% | 0.34% |

These modal splits were used to apportion the total EU t-km (based on direct km to UK, as used above) between the different transport modes. The same modal splits were used for imports and for exports. The same CO2e intensities by transport mode as applied to uktradeinfo records were then applied to these resulting t-km at a total

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[18] See Table 4.2 of Annex 2.

EU imports and EU exports level. This most likely underestimates the overall carbon footprint as the shipping t-km distances between many countries and the UK are significantly longer than direct distances.

Therefore, for the purpose of contrasting trade of different commodity types, we have allocated 'general shipping' as the mode of transport for all EU trade, except where this is identified otherwise in the uktradeinfo dataset. Whilst this is correct for 85% of trade with the EU (the amount of tonne-km shipped – see above) this is a conservative assumption – and means that a breakdown of the carbon footprint of UK trade with the EU-27 by either commodity group or individual commodity is not possible. This use of 'general shipping' for all UK-EU trade under-estimates the emissions of trade transported by road, rail and air between the UK and EU-27 (in line with the table above).  As a result some individual trade carbon footprint estimates are under-reported, and will actually have much higher carbon intensities than analysed. This assumption means that the trade carbon footprint used for assessment of individual commodity groups and commodities under-estimates the carbon footprint of UK-EU trade by a factor of 2, compared to the total calculated and reported in the overall analysis.

## *Overall trade analysis*

This database was accessed using *Sequel Ace*. Query caching was enabled in *MariaDB*, to speed up the database queries. The database was interrogated in different ways to analyse different aspects of the UK's trade carbon footprint. This includes analysis by country and by commodity type. The overall commodity code categories (1-99) have been reduced to a shorter number of overall groups as set out in Table 4.2 of this Technical Annex and Table 1 of the main report.

## *Benchmarking to UK government and Committee on Climate Change estimates*

This analysis of the carbon footprint of the UK's international trade is likely to be slightly lower than the actual carbon footprint as it excludes trades where no customs declaration is made, packaging (which could be significant for some goods, such as wine) and mail. However, it is also dependant on accuracy of the UK's carbon intensity figures used, which have not recently been benchmarked against actual fuel used by different transport modes (see Table 4.1 in Annex 2 below). Further work is needed to review and confirm these metrics, particularly for shipping for which there is shortage of recent information on fuel efficiency.[19] However, these estimates are comparable for other recent work as noted below.

The trade carbon footprint for total shipping imports and exports (excluding

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[19] Halim, R.A., Kirstein, L., Merk, O. and Martinez, L.M., 2018. Decarbonization pathways for international maritime transport: A model-based policy impact assessment. *Sustainability*, *10*(7), p.2243

embodied carbon) is estimated here as 14.5 MtCO2e for imports and 6.8 MtCO2e for exports: a total of 21.3 MtCO2e. This appears consistent with earlier estimates by the UK's Committee on Climate Change (2011)[20], whose analysis was based on the UK considering itself responsible for all of the shipping emissions involved in the transfer of cargos between the UK and its trading partners, as in the range of 12-29 MtCO2 for 2006, higher than the value for bunker fuels (then reported as around 10MtCO2). But both this analysis and the earlier estimates by the CCC for international shipping are significantly higher than the latest figures reported as part of the UK annual greenhouse gas emission accounts. The 2018 total reported by the UK government for international shipping of 7.9 MtCO2e (down 0.2% from 2017, and claiming a fall of 17% from 1990 levels) was based on UK bunker fuels, so better represents the fuel use of our exports than our imports.[21]

The trade carbon footprint for total airfreight imports and exports (excluding embodied carbon) is estimated here as 6.5 MtCO2e for imports and 4.8 MtCO2e for exports: a total of 11.3 MtCO2e. While a separate figure for aviation freight and passenger freight is not published this appears relatively consistent with the scale of the UK's total aviation carbon footprint, which in 2018 (including both passengers and freight) was 36.7 MtCO2e.[22] This is calculated based on departing flights, with a methodology that considers bunker fuel sales for departing flights, based on the Intergovernmental Panel on Climate Change's reporting guidelines.[23]

Therefore, this analysis of the carbon footprint of UK international's trade highlights the need for up-to-date and accurate estimates for international shipping, airfreight and land transport of freight by the UK government so the current emissions can be tracked and enforced, alongside the 'embodied emissions' of the goods traded.[24]

This would support, further to the recommendations set out in the main report for Policies and a wider governance framework to address the scale and complexity of decarbonising the UK's international trade.

### Final Note

If you are interested in detailed breakdowns for certain commodity codes or countries, or have a specific query regarding the database created and this analysis we maybe be able to provide additional information on request. Please feel free to contact us at info@greenhousethinktank.org.

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[20] Committee on Climate Change (2011) Review of UK Shipping Emissions.

[21] As reported by Committee on Climate Change (2020) Reducing UK Emissions: 2020 Progress Report to Parliament. Excludes naval vessels.

[22] As reported by Committee on Climate Change (2020) Reducing UK Emissions: 2020 Progress Report to Parliament. Excludes military aviation.

[23] Thanks to details from Airport Environment Federation (aef.org.uk). See https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_3_Ch3_Mobile_Combustion.pdf

[24] This need to harmonise reporting of consumption-based carbon emissions and link this to country-level reduction targets is made by Climate Works and Sum of Us (2018) Closing Europe's Carbon Loophole in Climate Policy. However, it is important that at the same time the carbon footprint associated with the transport of trade is also reported and reduced.

## Annex 2.   UK Trade Analysis and Carbon Footprint Tables.

This second annex includes a wider set of tables to complement the analysis and results presented in the main Trade and Investment Requirements of Zero Carbon report.

These present more details of the overall breakdown of import and export emissions (broken down by SITC code), as well as key summary tables showing the top-ten product categories and products by carbon emissions (overall and for air freight) together with tables setting out the value, tonnage and carbon emissions for the UK's top-ten countries of goods import and export in 2019. The final tables included in section 4 of this annex complement the methodology included as Annex 2.

The tables presented in this section are as follows:

1.  Overall UK Trade Analysis and Carbon Footprint Summary
2.  Key Summary Tables showing highest carbon footprint product categories and products (overall and air freight only)
3.  Breakdown of UK Trade Carbon Footprint, Tonnage and Value by Region and Country
4.  Tables that relate to the Methodology –  the carbon intensity of transport modes, grouping of commodity codes, countries and distances.

# 1.  Overall UK Trade Analysis and Carbon Footprint Summary

This is included separately for trade with the other 27 countries in the European Community (referred to as EU) and the Rest of the World. For the Rest of the World the UK publishes more details in the trade customs declaration (including mode of transport), whereas for the EU only a modal split for tonnes and tonne-km of UK-EU trade was obtained.

## 1.1 Breakdown of UK Import Customs Declarations with all countries for 2019 by Commodity Type

|   | GROUP | Tonnes | GBP-£m | Total Number of Customs Declarations |
|---|-------|--------|--------|--------------------------------------|
| A | Food – Animal | 3,568,932 | £10,227m | 66,256 |
| E | Food – Plant | 17,744,793 | £14,197m | 139,113 |
| M | Food - Processed/Manufactured | 14,816,310 | £22,734m | 188,524 |
| B | Biomass Fuels | 9,338,708 | £1,406m | 2,775 |
| F | Fossil Fuels | 126,208,546 | £42,843m | 10,337 |
| N | Natural Fibres/Timber/Flowers | 8,304,728 | £4,839m | 31,381 |
| O | Ores | 7,942,616 | £1,270m | 814 |
| S | Stone & Minerals (excludes metal ores) | 9,474,592 | £620m | 13,817 |
| D | Manufactured - Construction Materials | 11,942,577 | £11,086m | 133,694 |
| G | Manufactured - Consumer Goods | 10,484,441 | £59,314m | 784,172 |
| H | Manufactured – Machinery | 3,671,118 | £62,298m | 565,162 |
| P | Manufactured - Materials/Parts | 23,625,476 | £143,437m | 925,302 |
| V | Manufactured – Vehicles | 6,743,013 | £68,840m | 113,065 |
| C | Chemicals | 17,159,865 | £47,531m | 259,933 |
| T | Textiles | 2,922,471 | £33,460m | 834,191 |
| W | Wastes | 8,859,215 | £4,394m | 18,868 |
| Z | Other | 86,293 | £11,493m | 18,894 |
| | TOTAL | 282,893,694 | £539,988m | 4,106,298 |

## 1.2 Breakdown of UK Export Customs Declarations with all countries for 2019 by Commodity Type

| | GROUP | Tonnes | GBP-£m | Total Number of Custom Declarations |
|---|---|---|---|---|
| A | Food - Animal | 3,079,610 | £6,199m | 82,221 |
| E | Food - Plant | 5,538,827 | £2,755m | 121,145 |
| M | Food - Processed/Manufactured | 5,513,967 | £14,463m | 292,997 |
| B | Biomass Fuels | 344,670 | £24m | 2,353 |
| F | Fossil Fuels | 78,838,786 | £30,821m | 20,381 |
| N | Natural Fibres/Timber/Flowers | 720,359 | £440m | 16,099 |
| O | Ores | 34,705 | £26m | 726 |
| S | Stone & Minerals (excl metal ores) | 9,490,453 | £446m | 16,637 |
| D | Manufactured - Construction Materials | 1,924,688 | £4,381m | 142,976 |
| G | Manufactured - Consumer Goods | 2,584,733 | £26,755m | 786,761 |
| H | Manufactured - Machinery | 2,833,365 | £55,989m | 824,692 |
| P | Manufactured - Materials/Parts | 10,460,145 | £80,294m | 1,145,172 |
| V | Manufactured - Vehicles | 3,569,349 | £55,230m | 191,241 |
| C | Chemicals | 8,879,096 | £46,852m | 476,008 |
| T | Textiles | 1,188,319 | £12,811m | 828,657 |
| W | Wastes | 16,222,019 | £6,499m | 42,437 |
| Z | Other | 647,839 | £19,569m | 23,289 |
| | TOTAL | 151,870,930 | £363,553m | 5,013,792 |

## 1.3   Breakdown of UK Imports from EU-27 for 2019 by Commodity Type

| | GROUP | Total-Tonnes | Total-Tkm | GBP |
|---|---|---|---|---|
| A | Food – Animal | 3,081,312 | 3,079,657,366 | £7,994,019,427 |
| B | Biomass Fuels | 1,886,969 | 1,310,490,480 | £274,329,852 |
| C | Chemicals | 12,597,587 | 12,662,601,297 | £36,695,791,791 |
| D | Manufactured - Construction Materials | 6,295,208 | 6,634,745,744 | £7,106,909,133 |
| E | Food – Plant | 8,863,240 | 10,115,889,662 | £7,661,339,133 |
| F | Fossil Fuels | 18,493,413 | 17,564,549,914 | £7,291,765,632 |
| G | Manufactured - Consumer Goods | 5,358,306 | 5,791,345,129 | £26,082,330,148 |
| H | Manufactured – Machinery | 2,189,051 | 2,358,562,347 | £32,601,027,619 |
| M | Food - Processed/Manufactured | 11,976,787 | 12,880,965,708 | £18,040,055,482 |
| N | Natural Fibres/Timber/Flowers | 6,617,285 | 6,314,702,117 | £3,559,524,802 |
| O | Ores | 1,512,514 | 2,047,099,357 | £505,139,401 |
| P | Manufactured - Materials/Parts | 15,927,847 | 16,984,768,012 | £49,426,375,851 |
| S | Stone & Minerals (excludes metal ores) | 4,771,029 | 5,191,695,831 | £305,299,428 |
| T | Textiles | 843,137 | 919,297,254 | £13,338,276,055 |
| V | Manufactured – Vehicles | 5,391,845 | 5,869,282,690 | £55,297,693,334 |
| W | Wastes | 4,529,659 | 4,121,770,386 | £2,422,811,966 |
| Z | Other | 50,087 | 41,865,643 | £1,710,562,586 |
| | **TOTAL** | **110,385,275** | **113,889,289,228** | **£271,370,216,846** |

## 1.4   Breakdown of UK Exports to EU-27 for 2019 by Commodity Type

| | GROUP | Total-Tonnes | Total-Tkm | GBP |
|---|---|---|---|---|
| A | Food – Animal | 2,468,027 | 1,755,632,156 | £4,367,088,327 |
| B | Biomass Fuels | 281,390 | 334,184,564 | £16,787,306 |
| C | Chemicals | 6,783,498 | 6,557,689,185 | £22,122,369,201 |
| D | Manufactured - Construction Materials | 1,538,336 | 1,077,050,221 | £2,640,914,559 |
| E | Food – Plant | 4,725,942 | 4,888,692,888 | £2,178,034,936 |
| F | Fossil Fuels | 56,820,728 | 48,616,783,990 | £21,878,055,862 |
| G | Manufactured - Consumer Goods | 1,935,389 | 1,729,927,562 | £15,037,833,576 |
| H | Manufactured – Machinery | 1,754,894 | 2,040,876,753 | £21,449,616,777 |
| M | Food - Processed/Manufactured | 3,618,780 | 3,248,188,233 | £7,486,801,214 |
| N | Natural Fibres/Timber/Flowers | 637,447 | 362,419,265 | £329,769,911 |
| O | Ores | 25,481 | 35,549,805 | £17,923,880 |
| P | Manufactured - Materials/Parts | 7,931,074 | 8,553,506,457 | £28,230,832,888 |
| S | Stone & Minerals (excludes metal ores) | 8,834,969 | 7,047,366,620 | £276,761,142 |
| T | Textiles | 678,062 | 855,577,462 | £9,112,440,374 |
| V | Manufactured – Vehicles | 2,044,126 | 2,399,878,138 | £27,300,270,294 |
| W | Wastes | 4,225,785 | 4,979,977,220 | £2,519,635,830 |
| Z | Other | 26,556 | 33,670,530 | £871,476,948 |
| | **TOTAL** | **104,330,487** | **94,516,971,084** | **£165,977,432,477** |

## 1.5  Breakdown of UK International Trade by Transport Mode.

| Imports/ Exports | Shipping | | Road | | Rail | | Air | | Total (all modes) |
|---|---|---|---|---|---|---|---|---|---|
| CO$_2$e emissions | Tonnes | % | Tonnes | % | Tonnes | % | Tonnes | % | |
| EU imports | 1,253,309 | 40% | 1,389,462 | 45% | 24,517 | 1% | 428,936 | 14% | 3,096,224 |
| Rest of World imports | 13,282,657 | 66% | 214,868 | 1% | 68 | 0% | 6,256,663 | 31% | 20,039,563 |
| Total imports | 14,535,966 | 63% | 1,604,330 | 7% | 24,585 | 0.1% | 6,685,599 | 29% | 23,135,787 |
| | | | | | | | | | |
| EU exports | 1,067,634 | 40% | 1,183,616 | 45% | 20,885 | 1% | 365,390 | 14% | 2,637,525 |
| Rest of World exports | 5,704,548 | 54% | 208,148 | 2% | 12,262 | 0% | 4,661,529 | 44% | 10,586,487 |
| Total exports | 6,772,182 | 51% | 1,391,764 | 11% | 33,147 | 0.3% | 5,026,919 | 38% | 13,224,012 |
| | | | | | | | | | |
| Grand total | 21,308,148 | 59% | 2,996,094 | 8% | 57,732 | 0.2% | 11,712,518 | 32% | 36,359,799 |

**Note.** The total CO2 emissions for (all modes) is the sum of international shipping, air, road and rail transport and goods where the mode of transport is not defined (which is assumed to be shipping, but not included in the shipping total).

## 1.6 Breakdown of UK Imports from Rest of the World for 2019 by Commodity Type

### 1.6.1  Breakdown of UK Imports from Rest of the World for 2019 by Commodity Type - Carbon Footprint

| | GROUP | Total -tCO2e | Sea -tCO2e | Road-tCO2e | Rail-tCO2e | Air-tCO2e |
|---|---|---|---|---|---|---|
| A | Food - Animal | 255902 | 81,025 | 4,037 | 0 | 165,786 |
| B | Biomass Fuels | 631,206 | 630,738 | 355 | 0 | 105 |
| C | Chemicals | 793,918 | 429,535 | 5,079 | 0 | 344,836 |
| D | Manufactured - Construction Materials | 653,069 | 514,750 | 8,149 | 0 | 124,524 |
| E | Food - Plant | 2,416,073 | 1,093,772 | 65,790 | 27 | 1,239,862 |
| F | Fossil Fuels | 4,986,814 | 4,978,170 | 123 | 0 | 4,122 |
| G | Manufactured - Consumer Goods | 2,167,321 | 1,166,695 | 21,158 | 0 | 947,209 |
| H | Manufactured - Machinery | 1,030,241 | 313,399 | 10,424 | 0 | 697,666 |
| M | Food - Processed/Manufactured | 628,740 | 465,026 | 13,504 | 0 | 98,236 |
| N | Natural Fibres/Timber/Flowers | 436,611 | 211,109 | 3,015 | 0 | 179,969 |
| O | Ores | 579,879 | 578,758 | 97 | 0 | 379 |
| P | Manufactured - Materials/Parts | 2,524,766 | 1,225,643 | 43,021 | 2 | 1,219,233 |
| S | Stone & Minerals (excl metal ores) | 219,581 | 214,984 | 117 | 0 | 4,458 |
| T | Textiles | 1,482,326 | 411,291 | 27,267 | 25 | 1,024,777 |
| V | Manufactured - Vehicles | 515,369 | 279,081 | 8,107 | 9 | 185,410 |
| W | Wastes | 701,417 | 683,060 | 3,236 | 0 | 10,935 |
| Z | Other | 16,331 | 5,621 | 1,388 | 5 | 9,156 |
| | **TOTAL** | **20,039,563** | **13,282,657** | **214,868** | **68** | **6,256,663** |

### 1.6.2  Breakdown of UK Imports from Rest of the World for 2019 by Commodity Type - Tonnes

|   | GROUP | Total-Tonnes | Tonnes Shipped | Tonnes by Road | Tonnes by Rail | Tonnes by Pipeline | Tonnes by Air |
|---|---|---|---|---|---|---|---|
| A | Food – Animal | 482,558 | 411,784 | 9,490 | 0 | 0 | 14,821 |
| B | Biomass Fuels | 7,451,739 | 7,450,569 | 1,084 | 0 | 0 | 13 |
| C | Chemicals | 4,067,201 | 3,863,667 | 16,466 | 0 | 0 | 40,463 |
| D | Manufactured - Construction Materials | 2,514,514 | 2,418,080 | 20,984 | 0 | 0 | 14,410 |
| E | Food – Plant | 8,881,552 | 8,430,016 | 138,731 | 101 | 0 | 146,626 |
| F | Fossil Fuels | 107,715,134 | 81,397,671 | 190 | 0 | 26,264,905 | 521 |
| G | Manufactured - Consumer Goods | 5,126,136 | 4,646,687 | 61,601 | 0 | 0 | 108,713 |
| H | Manufactured – Machinery | 1,482,074 | 1,293,999 | 24,675 | 0 | 0 | 79,575 |
| M | Food - Processed/Manufactured | 2,839,521 | 2,430,157 | 39,600 | 0 | 0 | 10,346 |
| N | Natural Fibres/Timber/Flowers | 1,687,449 | 1,277,833 | 8,639 | 0 | 0 | 20,818 |
| O | Ores | 6,430,104 | 6,425,032 | 50 | 0 | 0 | 43 |
| P | Manufactured - Materials/Parts | 7,673,855 | 7,006,513 | 109,004 | 7 | 0 | 139,479 |
| S | Stone & Minerals (excludes metal ores) | 4,703,565 | 4,702,585 | 220 | 0 | 0 | 536 |
| T | Textiles | 2,079,324 | 1,714,898 | 58,336 | 122 | 0 | 116,452 |
| V | Manufactured – Vehicles | 1,351,162 | 909,233 | 18,340 | 35 | 0 | 21,524 |
| W | Wastes | 4,329,471 | 4,266,071 | 7,898 | 0 | 0 | 1,330 |
| Z | Other | 36,205 | 29,330 | 1,375 | 20 | 0 | 1,080 |
| | **TOTAL** | **168,851,564** | **138,674,124** | **516,682** | **285** | **26,264,905** | **716,751** |

### 1.6.3  Breakdown of UK Imports from Rest of the World for 2019 by Commodity Type - Value (£)

| | GROUP | £ Total | £ Shipped | £ by Road | £ by Rail | £ by Pipeline | £ by Air |
|---|---|---|---|---|---|---|---|
| A | Food – Animal | £2,216,740,109 | £1,782,925,831 | £63,055,235 | £0 | £0 | 197,154,271 |
| B | Biomass Fuels | £1,131,322,222 | £1,130,899,643 | £315,706 | £0 | £0 | 59,964 |
| C | Chemicals | £10,702,496,351 | £5,655,987,004 | £743,529,908 | £5,430 | £0 | 3,949,496,237 |
| D | Manufactured - Construction Materials | £3,794,020,887 | £3,218,651,146 | £71,839,159 | £0 | £0 | 363,229,568 |
| E | Food – Plant | £6,535,820,537 | £5,664,528,255 | £194,812,208 | £188,356 | £0 | 542,431,805 |
| F | Fossil Fuels | £35,551,733,000 | £29,228,588,139 | £326,991 | £0 | £6,298,774,863 | 3,522,739 |
| G | Manufactured - Consumer Goods | £33,228,782,196 | £17,237,139,063 | £368,968,836 | £49,381 | £0 | 10,482,432,975 |
| H | Manufactured – Machinery | £29,456,597,461 | £9,654,688,113 | £726,406,672 | £2,923 | £0 | 15,261,068,457 |
| M | Food - Processed/Manufactured | £4,693,802,845 | £3,760,389,374 | £122,175,599 | £0 | £0 | 116,782,865 |
| N | Natural Fibres/Timber/Flowers | £1,279,470,699 | £913,130,262 | £14,903,369 | £0 | £0 | 110,236,753 |
| O | Ores | £764,580,310 | £704,603,280 | £76,865 | £0 | £0 | 50,987,787 |
| P | Manufactured - Materials/Parts | £93,780,129,848 | £16,935,109,428 | £1,010,912,555 | £121,926 | £0 | 73,179,743,481 |
| S | Stone & Minerals (excludes metal ores) | £314,203,842 | £309,785,299 | £335,509 | £0 | £0 | 3,892,149 |
| T | Textiles | £20,121,314,781 | £14,353,479,426 | £875,556,785 | £1,315,511 | £0 | 2,590,758,285 |
| V | Manufactured – Vehicles | £13,298,183,892 | £6,421,318,699 | £251,908,542 | £6,188,849 | £0 | 2,307,145,895 |
| W | Wastes | £1,970,755,026 | £1,586,036,610 | £33,426,205 | £0 | £0 | 294,544,644 |
| Z | Other | £3,496,115,276 | £256,687,775 | £318,010,426 | £85,472 | £0 | 1,180,536,491 |
| | **TOTAL** | **£262,336,069,282** | **£118,813,947,347** | **£4,796,560,570** | **£7,957,848** | **£6,298,774,863** | **£110,634,024,366** |

## 1.7   Breakdown of UK Exports with Rest of the World for 2019 by Commodity Type

### 1.7.1   Breakdown of UK Exports with Rest of the World for 2019 by Commodity Type - Carbon Footprint

| | GROUP | Total tCO2e | tCO2e Shipped | tCO2e - Road | tCO2e - Rail | tCO2e - Air |
|---|---|---|---|---|---|---|
| A | Food – Animal | 757,867 | 112,053 | 3,692 | 0 | 642,122 |
| B | Biomass Fuels | 5,110 | 5,089 | 6 | 0 | 16 |
| C | Chemicals | 845,510 | 292,920 | 37,240 | 1 | 515,349 |
| D | Manufactured - Construction Materials | 183,559 | 57,036 | 6,539 | 0 | 119,984 |
| E | Food – Plant | 110,642 | 60,082 | 1,643 | 0 | 48,917 |
| F | Fossil Fuels | 1,890,145 | 1,883,786 | 1,035 | 0 | 5,323 |
| G | Manufactured - Consumer Goods | 843,068 | 84,093 | 12,550 | 0 | 746,425 |
| H | Manufactured – Machinery | 904,969 | 135,789 | 51,194 | 2 | 717,984 |
| M | Food - Processed/Manufactured | 604,995 | 345,991 | 20,883 | 22 | 238,100 |
| N | Natural Fibres/Timber/Flowers | 28,167 | 12,435 | 782 | 0 | 14,950 |
| O | Ores | 1,633 | 1,481 | 44 | 0 | 108 |
| P | Manufactured - Materials/Parts | 1,362,192 | 356,958 | 40,632 | 660 | 963,942 |
| S | Stone & Minerals (excludes metal ores) | 75,689 | 68,639 | 2,054 | 1 | 4,995 |
| T | Textiles | 440,890 | 73,693 | 16,206 | 0 | 350,990 |
| V | Manufactured – Vehicles | 851,120 | 576,972 | 10,258 | 0 | 263,890 |
| W | Wastes | 1,660,337 | 1,635,092 | 3,002 | 11,576 | 10,667 |
| Z | Other | 20,595 | 2,438 | 390 | 0 | 17,767 |
| | **TOTAL** | **10,586,487** | **5,704,548** | **208,148** | **12,262** | **4,661,529** |

### 1.7.2   Breakdown of UK Exports with Rest of the World for 2019 by Commodity Type Tonnes

| | GROUP | Total-Tonnes | Tonnes Shipped | Tonnes by Road | Tonnes by Rail | Tonnes by Pipeline | Tonnes by Air |
|---|---|---|---|---|---|---|---|
| A | Food – Animal | 611,594 | 523,217 | 10,675 | 0 | 0 | 77,527 |
| B | Biomass Fuels | 63,279 | 63,240 | 16 | 0 | 0 | 2 |
| C | Chemicals | 2,088,027 | 1,941,049 | 88,043 | 9 | 0 | 58,925 |
| D | Manufactured - Construction Materials | 386,352 | 356,728 | 15,676 | 0 | 0 | 13,946 |
| E | Food – Plant | 812,896 | 800,657 | 5,791 | 0 | 0 | 6,292 |
| F | Fossil Fuels | 22,018,063 | 22,014,997 | 2,399 | 0 | 0 | 663 |
| G | Manufactured - Consumer Goods | 649,354 | 536,458 | 31,851 | 1 | 0 | 80,660 |
| H | Manufactured – Machinery | 1,078,451 | 879,632 | 116,058 | 8 | 0 | 82,753 |
| M | Food - Processed/Manufactured | 1,895,183 | 1,820,289 | 48,109 | 89 | 0 | 26,641 |
| N | Natural Fibres/Timber/Flowers | 82,907 | 78,903 | 2,208 | 0 | 0 | 1,793 |
| O | Ores | 9,225 | 9,062 | 150 | 0 | 0 | 13 |
| P | Manufactured - Materials/Parts | 2,491,472 | 2,263,897 | 100,243 | 15,841 | 0 | 111,484 |
| S | Stone & Minerals (excludes metal ores) | 643,547 | 637,599 | 5,316 | 22 | 0 | 611 |
| T | Textiles | 510,259 | 424,523 | 47,006 | 0 | 0 | 38,712 |
| V | Manufactured – Vehicles | 1,525,223 | 1,468,315 | 22,678 | 1 | 0 | 31,202 |
| W | Wastes | 11,996,228 | 11,878,769 | 13,620 | 102,658 | 0 | 1,171 |
| Z | Other | 621,282 | 25,018 | 937 | 0 | 0 | 2,419 |
| | **TOTAL** | **47,483,343** | **45,722,354** | **510,774** | **118,629** | **0** | **534,813** |

### 1.7.3  Breakdown of UK Exports with Rest of the World for 2019 by Commodity Type Value (£)

| | GROUP | £ Total | £ Shipped | £ by Road | £ by Rail | £ by Pipeline | £ by Air |
|---|---|---|---|---|---|---|---|
| A | Food – Animal | £1,831,459,157 | £932,757,608 | £104,546,624 | £1,247 | £0 | 793,246,963 |
| B | Biomass Fuels | £6,986,644 | £6,863,699 | £36,421 | £0 | £0 | 65,901 |
| C | Chemicals | £24,444,215,653 | £7,691,627,054 | £1,349,429,219 | £22,023 | £0 | 15,403,130,164 |
| D | Manufactured - Construction Materials | £1,740,087,002 | £1,179,384,559 | £92,005,148 | £0 | £0 | 468,694,592 |
| E | Food – Plant | £576,772,807 | £506,162,592 | £17,995,721 | £0 | £0 | 52,393,526 |
| F | Fossil Fuels | £8,942,902,955 | £8,929,171,749 | £5,588,378 | £1,612 | £0 | 8,119,871 |
| G | Manufactured - Consumer Goods | £11,714,225,712 | £2,824,205,183 | £405,570,167 | £18,297 | £0 | 8,467,753,452 |
| H | Manufactured – Machinery | £34,245,650,526 | £12,228,327,062 | £2,003,621,620 | £335,056 | £0 | 20,013,363,089 |
| M | Food - Processed/Manufactured | £6,975,881,151 | £6,198,046,561 | £191,432,819 | £215,999 | £0 | 585,961,695 |
| N | Natural Fibres/Timber/Flowers | £109,757,391 | £85,193,266 | £3,345,781 | £0 | £0 | 21,218,320 |
| O | Ores | £8,141,816 | £7,707,551 | £323,850 | £0 | £0 | 110,415 |
| P | Manufactured - Materials/Parts | £51,620,406,345 | £8,977,232,566 | £1,014,702,854 | £27,393,661 | £0 | 41,600,776,010 |
| S | Stone & Minerals (excludes metal ores) | £165,531,019 | £155,986,336 | £4,141,290 | £1,079 | £0 | 5,402,314 |
| T | Textiles | £3,698,429,490 | £1,002,022,340 | £259,544,016 | £0 | £0 | 2,436,646,789 |
| V | Manufactured – Vehicles | £27,700,435,282 | £21,370,207,183 | £508,020,956 | £26,677 | £0 | 5,306,655,820 |
| W | Wastes | £3,979,052,570 | £3,806,645,586 | £25,052,709 | £21,818,158 | £0 | 125,448,362 |
| Z | Other | £10,640,954,043 | £731,390,159 | £2,576,337,962 | £0 | £0 | 6,451,318,299 |
| | **TOTAL** | **£188,400,889,563** | **£76,632,931,054** | **£8,561,695,535** | **£49,833,809** | **£0** | **£101,740,305,582** |

## 2.  Key Summary Tables showing highest carbon footprint imports and exports by product type (overall and air freight only)

### 2.1  Top 10 Overall Commodities Imported by Carbon Footprint

| Commodity type (summary, commodity code) | Carbon Footprint ktCO2e |
|---|---|
| Jet fuel, kerosene type – 271019210 | 1194 |
| Natural gas, liquefied – 271111000 | 1052 |
| Gas oils of petroleum or bituminous minerals, (excluding biodiesel, and for undergoing chemical transformation) – 271019430 | 961 |
| Petroleum oils and oils obtained from bituminous minerals, crude (excluding natural gas condensates) – 270900900 | 957 |
| Wood pellets – 440131000 | 629 |
| Non-agglomerated iron ores and concentrates (excluding roasted iron pyrites) – 260111000 | 529 |
| Soya bean oilcake and other solid residues, whether or not ground or in the form of pellets, resulting from the extraction of soya-bean oil – 230400000 | 279 |
| Coking coal, whether or not pulverised, non-agglomerated – 270112100 | 242 |
| Bituminous coal, whether or not pulverised, non-agglomerated (excl. coking) – 270112900 | 188 |
| Fresh or dried guavas, mangoes and mangosteens – 80450000 | 163 |

## *2.2 Top 10 Overall Commodities Exported by Carbon Footprint*

| Commodity type (summary, commodity code) | Carbon Footprint ktCO2e |
|---|---|
| Petroleum oils and oils obtained from bituminous minerals, crude (excl. natural gas condensates) – 270900900 | 1521 |
| Motor spirit (excluding biodiesel) – 271012410 | 431 |
| Recovered "waste and scrap" unbleached paper and cardboard – 470710000 | 394 |
| Fresh or chilled salmon – 30214000 | 335 |
| Waste and scrap of iron or steel, not fragmentised "shredded", not in bundles (not alloys etc.) – 720449900 | 302 |
| Printed matter (e.g. books) - excludes advertising – 490199000 | 287 |
| Motor cars and other motor vehicles – 870323190 | 206 |
| Waste and scrap of iron or steel, fragmentised "shredded" (not alloys etc.) – 720449100 | 159 |
| Sorted, recovered "waste and scrap" paper or paperboard -470790900 | 121 |
| Waste and scrap of alloy steel (excl. stainless steel, scrap) – 720429000 | 113 |

## 2.3 Top 10 Air Freighted Commodity Types Imported and Exported by Carbon Footprint *(Air freight carbon footprint only)*

| Commodity Description | Import or Export | Carbon Footprint ktCO2e |
|---|---|---|
| Fresh or chilled salmon – 30214000 | Exports | 334 |
| Printed matter (e.g. books) - excluding advertising - 490199000 | Exports | 278 |
| Fresh or chilled beans (Vigna and Phaseolus) - 70820000 | Import | 161 |
| Fresh or dried guavas, mangoes and mangosteens - 80450000 | Import | 156 |
| Printed matter (e.g. books) - excluding advertising - 490199000 | Import | 134 |
| Fresh or chilled asparagus - 70920000 | Import | 109 |
| Fresh cut roses and buds – 60311000 | Import | 103 |
| Fresh or chilled vegetables n.e.s. - 70999900 | Import | 98 |
| Machines for the reception, conversion and transmission or regeneration of voice, images or other data, incl. switching and routing apparatus (excl. telephones) - 851762000 | Import | 85 |
| Diesel internal combustion engine parts, n.e.s.- 840999000 | Import | 84 |

## 2.4 Top 10 Commodity Categories Imported and Exported by Air Freight by Carbon Footprint *(Air freight carbon footprint only)*

| Commodity Category | Import/ Export | Carbon Footprint ktCO2e |
|---|---|---|
| Machinery – including nuclear reactors, boilers, machinery and mechanical appliances | Import | 796 |
| Machinery – including nuclear reactors, boilers, machinery and mechanical appliances | Exports | 749 |
| Edible vegetables and certain roots and tubers | Import | 736 |
| Electrical machinery and equipment and parts | Import | 716 |
| Fish and Crustaceans, molluscs and other aquatic vertebrates | Exports | 533 |
| Edible fruit and nuts, peel of citrus and melons | Import | 449 |
| Printed books, newspapers, pictures etc. | Exports | 376 |
| Clothing (knitted) | Import | 375 |
| Electrical machinery and equipment and parts | Exports | 371 |
| Clothing (not knitted) | Import | 317 |

# 3. Breakdown of UK Trade Carbon Footprint, Tonnage and Value by Region and Country

These tables exclude customs trade that is recorded in uktradeinfo as NULL (no country given) and excludes stores and provisions.

## 3.1 Regional Breakdown of Imports by Carbon Footprint, Tonnage and Value



Carbon Footprint - MtCO2e          Amount of Goods - Million Tonnes (Mt)          £ billions

Legend:
- European Community (EU-27)
- China
- US
- Asia & Oceania excluding China
- Europe outside the EC
- North America excluding USA
- Latin America and Caribbean
- Middle East and North Africa
- Sub-Saharan Africa

### 3.2  Regional Breakdown of Exports by Carbon Footprint, Tonnage and Value



**Carbon Footprint - MtCO2e**      **Amount of Goods - Million Tonnes (Mt)**      **£ billions**

Legend:
- European Community (EU-27)
- China
- US
- Asia & Oceania excluding China
- Europe outside the EC
- North America excluding USA
- Latin America and Caribbean
- Middle East and North Africa
- Sub-Saharan Africa
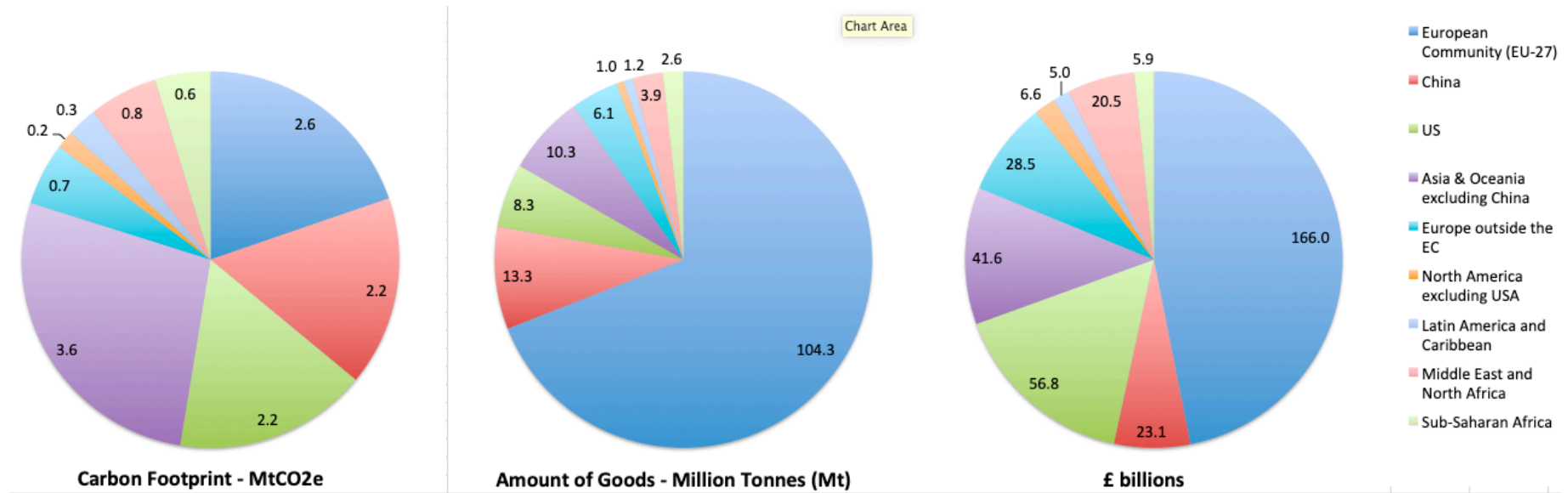
### 3.3 Top 10 Countries of Import and Export by Carbon Footprint (Mt CO2e)

### 3.3.1 Imports

| No. | Country | MtCO2e |
|---|---|---|
| 1 | China | 4.2 |
| 2 | EU (1) | 3.1 |
| | United States | 3.1 |
| 3 | India | 1.3 |
| 4 | France | 1.2 |
| 5 | Russia | 1.1 |
| 6 | Qatar | 0.9 |
| 7 | Brazil | 0.7 |
| 8 | Turkey | 0.5 |
| 9 | Japan | 0.5 |
| 10 | South Africa | 0.5 |
| | Total | 23.2 |

Note 1. The overall value for the EU is shown as accurate breakdown of carbon emissions were not possible due to limited breakdown of transport mode in Eurostat data.

### 3.3.2 Exports

| No. | Country | MtCO2e |
|---|---|---|
| 1 | EU | 2.6 |
| 2 | United States | 2.2 |
| 3 | China | 2.2 |
| 4 | India | 0.6 |
| 5 | Australia | 0.5 |
| 6 | Turkey | 0.4 |
| 7 | Japan | 0.3 |
| 8 | Hong Kong | 0.3 |
| 9 | South Korea | 0.3 |
| 10 | United Arab Emirates | 0.3 |
| | Total | 13.2 |

Note 1. The overall value for the EU is shown as accurate breakdown of carbon emissions were not possible due to limited breakdown of transport mode in Eurostat data.

## 3.4  Top 10 Countries of Import and Export by Tonnage (Mt)

### 3.4.1  Imports

| No. | Country | Mt |
|---|---|---|
| 1 | France | 81.0 |
| 2 | Norway (1) | 50.5 |
| 3 | United States | 25.6 |
| 4 | Netherlands | 18.3 |
| 5 | Russia | 16.0 |
| 6 | China | 9.2 |
| 7 | Qatar | 7.1 |
| 8 | Canada | 6.5 |
| 9 | Germany | 5.8 |
| 10 | Algeria | 5.3 |
| | EU-27 total | 110.4 |
| | Total | 279.2 |

Note 1. Includes fossil fuels imported via pipeline from the Norwegian Continental Shelf.

### 3.4.2  Exports

| No. | Country | Mt |
|---|---|---|
| 1 | Netherlands | 31.1 |
| 2 | Irish Republic | 17.8 |
| 3 | Germany | 15.0 |
| 4 | China | 13.3 |
| 5 | Belgium | 13.1 |
| 6 | United States | 8.3 |
| 7 | France | 6.7 |
| 8 | Spain | 5.8 |
| 9 | Turkey | 3.6 |
| 10 | Poland | 3.0 |
| | EU-27 total | 104.3 |
| | Total | 151.8 |

## 3.5 Top 10 Countries of Import and Export by Value (£ billions)

### 3.5.1 Imports

| No. | Country | £ billions |
|-----|---------|------------|
| 1 | France | 235.1 |
| 2 | United States | 52.7 |
| 3 | China | 51.3 |
| 4 | Switzerland | 18.3 |
| 5 | Norway (1) | 15.2 |
| 6 | Netherlands | 14.0 |
| 7 | Germany | 12.4 |
| 8 | Canada | 12.2 |
| 9 | Russia | 11.1 |
| 10 | Japan | 10.2 |
| | EU-27 total | 271.4 |
| | Total | 533.7 |

Note 1. Includes fossil fuels imported via pipeline from the Norwegian Continental Shelf.

### 3.5.2 Exports

| No. | Country | £ billions |
|-----|---------|------------|
| 1 | United States | 56.8 |
| 2 | Germany | 35.9 |
| 3 | France | 23.9 |
| 4 | Netherlands | 23.4 |
| 5 | China | 23.1 |
| 6 | Irish Republic | 21.6 |
| 7 | Belgium | 12.5 |
| 8 | Switzerland | 12.1 |
| 9 | Spain | 10.3 |
| 10 | Italy | 9.9 |
| | EU-27 total | 166.0 |
| | Total | 354.0 |

## 3.6 Overall Tonnage, Average Distance and £value of trade by Commodity Type

| Commodity Code group (1-99) | Imports | | | Exports | | |
|---|---|---|---|---|---|---|
| | Amount thousand tonnes | Average distance (km) | Value £ millions | Amount thousand tonnes | Average distance (km) | Value £ millions |
| 1 | 46 | 596 | 531 | 12 | 1573 | 569 |
| 2 | 1530 | 2236 | 4208 | 1055 | 5775 | 1843 |
| 3 | 477 | 6254 | 2352 | 421 | 3499 | 1842 |
| 4 | 1498 | 1512 | 3090 | 1557 | 1461 | 1898 |
| 5 | 195 | 2202 | 153 | 186 | 2331 | 125 |
| 6 | 414 | 1468 | 1171 | 41 | 1351 | 76 |
| 7 | 3420 | 3151 | 3381 | 861 | 2732 | 451 |
| 8 | 4007 | 6593 | 4934 | 189 | 1090 | 251 |
| 9 | 484 | 10098 | 1362 | 71 | 3757 | 445 |
| 10 | 4873 | 4943 | 1203 | 3230 | 1558 | 580 |
| 11 | 643 | 1801 | 400 | 602 | 6069 | 340 |
| 12 | 1370 | 6309 | 809 | 176 | 1188 | 181 |
| 13 | 45 | 8679 | 201 | 14 | 5348 | 95 |
| 14 | 210 | 4149 | 52 | 2 | 4557 | 2 |
| 15 | 1920 | 5859 | 1544 | 667 | 1245 | 560 |
| 16 | 968 | 5180 | 3548 | 106 | 2107 | 394 |
| 17 | 2055 | 6184 | 1089 | 432 | 2372 | 415 |
| 18 | 648 | 2043 | 2163 | 207 | 3007 | 823 |
| 19 | 1839 | 2206 | 3610 | 820 | 4111 | 1847 |
| 20 | 3298 | 2038 | 3081 | 319 | 2826 | 552 |
| 21 | 1347 | 2893 | 3078 | 562 | 4120 | 2247 |
| 22 | 5435 | 3757 | 6476 | 2794 | 5409 | 8033 |
| 23 | 6279 | 7527 | 2408 | 1453 | 3642 | 1121 |
| 24 | 43 | 2330 | 541 | 11 | 6146 | 70 |
| 25 | 13277 | 1662 | 860 | 9729 | 1345 | 497 |
| 26 | 9368 | 6935 | 1377 | 90 | 5323 | 157 |
| 27 | 126212 | 4752 | 43903 | 78858 | 4548 | 30965 |
| 28 | 2813 | 2909 | 2062 | 671 | 2121 | 1302 |
| 29 | 4499 | 3750 | 7845 | 3287 | 2070 | 9317 |
| 30 | 370 | 3206 | 21962 | 263 | 4126 | 21201 |
| 31 | 4072 | 1730 | 860 | 932 | 5789 | 260 |
| 32 | 563 | 2698 | 1952 | 710 | 4225 | 2702 |
| 33 | 908 | 3342 | 5114 | 713 | 3477 | 4497 |
| 34 | 1275 | 2600 | 2027 | 1034 | 3984 | 1746 |
| 35 | 312 | 2424 | 774 | 97 | 3665 | 414 |
| 36 | 14 | 11796 | 33 | 22 | 4701 | 34 |
| 37 | 33 | 2754 | 423 | 7 | 4225 | 163 |
| 38 | 2373 | 2134 | 4942 | 1314 | 3733 | 5419 |

| Commodity Code group (1-99) | Imports | | | Exports | | |
|---|---|---|---|---|---|---|
| | Amount thousand tonnes | Average distance (km) | Value £ millions | Amount thousand tonnes | Average distance (km) | Value £ millions |
| 39 | 7096 | 4302 | 14744 | 3557 | 4036 | 9130 |
| 40 | 1252 | 8237 | 4134 | 656 | 7383 | 1858 |
| 41 | 19 | 3498 | 132 | 159 | 9608 | 265 |
| 42 | 190 | 14195 | 2958 | 41 | 1935 | 997 |
| 43 | 1 | 13105 | 58 | 0 | 5522 | 35 |
| 44 | 16989 | 5098 | 5794 | 1080 | 1480 | 460 |
| 45 | 5 | 4388 | 36 | 1 | 12764 | 5 |
| 46 | 23 | 15822 | 79 | 1 | 2164 | 7 |
| 47 | 1063 | 5293 | 572 | 4362 | 12532 | 442 |
| 48 | 6335 | 3008 | 5875 | 1512 | 3550 | 2396 |
| 49 | 338 | 9805 | 1893 | 250 | 5435 | 2847 |
| 50 | 8 | 7715 | 28 | 1 | 14219 | 25 |
| 51 | 62 | 8268 | 337 | 58 | 8540 | 388 |
| 52 | 49 | 6830 | 224 | 10 | 3741 | 158 |
| 53 | 56 | 9414 | 77 | 2 | 5279 | 43 |
| 54 | 170 | 8179 | 584 | 38 | 3501 | 269 |
| 55 | 201 | 12084 | 441 | 51 | 3428 | 185 |
| 56 | 211 | 5538 | 607 | 51 | 4449 | 333 |
| 57 | 351 | 3775 | 895 | 67 | 3178 | 275 |
| 58 | 27 | 9432 | 234 | 9 | 2765 | 137 |
| 59 | 58 | 7971 | 336 | 40 | 3772 | 313 |
| 60 | 42 | 13174 | 173 | 21 | 2449 | 110 |
| 61 | 675 | 10202 | 10185 | 147 | 1898 | 3121 |
| 62 | 519 | 9075 | 9303 | 95 | 2644 | 3570 |
| 63 | 408 | 12470 | 2036 | 447 | 6430 | 853 |
| 64 | 306 | 11415 | 5412 | 61 | 2298 | 1922 |
| 65 | 22 | 12365 | 390 | 7 | 2403 | 185 |
| 66 | 25 | 17316 | 82 | 2 | 1773 | 16 |
| 67 | 23 | 15547 | 226 | 4 | 1591 | 34 |
| 68 | 2547 | 4638 | 1640 | 610 | 1947 | 886 |
| 69 | 3017 | 3649 | 1512 | 206 | 2597 | 463 |
| 70 | 1255 | 5432 | 1870 | 783 | 2481 | 1016 |
| 71 | 38 | 4744 | 69662 | 32 | 5389 | 33007 |
| 72 | 6503 | 3878 | 4663 | 11785 | 6307 | 5182 |
| 73 | 3280 | 7519 | 8801 | 1375 | 3949 | 4528 |
| 74 | 363 | 2506 | 1519 | 416 | 11019 | 1322 |
| 75 | 96 | 8324 | 1190 | 60 | 8127 | 1097 |
| 76 | 1349 | 4600 | 4009 | 1086 | 6664 | 2264 |
| 78 | 189 | 14970 | 358 | 235 | 3917 | 407 |
| 79 | 113 | 1615 | 275 | 38 | 3800 | 113 |
| 80 | 13 | 6601 | 102 | 1 | 4732 | 14 |
| 81 | 54 | 8642 | 886 | 37 | 6817 | 791 |
| 82 | 185 | 10027 | 1483 | 46 | 3826 | 774 |

| Commodity Code group (1-99) | Imports | | | Exports | | |
|---|---|---|---|---|---|---|
| | Amount thousand tonnes | Average distance (km) | Value £ millions | Amount thousand tonnes | Average distance (km) | Value £ millions |
| 83 | 392 | 8974 | 2117 | 115 | 3501 | 974 |
| 84 | 4507 | 6548 | 65791 | 2938 | 4685 | 57355 |
| 85 | 2392 | 7758 | 48381 | 827 | 4045 | 22214 |
| 86 | 234 | 5181 | 1633 | 29 | 5766 | 225 |
| 87 | 6478 | 3221 | 58440 | 3475 | 5443 | 39376 |
| 88 | 51 | 6936 | 8447 | 36 | 4861 | 14500 |
| 89 | 38 | 12594 | 1153 | 41 | 4813 | 1672 |
| 90 | 353 | 5359 | 14927 | 245 | 2922 | 15547 |
| 91 | 19 | 9018 | 1592 | 4 | 3109 | 878 |
| 92 | 15 | 13892 | 301 | 3 | 3005 | 135 |
| 93 | 15 | 4555 | 575 | 6 | 3370 | 738 |
| 94 | 2703 | 9676 | 9284 | 357 | 3676 | 3333 |
| 95 | 618 | 14205 | 4770 | 134 | 2735 | 1817 |
| 96 | 395 | 5693 | 1856 | 72 | 1887 | 530 |
| 97 | 11 | 9407 | 3456 | 5 | 8036 | 9812 |
| 98 | 6 | 1082 | 118 | 0 | 1339 | 0 |
| 99 | 6 | 4803 | 6866 | 612 | 37 | 8907 |

Note. For names of Commodity Groups please see Table 4.2.

# 4. Methodology Tables

## 4.1 Carbon Intensity by Transport Mode

| Mode of Transport | kg CO2e/tkm | Source |
|---|---|---|
| Shipping general (not roll-on/roll-off ferry, container or bulk) | 0.013 | BEIS (1) |
| Rail transport | 0.03333 | BEIS (1) |
| Road transport (average value taken) | 0.129087 | BEIS (1) |
| Mail | NULL | N/A |
| Fixed installations (e.g. pipeline) | NULL | N/A |
| Inland waterway transport | NULL | N/A |
| Shipping - Crude Oil | 0.004572 | BEIS (1) |
| Shipping - Bulk Cargo (Products/chemicals/LPG) | 0.01 | BEIS (1) |
| Sea - General Cargo & Refrigerated Cargo | 0.013 | BEIS (1) |
| Shipping – Container | 0.016142 | BEIS (1) |
| Shipping - Vehicle Transport | 0.03858 | BEIS (1) |
| Shipping - Roll-on Roll-off Ferry | 0.051659 | BEIS (1) |
| Air freight- Short Haul | 2.37968 | BEIS (1,2) |
| Air freight - Long Haul | 1.13174 | BEIS (1,2) |
| Trade undefined - assume equivalent to shipping (general) | 0.013 | BEIS (1) |

**Notes:**
1. BEIS (2019), 'Greenhouse Gas Reporting: Conversion Factors 2019' (accessed May 2020). https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2019.
2. This includes an uplift of 2 for the radiative forcing impacts of aviation.
3. The short-haul and long-haul carbon intensities were applied for flight distances up to and greater than 3700 km respectively.

### 4.2 Commodity codes against Category Groups *(see Section 1 of Annex 1 and Table 1 in main report)*

| COMMODITY CODE | Commodity | GROUP Code and Description (as used in this report) | |
|---|---|---|---|
| 10000000 | LIVE ANIMALS | A | Food – Animal |
| 20000000 | MEAT AND EDIBLE MEAT OFFAL | A | Food – Animal |
| 30000000 | FISH AND CRUSTACEANS, MOLLUSCS AND OTHER AQUATIC INVERTEBRATE | A | Food – Animal |
| 40000000 | DAIRY PRODUCE; BIRDS' EGGS; NATURAL HONEY; EDIBLE PRODUCTS OF | A | Food – Animal |
| 50000000 | PRODUCTS OF ANIMAL ORIGIN, NOT ELSEWHERE SPECIFIED OR INCLUDE | A,N,W,Z | Food - Animal, Natural Fibres/Timber/Flowers, Wastes, Other |
| 60000000 | LIVE TREES AND OTHER PLANTS; BULBS, ROOTS AND THE LIKE; CUT F | N | Natural Fibres/Timber/Flowers |
| 70000000 | EDIBLE VEGETABLES AND CERTAIN ROOTS AND TUBERS | E | Food – Plant |
| 80000000 | EDIBLE FRUIT AND NUTS; PEEL OF CITRUS FRUIT OR MELONS | E | Food – Plant |
| 90000000 | COFFEE, TEA, MAT√â AND SPICES | E | Food – Plant |
| 100000000 | CEREALS | E | Food – Plant |
| 110000000 | PRODUCTS OF THE MILLING INDUSTRY; MALT; STARCHES; INULIN; WHE | M | Food - Processed/Manufactured |
| 120000000 | OIL SEEDS AND OLEAGINOUS FRUITS; MISCELLANEOUS GRAINS, SEEDS | E | Food – Plant |
| 130000000 | LAC; GUMS, RESINS AND OTHER VEGETABLE SAPS AND EXTRACTS | E | Food – Plant |
| 140000000 | VEGETABLE PLAITING MATERIALS; VEGETABLE PRODUCTS NOT ELSEWHER | E | Food – Plant |
| 150000000 | ANIMAL OR VEGETABLE FATS AND OILS AND THEIR CLEAVAGE PRODUCTS | E | Food – Plant |
| 160000000 | PREPARATIONS OF MEAT, OF FISH OR OF CRUSTACEANS, MOLLUSCS OR | M | Food - Processed/Manufactured |
| 170000000 | SUGARS AND SUGAR CONFECTIONERY | E,M | Food - Plant, Food - Processed/Manufactured |
| 180000000 | COCOA AND COCOA PREPARATIONS | E,W,M | Food - Plant, Wastes, Food - Processed/Manufactured |
| 190000000 | PREPARATIONS OF CEREALS, FLOUR, STARCH OR MILK; PASTRYCOOKS' | M | Food - Processed/Manufactured |
| 200000000 | PREPARATIONS OF VEGETABLES, FRUIT, NUTS OR OTHER PARTS OF PLA | M | Food - Processed/Manufactured |
| 210000000 | MISCELLANEOUS EDIBLE PREPARATIONS | M | Food - Processed/Manufactured |

| COMMODITY CODE | Commodity | GROUP Code and Description (as used in this report) | |
|---|---|---|---|
| 220000000 | BEVERAGES, SPIRITS AND VINEGAR | M | Food - Processed/Manufactured |
| 230000000 | RESIDUES AND WASTE FROM THE FOOD INDUSTRIES; PREPARED ANIMAL | W | Wastes |
| 240000000 | TOBACCO AND MANUFACTURED TOBACCO SUBSTITUTES | Z | Other |
| 250000000 | SALT; SULPHUR; EARTHS AND STONE; PLASTERING MATERIALS, LIME A | S,W,D | Stone & Minerals (excludes metal ores), Wastes, Manufactured - Construction Materials |
| 260000000 | ORES, SLAG AND ASH | O,W | Ores, Wastes |
| 270000000 | MINERAL FUELS, MINERAL OILS AND PRODUCTS OF THEIR DISTILLATIO | F,W | Fossil Fuels, Wastes |
| 280000000 | INORGANIC CHEMICALS; ORGANIC OR INORGANIC COMPOUNDS OF PRECIO | C | Chemicals |
| 290000000 | ORGANIC CHEMICALS | C | Chemicals |
| 300000000 | PHARMACEUTICAL PRODUCTS | C,W | Chemicals, Wastes |
| 310000000 | FERTILISERS | C | Chemicals |
| 320000000 | TANNING OR DYEING EXTRACTS; TANNINS AND THEIR DERIVATIVES; DY | C | Chemicals |
| 330000000 | ESSENTIAL OILS AND RESINOIDS; PERFUMERY, COSMETIC OR TOILET P | C | Chemicals |
| 340000000 | SOAP, ORGANIC SURFACE-ACTIVE AGENTS, WASHING PREPARATIONS, LU | C | Chemicals |
| 350000000 | ALBUMINOIDAL SUBSTANCES; MODIFIED STARCHES; GLUES; ENZYMES | C | Chemicals |
| 360000000 | EXPLOSIVES; PYROTECHNIC PRODUCTS; MATCHES; PYROPHORIC ALLOYS; | Z | Other |
| 370000000 | PHOTOGRAPHIC OR CINEMATOGRAPHIC GOODS | H | Manufactured - Machinery |
| 380000000 | MISCELLANEOUS CHEMICAL PRODUCTS | C,W | Chemicals, Wastes |
| 390000000 | PLASTICS AND ARTICLES THEREOF | P,W,D,G | Manufactured - Materials/Parts, Wastes, Manufactured - Construction Materials, Manufactured - Consumer Goods |
| 400000000 | RUBBER AND ARTICLES THEREOF | P,W,G | Manufactured - Materials/Parts, Wastes, Manufactured - Consumer Goods |
| 410000000 | RAW HIDES AND SKINS (OTHER THAN FURSKINS) AND LEATHER | T,W | Textiles, Wastes |

| COMMODITY CODE | Commodity | GROUP Code and Description (as used in this report) | |
|---|---|---|---|
| 420000000 | ARTICLES OF LEATHER; SADDLERY AND HARNESS; TRAVEL GOODS, HAND | T | Textiles |
| 430000000 | FURSKINS AND ARTIFICIAL FUR; MANUFACTURES THEREOF | T | Textiles |
| 440000000 | WOOD AND ARTICLES OF WOOD; WOOD CHARCOAL | B,N,D,G,P | Biomass Fuels, Natural Fibres/Timber/Flowers, Manufactured - Construction Materials, Manufactured - Consumer Goods, Manufactured - Materials/Parts |
| 450000000 | CORK AND ARTICLES OF CORK | N,W,G | Natural Fibres/Timber/Flowers, Wastes, Manufactured - Consumer Goods |
| 460000000 | MANUFACTURES OF STRAW, OF ESPARTO OR OF OTHER PLAITING MATERI | G | Manufactured - Consumer Goods |
| 470000000 | PULP OF WOOD OR OF OTHER FIBROUS CELLULOSIC MATERIAL; RECOVER | N,W | Natural Fibres/Timber/Flowers, Wastes |
| 480000000 | PAPER AND PAPERBOARD; ARTICLES OF PAPER PULP, OF PAPER OR OF | P,D,G | Manufactured - Materials/Parts, Manufactured - Construction Materials, Manufactured - Consumer Goods |
| 490000000 | PRINTED BOOKS, NEWSPAPERS, PICTURES AND OTHER PRODUCTS OF THE | G | Manufactured - Consumer Goods |
| 500000000 | SILK | N,W,T | Natural Fibres/Timber/Flowers, Wastes, Textiles |
| 510000000 | WOOL, FINE OR COARSE ANIMAL HAIR; HORSEHAIR YARN AND WOVEN FA | T,N,W | Textiles, Natural Fibres/Timber/Flowers, Wastes |
| 520000000 | COTTON | N,W,T | Natural Fibres/Timber/Flowers, Wastes, Textiles |
| 530000000 | OTHER VEGETABLE TEXTILE FIBRES; PAPER YARN AND WOVEN FABRICS | N,W,T | Natural Fibres/Timber/Flowers, Wastes, Textiles |
| 540000000 | MAN-MADE FILAMENTS; STRIP AND THE LIKE OF MAN-MADE TEXTILE MA | T | Textiles |
| 550000000 | MAN-MADE STAPLE FIBRES | T,W | Textiles, Wastes |
| 560000000 | WADDING, FELT AND NONWOVENS; SPECIAL YARNS; TWINE, CORDAGE, R | T | Textiles |
| 570000000 | CARPETS AND OTHER TEXTILE FLOOR COVERINGS | D | Manufactured - Construction Materials |
| 580000000 | SPECIAL WOVEN FABRICS; TUFTED TEXTILE FABRICS; LACE; TAPESTRI | T | Textiles |
| 590000000 | IMPREGNATED, COATED, COVERED OR LAMINATED TEXTILE FABRICS; TE | T | Textiles |

| COMMODITY CODE | Commodity | GROUP Code and Description (as used in this report) | |
|---|---|---|---|
| 600000000 | KNITTED OR CROCHETED FABRICS | T | Textiles |
| 610000000 | ARTICLES OF APPAREL AND CLOTHING ACCESSORIES, KNITTED OR CROC | T | Textiles |
| 620000000 | ARTICLES OF APPAREL AND CLOTHING ACCESSORIES, NOT KNITTED OR | T | Textiles |
| 630000000 | OTHER MADE-UP TEXTILE ARTICLES; SETS; WORN CLOTHING AND WORN | T | Textiles |
| 640000000 | FOOTWEAR, GAITERS AND THE LIKE; PARTS OF SUCH ARTICLES | T | Textiles |
| 650000000 | HEADGEAR AND PARTS THEREOF | T | Textiles |
| 660000000 | UMBRELLAS, SUN UMBRELLAS, WALKING STICKS, SEAT-STICKS, WHIPS, | H,P | Manufactured - Machinery, Manufactured - Materials/Parts |
| 670000000 | PREPARED FEATHERS AND DOWN AND ARTICLES MADE OF FEATHERS OR O | T,G | Textiles, Manufactured - Consumer Goods |
| 680000000 | ARTICLES OF STONE, PLASTER, CEMENT, ASBESTOS, MICA OR SIMILAR | D | Manufactured - Construction Materials |
| 690000000 | CERAMIC PRODUCTS | D,G | Manufactured - Construction Materials, Manufactured - Consumer Goods |
| 700000000 | GLASS AND GLASSWARE | P,W,G | Manufactured - Materials/Parts, Wastes, Manufactured - Consumer Goods |
| 710000000 | NATURAL OR CULTURED PEARLS, PRECIOUS OR SEMI-PRECIOUS STONES, | P,W,G,Z | Manufactured - Materials/Parts, Wastes, Manufactured - Consumer Goods, Other |
| 720000000 | IRON AND STEEL | P,W | Manufactured - Materials/Parts, Wastes |
| 730000000 | ARTICLES OF IRON OR STEEL | P,D,G | Manufactured - Materials/Parts, Manufactured - Construction Materials, Manufactured - Consumer Goods |
| 740000000 | COPPER AND ARTICLES THEREOF | P,W | Manufactured - Materials/Parts, Wastes |
| 750000000 | NICKEL AND ARTICLES THEREOF | P,W | Manufactured - Materials/Parts, Wastes |
| 760000000 | ALUMINIUM AND ARTICLES THEREOF | P,W,D,G | Manufactured - Materials/Parts, Wastes, Manufactured - Construction Materials, Manufactured - Consumer Goods |
| 780000000 | LEAD AND ARTICLES THEREOF | P,W | Manufactured - Materials/Parts, Wastes |
| 790000000 | ZINC AND ARTICLES THEREOF | P,W | Manufactured - Materials/Parts, Wastes |
| 800000000 | TIN AND ARTICLES THEREOF | P,W | Manufactured - Materials/Parts, Wastes |
| 810000000 | OTHER BASE METALS; CERMETS; ARTICLES THEREOF | P,W | Manufactured - Materials/Parts, Wastes |

| COMMODITY CODE | Commodity | | GROUP Code and Description (as used in this report) |
|---|---|---|---|
| 820000000 | TOOLS, IMPLEMENTS, CUTLERY, SPOONS AND FORKS, OF BASE METAL; | G,H,P | Manufactured - Consumer Goods, Manufactured - Machinery, Manufactured - Materials/Parts |
| 830000000 | MISCELLANEOUS ARTICLES OF BASE METAL | G,P,D | Manufactured - Consumer Goods, Manufactured - Materials/Parts, Manufactured - Construction Materials |
| 840000000 | NUCLEAR REACTORS, BOILERS, MACHINERY AND MECHANICAL APPLIANCE | H,P | Manufactured - Machinery, Manufactured - Materials/Parts |
| 850000000 | ELECTRICAL MACHINERY AND EQUIPMENT AND PARTS THEREOF; SOUND R | H,P,G | Manufactured - Machinery, Manufactured - Materials/Parts, Manufactured - Consumer Goods |
| 860000000 | RAILWAY OR TRAMWAY LOCOMOTIVES, ROLLING STOCK AND PARTS THERE | V | Manufactured – Vehicles |
| 870000000 | VEHICLES OTHER THAN RAILWAY OR TRAMWAY ROLLING STOCK, AND PAR | V,G | Manufactured - Vehicles, Manufactured - Consumer Goods |
| 880000000 | AIRCRAFT, SPACECRAFT, AND PARTS THEREOF | V,G,H,P,Z | Manufactured - Vehicles, Manufactured - Consumer Goods, Manufactured - Machinery, Manufactured - Materials/Parts, Other |
| 890000000 | SHIPS, BOATS AND FLOATING STRUCTURES | V | Manufactured - Vehicles |
| 900000000 | OPTICAL, PHOTOGRAPHIC, CINEMATOGRAPHIC, MEASURING, CHECKING, | P,G,H | Manufactured - Materials/Parts, Manufactured - Consumer Goods, Manufactured - Machinery |
| 910000000 | CLOCKS AND WATCHES AND PARTS THEREOF | P,G | Manufactured - Materials/Parts, Manufactured - Consumer Goods |
| 920000000 | MUSICAL INSTRUMENTS; PARTS AND ACCESSORIES OF SUCH ARTICLES | G,P | Manufactured - Consumer Goods, Manufactured - Materials/Parts |
| 930000000 | ARMS AND AMMUNITION; PARTS AND ACCESSORIES THEREOF | Z | Other |
| 940000000 | FURNITURE; BEDDING, MATTRESSES, MATTRESS SUPPORTS, CUSHIONS A | G,D,P | Manufactured - Consumer Goods, Manufactured - Construction Materials, Manufactured - Materials/Parts |
| 950000000 | TOYS, GAMES AND SPORTS REQUISITES; PARTS AND ACCESSORIES THER | G,P | Manufactured - Consumer Goods, Manufactured - Materials/Parts |
| 960000000 | MISCELLANEOUS MANUFACTURED ARTICLES | G,P | Manufactured - Consumer Goods, Manufactured - Materials/Parts |

| COMMODITY CODE | Commodity | GROUP Code and Description (as used in this report) | |
|---|---|---|---|
| 970000000 | WORKS OF ART, COLLECTORS' PIECES AND ANTIQUES | Z | Other |
| 988084000 | INDUSTRIAL PLANT COMPONENT PARTS FALLING IN TARIFF CHAPTER 84 - MACHINERY AND MECHANICAL APPLIANCES | P | Manufactured - Materials/Parts |
| 999088000 | MIXED CONSIGNMENTS OF AIRCRAFT PARTS | P,Z | Manufactured - Materials/Parts, Other |
| 988063000 | INDUSTRIAL PLANT COMPONENT PARTS FALLING IN TARIFF CHAPTER 63 | N/A | Not included |
| 992099000 | POSTAL PACKAGES NOT CLASSIFIED ACCORDING TO KIND | N/A | Not included |
| 988063000 | INDUSTRIAL PLANT COMPONENT PARTS FALLING IN TARIFF CHAPTER 63 | N/A | Not included |
| 992099000 | POSTAL PACKAGES NOT CLASSIFIED ACCORDING TO KIND | N/A | Not included |
| 993024000 | SHIPS' AND AIRCRAFT'S STORES AND SUPPLIES | N/A | Not included |
| 993124000 | GOODS DELIVERED TO OFFSHORE INSTALLATIONS-CN CHAPTERS 1-24 | N/A | Not included |
| 995000000 | TRANSACTIONS OF LOW VALUE NOT CLASSIFIED ACCORDING TO KIND | N/A | Not included |
| 999087000 | MIXED CONSIGNMENTS OF MOTOR VEHICLE PARTS | N/A | Not included |
| 999999999 | No commodity code declared | N/A | Not included |

## 4.3 Table of Countries – including location (region) and distance from UK

| Region | Country | Distance (km) | Shipping distance (km) |
|---|---|---|---|
| European Community | Austria | 1515 | 5353 |
| European Community | Belgian Continental Shelf | 757 | 434 |
| European Community | Belgium | 757 | 434 |
| European Community | Bulgaria | 2505 | 5746 |
| European Community | Canary Islands | 1664 | 2170 (1) |
| European Community | Croatia | 1740 | 5289 |
| European Community | Cyprus | 3592 | 6015 |
| European Community | Cyprus Continental Shelf | 3592 | 6015 |
| European Community | Czech Republic | 1413 | 834 |
| European Community | Danish Continental Shelf | 1413 | 1465 |
| European Community | Denmark | 813 | 1465 |
| European Community | Estonia | 1746 | 2324 |
| European Community | Finland | 1819 | 2366 |
| European Community | Finnish Continental Shelf | 1819 | 2366 |
| European Community | France | 1091 | 3530 |
| European Community | French Continental Shelf | 1091 | 3530 |
| European Community | French Guiana | 7224 | 7012 |
| European Community | German Continental Shelf | 1033 | 834 |
| European Community | Germany | 1033 | 834 |
| European Community | Greece | 2604 | 5006 |
| European Community | Greece Continental Shelf | 2604 | 5006 |
| European Community | Guadeloupe | 6534 | 6553 |
| European Community | Guernsey | 660 | NULL |
| European Community | Hungary | 1826 | 5353 |
| European Community | Irish Continental Shelf | 4365 | 734 |
| European Community | Irish Republic | 380 | 734 |
| European Community | Italy | 1898 | 3963 |
| European Community | Latvia | 1733 | 2120 |
| European Community | Lithuania | 1719 | 2058 |
| European Community | Luxembourg | 893 | 368 |
| European Community | Malta | 2550 | 4061 |
| European Community | Martinique | 6652 | 6630 |
| European Community | Mayotte | 8831 | 12897 |
| European Community | Netherlands | 677 | 368 |
| European Community | Netherlands Continental Shelf | 677 | 368 |
| European Community | Poland | 1530 | 1836 |
| European Community | Portugal | 1812 | 1654 |
| European Community | Reunion | 10156 | 13710 |
| European Community | Romania | 2238 | 5971 |
| European Community | Slovakia | 1739 | 5353 |

| Region | Country | Distance (km) | Shipping distance (km) |
|---|---|---|---|
| European Community | Slovenia | 1644 | 5353 |
| European Community | Spain | 1664 | 2212 |
| European Community | Sweden | 1404 | 1253 |
| European Community | Swedish Continental Shelf | 1404 | 1253 |
| European Community | UK Continental Shelf | 0 | 0 |
| European Community | United Kingdom | 0 | 0 |
| Europe outside the EC | Albania | 2336 | 4609 |
| Europe outside the EC | Andorra | 1475 | 3531 |
| Europe outside the EC | Armenia | 3905 | 6455 |
| Europe outside the EC | Azerbaijan | 4059 | 6455 |
| Europe outside the EC | Belarus | 2016 | 2058 |
| Europe outside the EC | Bosnia-Herzegovina | 1970 | 4852 |
| Europe outside the EC | Faroe Islands | 752 | 1494 |
| Europe outside the EC | Georgia | 3635 | 6638 |
| Europe outside the EC | Gibraltar | 2144 | 2209 |
| Europe outside the EC | Iceland | 1363 | 2100 |
| Europe outside the EC | Jersey | 691 | NULL |
| Europe outside the EC | Kazakhstan | 4705 | 6455 |
| Europe outside the EC | Kosovo | 2254 | 4852 (1) |
| Europe outside the EC | Kyrgyz, Republic | 5670 | 11590 |
| Europe outside the EC | Liechtenstein | 1281 | 5353 |
| Europe outside the EC | Macedonia | 2382 | 4840 |
| Europe outside the EC | Moldova, Republic of | 2352 | 5971 |
| Europe outside the EC | Montenegro | 2161 | 4839 |
| Europe outside the EC | Norway | 900 | 1254 |
| Europe outside the EC | Norwegian Continental Shelf | 900 | 1254 |
| Europe outside the EC | Russia | 5614 | 6455 |
| Europe outside the EC | San Marino | 1702 | 3963 |
| Europe outside the EC | Sao Tome and Principe | 6204 | 8233 |
| Europe outside the EC | Serbia | 2146 | 4852 (1) |
| Europe outside the EC | Switzerland | 1249 | 3531 |
| Europe outside the EC | Tajikistan | 5641 | 11590 |
| Europe outside the EC | Turkey | 3382 | 5569 |
| Europe outside the EC | Turkmenistan | 4904 | 11695 |
| Europe outside the EC | Ukraine | 2470 | 6145 |
| Europe outside the EC | Uzbekistan | 5036 | 11590 |
| Europe outside the EC | Vatican City State | 1898 | 3963 (1) |
| Asia & Oceania | Afghanistan | 5814 | 11590 |
| Asia & Oceania | American Samoa | 15318 | 17923 |
| Asia & Oceania | Antarctica | 16646 | 16646 (1) |
| Asia & Oceania | Antigua and Barbuda | 6476 | 6537 |
| Asia & Oceania | Australia | 15206 | 20811 |
| Asia & Oceania | Bangladesh | 8092 | 14719 |
| Asia & Oceania | Bhutan | 7756 | 14720 |
| Asia & Oceania | Bouvet Island | 12225 | NULL |

| Region | Country | Distance (km) | Shipping distance (km) |
|---|---|---|---|
| Asia & Oceania | Brunei | 11305 | 16591 |
| Asia & Oceania | Cambodia | 9984 | 16556 |
| Asia & Oceania | China | 7780 | 19498 |
| Asia & Oceania | Christmas Islands | 15206 | 15002 (1) |
| Asia & Oceania | Cocos Islands | 11766 | 16017 (1) |
| Asia & Oceania | Cook Islands | 15740 | 16843 |
| Asia & Oceania | Fiji | 15825 | 23600 |
| Asia & Oceania | French Polynesia | 14935 | 15946 |
| Asia & Oceania | French Southern Territories | 13447 | 13447 (1) |
| Asia & Oceania | Guam | 11805 | 20053 |
| Asia & Oceania | Heard Island and McDonald Islands | 13956 | NULL |
| Asia & Oceania | Hong Kong | 9557 | 18233 |
| Asia & Oceania | India | 7663 | 11893 |
| Asia & Oceania | Indonesia | 11765 | 16017 |
| Asia & Oceania | Japan | 9200 | 20659 |
| Asia & Oceania | Kiribati | 13220 | 15929 |
| Asia & Oceania | Laos | 9159 | 17102 |
| Asia & Oceania | Macao | 9547 | 18221 |
| Asia & Oceania | Malaysia | 10583 | 15002 |
| Asia & Oceania | Maldives | 9007 | 12154 |
| Asia & Oceania | Marshall Islands | 12493 | 22596 |
| Asia & Oceania | Micronesia (Federated States of) | 12887 | 20170 |
| Asia & Oceania | Mongolia | 6781 | 19498 |
| Asia & Oceania | Myanmar | 8587 | 14552 |
| Asia & Oceania | Nauru | 13853 | 22404 |
| Asia & Oceania | Nepal | 7298 | 14720 |
| Asia & Oceania | New Caledonia | 16074 | 22509 |
| Asia & Oceania | New Zealand | 18401 | 23909 |
| Asia & Oceania | Norfolk Island | 17005 | 22929 |
| Asia & Oceania | North Korea | 8405 | 20869 |
| Asia & Oceania | Northern Mariana Islands | 11659 | 20218 |
| Asia & Oceania | Pakistan | 6211 | 11589 |
| Asia & Oceania | Palau | 12023 | 18880 |
| Asia & Oceania | Papua New Guinea | 13842 | 20248 |
| Asia & Oceania | Philippines | 10876 | 17866 |
| Asia & Oceania | Pitcairn | 14396 | 14396 (1) |
| Asia & Oceania | Samoa | 15285 | 17992 |
| Asia & Oceania | Singapore | 10961 | 15348 |
| Asia & Oceania | Solomon Islands | 14730 | 21353 |
| Asia & Oceania | South Georgia and South Sandwich Islands | 12578 | NULL |
| Asia & Oceania | South Korea | 8858 | 20084 |
| Asia & Oceania | Sri Lanka | 8922 | 12717 |
| Asia & Oceania | Taiwan | 9773 | 18499 |
| Asia & Oceania | Thailand | 9441 | 17101 |
| Asia & Oceania | Timor-Leste | 13208 | 18134 |

| Region | Country | Distance (km) | Shipping distance (km) |
|---|---|---|---|
| Asia & Oceania | Tonga | 16151 | 18353 |
| Asia & Oceania | Tuvalu | 14686 | 23580 |
| Asia & Oceania | Vanuatu | 15492 | 22599 |
| Asia & Oceania | Vietnam | 10033 | 16662 |
| Asia & Oceania | Wallis and Futuna | 15424 | 18434 |
| Latin America & Caribbean | Anguilla | 6448 | 6609 |
| Latin America & Caribbean | Argentina | 11882 | 13554 |
| Latin America & Caribbean | Aruba | 7391 | 7591 |
| Latin America & Caribbean | Bahamas | 6742 | 7548 |
| Latin America & Caribbean | Barbados | 6699 | 6548 |
| Latin America & Caribbean | Belize | 8133 | 9080 |
| Latin America & Caribbean | Bermuda | 5327 | 5925 |
| Latin America & Caribbean | Bolivia | 9749 | 14464 |
| Latin America & Caribbean | Bonaire, Sint Eustatius and Saba | 7316 | 7508 (1) |
| Latin America & Caribbean | Brazil | 8967 | 10469 |
| Latin America & Caribbean | British Indian Ocean Territory | 9800 | 12154 (1) |
| Latin America & Caribbean | Cayman Islands | 7488 | 8307 |
| Latin America & Caribbean | Chile | 12001 | 14463 |
| Latin America & Caribbean | Colombia | 8389 | 8278 |
| Latin America & Caribbean | Costa Rica | 8506 | 9028 |
| Latin America & Caribbean | Cuba | 7073 | 8477 |
| Latin America & Caribbean | Curacao | 7363 | 7508 (1) |
| Latin America & Caribbean | Dominica | 6601 | 6591 |
| Latin America & Caribbean | Dominican Republic | 6840 | 7163 |
| Latin America & Caribbean | Ecuador | 9221 | 10049 |
| Latin America & Caribbean | El Salvador | 8464 | 10211 |
| Latin America & Caribbean | Falklands Islands and dependencies | 12986 | 13758 |
| Latin America & Caribbean | Grenada | 6926 | 6785 |
| Latin America & Caribbean | Guatemala | 8369 | 10471 |
| Latin America & Caribbean | Guyana | 7452 | 7071 |
| Latin America & Caribbean | Haiti | 6952 | 7419 |
| Latin America & Caribbean | Honduras | 8170 | 9118 |
| Latin America & Caribbean | Jamaica | 7345 | 7934 |
| Latin America & Caribbean | Montserrat | 6529 | 6598 |
| Latin America & Caribbean | Nicaragua | 8315 | 8819 |
| Latin America & Caribbean | Panama | 8429 | 8758 |
| Latin America & Caribbean | Paraguay | 10189 | 12244 |
| Latin America & Caribbean | Peru | 9716 | 10682 |
| Latin America & Caribbean | Saint Barthelemy | 6462 | 6621 (1) |
| Latin America & Caribbean | Sint Maarten (Dutch part) | 6463 | 6621 (1) |
| Latin America & Caribbean | St Kitts and Nevis | 6509 | 6621 |
| Latin America & Caribbean | St Lucia | 6717 | 6651 |
| Latin America & Caribbean | St Pierre and Miquelon | 3711 | 4361 |
| Latin America & Caribbean | St Vincent and the Grenadines | 6791 | 6741 |
| Latin America & Caribbean | Suriname | 7382 | 6975 |

| Region | Country | Distance (km) | Shipping distance (km) |
|---|---|---|---|
| Latin America & Caribbean | Trinidad and Tobago | 7032 | 6882 |
| Latin America & Caribbean | Turks and Caicos Islands | 6680 | 7287 |
| Latin America & Caribbean | Uruguay | 10965 | 12244 |
| Latin America & Caribbean | Venezuela, Bolivarian Republic of | 7750 | 7508 |
| Latin America & Caribbean | Virgin Islands, British | 6526 | 6727 |
| Latin America & Caribbean | Virgin Islands, United States | 6549 | 6761 |
| Middle East & North Africa | Algeria | 3068 | 2675 |
| Middle East & North Africa | Bahrain | 5401 | 12108 |
| Middle East & North Africa | Ceuta | 1664 | 2170 (1) |
| Middle East & North Africa | Egypt | 4200 | 5901 |
| Middle East & North Africa | Iran (Islamic Republic of) | 5053 | 11695 |
| Middle East & North Africa | Iraq | 4365 | 12487 |
| Middle East & North Africa | Israel | 4031 | 6135 |
| Middle East & North Africa | Jordan | 4151 | 6705 |
| Middle East & North Africa | Kuwait | 4930 | 12462 |
| Middle East & North Africa | Lebanon | 3842 | 6066 |
| Middle East & North Africa | Libya | 3636 | 4237 |
| Middle East & North Africa | Melilla | 1664 | 2170 (1) |
| Middle East & North Africa | Morocco | 2638 | 2170 |
| Middle East & North Africa | Occupied Palestinian Territory | 3976 | 6136 |
| Middle East & North Africa | Oman | 6134 | 9970 |
| Middle East & North Africa | Qatar | 5502 | 12039 |
| Middle East & North Africa | Saudi Arabia | 5267 | 7463 |
| Middle East & North Africa | South Sudan | 6205 | 7268 (1) |
| Middle East & North Africa | Sudan | 5547 | 7269 |
| Middle East & North Africa | Syria | 3949 | 6049 |
| Middle East & North Africa | Tunisia | 2591 | 3692 |
| Middle East & North Africa | United Arab Emirates | 5837 | 11637 |
| Middle East & North Africa | Yemen | 6236 | 8929 |
| North America | Canada | 5807 | 5089 |
| North America | Greenland | 2572 | 4115 |
| North America | Mexico | 8415 | 11593 |
| North America | United States | 6830 | 9277 |
| North America | United States Minor outlying islands | 11660 | NULL |
| Sub-Saharan Africa | Angola | 7666 | 9733 |
| Sub-Saharan Africa | Benin | 5148 | 7661 |
| Sub-Saharan Africa | Botswana | 9043 | 13696 |
| Sub-Saharan Africa | Burkina Faso | 4800 | 7576 |
| Sub-Saharan Africa | Burundi | 7209 | 12289 |
| Sub-Saharan Africa | Cameroon | 5518 | 8292 |
| Sub-Saharan Africa | Cape Verde | 4799 | 4861 |
| Sub-Saharan Africa | Central Africa Republic | 5837 | 8292 |
| Sub-Saharan Africa | Chad | 4827 | 8292 |
| Sub-Saharan Africa | Comoros | 8627 | 12871 |
| Sub-Saharan Africa | Congo | 6999 | 9018 |

| Region | Country | Distance (km) | Shipping distance (km) |
|---|---|---|---|
| Sub-Saharan Africa | Congo (Democratic Republic of the) | 6999 | 9131 |
| Sub-Saharan Africa | Cote D'Ivoire | 5323 | 7004 |
| Sub-Saharan Africa | Djibouti | 6261 | 8760 |
| Sub-Saharan Africa | Equatorial Guinea | 6101 | 8460 |
| Sub-Saharan Africa | Eritrea | 5787 | 8638 |
| Sub-Saharan Africa | Ethiopia | 6413 | 8638 |
| Sub-Saharan Africa | Gabon | 6395 | 8478 |
| Sub-Saharan Africa | Gambia | 4775 | 5025 |
| Sub-Saharan Africa | Ghana | 5278 | 7428 |
| Sub-Saharan Africa | Guinea | 5082 | 5640 |
| Sub-Saharan Africa | Guinea Bissau | 5082 | 5284 |
| Sub-Saharan Africa | Kenya | 7202 | 11975 |
| Sub-Saharan Africa | Lesotho | 9920 | 13696 |
| Sub-Saharan Africa | Liberia | 5469 | 6577 |
| Sub-Saharan Africa | Madagascar | 9505 | 13333 |
| Sub-Saharan Africa | Malawi | 8406 | 12289 |
| Sub-Saharan Africa | Mali | 4204 | 5640 |
| Sub-Saharan Africa | Mauritania | 3873 | 4098 |
| Sub-Saharan Africa | Mauritius | 10185 | 13699 |
| Sub-Saharan Africa | Mozambique | 9015 | 14140 |
| Sub-Saharan Africa | Namibia | 8956 | 10746 |
| Sub-Saharan Africa | Niger | 4312 | 7661 |
| Sub-Saharan Africa | Nigeria | 5257 | 7795 |
| Sub-Saharan Africa | Niue | 15818 | 17963 |
| Sub-Saharan Africa | Rwanda | 7057 | 12289 |
| Sub-Saharan Africa | Senegal | 4644 | 4850 |
| Sub-Saharan Africa | Seychelles | 8561 | 11733 |
| Sub-Saharan Africa | Sierra Leone | 5269 | 5858 |
| Sub-Saharan Africa | Somalia | 7102 | 10494 |
| Sub-Saharan Africa | South Africa | 9881 | 13697 |
| Sub-Saharan Africa | St Helena, Ascension and Tristan da Cunha | 7936 | 11386 |
| Sub-Saharan Africa | Swaziland | 9692 | 14141 |
| Sub-Saharan Africa | Tanzania (United Republic of) | 7718 | 12289 |
| Sub-Saharan Africa | Togo | 5213 | 7575 |
| Sub-Saharan Africa | Uganda | 6812 | 11975 |
| Sub-Saharan Africa | Western Sahara | 3551 | NULL |
| Sub-Saharan Africa | Zambia | 8161 | 14141 |
| Sub-Saharan Africa | Zimbabwe | 8826 | 14141 |

*Notes. Sea Distance Exceptions (from data imported from the CERDI sea distance database – see https://hal.archives-ouvertes.fr/halshs-01288748v1 and https://zenodo.org/record/240493#.XrKhpi-ZOL4) are as follows:*

- Serbia - the UKtradeinfo countries list uses Alpha2 code of XS but ISO3166 uses RS. The sea distance has been entered manually to get round this.

- South Sudan - doesn't appear in CERDI database at all, but Sudan does, so the sea distance for Sudan has been used for South Sudan as an approximation.
- Antarctic, French Southern Territories and Pitcairn – There are not listed in the sea distance database so the line of sight distance has been entered manually.
- Kosovo – is not included in the CERDI database. The sea distance for Serbia has been used as an approximation.
- Cocos Islands – have used the Indonesia Sea Distance from the CERDI database.
- Saint Barthelemy – have used the Saint Kitts and Nevis sea distance from CERDI database.
- Bonaire, Sint Eustatius, Curacao and Saba – have used Venezuela sea distance from CERDI database.
- Christmas Island – have used the Malaysia sea distance from CERDI database.
- Canary Islands – have used the Morocco sea distance from CERDI database.
- British Indian Ocean Territory – have used the Maldives sea distance from CERDI database.
- Sint Maarten – have used the Saint Kitts and Nevis sea distance from CERDI database.
- Ceuta and Melilla – have used the Morocco sea distance from CERDI database.
- Vatican City State – have used the Italy sea distance from CERDI database.