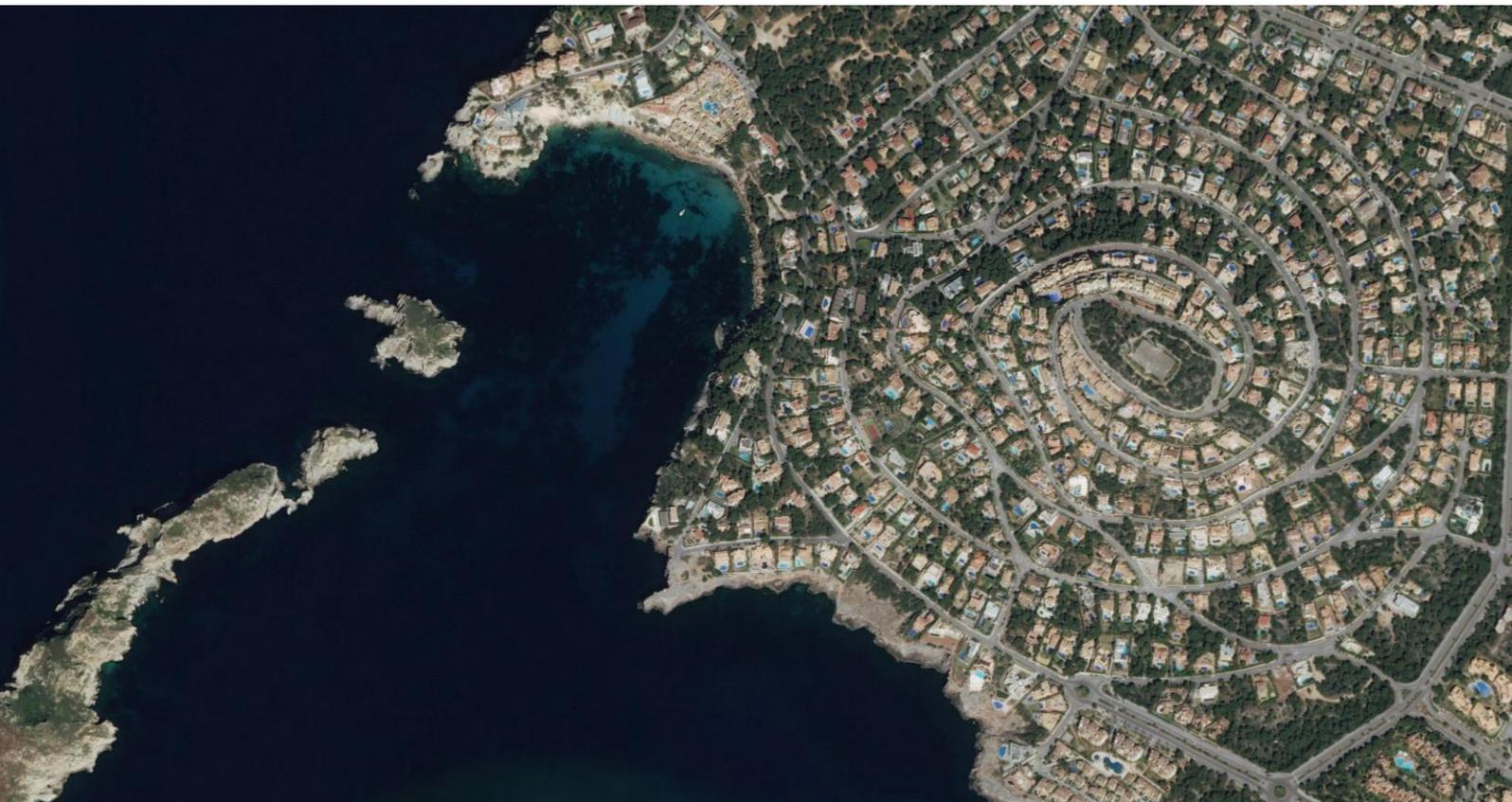


Tourism and the environment

Towards a reporting mechanism in Europe



ANNEX 4. Indicator assessment TOUR002

Tourism related modes of transport



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European Topic Centre on Urban Land and Soil Systems (ETC/ULS)

Departament de Geografia

Universitat Autònoma de Barcelona (UAB)

08193 – Bellaterra

Spain

Tel.: +34 935813520

Web: uls.eionet.europa.eu

Indicator name: TOUR002 – Tourism related modes of transport

Assessment

Indicator name

TOUR002a – Trips made by European residents by main modes of transport

TOUR002b – Total air passengers carried

TOUR002c – Carried passengers per airport

TOUR002d – Number of cruise port passengers

Key policy question

Are we using more environmentally friendly modes of transports for tourism?

Are we going better at managing the tourism mobility?

Key message

When Europeans travel inside their own country (domestic trips) use to do it mainly by land, and more precisely by motor vehicle (75.8 % from all domestic trips), while when they go abroad (outbound trips, to any country of the world) they tend to use the airplane (53.8 % from all outbound trips). Significant differences among countries, though, are observed.

Air traffic and number of air passengers carried are steadily increasing in Europe. The environmental impacts of increased air traffic are relevant and have both a global (climate change) and local (noise) dimension. Tourism is the most important contributor to the increase in air traffic with a clear impact on touristic areas around the Mediterranean Sea and in bigger cities.

Being of significant economic importance, cruise tourism also leads to unwanted externalities, as cruise ships generate air, waste and noise emissions in EU ports and seas. These externalities are located both at the ports where cruise ships call and along shipping routes. Local pressures depend on the intensity of cruise traffic, which is measured by the number of passengers per port.

Key assessment

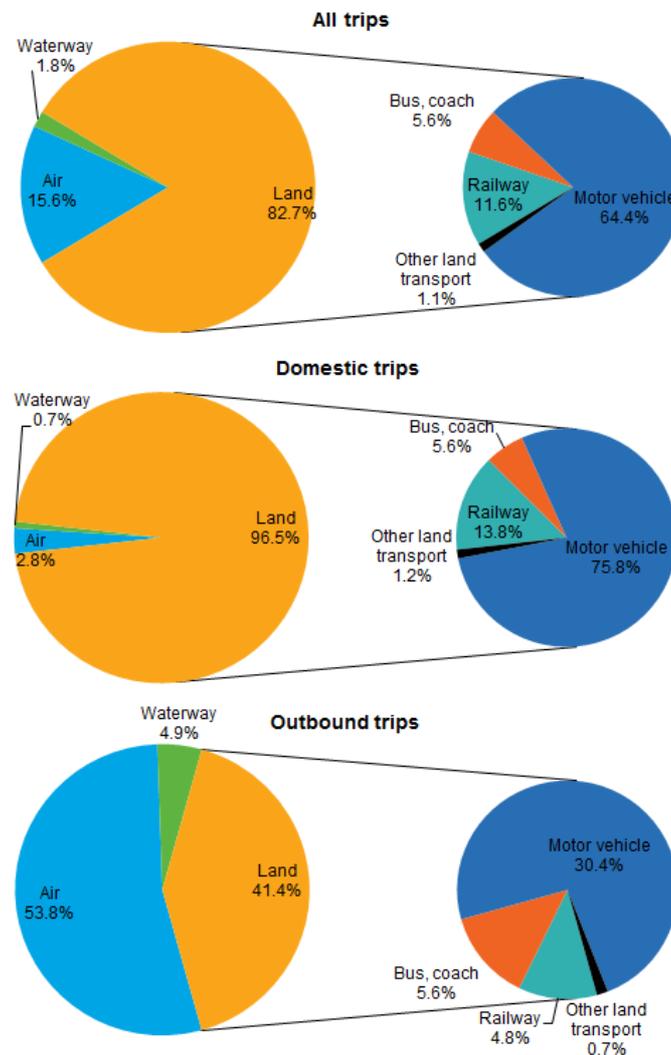
For all trips made by Europeans in 2014, motor vehicles (private or rented) were the main means of transport used by 64.4% of travelers, followed by air and railway transport (15.6% and 11.6%, respectively). When Europeans travel inside their own country (domestic trips), they travel mainly over land, and more precisely by motor vehicle (75.8% of all domestic trips), followed by rail (13.8%). When they go abroad, (outbound trips, to any country of the world) they tend to fly (53.8% of all outbound trips). Significant differences, though, are observed between countries. For example, the highest number of bus users was found in Romania, where bus travel accounts for 23.5% of land trips. Islands also present specific patterns: for instance, waterways were the main means of transport for 36.1% of trips made by residents of Malta and air travel accounted for almost 64% of trips.

The main trends in EU residents' trips for the 2005–2014 period show the effects of the financial and economic crisis started to become evident in 2009, with a drop in total overnight stays on trips for personal purposes. However, this was counterbalanced by the number of trips continuing to increase during that year, partly also due to the growing appreciation for short breaks. This translates in Europeans going on more but shorter trips, with an increase in the environmental impacts of tourism-related transport.

If length of stay is also considered, out of 223 million outbound tourism trips made by EU citizens in 2014 of at least one overnight stay, 46% of those trips were by air transport as the main means of transport, followed by (rented or private) motor vehicles (36%). Bus (6%), train (6%) and transport using waterways (5%) were less common.

When considering the countries visited, air transport accounted for more than 80% of all intra-EU inbound flows into Malta (87%), Cyprus (97%), Greece (88%) and Spain (84%), arguably for geographical reasons. In Austria, Croatia, Denmark, Slovakia and Slovenia, the share of inbound trips made by motor vehicle was 60% or more. Only in one country, Estonia, was waterway the dominant means of transport for inbound visitors (most likely because of the popular ferry connection between Tallinn and the Finnish capital Helsinki, its main generating market). Railway transport was relatively common for visitors to Belgium (25% of intra-EU inbound trips) and France (16%), while buses were relatively common for Latvia and Lithuania (both 17%), Poland (16%), Czech Republic (15%) and Croatia (14%).

Trips made by EU-28 residents by main means of transport, 2014



Source: Eurostat.

Trips made by EU residents by main means of transport, 2014

Country of residence of the tourist	Total (Thousand)	Share by type of transport (% of total transport)			Share by type of land transport (% of total transport)			
		Air	Waterway	Land	Railway	Bus, coach	Motor vehicle (private or hired)	Other (e.g. bicycle)
EU-28(*)	1 182 828	15.6	1.8	82.7	11.6	5.6	64.4	1.1
Belgium	13 031	30.4	0.7	68.9	6.4	4.3	57.4	0.8
Bulgaria	3 774	4.4	:u	95.6	3.5	20.6	71.5	:u
Czech Republic	32 693	4.7	:u	95.3	6.4	9.1	79.1	0.7
Denmark	32 318	15.3	1.6	83.2	11.2	4.6	65.1	2.3
Germany	236 910	16.6	1.2	82.1	14.4	5.0	61.0	1.7
Estonia	3 998	13.8	10.7	75.5	3.8	18.4	53.2	:u
Ireland	11 910	42.8	2.6	54.6	4.2	3.5	46.4	0.4(u)
Greece	6 334	12.1	18.2	69.7	1.3	10.8	57.5	:u
Spain	127 933	10.0	1.1	88.9	5.1	5.8	77.7	0.3
France	226 261	9.0	0.5	90.5	15.4	1.8	72.7	0.6
Croatia	8 173	7.3	1.7	91.0	3.4	20.7	65.9	1.1(u)
Italy	54 993	18.1	2.8	79.1	11.9	4.8	57.7	4.7
Cyprus	2 495	45.9	2.1	52.0	0.0	2.1	49.9	:u
Latvia	4 620	13.3	2.5	84.2	3.9	16.7	62.7	0.9(u)
Lithuania	4 438	18.5	1.0	80.4	3.4	11.1	65.0	0.9
Luxembourg	1 845	37.1	0.5	62.4	9.1	3.6	48.0	1.6
Hungary	17 317	6.8	:u	93.2	8.8	11.8	72.1	0.6
Malta	510	63.9	36.1	0.0	0.0	0.0	0.0	0.0
Netherlands	42 280	18.0	0.9	81.1	9.1	2.8	66.4	2.7
Austria	22 470	19.2	0.2(u)	80.6	11.3	6.2	61.6	1.5
Poland	48 630	9.3	0.4	90.3	6.8	16.7	66.3	0.5
Portugal	14 656	8.6	0.5	90.9	4.0	6.1	79.8	1.1
Romania	17 387	2.3	1.1	96.6	13.0	23.5	59.5	0.6
Slovenia	4 531	6.8	:u	92.8	2.1	5.7	84.9	:u
Slovakia	7 338	7.9	:u	92.0	9.5	15.2	66.8	:u
Finland	37 605	14.6	9.5	75.9	9.7	4.9	61.3	:u
Sweden	38 965	19.2	3.5	77.3	18.5	5.8	51.6	1.4
United Kingdom(†)	159 414	29.6	3.1	67.3	13.0	3.8	50.0	0.4
Switzerland	19 043	27.5	0.7(u)	71.8	16.5	3.0	52.1	:u

Note: Due to rounding, deviations can occur between total and subtotals.

(*) EU-28 aggregate calculated using 2013 data for the United Kingdom.

(†) 2013 data.

":u" - data not available or extremely unreliable.

"u" - low reliability.

Source: Eurostat.

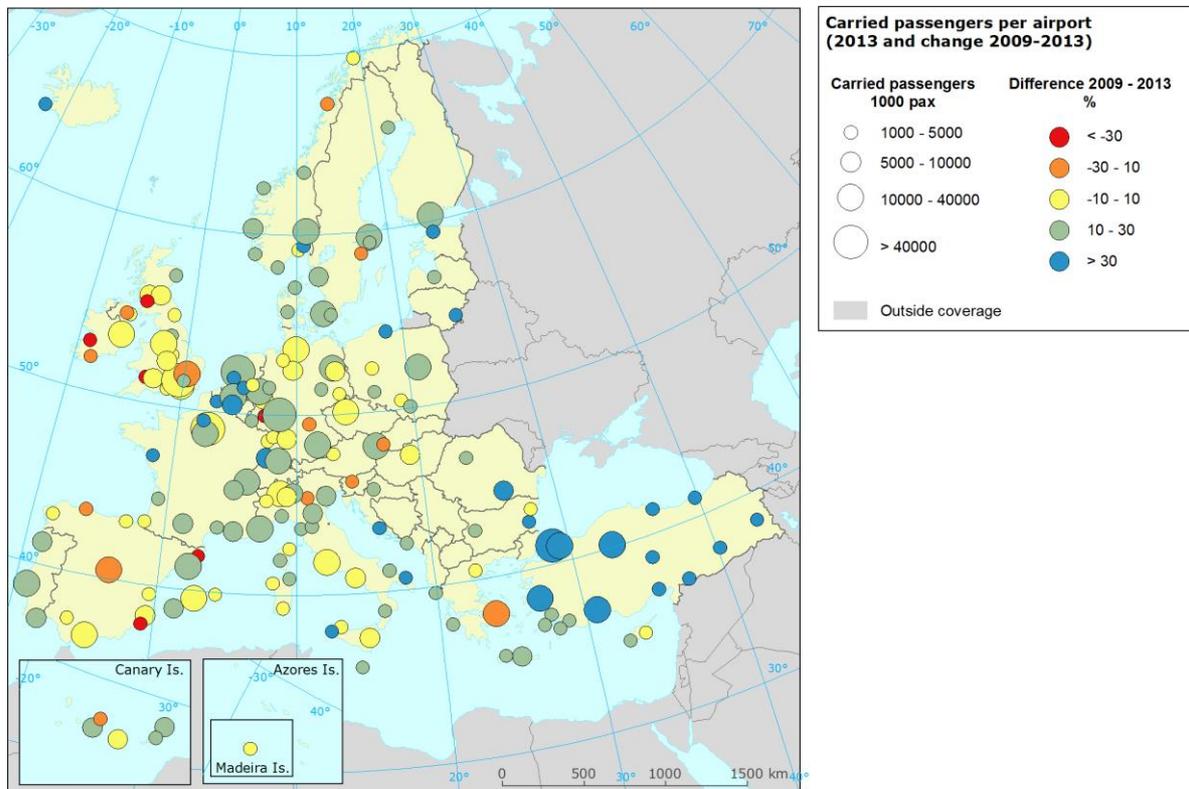
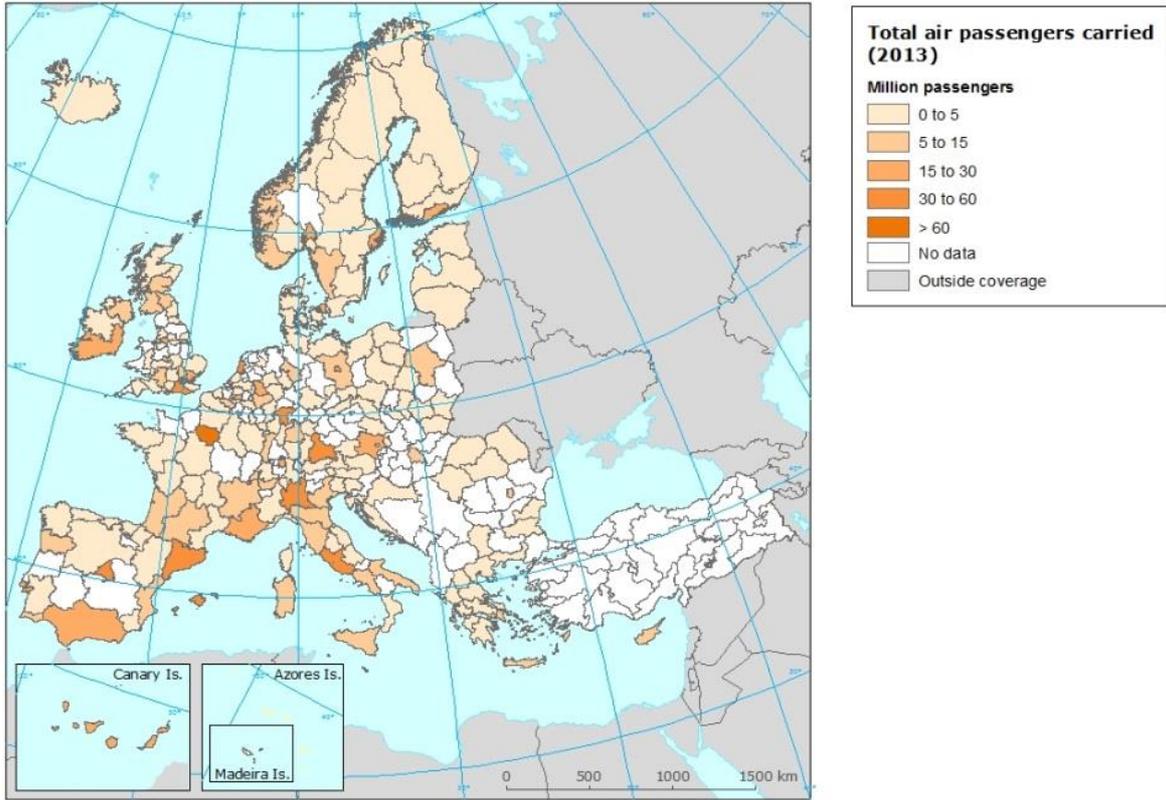
Specific policy question

What are the changes in the number of passengers per airport?

Specific assessment

When looking at the overall distribution of air passengers carried by NUTS-2 regions, those with major airports stand out, e.g. Paris, London, Frankfurt, Munich, Barcelona, Madrid and Rome. Catalonia, Andalusia, the Balearic and Canary Islands and the French region of Provence-Alpes-Côte d'Azur have an elevated number of air passengers carried in comparison to other neighbouring regions.

The number of passengers per airport provides a more detailed vision on the local/regional trends in air traffic. While there is a general increase of the number of passengers carried by airplane in Europe, this increase is taking place mostly in airports with more than 10 million passengers, with the exception of Madrid and Athens, for different operational and economic reasons. Most Turkish airports stand out with an increase over 30% between 2009 and 2013. Small, regional airports, in turn, have been losing passengers despite the steady growth in the number of low-cost airlines that use them.



The country and airport pairs nicely show the main passenger flows between countries and airports respectively. The passenger flows between country clearly highlight the intra-EU touristic route between United Kingdom and Spain, and Germany and Spain, representing approximately 10% and 7% of the total intra-EU passenger movement respectively. Generally, the passenger flow between United Kingdom and the major European countries can be highlighted in this top-ten of country pairs. The most frequently used connections between airports correspond to airport pairs which are mainly characterised by business trips. National connections in Germany, Spain and France prevail as well as those between well-connected business centres like Dublin-London and Frankfurt-London.

Rank	Country pairs	2013		2014	
		Passengers carried (in 1000)	Share in total intra-EU (%)	Passengers carried (in 1000)	Share in total intra-EU (%)
1	United Kingdom Spain	32 879	9.4	34 421	9.3
2	Spain Germany	23 042	6.6	24 491	6.6
3	United Kingdom Germany	12 213	3.5	12 511	3.4
4	Italy Germany	11 335	3.3	11 723	3.2
5	United Kingdom Italy	11 042	3.2	11 929	3.2
6	United Kingdom France	11 029	3.2	11 442	3.1
7	France Spain	10 288	3.0	11 062	3.0
8	Italy France	9 980	2.9	10 415	2.8
9	United Kingdom Ireland	9 704	2.8	10 450	2.8
10	Italy Spain	9 648	2.8	10 460	2.8

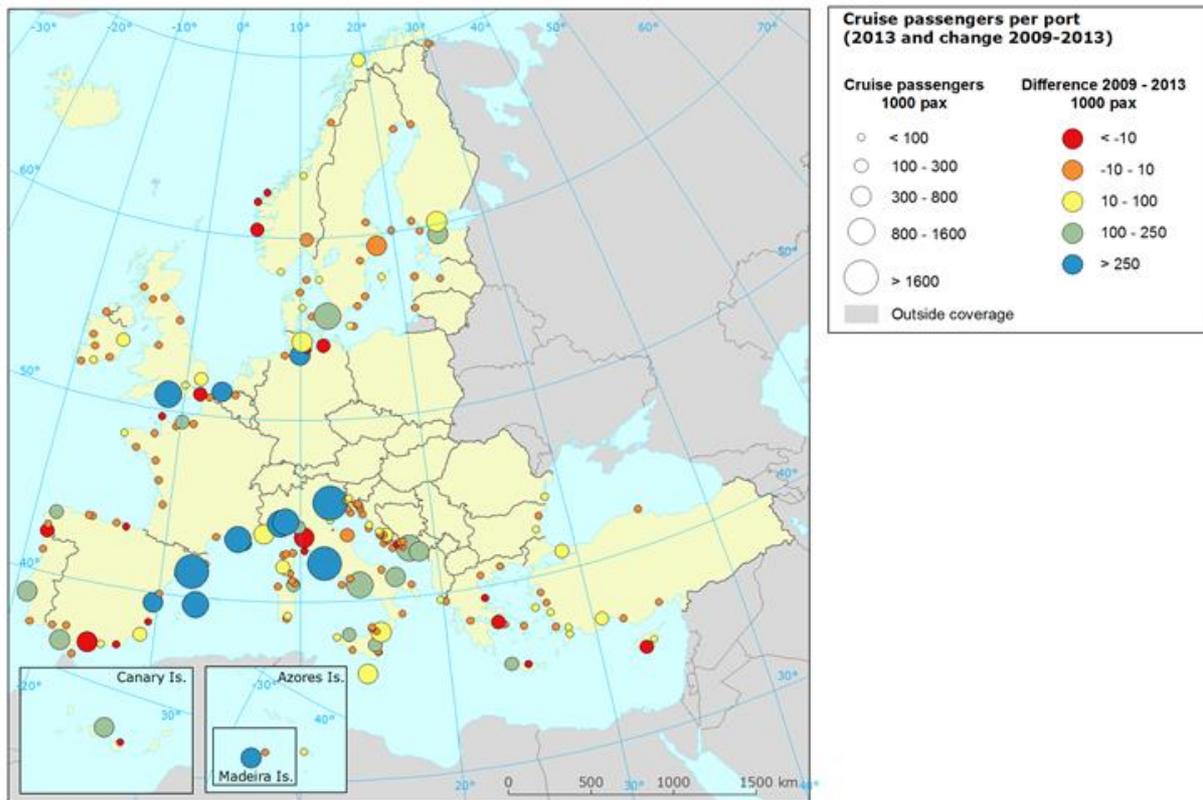
Source: Eurostat.

Specific policy question

What are the changes in cruise passenger per port?

Specific assessment

There is an uneven distribution of the more than 27 million passenger visits on one of the 313 ports that receive cruise ships. Nine out of the ten with most cruise passengers (> 900,000 pax) are located in the Mediterranean Sea. Even under the top 20, there are only 4 Northern European ports (Southampton, Copenhagen, Hamburg and Tallin). This concentration of high numbers of passengers (and calls) within relatively short distance and with the semi-closed situation of the Mediterranean Sea provides a map of potentially very high pressure on the marine and coastal ecosystems as well as cities. Over the 2009-2013 period, it is clear that Mediterranean ports had the highest increase in numbers of passengers visiting the port. It can also be observed that a significant concentration of passengers moved away from smaller ports towards the ports that already had the highest numbers of passenger visits, with a clear focus on the Western Mediterranean region, and some exceptions in the Adriatic Sea.



Specifications

Indicator definition

- Share by type of transport used by European residents when they travel inside their country (domestic trips) and outside their country (outbound trips). Annual data at country level.
- Number of passenger per airport.
- Trend in number of passengers per airport.
- Number of cruise passenger per port
- Trend in number of cruise passengers

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Rationale

In the case of air transport, it is recognised that Europe's aviation sector brings significant economic and social benefits. However, its activities also contribute to climate change, noise and local air quality impacts, and consequently affect the health and quality of life of European citizens, particularly taking into account the steady increase in air traffic over the last few years in Europe.

In the case of cruises, since the cruise industry adds significant economic value to EU Member States, cruise tourism is an important sector for coastal regions and islands to attract. Nevertheless, it also leads to unwanted externalities, as cruise ships create air emissions, waste and noise in EU ports and seas. The Communication 'An integrated Maritime Policy for the European Union' (COM (2007) 575 final) stresses the importance of reconciling economic development, environmental sustainability and quality of life within coastal regions and islands. Due to the lack of accessible data on cruise ship routes, the number of

passengers visiting or embarking/disembarking is a reasonable approximation of the pressure cruise tourism is exerting to the ports and the surrounding areas in terms of air pollution, waste and noise.

Policy context

Environmental Noise Directive (Directive 2002/49/EC).

Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise.

European maritime policy to reconcile economic growth and environmental sustainability (Blue Growth).

International efforts to reduce air emissions and improve waste treatment for cruise ships.

Methodology for indicator calculation

Data is provided by Eurostat's tourism statistics (tour_dem_tttr).

Annual passenger data per airport were downloaded from Eurostat database (avia_paoa, total carried passengers) and linked to the airport layer acquired from the Geographical information system of the Commission (GISCO). Missing values were gap filled with avia_tf_apal.

In the case of cruises, annual passenger data per port were downloaded from Eurostat database and linked to port layer acquired from the Geographical information system of the Commission (GISCO).

Missing values were taken from MedCruise yearly statistics.

Data specifications

Data comes from Eurostat.

MedCruise Statistical Yearbook 2013.

Data sets uncertainties

TOUR002a does not include data from non-European residents travelling to and within Europe.

Ownership and contacts

ETC/ULS.

European Topic Centre on Urban Land and Soil
Systems (ETC/ULS)
Departament de Geografia
Universitat Autònoma de Barcelona (UAB)
08193 – Bellaterra
Spain

Tel.: +34 935813520
Web: uls.eionet.europa.eu

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