

# Transport and Tourism in Greece

This overview of the transport and tourism sectors in Greece was prepared to provide information for the mission of the Transport and Tourism Committee to the country between 7 and 9 May 2018.

## 1. INTRODUCTION

Greece is located in the south-eastern part of the European Union (EU) and borders by land Turkey, Bulgaria, Former Yugoslav Republic of Macedonia (FYROM) and Albania. The country is surrounded by three seas: the Ionian Sea from the west, the Aegean Sea from the east and the Mediterranean Sea from the south. In terms of size, Greece is ranked the 10<sup>th</sup> country in the EU, while its inhabitants (almost 10.9 million in 2017) constitute 2.14% of the EU's population<sup>1</sup>. The country is composed of three distinctive geographical areas which include: a peninsular mainland, the Peloponnese Peninsula and around 6,000 inlands. Almost 80% of the country's area is covered by mountains and hills, which makes Greece one of the most mountainous countries in the EU<sup>2</sup>. The country joined the EU on 1 January 1981 and adopted the euro in 2002.

The Greek economy grew on average about 4% per year between 2003 and 2007, but it went into recession in 2009 as a result of the world financial crisis, tightening credit conditions, and of the country's failure to address a growing budget deficit. By 2013, the economy had contracted 26%, compared to the pre-crisis level of 2007. In 2014, the Greek economy began to show the first signs of recovery and generated 0.7% GDP growth. In 2017, Greece saw further improvements in GDP and unemployment. However, unfinished economic reforms and a massive non-performing loan problem are among the major factors holding the economy back<sup>3</sup> (please see Table 1 below for more details on Greek economic indicators).



Source: [European Energy Agency](#)

**Table 1: Macro-economic forecasts for Greece**

	1998 -2013	2014	2015	2016	2017	2018	2019
<b>GDP growth (% , year over year)</b>	0.5	0.7	-0.3	-0.2	1.6	2.5	2.5
<b>Unemployment (% of total labour force)</b>	12.7	26.5	24.9	23.6	21.8	20.4	18.7
<b>Private consumption (% , year over year)</b>	0.7	0.6	-0.5	0.0	0.9	1.2	1.2

Source: European Commission's data

<sup>1</sup> European Commission - Facts and Figures about the EU - [Geographical Size and Population](#).

<sup>2</sup> Official website of Greek National Tourism Organisation: [www.visitgreece.gr](http://www.visitgreece.gr) - [Greece's Geography](#), accessed Mar 2018.

<sup>3</sup> European Commission - DG ECFIN (Economic and Financial Affairs) - [Country Page for Greece](#) - autumn 2017 and Central Intelligence Agency - World Factbook - Country Profiles - Greece - [Economy](#).



The most important sectors of Greece's economy in 2016 were wholesale and retail trade, transport, accommodation and food services (24.5%), public administration, defense, education, human health and social work activities (21.0%) and real estate activities (17.7%)<sup>4</sup>. In the same year, 56% of Greece's exports was intra-EU with major trading partners including Italy 11%, Germany 8% and Cyprus 6%, while outside the EU - 5% of trade went to Turkey and 4% to the United States. In terms of imports, 55% came from the EU Member States (Germany 11%, Italy 9% and the Netherlands 6%), while outside the EU - 7% came from China and 6% from Russia.

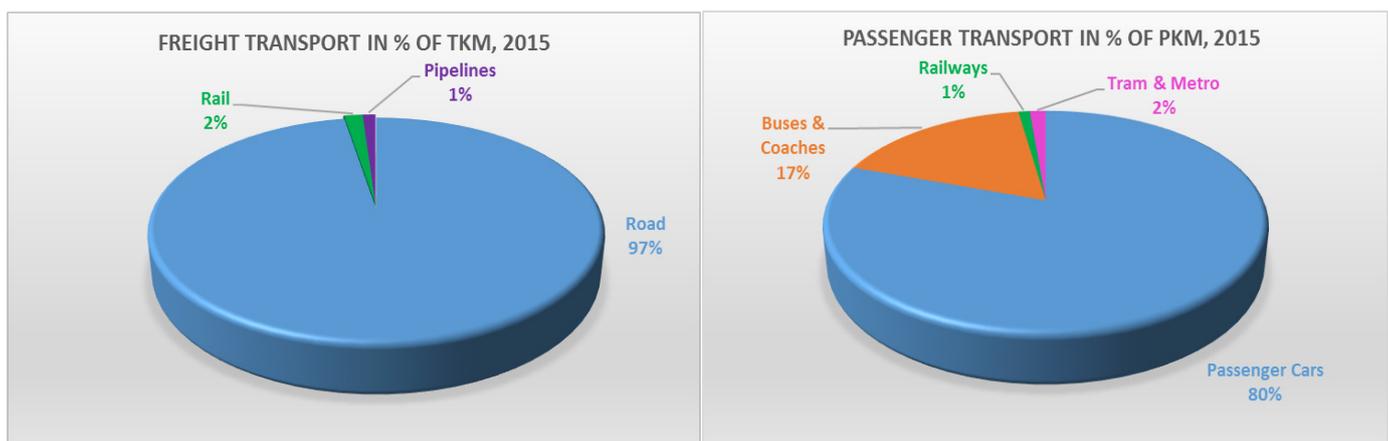
In 2016, Greek contribution to the EU budget amounted to EUR 1.5 billion, which represented 0.86% of the country's Gross National Income<sup>5</sup> (GNI). At the same time, Greece received EUR 5.85 billion from the EU's budget, equivalent of 3.32% of the country's GNI<sup>6</sup>.

## 2. GENERAL INFORMATION ON TRANSPORT

As presented in Figure 1 below, transport by road remained the predominant inland mode for both passengers and freight in Greece in 2015 and its market share of 97% in both segments was above the EU averages of 90.7% and 71.7% respectively. The dominance of the road transport is partly due to the characteristics of the country's terrain and inadequate railway infrastructure.

In 2015, buses and coaches in Greece transported 17% of passengers travelling by land, almost double the EU average of 9%. However, the market share of Greece's rail transport in both segments continued to be on a low level compared to the EU average of 17.4% for freight and 7.6% for passenger transport.

**Figure 1: Modal split of passenger and freight land transport in Greece**



Source: author's own elaboration based on the European Commission's data<sup>7</sup>

With a share close to 20% in 2015, Greece is the 1<sup>st</sup> country in the EU in terms of employment share in high growth transport enterprises (against the EU average of 12%). This means that Greek transport companies are growing and hiring<sup>8</sup>. However, the **share of women** working in transport in Greece is one of the lowest in the EU (15.5% compared to the EU average of 22%)<sup>9</sup>. All of **EU transport related directives have been transposed** into Greece's national law.

### 2.1 Energy efficiency of transport and low emission mobility

The transport sector is responsible for the largest share of total final consumption (TFC) in Greece, consuming 5.8 Mtoe in 2015 (or 35% of the country's TFC). Greece's **transport energy consumption** peaked in 2009 at 8.4 Mtoe, but fell by one-third in the three years to 2012, and has been stable since then. Road transport accounted for 88% of the country's total transport energy consumption in 2014. The rest consisted of sea transport (8%) and small shares of domestic aviation and rail transport. Passenger vehicles accounted for over half of the energy

<sup>4</sup> Eurostat - Table: [Gross value added at basic prices, 2006 and 2016](#), Jul 2017.

<sup>5</sup> OECD.Stat (Organisation for Economic Co-operation and Development) - [Gross National Income](#) is equal to GDP less taxes (less subsidies) on production and imports, compensation of employees and property income payable to the rest of the world plus the corresponding items receivable from the rest of the world.

<sup>6</sup> European Commission - EU Member Countries in Brief - [Greece](#).

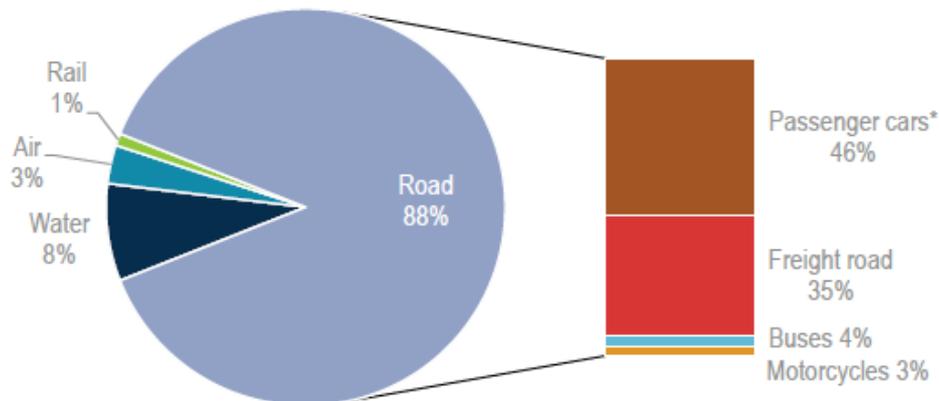
<sup>7</sup> European Commission - DG MOVE (Mobility and Transport) - EU Transport in Figures - [Statistical Pocketbook 2017](#), p.37 and p.49.

<sup>8</sup> European Commission - DG MOVE (Mobility and Transport) - Greece Country Scoreboard - [Internal Market](#).

<sup>9</sup> European Commission - DG MOVE (Mobility and Transport) - Greece Country Scoreboard - [People](#).

consumption within road transport, with freight transport responsible for most of the remaining energy use (please see Figure 2 below for more details)<sup>10</sup>.

**Figure 2: Energy consumption by mode of transport in Greece, 2014**



Source: [European Energy Agency](#)

In 2015, Greece was among the only three Member States (with Lithuania and Latvia) that consumed less energy in the transport sector, compared to 1990<sup>11</sup>. In fact, between 2000 and 2014, the **energy intensity** fell by 41% in passenger transport and by 43% in freight transport in Greece. This was attributed by a large extent to the economic and financial crisis, which resulted in a lower transport activity, but also to measures implemented by the Greek Government to improve the fuel efficiency of passenger vehicles, as well as to the introduction of energy efficiency obligation programme<sup>12</sup>. Since 2005, **transport fuel taxes** have grown by 0.7 percentage points, contributing 1.8% to the Greek GDP in 2015<sup>13</sup>.

In Greece, the **share of renewable energy in transport** has been rising gradually since 2011, however the advancements in this area have been quite slow. With 1.4%, Greece was ranked 3<sup>rd</sup> last among the Member States for the share of renewable energy in transport in 2016<sup>14</sup> and it is unclear if the country will be able to reach the national target of 10% by 2020 as imposed on all Member States by the Renewable Energy Directive<sup>15</sup>. Also, both the number of charging points for electric vehicles and the market share of electric passenger vehicles in Greece are among the lowest in the EU<sup>16</sup>.

## 2.2. Transport Infrastructure Quality

As for the **quality of transport infrastructure**, the Greek ports and especially the rail infrastructure are rated relatively low, however the quality of roads and air transports are around the EU average<sup>17</sup>. This assessment is also reflected in the analysis of the 2016 World Bank Logistics Performance Index (LPI)<sup>18</sup>, which shows that Greece is lagging behind the leading Member States in terms of quality of transport infrastructure<sup>19</sup>. Among the components of the LPI is quality of trade and transport related infrastructure (e.g. ports, railways, roads, information technology), as well as efficiency of the clearances process by border controls and the logistics quality and competence, which were the lowest rated components of the Greece's LPI.

<sup>10</sup> European Energy Agency (IEA) - Energy Policies of IEA countries - [Greece 2017 Review](#), p.117. (\*) Passenger cars category includes cars, sport utility vehicles, and personal trucks.

<sup>11</sup> European Environment Agency - [Overall Trends in Transport Energy Consumption](#), Dec 2017.

<sup>12</sup> European Energy Agency (IEA) - Energy Policies of IEA countries - [Greece 2017 Review](#), p.118-119.

<sup>13</sup> European Commission - DG MOVE (Mobility and Transport) - EU Transport in Figures - [Statistical Pocketbook 2017](#), p.30.

<sup>14</sup> Eurostat - Table: [Share of Transport Fuel from Renewable Energy Sources](#), Mar 2018.

<sup>15</sup> Directive 2009/28/EC of the European Parliament and of the Council of 23 Apr 2009 on [the promotion of the use of energy from renewable sources](#) and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC - Article 3, paragraph 4: "Each Member State shall ensure that the share of energy from renewable sources in all forms of transport in 2020 is at least 10% of the final consumption of energy in transport in that Member State." (p. L140/28).

<sup>16</sup> European Commission - DG MOVE (Mobility and Transport) - Greece Country Scoreboard - [Energy Union and Innovations](#).

<sup>17</sup> European Commission - DG MOVE (Mobility and Transport) - Greece Country Scoreboard - [Investments and Infrastructure](#).

<sup>18</sup> The Logistics Performance Index (LPI) is the weighted average of the scores of a country on six key dimensions: efficiency of the clearance process, quality of trade and transport related infrastructure, ease of arranging competitively priced shipments, competence and quality of logistics services, ability to track and trace consignments, and timeliness of shipments in reaching destination within the scheduled or expected delivery time. The LPI consists of both qualitative and quantitative measures.

<sup>19</sup> The World Bank - [Logistics Performance Index 2016](#).

In terms of the **timeliness of shipments**, Greece was ranked 19<sup>th</sup> out of 28 Member States in 2016, with the value of 3.85 being below the EU average<sup>20</sup>. Nevertheless, **consumer satisfaction** with transport in Greece is close to the EU average for all modes of transport, with a positive tendency throughout<sup>21</sup>.

Recently, major steps have been taken in the area of **logistics**, a core sector for the country's growth, as Greece adopted secondary legislation required to implement the logistics law. This legislation is aimed at the simplification of the licensing procedure and the stabilisation of the legal framework for the sector<sup>22</sup>.

## 2.3. The Trans-European Transport Network (TEN-T)

**Map 1: The OEM Corridor - focus on Greece**



**RHINE-DANUBE**      **ORIENT/EAST-MED**  
**Source:** European Commission

One multimodal TEN-T Core Network Corridor (CNC) crosses Greece<sup>23</sup> (please see Map 1 on the left).

The **Orient/East-Mediterranean (OEM) Corridor** is a long north-west to south-east corridor which connects the maritime ports of the North, Baltic, Black and Mediterranean Seas in central and southeastern Europe. It involves nine Member States (Germany, the Czech Republic, Slovakia, Austria, Hungary, Romania, Bulgaria and Greece with Cyprus connected remotely with the Greek ports of Thessaloniki, Igoumenitsa, Patra and Piraeus via a "Motorway of the Sea"). In Greece, a road section of the OEM Corridor (from the Bulgarian/Greek border to Thessaloniki) overlaps with the international road route: [Via Carpatia](#)<sup>24</sup>, which offers the shortest seamless connection between northern and southern Europe, with extensions to Ukraine and Turkey.

Major missing links in the OEM Corridor include multimodal connections between Hungary, Bulgaria, Romania and Greece, which are yet to be constructed or substantially upgraded. Cross-border traffic management systems on rail and inland waterways are still to be implemented on many sections.

To date, major success stories of the project implementation in the OEM Corridor include the completion of the high-speed link between the Greek ports of Athens and Thessaloniki early in 2018, giving fast access between the two ports in the north and south of the country<sup>25</sup>.

Greece is doing well in the completion of its **TEN-T Core Network** with 76% of the core road network and 80% of the conventional rail network completed. The high-speed rail network stands at 55% completion<sup>26</sup>. Within 2007-2013 financial perspective, Greece spent almost EUR 19.3 billion on TEN-T projects<sup>27</sup>.

The **Connecting Europe Facility (CEF)** has selected 24 transport projects involving Greece in the CEF calls 2014-2016, of which ten projects are actions exclusively in Greece. Nine of these ten projects foresee actions on railway lines and three projects concern bottlenecks and missing links of the OEM Corridor. The estimated cost of all exclusively Greek projects selected under CEF Transport calls 2014-2016 is around EUR 842 million, with a

<sup>20</sup> European Commission - DG MOVE (Mobility and Transport) - Greece Country Scoreboard - [Investments and Infrastructure](#). The timeliness of shipment in reaching destination within the scheduled or expected delivery time is rated from 1 - "hardly ever within schedule" to 5 - "nearly always on schedule".

<sup>21</sup> European Commission - DG MOVE (Mobility and Transport) - Greece Country Scoreboard - [People](#).

<sup>22</sup> European Commission - DG ECFIN (Economic and Financial Affairs) - [The ESM Stability Support Programme - Greece](#), Nov 2017, p.129.

<sup>23</sup> European Commission - DG MOVE (Mobility and Transport) - TEN-T [Country Fiche for Greece](#).

<sup>24</sup> United Nations - Economic and Social Council - [Report of the 'Group of Experts on Euro-Asian Transport Links' on its 14 session](#), Feb 2017, p.6.

<sup>25</sup> European Commission - DG MOVE (Mobility and Transport) - [Delivering TEN-T - Facts and Figures](#), Sep 2017, p.20 and Railway Pro Magazine - [Greece Opened a Rail Section on Athens - Thessaloniki Corridor](#), Feb 2018.

<sup>26</sup> European Commission - DG MOVE (Mobility and Transport) - Greece Country Scoreboard - [Investments and Infrastructure](#).

<sup>27</sup> European Commission - DG MOVE (Mobility and Transport) - [Greece Country Factsheet](#).

maximum EU contribution on average of 69%. The remaining 14 selected projects are joint projects, where Greece is one of two or several Member States involved.

**Table 2: CEF transport projects in Greece approved in calls between 2014 and 2016**

No.	Name of the project	Call year	Total cost of the project (EUR)	Max. EU contribution (EUR)	Max. EU contribution (%)
1.	Upgrade of the Athens (RS)–Tris Gefires railway section	2016	56,278,931	40,363,249	72
2.	TAF/TAP – TSI implementation in Greece: Design and development of scalable TAF/TAP – TSI systems	2016	3,526,120	2,997,202	85
3.	Upgrade of the Polikastro-Idomeni railway section	2016	9,171,321	7,093,100	77
4.	Study on a pilot CNG filling station network across the <u>Greek part of the OEM road corridor</u>	2016	9,088,300	4,544,150	50
5.	Construction of railway infrastructure in section Psathopirgos - Patras(Bozaitika), of axis Athens-Patras ( <u>Part of OEM corr.</u> )	2015	112,003,971	78,537,184	70
6.	Completion of the new, double, high speed, electrified railway line Tithorea-Lianonkladi-Domokos, 106 km long	2014	385,829,525	260,357,764	67
7.	Construction of railway infrastructure in the Rododafni-Psathopirgos section of the new railway line Athens-Patras	2014	261,998,324	186,988,204	71
8.	New single railway line connecting Thessaloniki-Amphipolis-New Karvali (Phase A of studies)	2014	3,800,000	1,900,000	50
9.	Studies for the infrastructure upgrading on sections of Thessaloniki-Promachonas Railway Line ( <u>Part of OEM corr.</u> )	2014	1,000,000	500,000	50
10.	Studies for the new railway line Toxotes Xanthi-Nea Karvali and connection with Kavala freight port	2014	200,000	100,000	50
<b>TOTAL</b>		<b>2014-2016</b>	<b>841,996,492</b>	<b>583,380,853</b>	<b>69</b>

Source: author's own compilation based on the INEA's data<sup>28</sup>

## 2.4. Greece's transport development plans and programmes

In May 2017, Greece has started preparing a comprehensive **National Transport Plan (NTP)** with a time horizon to 2037. Its aim is to identify future necessary policies and investments in the country's transport sector which will constitute the basis for sustainable transport infrastructure and service development in Greece in the medium- and long-term. The NTP is expected to be completed in the 1<sup>st</sup> half of 2019<sup>29</sup>.

The objectives of the Greece's **Operational Programme (OP) Transport, Infrastructure, Environment and Sustainable Development 2014-2020** in the field of transport include:

<sup>28</sup> INEA (Innovation and Networks Executive Agency) - Connecting Europe Facility - Transport - Projects by Country - [Greece](#), accessed on 14 Mar 2018.

<sup>29</sup> Official website of National Transport Plan for Greece - [Project](#).

- the promotion of **completing part of the infrastructures of the TEN-T core network** (road and rail) and **improving the TEN-T comprehensive network** (with emphasis on road and rail, but also with focused interventions on ports and airports);
- the promotion of **combined transport** and the **modernisation of the transport system**;
- the **improvement of road safety**; and
- the development of **sustainable and ecological urban transport** (track-based modes).

The total OP budget for Greece amounts to EUR 5.2 billion and the maximum EU contribution is expected to reach EUR 4.3 billion<sup>30</sup>. Between 2014 and 2020, Greece intends to spend nearly EUR 1.3 billion of the Cohesion Policy funds (amounting to a total of EUR 3.18 billion for the country) on transport and environmental projects, which will include primarily:

- the **urban public transport** systems in Athens and the region of Attica - estimated cost of EUR 377 million;
- the extension of the **metro** in Thessaloniki and in the city of Kalamaria, in central Macedonia - estimated cost of EUR 730 million;
- the **sustainable mobility** in the Peloponnese Peninsula - estimated cost of EUR 50 million, which will be spent for the modernisation of section of the Athens-Patras railway line (part of the OEM Corridor); and
- the improvement of **transport connectivity** in the north of Greece - estimated cost of EUR 92 million.

In 2016, Greece had 69 infrastructure projects in the pipeline for completion by 2022 totalling EUR 21.4 billion, out of which 46% accounted for rail and motorway projects<sup>31</sup>.

### 3. ROAD TRANSPORT

As shown in Figure 1 in section 2, land **freight transport** in Greece is almost exclusively road haulage (97% of tkm in 2015). In addition, the country has also a high number of trucks per capita (120 per 1,000 residents) which, even taking into account Greece's specifics, is considered excessive and reveals the surplus of 25% in the current fleet. In 2015, 76% of the haulage by vehicles registered in Greece was international haulage, whereas the remaining 24% was international haulage, moving a total of 19.8 billion tkm combined. This number represents a 2.8% increase on 2014 and a decrease of 10 billion tkm as compared to 2010<sup>32</sup>.

The Greek **truck fleet** consists of vehicles that are mainly old, relatively small and purchased mainly for own-account activities. Just 21% of freight transport (by tonnes) in Greece is handled by specialised logistic companies, which is the lowest score among the Member States and much below the EU average of 70%. This structure has its ramifications for the effectiveness of the logistic operations of the haulage companies in Greece, which are characterised by a high rate of empty runs (one third of a distance travelled compared to 22% in the EU). Moreover, large trucks (over 25.5 tonnes) account for only 10% of the fleet in Greece and the share of old trucks grew to 30% in 2015 (from 18% in 2008)<sup>33</sup>.

Road **passenger transport sector** continues to be an important source of employment and revenue in Greece: it employed 68.7 thousand people in 2014 (i.e. almost 40% of all people working in the transport, warehousing and postal sector) and encompassed over 35 thousand enterprises. The level of **motorisation** in Greece more than doubled over the last 20 years, and the number of cars per 1,000 inhabitants reached 479 in 2015 (slightly below the EU average of 498 cars)<sup>34</sup>.

At the end of 2015, there were 1,589 km of **motorways** in Greece (672 km more than in 2005) out of a total road network length of 117,352 km in the country<sup>35</sup>. During the last decade, Greece's road network has seen substantial improvements. One of the largest infrastructure projects was the **Egnatia motorway**, a new east-west motorway

<sup>30</sup> Greek Ministry of Economy and Development - Operational Programmes 2014-2020 - [OP Transport, Infrastructure, Environment and Sustainable Development 2014-2020](#) and European Commission - DG REGIO (Regional and Urban Policy) - Summary of the Greece's [OP Transport, Infrastructure, Environment and Sustainable Development 2014-2020](#).

<sup>31</sup> PriceWaterhouseCoopers (PwC) - [Infrastructure in Greece](#), Mar 2017, pp.3-14 and p.30.

<sup>32</sup> European Commission - EU Transport in Figures - [Statistical Pocketbook 2017](#), p.41.

<sup>33</sup> National Bank of Greece - [Survey of Greek SMEs - Land logistics sector](#), Feb 2017, p. 9.

<sup>34</sup> European Commission - EU Transport in Figures - [Statistical Pocketbook 2017](#), pp.38-40, pp.24-25 and p.86.

<sup>35</sup> European Commission - EU Transport in Figures - [Statistical Pocketbook 2017](#), p.78. For the collection of data for these statistics, the European Commission defines a country's road network length as the sum of motorways, main or national roads, secondary or regional roads, and other roads (to be used with caution as some countries include roads without a hard surface in "other roads").

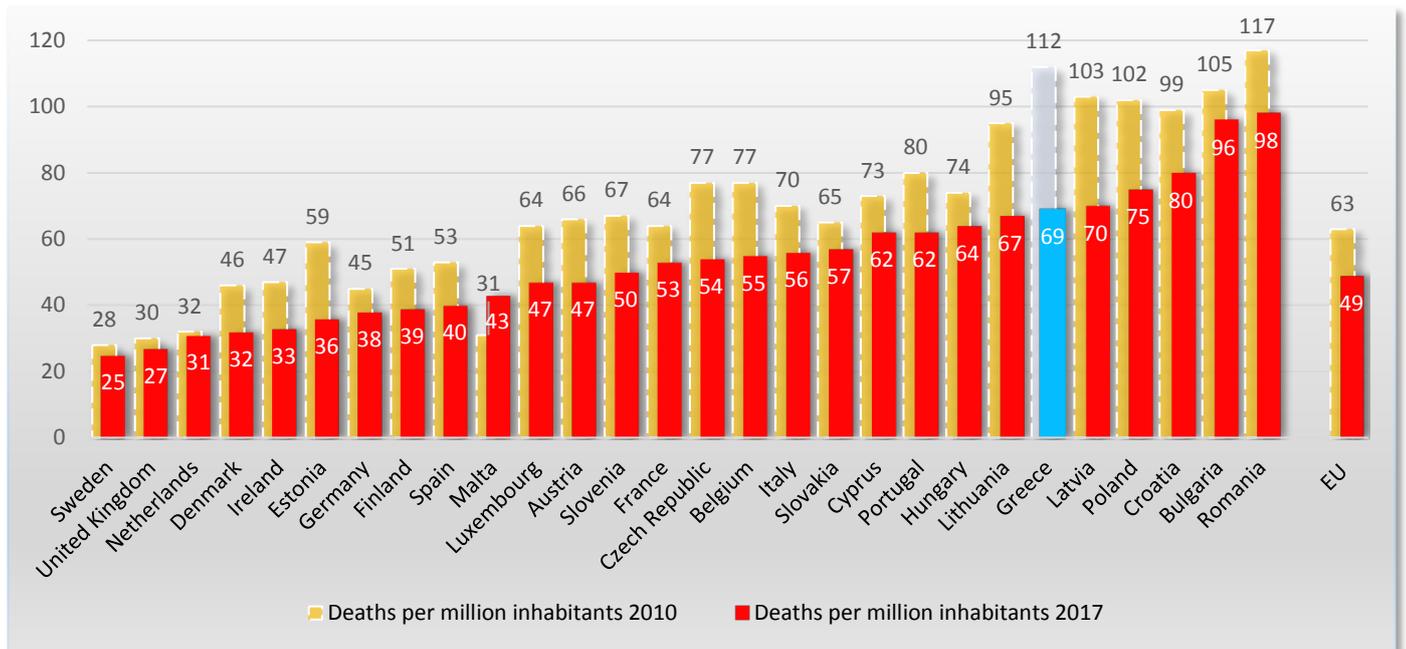
connecting the port of Igoumenitsa on the Ionian Sea with Alexandroupolis, near the Turkish border. The **PATHE motorway** system has also been substantially upgraded and connects the southern port of Patras with Athens and Thessaloniki, and then continues north to the border with FYROM. The third major motorway system in Greece is the **Ionian motorway** that connects Patras with Igoumenitsa. Within the greater Athens area, the new **Attica Motorway Ring Road** has substantially changed road transport in the capital region and is an important logistics route, connecting the airport with logistics centres, sea ports, and rail stations<sup>36</sup>.

Within 2014-2020 perspective, Greece’s Cohesion Funds are intended to support the upgrading of the **Western Internal Ring Road of Thessaloniki and collateral roads**, for a better and faster connection from the city to major road networks, including the Egnatia motorway, the Piraeus – Athens – Thessaloniki – Evzoni motorway and the OEM road corridor. In addition, the completion and upgrade of motorway N°29 (part of the OEM corridor), in western Macedonia is also expected<sup>37</sup>.

In 2010, the EU renewed its commitment to improving road safety by setting a **target of reducing road deaths** by 50% by 2020, compared to 2010 levels. Greece has made impressive improvements in its road safety performance reducing the number of road fatalities by 41% over 2010-2017 period, thus being the leader among the Member States. Nevertheless, the number of road fatalities in Greece at 69 per million inhabitants in 2017 was considerably higher than the EU average of 49 per million inhabitants (please see Figure 3 below).

Greece was among the most congested Member States in 2016, with the average amount of time spent by drivers in **road congestion** over 35 hours per year (the EU average of 30 hours/year). This result represented, however, almost a two-hour improvement on 2014<sup>38</sup>.

**Figure 3: Mortality (road deaths per million inhabitants) in 2017, with mortality in 2010 for comparison**



Source: author’s own elaboration based on the European Commission’s data<sup>39</sup>

## 4. RAILWAY TRANSPORT

In 2015, there were 2,239 km of **railway lines** in use in Greece, i.e. 245 km less than in 1995<sup>40</sup>. The Greek railway system comprises three different gauge standards: (i) a UIC gauge of 1,435 mm which is a prevailing standard in the mainland part of Greece; (ii) a metric gauge (1,000 mm) encompassing primarily the Peloponnese Peninsula;

<sup>36</sup> Enterprise Greece - Greece Today - [Infrastructure](#), accessed in Apr 2018. Enterprise Greece is the official agency of the Greek State, under the auspices of the Ministry of Economy and Development, to promote investment in Greece, exports from Greece, and make Greece more attractive as an international business partner.

<sup>37</sup> PriceWaterhouseCoopers (PwC) - [Infrastructure in Greece](#), Mar 2017, pp.3-14 and p.30.

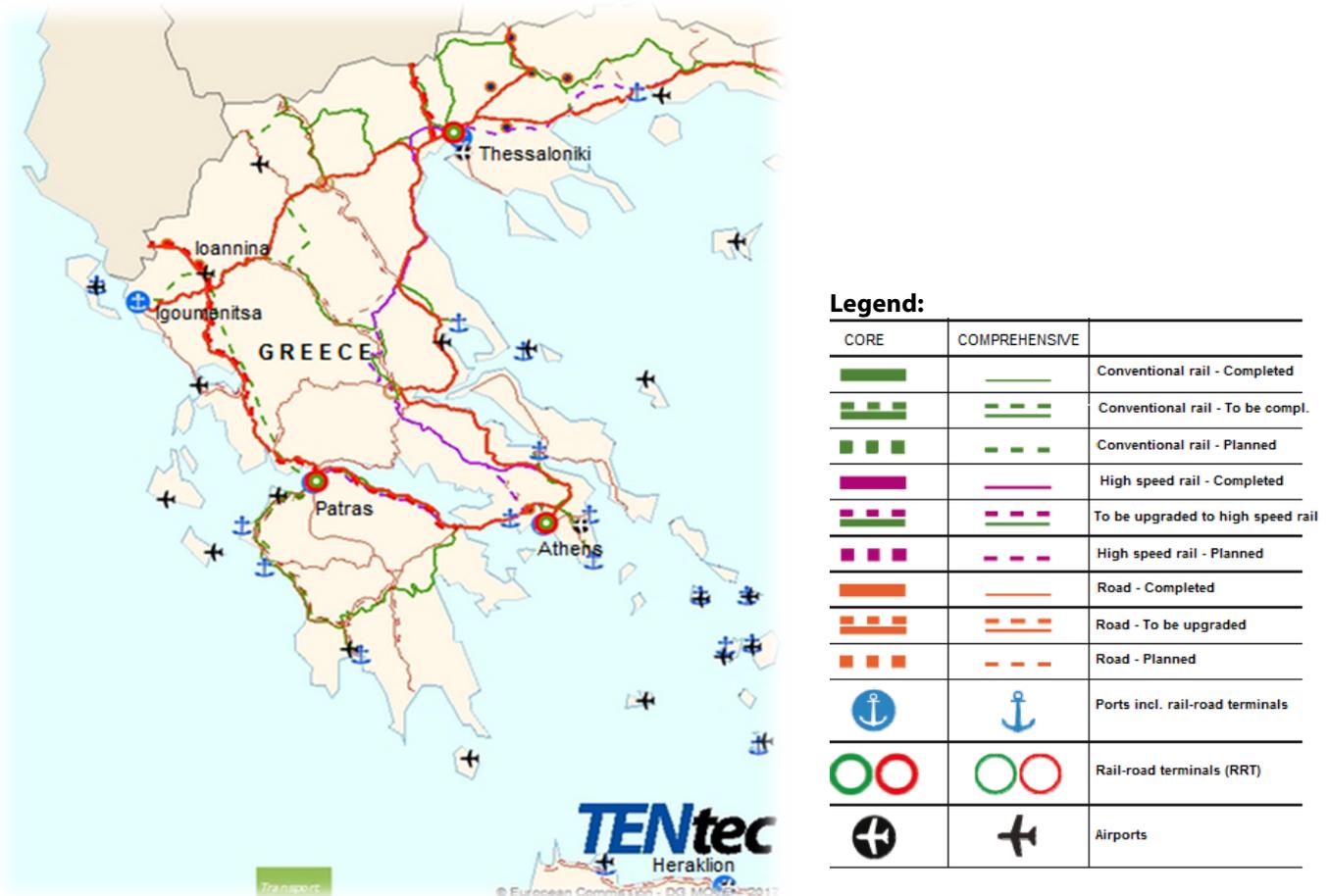
<sup>38</sup> European Commission - DG MOVE (Mobility and Transport) - Greece Country Scoreboard - [Energy Union and Innovation](#).

<sup>39</sup> European Commission - Press release - [The Preliminary 2017 Road Safety Statistics Released Today](#), 10 Apr 2018. The 2017 figures are based on provisional data. There might be minor changes in the final data for individual countries.

<sup>40</sup> European Commission - DG MOVE (Mobility and Transport) - EU Transport in Figures - [Statistical Pocketbook 2017](#), p.80.

and (iii) a 600 mm gauge of 15 km long Pelion line, one of the narrowest lines in the world, which follows the mountain trail from Ano Lechonia to Milies<sup>41</sup>. In 2015, only 23.5% of the country's railway lines were electrified, ranking Greece as 22<sup>nd</sup> in the EU<sup>42</sup>. The railway infrastructure in Greece (with the exception of Athens' rapid transit lines) is owned, maintained and operated by the **Hellenic Railways Organisation (OSE)** - a national railway company<sup>43</sup>.

**Map 2: Core and comprehensive TEN-T in Greece (roads, rail, ports, airports, rail-road terminals)**



Source: European Commission<sup>44</sup>

In 2015, **rail freight** moved 300 million tkm in Greece which represented a 5.5% drop compared to 2014 and a 50% decline in comparison with 2005. At the same time, **rail passenger transport** in Greece accounted for 1.9 billion pkm, which constituted nearly a 18% increase as compared to 2014, however it was some 30% less than in 2005<sup>45</sup>.

The **rail market** in Greece is a monopoly both in the passenger and the freight segments<sup>46</sup>. Since September 2017, the Italian national railway company, Ferrovie dello Stato Italiane, operates all passenger and freight trains on OSE lines after the acquisition of the TRAINOSE S.A. (a state-owned Greek company). The sale fetched Greece EUR 45 million and an additional EUR 500 million is expected to be invested in the railway by the Italian company<sup>47</sup>.

The completion of a combined transport infrastructure, including **railways and freight centers, is a strategic priority** for the Greek Government, since strengthening this sector is crucial for increasing the country's trade flows and boosting its competitiveness through facilitating an efficient transfer of freight arriving to the country's sea ports<sup>48</sup>. The country has chosen to focus on upgrading its railway infrastructure and on the construction of new tracks to shorten transport times. In recent years, travel time between Athens and Thessaloniki has been reduced

<sup>41</sup> European Commission - DG MOVE (Mobility and Transport) - EU Transport in Figures - [Statistical Pocketbook 2017](#), p.82 and Hellenic Railway Organisation (OSE) - [Railway infrastructure](#), accessed in Apr 2018.

<sup>42</sup> European Commission - DG MOVE (Mobility and Transport) - Greece Country Scoreboard - [Energy Union and Innovation](#).

<sup>43</sup> European Commission - DG MOVE (Mobility and Transport) - Rail transport - ERTMS countries - [Greece](#).

<sup>44</sup> European Commission - DG MOVE (Mobility and Transport) - TENtec portal - [Interactive map of Greece](#), accessed Apr 2018.

<sup>45</sup> European Commission - DG MOVE (Mobility and Transport) - EU Transport in Figures - [Statistical Pocketbook 2017](#), p.42 and p.53.

<sup>46</sup> European Commission - DG MOVE (Mobility and Transport) - Greece Country Scoreboard - [Internal Market](#).

<sup>47</sup> Reuters - [Greece Completes Sale of Railway Operator to Italy's Ferrovie](#) - Sep 2017.

<sup>48</sup> ForeignPolicy.com - [Greece infrastructure](#), Jul 2017.

from six to five hours. The suburban railway connecting the Athens Airport with the capital of Athens, and with Corinth and Kiato, is fast and efficient. The Athens Metro, has been extremely successful and has had a major impact on improving urban transport<sup>49</sup>.

Greece's **major track-based projects** in the pipeline include primarily:

- Egnatia Railway Project - which foresees the construction of new tracks on sections of the 565 km long main railway line running horizontally through the northern Greece and connecting the ports of Alexandroupolis, Kavala, Thessaloniki and Igoumenitsa;
- the completion of PATHE railway;
- the construction and upgrade of vertical railway lines leading to neighbouring central European countries;
- the railway network connecting logistics centres in ports serving as logistics hubs, such as the port of Volos, Thessaloniki or Thriassio Pedio, the latter set to be the largest freight railway station in the Balkans; and
- the construction of a new metro system in Thessaloniki and the fourth metro line in Athens, which are intended to be completed by 2020 and 2025 respectively<sup>50</sup>.

## 5. MARITIME TRANSPORT

With almost 65 million passengers passing through its ports, Greece was ranked 2<sup>nd</sup> in the EU in 2016 in terms of **seaborne passengers**<sup>51</sup>, a figure representing a 17% share of the total number of seaborne passengers embarking and disembarking in the EU. Three Greek ports - Piraeus, Paloukia Salaminas/Peramas and Igoumenitsa - are among the top 40 EU seaports by the number of passengers embarking and disembarking, moving together almost 18 million passengers in 2015<sup>52</sup>.

In terms of **freight**, Greece's maritime transport moved some 175 million tonnes of goods in 2016 (a 4.8% increase on 2015)<sup>53</sup>. Around 58% of shipped goods were transported to/from ports outside the EU. At the same time, cross-border shipments between Greece's ports and other ports within the EU made up 21% of the country's maritime transport of goods in 2016, which was equal to the share of transport of goods by sea between Greece's national ports<sup>54</sup>.

The **port of Piraeus** handled over 41 million tonnes of freight in 2016, placing the port on the 15<sup>th</sup> position among the top EU ports<sup>55</sup>. Additionally, the ports of Piraeus and Thessaloniki were ranked 6<sup>th</sup> and 31<sup>st</sup> respectively in the EU in terms of containers handled, shipping a total of almost 4 million TEU in 2015. In August 2016, the China Ocean Shipping Company (COSCO)<sup>56</sup> bought majority shares of the Piraeus Port Authority S.A. The presence of the Chinese investor in the port increases Greece's potential to develop a competitive alternative link with Far East ports compared to north European ports in terms of transport time, service frequency and cost<sup>57</sup>.

Similarly, the privatisation the **port of Thessaloniki** is seen as a chance for Greece to improve the competitiveness of its transport services. In February 2018, Greece's parliament ratified the EUR 1.1 billion sale of 67% shares of the port to a consortium of German, French and Russian-Greek companies. The new majority shareholder pledged to invest some EUR 650 million in modernising the port over the 34-year concession period. Greece is now looking

<sup>49</sup> Enterprise Greece - Greece today - [Infrastructure](#), accessed in April 2018. Enterprise Greece is the official agency of the Greek State, under the auspices of the Ministry of Economy and Development, to promote investment in Greece, exports from Greece, and make Greece more attractive as an international business partner.

<sup>50</sup> ForeignPolicy.com - [Greece Infrastructure](#), Jul 2017 and Greek Observer - Interview with Mr Christos Spirtzis, Greece's Minister of Infrastructure and Transport - [Infrastructure for the Reconstruction of Greece and Meeting Social Needs is a Priority](#), Sep 2017.

<sup>51</sup> Eurostat - Statistics explained - [Number of Seaborne Passengers Embarked and Disembarked in All Ports, 2006-2016](#), Apr 2018.

<sup>52</sup> European Commission - DG MOVE (Mobility and Transport) - EU Transport in Figures - [Statistical Pocketbook 2017](#), pp.64-66.

<sup>53</sup> Eurostat - Statistics explained - [Gross Weight of Seaborne Goods Handled in All Ports, 2006-2016](#), Apr 2018.

<sup>54</sup> Eurostat - Statistics explained - [Seaborne Transport of Goods between Main Ports in the Reporting Country and Their Partner Ports Grouped by Main Geographical Areas](#), Apr 2018. Eurostat percentage calculation are based on the data from the main EU ports i.e. handling more than 1 million tonnes annually.

<sup>55</sup> Eurostat - Statistics explained - Table: [Top 20 Cargo Ports in 2016](#), Apr 2018. The ranking of the Piraeus port presented in this briefing does not take into account the ports from outside of the EU (Turkey and Norway) included in the original Eurostat data.

<sup>56</sup> European Commission - DG MOVE (Mobility and Transport) - EU Transport in Figures - [Statistical Pocketbook 2017](#), pp.66-70 and United Nations Conference on Trade and Development (UNCTAD) - [Review of Maritime Transport 2017](#), pp.65-66.

<sup>57</sup> EY - [Re-positioning Greece as a Global Maritime Capital](#), 2017, p.5.

for a strategic investor for the Alexandroupolis port in the northeastern part of the country and nine other regional ports that are 100% state-owned<sup>58</sup>.

The Greek **shipping industry** has a prominent position in global maritime transport and, together with tourism, they constitute key pillars of the country's economy<sup>59</sup>. The Greek-controlled fleet (i.e. vessels whose owners are Greek citizens, regardless of the flag of the vessel) is ranked 1<sup>st</sup> globally in terms of cargo carrying capacity, which reached almost 309 million dead-weight tonnes (dwt) or 16.7% of the world's total transport capacity in 2017. Greece's ship fleet is dominated by bulk carriers and oil tankers, while the country is ranked 3<sup>rd</sup> in the world (after Germany and China) in terms of ownership of cargo ships<sup>60</sup>.

## 6. AIR TRANSPORT

In 2014, air transport is estimated to have contributed USD 5.6 billion in Gross Value Added (GVA) to the Greece's GDP while supporting indirectly 430 thousand jobs (including jobs related to international tourism)<sup>61</sup>. In 2016, Greece's air transport moved close to 53 million **passengers** and around 90 thousand tonnes of **goods**, the values which represent an increase of almost 40% and a decrease of 30% respectively compared to 2006<sup>62</sup>. The vast majority of passengers carried through the Greek airports in 2015 (or 65%) was on flights within the EU, with the United Kingdom, Germany and Italy constituting the most popular flying destinations<sup>63</sup>.

There are 15 international, 26 national and four municipal airports in Greece and the largest one of them - the **Athens Airport 'El. Venizelos'** is ranked 23<sup>rd</sup> among the EU airports. In 2015, it moved more than 18 million passengers recording a remarkable growth of 19% as compared to 2014. In the same year, a flight connection between Thessaloniki and Athens was among the top ten EU air connections registering over 1.6 million passengers<sup>64</sup>.

In 2017, Greece's largest carrier, the **Aegean Airlines**, transferred 13.2 million passengers, 6% more than in 2016. In the same year, the airline was named the "Best Regional Airline in Europe" for the 8<sup>th</sup> time since 2009<sup>65</sup>. As part of the company's fleet expansion and renewal programme, the Aegean Airlines decided to order 42 Airbus aircrafts worth EUR 4 billion in March 2018<sup>66</sup>. The Aegean Airlines accounted for 49% of passenger traffic in the Athens Airport in 2016, followed by Ryanair (16.3%), Lufthansa (3.1%) and EasyJet (2.8%)<sup>67</sup>.

Greece has adopted a new law **reforming the Hellenic Civil Aviation Authority (HCAA)** in October 2016. The new framework foresees the split of the HCAA into two new entities: (i) a regulator for economic matters and air-navigation services, and (ii) a separate entity for air navigation services and airports. The new authorities, and particularly the regulator, will operate closely with the Greek Government in order to provide their services independently from each other, especially in view of the completed privatisation of 14 regional airports<sup>68</sup>.

Pursuant to the Single European Sky legislation<sup>69</sup>, Greece together with Cyprus, Italy and Malta is involved in the implementation of the **BLUE MED Functional Airspace Block** (BLUE MED FAB). In addition, three non-EU countries are participating in the BLUE MED FAB as Associated Members (Albania, Egypt and Tunisia) and two as Observers (Lebanon and Jordan). The BLUE MED FAB was established on 12 October 2012 through the signing of the State-level agreement and came into force on 22 August 2014, following the ratification by the four Member States composing the FAB.

<sup>58</sup> Financial Times - [Greece Wraps up Port Privatisation after Three Years](#), Feb 2018.

<sup>59</sup> Eurobank Research - [Greek Maritime Transport Industry and its Influence on the Greek's Economy](#), May 2014.

<sup>60</sup> United Nations Conference on Trade and Development (UNCTAD) - [Review of Maritime Transport 2017](#), pp.28-30.

<sup>61</sup> International Air Transport Association (IATA) and Oxford Economics - [The importance of Air Transport to Greece](#), Dec 2016, p.1.

<sup>62</sup> Hellenic Civil Aviation Authority - [Annual Airports Statistical Data 1996-2016](#), assessed in Apr 2018.

<sup>63</sup> Eurostat, Statistics explained - Table: [Overview of EU-28 air Passenger Transport by Member States in 2015](#), Nov 2016 and European Commission - EU Transport in Figures - [Statistical Pocketbook 2017](#), pp.56-57.

<sup>64</sup> European Commission - EU Transport in Figures - [Statistical Pocketbook 2017](#), p.59 and Hellenic Civil Aviation Authority - [Airports](#), assessed in Apr 2018.

<sup>65</sup> Aegean Airlines S.A. - [Company Profile](#), assessed in Apr 2018. The "Best Regional Airline in Europe" award is selected in a survey conducted among over 19.9 million passengers conducted for the Skytrax World Airline Awards.

<sup>66</sup> Reuters - [Greece's Aegean Air Aims Higher with USD 5 billion Airbus Jet Order](#), Mar 2018.

<sup>67</sup> Athens International Airport - [Annual Report 2016](#), p. 20.

<sup>68</sup> European Commission - DG ECFIN (Economic and Financial Affairs) - [The ESM Stability Support Programme - Greece](#), Nov 2017, p.129.

<sup>69</sup> [Regulation \(EC\) No 550/2004](#) of the European Parliament and of the Council of 10 March 2004 on the provision of air navigation services in the single European sky.

The BLUE MED FAB is one of the larger FABs and has airspace over the high seas. There are significant differences between Member States in their economic capability and staffing, as well as in their interests in terms of airspace and traffic characteristics - thus their priorities in relation to the functioning of the FAB are different<sup>70</sup>.

Major achievements of the BLUE MED FAB include, among others, the creation of the FAB's route network which was collaboratively optimised with intention to bring substantial savings in terms of time and distance travelled, fuel consumption and CO<sub>2</sub> emissions<sup>71</sup>.

## 7. TOURISM

Tourism is an important contributor to the Greek economy. In 2016, tourism directly contributed 6.4% to the country's GVA and supported nearly 366 thousand jobs, which constituted approximately 10% of jobs in Greece. 2016 was the 4<sup>th</sup> record year for the country in terms of **international tourist arrivals**, totalling 28 million visitors, an increase of 7.5% on 2015. Visits from the EU accounted for 61.3% of all arrivals, representing an overall growth of 15% in 2016. In the same year, the United Kingdom, Germany and Bulgaria were the most popular countries of origin for the international tourists arriving to Greece, while FYROM, Bulgaria and Turkey represented EU destinations the most frequently chosen by Greek tourists.

**Domestic tourism** in Greece was estimated to account for 5.8 million trips and 57 million overnight stays in 2015 (a 10.2% decrease as compared to 2014). Over three-quarters of total nights were spent in private accommodations<sup>72</sup>.

The two summer months (July and August) accounted for 45.5% of total nights spent (almost 100 million nights) in Greek tourist accommodation in 2016. In the same year, the country was the 2<sup>nd</sup> Member State with the highest **seasonal deviation** (after Croatia), with the value reaching 7 compared to 3.3 for the EU average (please see Table 3 below).

**Table 3: Nights spent at tourist accommodation establishments, 2016**

Total nights spent (thousand)		Distribution per month (%)											Seasonal deviation(*)	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		Dec
<b>EU-28</b>	2 857 676	4.4	5.0	6.0	6.2	8.5	10.1	15.6	17.2	10.1	7.3	4.7	5.0	3.3
<b>Greece</b>	<b>99 852</b>	<b>1.3</b>	<b>1.2</b>	<b>1.8</b>	<b>2.6</b>	<b>9.5</b>	<b>14.5</b>	<b>21.0</b>	<b>23.5</b>	<b>14.9</b>	<b>6.8</b>	<b>1.4</b>	<b>1.4</b>	<b>7</b>

Source: European Commission's data<sup>73</sup>

Balancing the tourism seasonality through the development of innovative products in cooperation with all of Greece's 13 regions is among the priorities of the new national **Tourism Policy**, implemented since 2015. The innovative products include, primarily:

- the proper utilisation of funding instruments available for the country within the framework of its National Strategic Reference Framework 2014-2020 (NSRF) - the country's allocation is EUR 19 billion and tourism is among the four sectors that are expected to receive the strongest support<sup>74</sup>;
- the regulation of licencing and general functioning of different types of tourism businesses through a set of Joint Ministerial Decisions; and
- the implementation of a comprehensive codification of tourism legislation to reduce administrative barriers, improve the business environment and thereby increase investment in the tourism sector.

The Tourism Policy also identifies other important priorities that need to be implemented to further increase the number of international visitors, enrich the tourism offer and enhance the competitiveness of the sector. They comprise:

<sup>70</sup> European Commission - DG MOVE (Mobility and Transport) - [Study on Functional Airspace Blocks](#), Jan 2017, pp.41-48.

<sup>71</sup> BLUE MED FAB official website - [Newsletter Blue Med - n°7 - April 2016](#).

<sup>72</sup> OECD (Organisation for Economic Co-operation and Development) - Tourism Trends and Policies 2018 - [Country Profiles: Greece](#), pp.180-184, Mar 2018.

<sup>73</sup> Eurostat, Statistics explained - Table: [Seasonality in the Tourist Accommodation Sector](#), Jul 2017. (\*) Seasonal deviation is estimated as the average of the absolute deviations of monthly data points from their mean.

<sup>74</sup> Greek news - GreekReporter - [NSRF: EUR 19 billion for Greece in the 2014-2020 Program](#) - by Philip Chrysopoulos, Dec 2014.

- promoting new, thematic tourism products, such as cultural tourism, pilgrimage tourism, cruises, yachting, driving parks, health tourism, luxury tourism, city-breaks and Greek gastronomy;
- targeting new dynamic source-markets (Middle East, China, South Korea and India);
- increasing the air connectivity (direct flights) to existing and new destinations in Greece; and
- attracting investments to upgrade and expand the overall tourism product<sup>75</sup>.

Greece's **UNESCO World Heritage sites** include 16 cultural heritage sites encompassing several archaeological sites, the [Acropolis](#) in Athens, the [Medieval City of Rhodes](#) and the [Old Town of Corfu](#), just to name a few. Moreover, there are two heritage sites of mixed nature, which include Meteora and Mount Athos, both on the UNESCO list since 1988<sup>76</sup>.

Two European Cycle Routes - the so-called **EuroVelo 11** (the East Europe Route) and **EuroVelo 8** (the Mediterranean Route) - run vertically through the territory of Greece crossing the country's borders with FYROM and Albania to end in Athens. The third European cycle route to involve Greece is **EuroVelo 13** (the Iron Curtain Trail) running along the Greek - Bulgarian - Turkey border offering a beautiful view of Evros River, which forms a vast delta of 188 km<sup>2</sup> near the city of Alexandroupolis before flowing into the Aegean Sea<sup>77</sup>.

## Further Information

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<sup>75</sup> OECD (Organisation for Economic Co-operation and Development) - Tourism Trends and Policies 2018 - [Country Profiles: Greece](#), p.182.

<sup>76</sup> UNESCO (United Nations Educational, Scientific and Cultural Organization) - The States parties - [Greece](#).

<sup>77</sup> The European Cycle Route Network - [EuroVelo](#).