

UNECE

The development of international passenger rail transport



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THE DEVELOPMENT OF INTERNATIONAL PASSENGER RAIL TRANSPORT



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UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

The United Nations Economic Commission for Europe (UNECE) is one of the five United Nations regional commissions, administered by the Economic and Social Council (ECOSOC). It was established in 1947 with the mandate to help rebuild post-war Europe, develop economic activity and strengthen economic relations among European countries, and between Europe and the rest of the world. During the Cold War, UNECE served as a unique forum for economic dialogue and cooperation between East and West. Despite the complexity of this period, significant achievements were made, with consensus reached on numerous harmonization and standardization agreements.

In the post-Cold War era, UNECE acquired not only many new member States, but also new functions. Since the early 1990s the organization has focused on assisting the countries of Central and Eastern Europe, Caucasus and Central Asia with their transition process and their integration into the global economy.

Today, UNECE supports its 56 member States in Europe, Central Asia and North America in the implementation of the 2030 Agenda for Sustainable Development with its Sustainable Development Goals (SDGs). UNECE provides a multilateral platform for policy dialogue, the development of international legal instruments, norms and standards, the exchange of best practices and economic and technical expertise, as well as technical cooperation for countries with economies in transition.

Offering practical tools to improve people's everyday lives in the areas of environment, transport, trade, statistics, energy, forestry, housing, and land management, many of the norms, standards and conventions developed in UNECE are used worldwide, and a number of countries from outside the region participate in UNECE's work.

UNECE's multisectoral approach helps countries to tackle the interconnected challenges of sustainable development in an integrated manner, with a transboundary focus that helps devise solutions to shared challenges. With its unique convening power, UNECE fosters cooperation among all stakeholders at the country and regional levels.



Transport in UNECE

The UNECE Sustainable Transport Division is the secretariat of the Inland Transport Committee (ITC) and the ECOSOC Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals. The ITC and its 17 working parties, as well as the ECOSOC Committee and its sub-committees are intergovernmental decision-making bodies that work to improve the daily lives of people and businesses around the world, in measurable ways and with concrete actions, to enhance traffic safety, environmental performance, energy efficiency and the competitiveness of the transport sector.

The ECOSOC Committee was set up in 1953 by the Secretary-General of the United Nations at the request of the Economic and Social Council to elaborate recommendations on the transport of dangerous goods. Its mandate was extended to the global (multi-sectoral) harmonization of systems of classification and labelling of chemicals in 1999. It is composed of experts from countries which possess the relevant expertise and experience in the international trade and transport of dangerous goods and chemicals. Its membership is restricted in order to reflect a proper geographical balance between all regions of the world and to ensure adequate participation of developing countries. Although the Committee is a subsidiary body of ECOSOC, the Secretary-General decided in 1963 that the secretariat services would be provided by the UNECE Sustainable Transport Division.

ITC is a unique intergovernmental forum that was set up in 1947 to support the reconstruction of transport connections in post-war Europe. Over the years, it has specialized in facilitating the harmonized and sustainable development of inland modes of transport. The main results of this persevering and ongoing work are reflected, among other things, (i) in 58 United Nations conventions and many more technical regulations, which are updated on a regular basis and provide an international legal framework for the sustainable development of national and international road, rail, inland water and intermodal transport, including the transport of dangerous goods, as well as the construction and inspection of road motor vehicles; (ii) in the Trans-European North-south Motorway, Trans-European Railway and the Euro-Asia Transport Links projects, that facilitate multi-country coordination of transport infrastructure investment programmes; (iii) in the TIR system, which is a global customs transit facilitation solution; (iv) in the tool called For Future Inland Transport Systems (ForFITS), which can assist national and local governments to monitor carbon dioxide (CO₂) emissions coming from inland transport modes and to select and design climate change mitigation policies, based on their impact and adapted to local conditions; (v) in transport statistics – methods and data – that are internationally agreed on; (vi) in studies and reports that help transport policy development by addressing timely issues, based on cutting-edge research and analysis. ITC also devotes special attention to Intelligent Transport Services (ITS), sustainable urban mobility and city logistics, as well as to increasing the resilience of transport networks and services in response to climate change adaptation and security challenges.

In addition, the UNECE Sustainable Transport and Environment Divisions, together with the World Health Organization (WHO) – Europe, co-service the Transport Health and Environment Pan-European Programme (THE PEP).

EXECUTIVE SUMMARY

International rail passenger transport is of fundamental importance to the movement of people across borders in the ECE region. Its central role was highlighted in Inland Transport Committee Resolution No. 264. The COVID-19 pandemic offers, beyond its negative economic impacts that remain to be recovered from, the opportunity to reconsider the role of rail transport in the ECE region and further promote it in the post-pandemic recovery.

The workshop dedicated to “The development of international passenger rail transport in the context of ITC Resolution No. 264”, held during the seventy-fourth session of the Working Party on Rail Transport on the 18 November 2020, provided an overview of the situation of international passenger rail transport in the ECE region and the impact of the COVID-19 pandemic.

It showed that joint efforts are necessary at several levels and in various fields: at the national level where investment in infrastructure and rolling stock, improvement of passenger services are necessary, and at the regional and international level, where border crossing formalities often need to be harmonized and simplified.

In the ECE region, the current focus on sustainability in the transport sector may offer the opportunity to national, international and private stakeholders to participate in the development of international passengers rail transport by giving a special attention to intermodality, with the aim to get a seamless network, more efficient and attractive.

It was agreed that international rail passenger transport needs to be developed further and facilitated by the creation and implementation of appropriate legal instruments at a pan-European level.



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1 INTRODUCTION

International passenger transport by rail remains fundamental to the movements across borders. In current times, with increased attention on the environmental impact of aviation travel leading to many travellers switching to rail, as well as in the aftermath of the COVID-19 pandemic, international rail travel is of increased importance, as identified in Resolution on International Rail Passenger Traffic on the route East-West (ECE/TRANS/2017/17/Rev.1).

This publication presents the status of the development of international passenger rail transport in the context of ITC Resolution No. 264 and COVID-19. It first provides an overview of data availability for international rail passenger transport in United Nations Economic Commission for Europe (UNECE) member States using available data sources at the international level. This overview was drafted by the UNECE secretariat and presented as an input to discussions at the Working Party on Rail Transport, during the workshop dedicated to “The development of international passenger rail transport in the context of ITC Resolution No. 264”. The main part of the publication is the findings and information shared by the ECE member States during this workshop.

Rail transport in the context of ITC Resolution No. 264

Resolution No. 264 recalls the necessity to increase rail passenger traffic on the East-West route and improve the management of passenger's needs and services. There are still several limitations that hinder the progress toward these goals: different legal regimes for passengers traffic by rail, insufficient cooperation among railway undertakings on single services, inadequate time schedules and non-competitive tariffs on the East-West route which reduce competitiveness and impedes the development of effective rail transport operations and efficient railway business. Resolution No. 264 encourages member States and all industry stakeholders to envisage, design and establish rail passenger services to counter the challenges set out above. This needs to be supported by improving the regulatory framework conditions for international rail passenger services, as well as applying the principles of economic responsibility in carrying out international traffic.

The rail sector in international passenger transport, nevertheless, will have to recover post-COVID-19 and continue to further increment its market share by incentivising its use.

COVID-19 impacts on rail transport

The COVID-19 crisis has affected all transport activity, including international rail passenger performance. Countries have been differently affected by the crisis, as have transport modes. The pandemic has led countries to restrict the movement of citizens, which can be seen in reduced traffic on most modes of transport. Economic activity has also slowed down as shops and services have been closed and this has also been felt in rail with dramatic drops in rail passenger numbers for virtually every country (see figure I below).¹

1 <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20201105-1>.

Figure I: Rail passenger transport in Q1 and Q2 2019-2020

	passengers (in thousand)		% change compared		passengers (in thousand)		% change compared	
	Q1 2019	Q1 2020	with Q1 2019		Q2 2019	Q2 2020	with Q1 2019	
Bulgaria	4 958	4 590	■	-7%	5 584	3 533	■	-37%
Croatia	5 156	4 793	■	-7%	5 076	1 698	■	-67%
Czechia	47 197	38 988	■	-17%	50 051	25 934	■	-48%
Denmark	50 616	41 856	■	-17%	51 452	23 070	■	-55%
Estonia	1 957	1 800	■	-8%	2 163	978	■	-55%
Finland	22 553	18 742	■	-17%	22 426	10 777	■	-52%
France	336 982	250 201	■	-26%	340 258	74 041	■	-78%
Germany	720 915	620 036	■	-14%	725 410	295 000	■	-59%
Greece	5 078	3 957	■	-22%	5 118	1 512	■	-70%
Hungary	36 472	34 272	■	-6%	37 328	15 346	■	-59%
Ireland	11 854	9 742	■	-18%	12 428	745	■	-94%
Italy	218 201	161 063	■	-26%	225 385	51 941	■	-77%
Latvia	4 075	3 755	■	-8%	4 871	2 343	■	-52%
Lithuania	1 201	988	■	-18%	1 330	573	■	-57%
Luxembourg	6 461	5 560	■	-14%	6 239	1 346	■	-78%
Montenegro	192	154	■	-20%	256	57	■	-78%
Netherlands	97 203	97 005		-0.2%	97 469	97 271		-0.2%
North Macedonia	130	93	■	-28%	147	28	■	-81%
Norway	20 887	16 636	■	-20%	20 586	6 994	■	-66%
Poland	79 251	71 357	■	-10%	81 605	29 562	■	-64%
Portugal	37 148	39 523	■	6%	43 038	N/A		N/A
Romania	16 487	14 898	■	-10%	17 010	9 067	■	-47%
Slovakia	19 842	16 322	■	-18%	20 456	7 937	■	-61%
Slovenia	3 277	2 779	■	-15%	3 197	1 377	■	-57%
Spain	161 458	131 495	■	-19%	160 348	35 048	■	-78%
Sweden	65 885	60 210	■	-9%	66 840	29 410	■	-56%
Switzerland	123 978	112 214	■	-9%	126 102	53 871	■	-57%
Turkey	27 098	40 968	■	51%	42 211	9 350	■	-78%
United Kingdom	453 939	401 514	■	-12%	449 794	36 244	■	-92%

Source: Eurostat.

2 STATISTICS ON INTERNATIONAL RAIL PASSENGER TRANSPORT

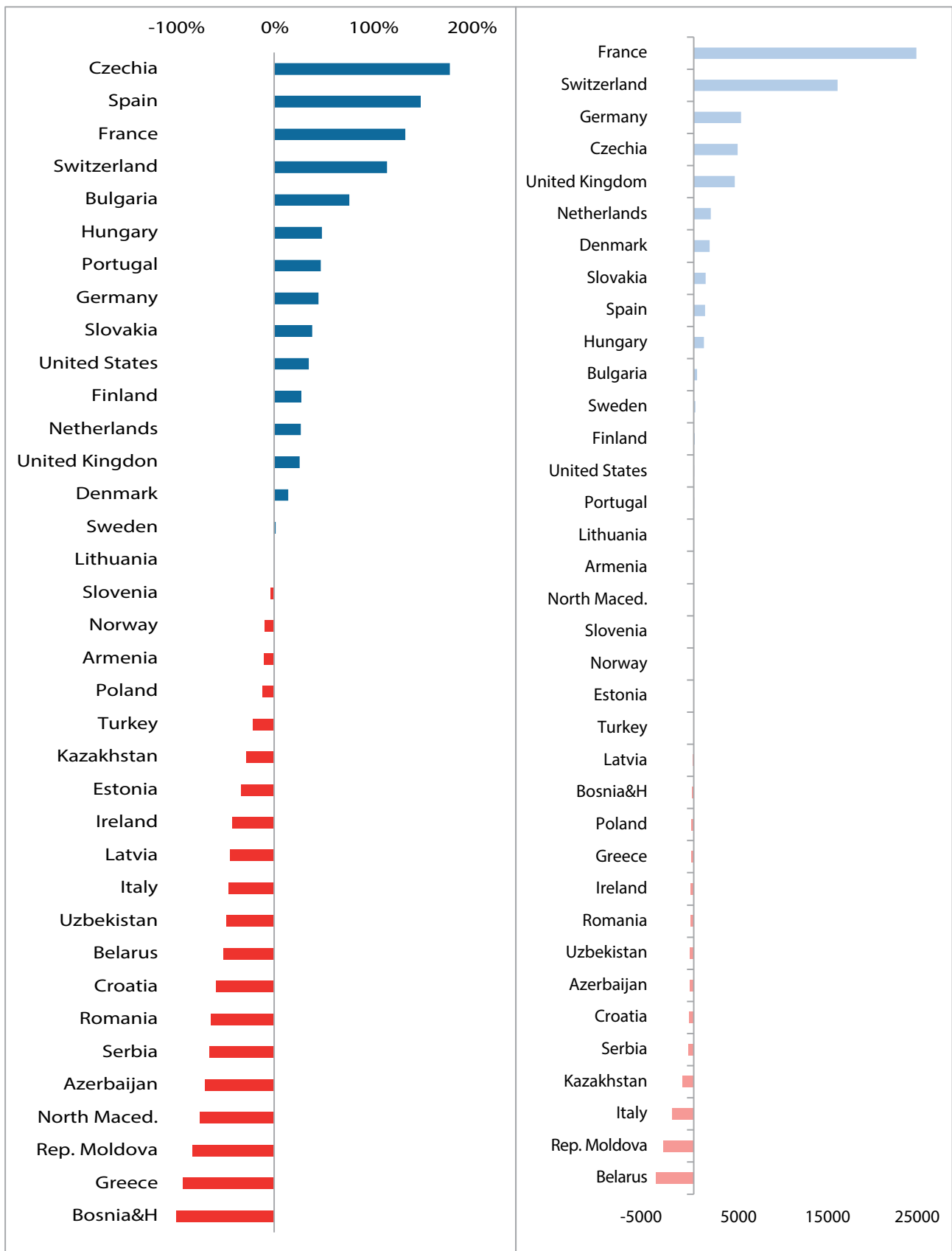
2.1 Overall trends in international passenger movements

Figure II below (left side) shows relative trends in total international passenger numbers for available ECE countries in the last decade (either 2008-2018, or earliest year to latest year available within this period).² This shows a very mixed picture, with around half of countries seeing decreases and the others seeing increases in the time period. Czechia, Spain, France and Switzerland all saw increases of above 100 per cent, while Bosnia and Herzegovina, Greece, Republic of Moldova and North Macedonia saw decreases greater than 75 per cent.

However, these numbers mask the fact that in some countries international passenger numbers are very small, and so the discontinuation of a single service can sometimes imply large decreases. And thus figure III provides the same changes in absolute figures. Both sources combined show that while Belarus, Italy and Republic of Moldova did see some significant decreases, the overall trend (based on available countries) is much more positive, with four countries (France, Switzerland, Germany and Czechia) increasing international passenger numbers by over 5 million per year over the time period.



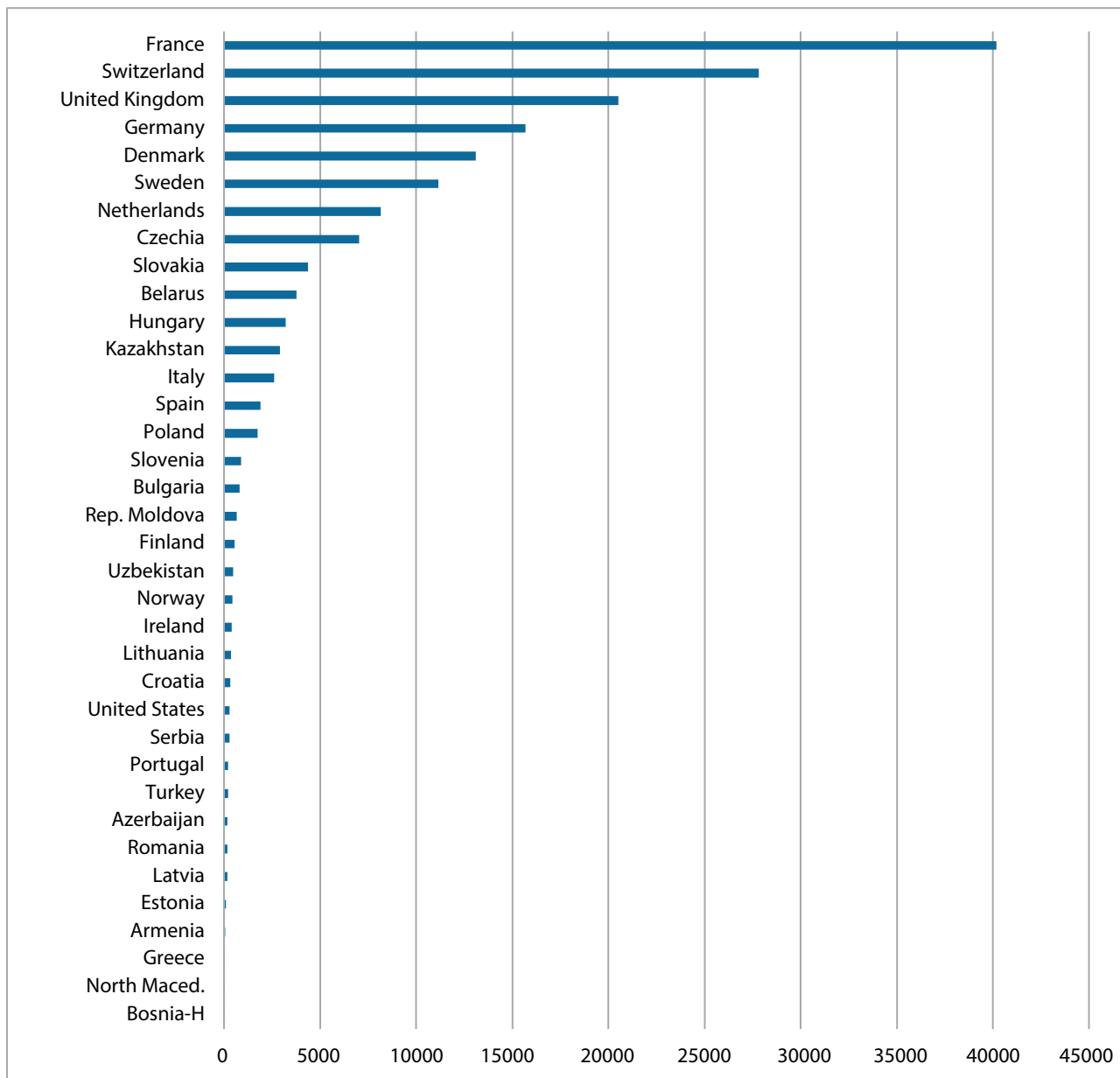
Figure II: Change (2008-2018 or latest) in international rail passenger numbers, in percentages (left) and absolute values (right)



Source : UNECE secretariat.

Looking again at absolute numbers of international passengers in the latest year, UNECE data show that France, Switzerland and the United Kingdom of Great Britain and Northern Ireland have the biggest international passenger numbers, followed by Germany, Denmark and Sweden (figure III).

Figure III: Total number of international rail passengers, 2018 or latest year



Source : UNECE secretariat.

A notable country that does not have any recent data but that may otherwise appear towards the top of this list is Belgium, with strong train connections to each of its neighbours. The latest year of Belgium data in the ECE database from 2009 shows 19 million international rail passengers, which would place it fourth on the above graph of total international passenger numbers.

2.2 Origin-destination flows

A natural question looking at the above graph is how much of each country's international passenger numbers is due to a handful of key routes. For example, due to geography the vast majority of United Kingdom of Great Britain and Northern Ireland passenger numbers will be London to Paris and London to Brussels traffic (Northern Ireland to Ireland connections making up the rest). To provide a more detailed assessment of key flows further statistical analysis was undertaken as set out in the annex (section A.2).

As a simple first step, data were summed up to the national level to see flows between different countries.

Figure IV shows these data, with a filter of only pairs with more than 100,000 passengers a year (in either direction). This first visualization clearly shows the large proportion of traffic that flows between a few key countries, such as France and the United Kingdom of Great Britain and Northern Ireland, and France and Switzerland (as well as Denmark and Sweden, which is not visible on the map). This visualization shows the results between countries and so identified the centre of the member State rather than the actual origin and destination.

Figure IV: Visualisation of International rail passenger numbers between countries, 2015



Source : UNECE secretariat.

In the case of simpler cases such as Ireland, Portugal and the United Kingdom of Great Britain and Northern Ireland, it would be easy to manually adjust these coordinates to better reflect termini in e.g. Belfast, Dublin, Lisbon and London. However, cases such as Germany and Switzerland would be much harder to accurately ascribe to a particular city, given the multiple potential origin/destination pairings. Nevertheless, the country-level figures do provide a useful insight into the biggest partnerships between countries in terms of international passengers. For a more detailed analysis regional data needs to be used. Figure V below shows the results for the pairings where information is available.

Figure V: Rail passenger flows between NUTS 2 regions, 2015



Source : UNECE secretariat.

Although not a complete analysis due to missing data, this map identifies the current key routes for international passenger train travel for countries covered by Eurostat. It shows the importance of pairings like Paris and London, Calais and Folkestone (Eurotunnel), Copenhagen and Malmö, as well as the many smaller connections between non-capital city regions for e.g. Germany and Switzerland.

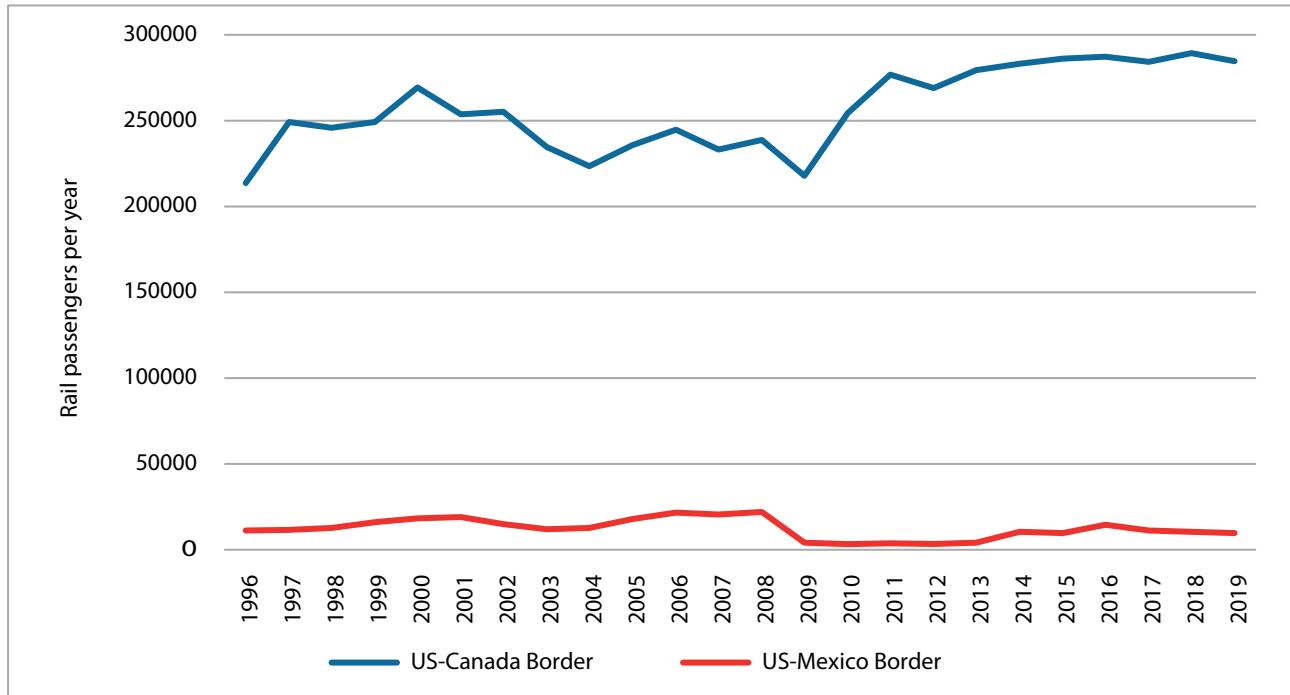
The map shows that there are strong links between many big population centres, but also the relatively low number between certain regions.

2.3 North American Data

For Canada and the United States of America (as well as Mexico), international rail passenger numbers are available for download from the United States Bureau of Transportation Statistics.³ These data go back to 1996, and can thus be used to see how international passenger numbers change over time. Data are split by border crossing point and can also be summarized by partner country (either Canada or Mexico).

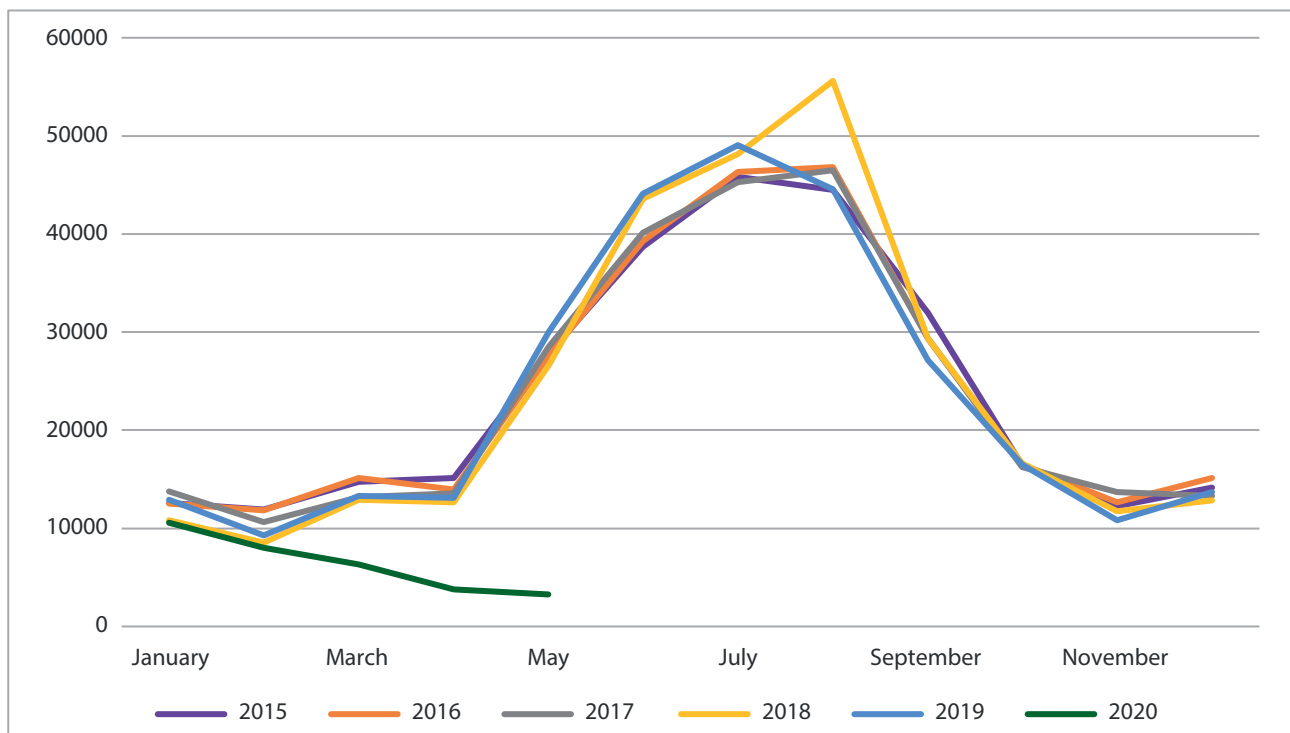
Annual data for Canada/United States of America crossings have been slowly increasing since 1995, with around a 30 per cent growth over the period, which happened mainly after 2010. The Mexico United States of America border, by contrast, saw strong growth until 2008 (with passenger numbers doubling), followed by an 80 per cent fall in 2009 and then growth again back to 1996 levels from 2014 onwards (figure VI).

3 <https://explore.dot.gov/views/BorderCrossingData/Monthly?isGuestRedirectFromVizportal=y&embed=y>.

Figure VI: US-Canada and US-Mexico rail passengers per year

Source: UNECE secretariat.

The North American data also show strong seasonality, with peak Summer months having up to four times the number of passengers as winter months. These monthly data also show the impact of COVID-19 on international numbers. Figure VII shows the last six years of monthly data, showing that in May 2020, passenger numbers between Canada and the United States of America were around a sixth of their typical value.

Figure VII: Monthly rail passengers between Canada and United States of America

Source: UNECE secretariat.

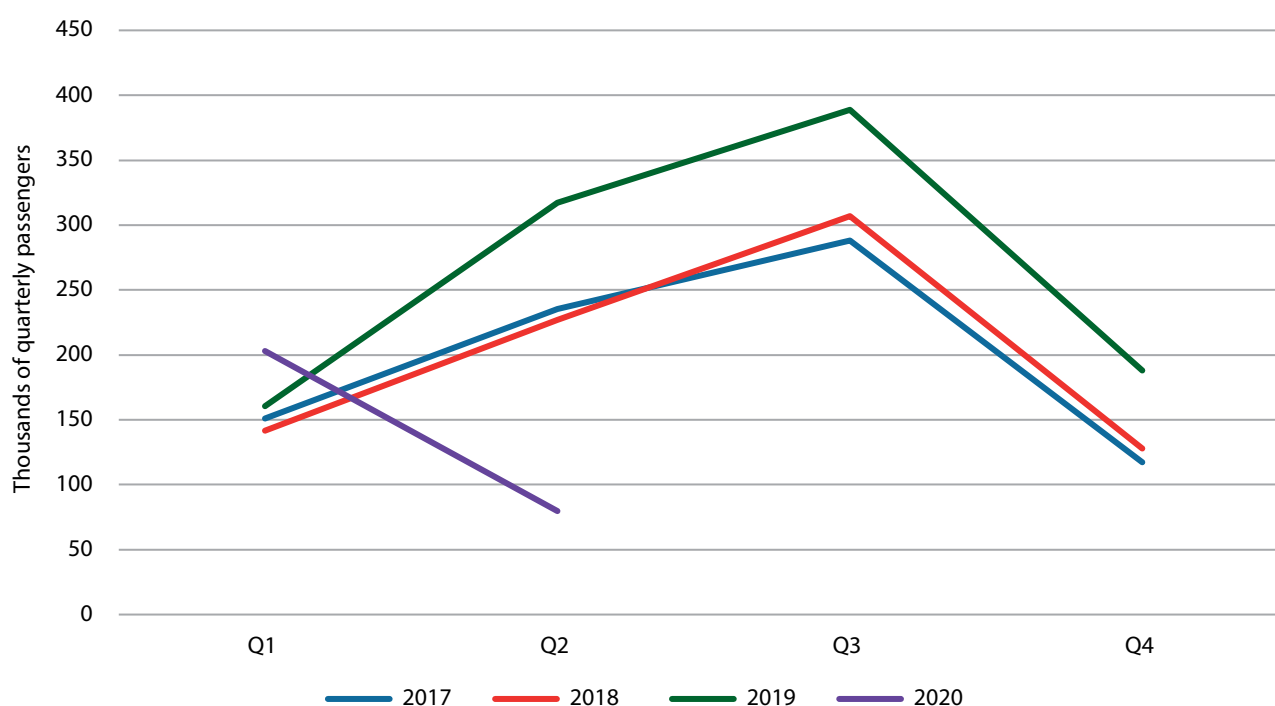
2.4 COVID-19 Impact in Available European countries

With no harmonized short-term data collated at the international level, a range of national sources have been referenced below, to give the best possible overview of what is happening. These sources are all included in the UNECE wiki on short-term data sources,⁴ which has been released and regularly updated since the COVID-19 pandemic started to affect ECE countries.

While international rail passenger numbers were not available for Russian Federation, total year-to-date passenger data are available.⁵ These are split between commuter rail and long-distance rail (it is assumed that international passenger numbers are included in the long-distance part, but this may not be the case). These data show that for January-July 2020 total passenger numbers were 32.4 per cent down on the same period of 2019, whereas long-distance trains were down 45 per cent. These data seem to show that long-distance passenger travel, including international passenger journeys, has declined more than other rail journeys.

Data for other countries typically did not have international rail passengers separated out either, or perhaps did not include them in short-term statistics at all. An exception to this was Bulgaria, which publishes these data on a quarterly basis (figure VIII). At the time of writing, data for the second quarter of 2020 were released. These data show that while the international passenger trend has been very positive over the last few years, the second quarter data for 2020 were 75 per cent lower than the same period in 2019.

Figure VIII: Quarterly Bulgarian international rail passenger numbers



Source: UNECE secretariat.

4 <https://wiki.unece.org/display/DSOCIOT/Data+Sources+on+Coronavirus+impact+on+transport>

5 At <https://eng.rzd.ru/en/9498/page/103290?id=12510#header>.

3 FINDINGS OF THE WORKSHOP DEDICATED TO “THE DEVELOPMENT OF INTERNATIONAL PASSENGER RAIL TRANSPORT IN THE CONTEXT OF ITC RESOLUTION No. 264”

This chapter presents the current state of international passenger rail transport for some of the ECE member States presented by speakers at the workshop.⁶ The national situation for each country is provided in section 3.1 with the international perspective provided in section 3.2 and an analysis of more detailed concepts identified by the speakers set out in 3.3. The contributions from participants are spread across these three themes.

3.1 The national situation

3.1.1 Bosnia and Herzegovina

Transport volumes for both passengers and freight have fallen over the last ten years, while investments in infrastructure during the same period amounted to around €2 billion. Sectoral reforms were not pursued in parallel to these investments and this meant that the full benefits of these upgrades are yet to be realised.

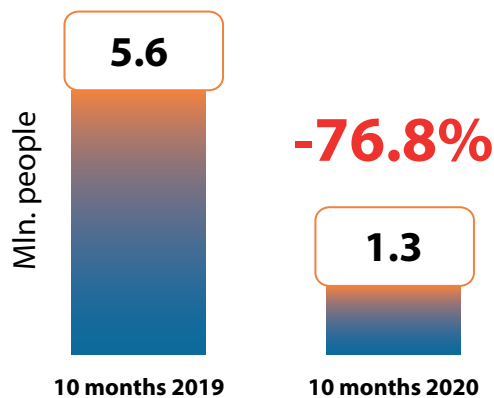
The rail network of Bosnia and Herzegovina is only partially covered by the TEN-T network. Moreover, the complex administrative structure of Bosnia and Herzegovina and of the railway sector has had an impact on the overall provision of railway services. Participating in regional cooperation is therefore very important, in particular through the setting up of the sub-regional Transport Community which seeks to develop the road, rail, inland waterway and maritime sectors in the region and link them to the European Union (EU) network. A working group is mandated to develop a targeted action plan for a new regional rail strategy in the Western Balkans. This action plan includes the modernisation of rail operations and infrastructures, and focus on operational and interoperability issues, especially at borders, taking into account the current and potential traffic volumes across the region.

6 The agenda for the meeting is available at: https://www.unece.org/fileadmin/DAM/trans/doc/2020/sc2/ECE-TRANS-SC2-2020-inf01e_REV1.pdf.

3.1.2 Russian Federation

International direct passenger traffic volumes in 2020 has seen a significant decrease, in particular for East-West journeys (figure IX).

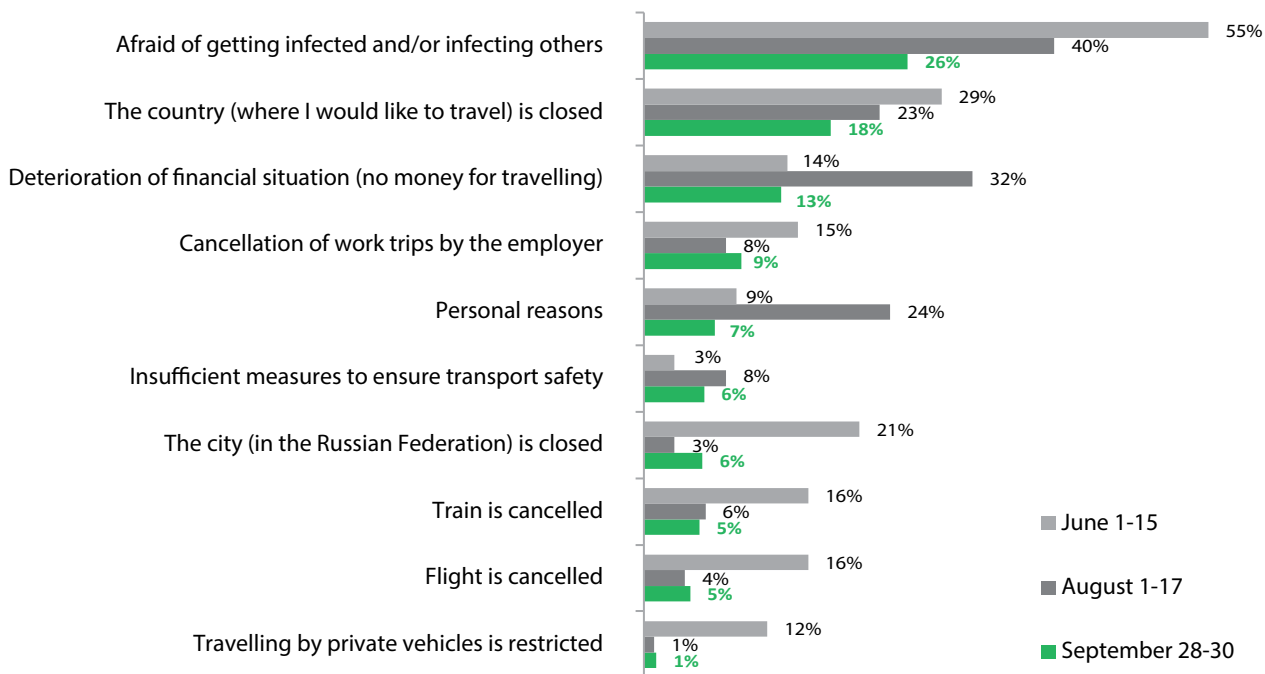
Figure IX: International direct traffic volumes in 2019 and 10 months of 2020



Source: Federal Passenger Company, Russian Federation.

The COVID-19 pandemic has discouraged international passenger movements as potential travellers are afraid of getting infected and/or infecting others and blocked it altogether where international destinations are closed. This has been clearly identified in the survey carried out by the Federal Passenger Company as set out in figure X below.

Figure X: Main reasons for passengers not travelling during the pandemic

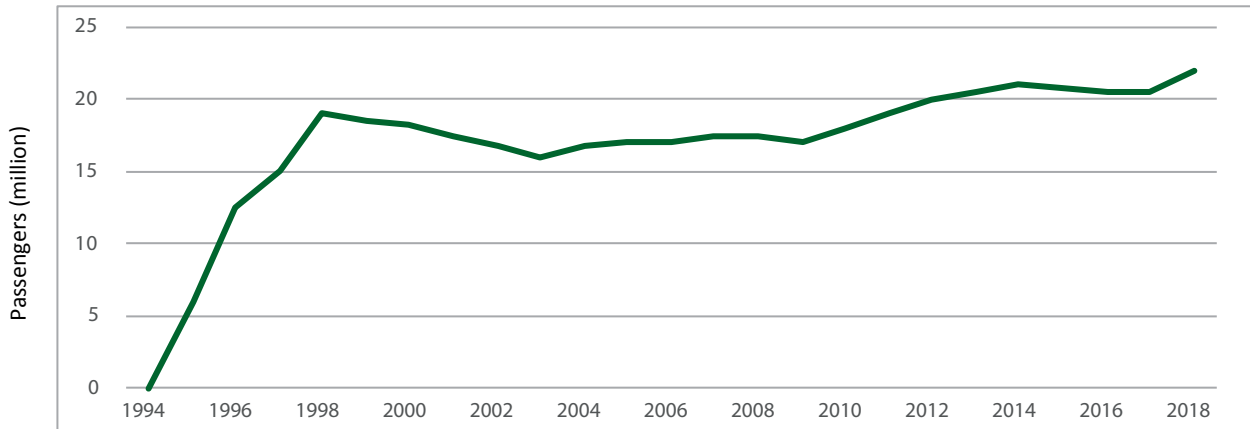


Source: Federal Passenger Company, Russian Federation.

3.1.3 United Kingdom

The United Kingdom railway is largely domestic, used for commuting between cities and for long distance travel. International rail services are provided through the Channel Tunnel in the form of high-speed rail services and the Shuttle between South of England and North of France, carrying 1.7 lorries per year and 2.5 million passenger vehicles per year. Total passenger numbers through the Channel Tunnel are set out in figure XI below.

Figure XI: Channel Tunnel: Annual passengers to and from Europe



Source: Department for Transport, United Kingdom.

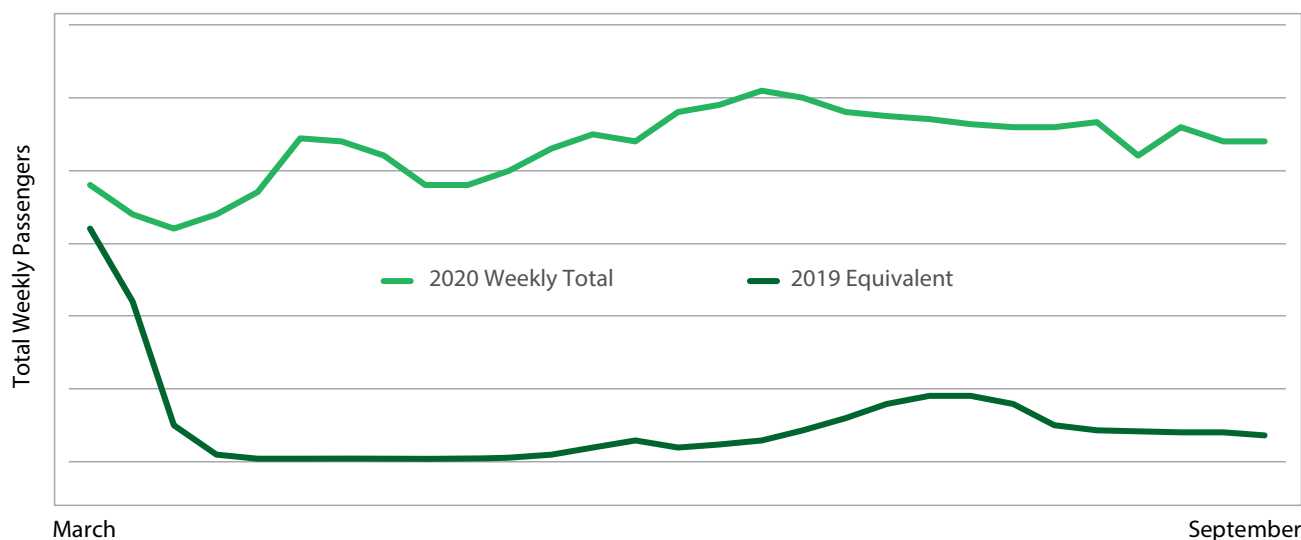
A record 21 million passengers travelled via the Channel Tunnel in 2019 divided into:

- 11 million passengers carried by Eurostar (the high-speed rail operator); and
- 10.3 million passengers carried via Eurotunnel passenger shuttles (i.e. travelled with a passenger vehicle).

This followed a challenging period in the mid-2010s that saw external shocks to international travel (e.g. terrorist attacks, migrant crisis etc) impacting passenger numbers.

In general, there has been record growth in the domestic and international rail services over the last 25 years. However, since the emergence of COVID-19, passenger numbers have declined by as much as 99 per cent as passenger journeys remain suppressed. Surveys show that there has also been a shift in passenger priorities that now include cleanliness and the behaviour of other travellers including whether they are using face coverings and observing social distancing.

For most of 2020, passenger numbers have been significantly lower than 2019 levels due to COVID-19 (figure XII). Passenger numbers fell to nearly zero in the earlier part of the year when countries across Europe introduced restrictions. Patronage then began to recover in May, June and July as restrictions started to ease. The United Kingdom Government introduced travel corridors in July which supported the opening up of travel. However, as transmission rates have increased across Europe, restrictions have once again been introduced, again reducing demand for travel.

Figure XII: Evolution of international High-Speed Rail Weekly Passenger Numbers (2019 vs 2020)

Source: Department for Transport, United Kingdom.

Since the introduction of international, cross-Channel rail services, this form of travel has become an increasingly popular passenger route with the network of direct connections growing rapidly over the last 25 years.

On its busiest days, prior to COVID-19, Eurostar would see between 20,000 and 30,000 passengers per day pass through its London terminus on services to France, Belgium and the Netherlands. International rail has become by far the preferred mode of transport on major city-to-city markets, including London-Paris and London-Brussels, completely reversing the dominance of the aviation market 20 years ago.

As a reaction to the COVID-19 pandemic the United Kingdom Ministers established a Global Travel Taskforce to consider what steps the Government could take, both domestically internationally, to enable the safe and sustainable recovery of international travel. The Taskforce has been tasked with developing a series of recommendations aimed at:

- ensuring that clear public health measures are implemented;
- increasing demand safely; and
- keeping the United Kingdom at the forefront of the development of global standards in this area.

3.1.4 Romania

The closing of the borders and the national lockdowns aiming at controlling the pandemic drastically reduced passengers and freight traffic. Rail passenger operator saw a drop of 70 per cent in passenger numbers, and the physical spacing and the fear of contagion prevents to return to a normal situation.

To reboot the rail sector, the Ministry of Transport is focusing on reshaping the sector to provide connectivity in a safe, sustainable and inclusive way. A series of initiatives have been initiated, such as the acceleration of rail infrastructure projects and the further development of relations with rail operators from the neighbouring countries.

Investments could contribute to the recovery and the development of international passenger rail transport in the Covid-19 context, both in the high-speed as well as in the local and regional rail transport. In addition, intermodal passenger hubs could be developed, through a revision of the European Agreement on Main International Railway Lines (AGC), in consideration of the relevant EU legislation, especially the Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area (SERA) and the Regulation (EC) No 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road.

Unfortunately, the travel restrictions imposed by governments severely have affected international passenger rail transport. The only solution remains the removal of restrictions, or at least, the establishment of a uniform set of rules for passenger traffic, similar to the freight green lanes. Common regulations and guidelines encompassing a uniform set of rules and conditions are needed, elaborated in a coordinated manner at the level of UNECE, EU and international organizations. Therefore, to unblock and revitalize the international passenger rail transport, cooperation and consultations with the public health experts along with the authorities responsible for health, internal and external affairs and emergency situations, are imperative and essential.

3.1.5 Ukraine

One of the main focus areas of policy in relation to the railway market in Ukraine in liberalization as a tool for encouraging the shift to rail. A law on railway transport in Ukraine is currently being drafted that should implement a new market system, similar to that of the EU. It aims to protect passenger rights, ensure safety and enable effective operations on the network. The implementation of the liberalization aspects plan to:

- Open the market, by offering equal access to railway infrastructure;
- Unbundle the railway monopoly;
- Establish specific government bodies responsible for: state policy, safety, control of equal access to infrastructure and tariffs; and
- Establish a new tariff policy in the field of railway transport.

Regarding the implementation of EU acquis, two regulations are currently under discussion with the aim of ensuring appropriate national implementation measures:

- Regulation (EC) No 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road; and
- Regulation (EC) No 1371/2007 of the European Parliament and of the Council of 23 October 2007 on rail passengers' rights.
- Once implemented, these regulations should improve rail passengers information services both before and during the journey, service quality standards and the effectiveness of public service contracts.

3.1.6 Azerbaijan

In 2021, Azerbaijan railways plans to open a new direct passenger route to Turkey (Ankara) as, before the pandemic, there was significant interest in this connection to supplement the already successful rail freight connections between the two countries. For this new service to be successful significant investment has been targeted at upgrading and renewing rolling stock for passenger services. Currently, twenty passenger carriages are dedicated to international passenger services (including to Tbilisi and Ankara).

In 2020, because of the pandemic, the state borders have been closed since March. As a result, since then, all international passenger rail services were cancelled, leading to only 17.4 per cent of the total journeys carried out in 2019 have been carried out in 2020.

3.1.7 Albania

Several projects are planned to support the development of international passenger rail transport. One of these projects regards the Rail R2 link between Tirana and Podgorica⁷ which has a significant cross-border and regional impact. In addition to carrying major in-country rail traffic, the line connects Albania’s domestic network to the regional and European railway network. The project involves a complete overhaul of the entire railway line (120.2 km and 13 railway stations) increasing traffic speed to up to 120 km/h, including the installation of a new signalling system and safety improvements. This will also result in a significant increase of freight traffic entering and exiting Albania via this extension of TEN-T core network, arriving at the port of Durres or going out from Bajza to Tuzi and beyond.

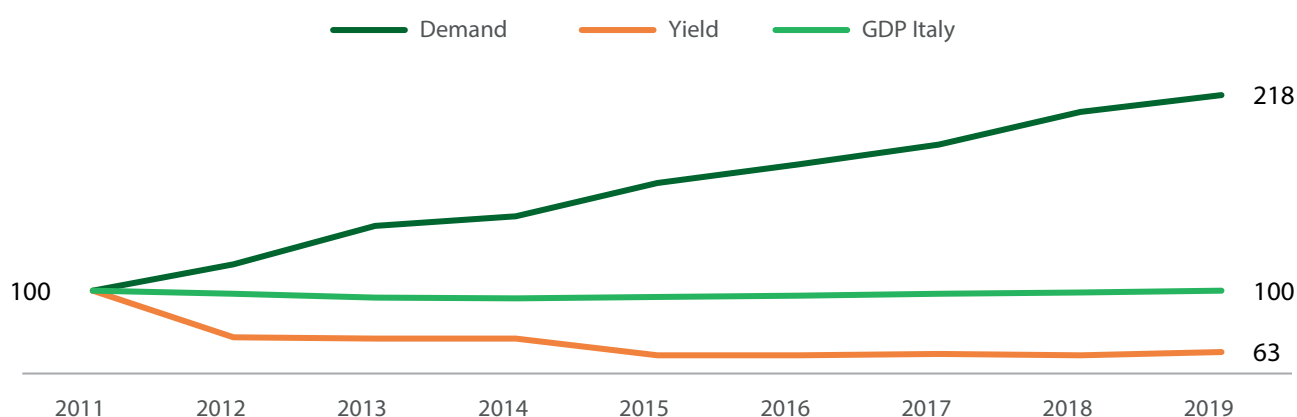
Cross-Border cooperation plans are also in place, based on EU initiatives and involving Italy, Montenegro and Greece, such as the Interreg IPA CBC Italy-Albania-Montenegro Programme⁸ and the Interreg “Greece – Albania” Programme.⁹ These programmes include, among other objectives, the promotion of sustainable cross border connections and increased investment in capacity of cross border infrastructure in transport.

3.2 The international perspective

3.2.1 Situation of high-speed rail in Italy (TRA Consulting)

Between 2011 and 2019, the number of passengers on high-speed railway lines in Italy has more than doubled (figure XIII).

Figure XIII: Evolution of the number of passengers on high-speed railway lines in Italy



Source: TRA Consulting. 2011 base year – 100.

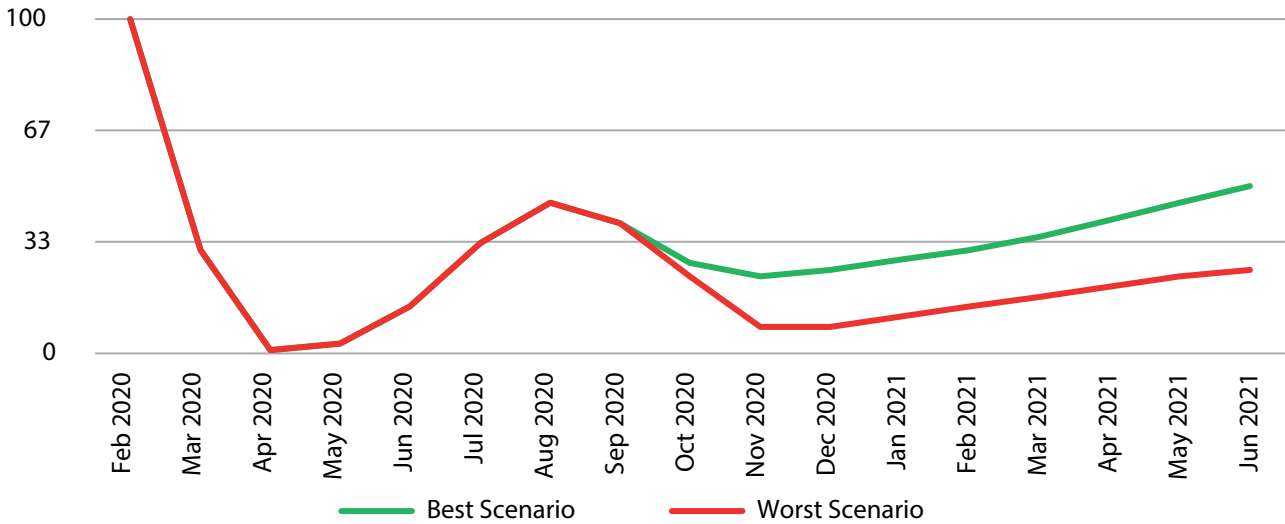
The COVID-19 pandemic has had a strong impact on traffic in 2020. Currently, the change in traffic has followed the worst-case scenario (figure XIV), resulting in significant revenue loss.

7 <https://www.wbif.eu/project/PRJ-ALB-TRA-008>

8 <https://www.italy-albania-montenegro.eu/>

9 <https://greece-albania.eu>

Figure XIV: Traffic forecast for Italy: COVID-19 impact

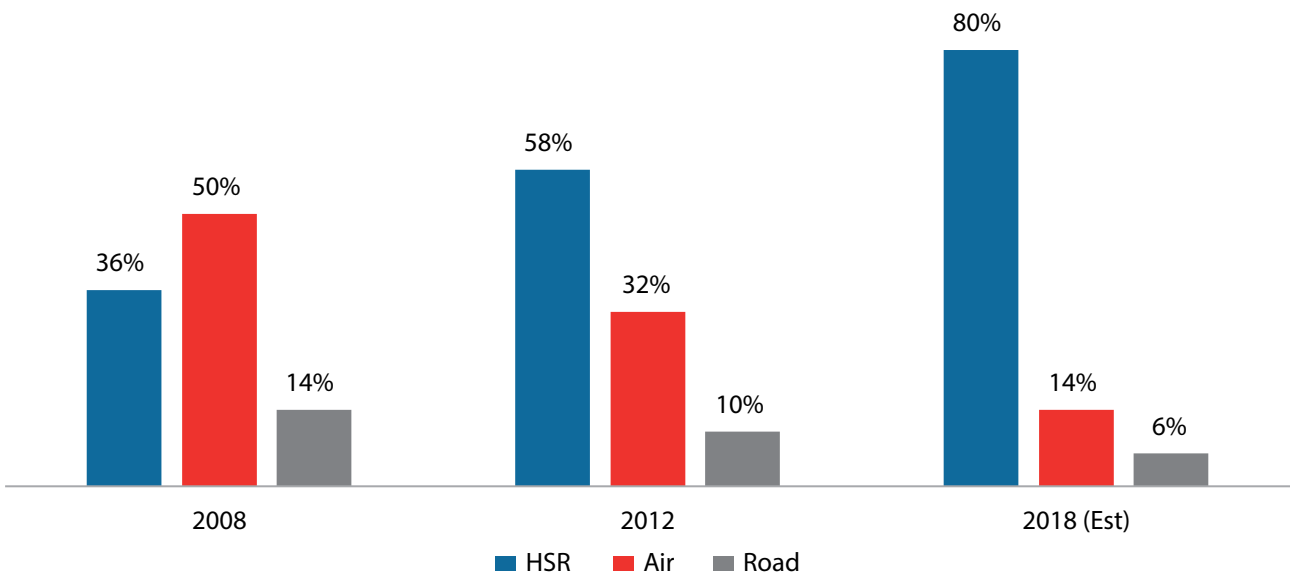


Source : TRA Consulting.

To counter to the COVID-19 impact, the national government has introduced a reduction in access charges to compensate operators for reduced passenger numbers resulting from government decisions limiting rail capacity.

Prior to COVID-19, high-speed rail had become the dominant mode of transport on certain routes in Italy. This is shown in the figure below showing the evolution of the modal share between 2008 and 2018 on the Rome-Milan connection (figure XV).

Figure XV: Rome-Milan modal share



Source : TRA Consulting.

According to TRA Consulting, the reduction of access charge mentioned above could further reduce the costs, but lowering operational expenses is also necessary. Working on services integration (intermodality), revenue management (increase of yield and load factor), productivity of the rolling stock (depending of the network, regulation and contract of maintenance), ancillary revenues and the increase of the services quality are possible paths to achieve this.

3.2.2 The international perspective: Shift2Rail Joint Undertaking

The Shift2Rail Joint Undertaking seeks to contribute to the achievement of the SERA. Its objective is to deliver, through railway research and innovation, the capabilities to bring about the most sustainable, cost-efficient, high-performing, time driven, digital and competitive customer-centred transport mode for Europe.

It focuses on several innovation programmes, including:

- The development of innovative and modular solutions for comfortable and attractive trains and the development of higher-performance technologies for traction and critical structural components, command-control and cabin environment application (traction, train control and monitoring system, car body shell, running gear, brakes, doors and intelligent access systems and train interiors)
- Enhancement of the advanced traffic management and control systems without impacting the ERTMS core with, where possible, backwards compatibility to protect investments both in mainline and urban railways (smart, fail-safe communications and positioning systems; traffic management evolution; automation; moving block and train integrity; smart procurement and testing; virtual coupling and cyber security)
- Analysis of solutions from relevant sectors related to improved information technology, management and exploitation, analysis of best practice solutions adapted to the rail sector and standards (interoperability framework, travel shopping, booking & ticketing, trip-tracker, travel companion, business analytics).

Over the longer term, the European Union, through the Shift2Rail Joint Undertaking is the coordinator and has a supporting role of the implementation of Transforming Projects. The general objectives for 2031 are to deliver integrated European rail networks, multimodality and European rail industry competitiveness. To achieve these objectives, it will be necessary to Design, establish and implement projects on:

- An ETML (European Rail Traffic Management Layer) and European Rail Network Manager;
- The development of a competitive green rail freight fully integrated into the logistic value chain;
- The creation of an accessible and safe Mobility on Demand, to deliver a sustainable and resilient rail system; and
- Bringing to market new land guided transport solutions.

3.2.3 The international perspective: Community of European Railway and Infrastructure Companies

In its outlook for 2020, the Community of European Railway and Infrastructure Companies (CER) foresees a decrease of 30 per cent of turnover from EU passenger traffic (corresponding to a loss of € 17 billion) and a decrease of 17 per cent of turnover for EU freight traffic (corresponding to a €2.5 billion loss).

To grow the international passenger rail transport, the completion of the SERA is necessary. There are four essential items:

- High quality, customer-oriented transport services;
- A level playing field, both externally (across all the transportation modes, but also internally, so that the rail transport market is fair and transparent);
- Cost efficient operations and a lower need for public funding; and
- Market driven innovation.

But infrastructure is the key and it needs investment, not only to facilitate the completion of the TEN-T network and the creation of an operational European high-speed core network, but also to eliminate missing links and transport bottlenecks and ensure appropriate connections to important last mile infrastructure and multimodal connections.

3.3 Trends and opportunities

3.3.1 Joint efforts are necessary at the regional/international level and on border crossing formalities and improve international rail passenger transport

In Bosnia and Herzegovina, to mitigate the impact of COVID-19 on the rail sector, following complete closure of the railways in April and May 2020, epidemiological measures have been introduced to revitalize passenger rail transport. Joint efforts are necessary at all levels, to deploy protocols that define how to manage cases of suspicion of passengers being infected.

A solution to revitalize the railway sector is to develop regional services, with the creation of a regional alliance of passenger transport railway operators (Western Balkan Railways alliance – WBRA) to facilitate cross border activities. In seeking to recover as quickly as possible passenger numbers new technologies relating to ticketing, reservations and customer information need to be introduced. This needs to be supported by continually evolving and updating medical protocols to ensure confidence in rail travel. To obtain good-quality, safe, affordable and environmentally friendly services, enhanced cooperation between operators is necessary, supported by an attractive tariff policy and focus on customer services.

One of the advantages of rail passenger transport, compared to air transport, is that it offers city centre to city centre direct trips and far less cumbersome border and security arrangements at international rail stations. In the United Kingdom, for example, a unique system is in place for processing border controls. There is no border control at arrival when using the cross-border Eurostar services in order to speed up the arrivals process and meet the needs of business travellers and the tourism sector.

There are also plans to merge the two largest international high-speed rail passenger operators: Eurostar and Thalys, which could open-up wider international links for passengers through the Channel Tunnel. In 2019, it was announced that Eurostar and Thalys would merge (“Project Greenspeed”), with the process expected to be completed in 2021. This has the potential to open new international links for United Kingdom rail passengers through either new direct or well-integrated interchanges to, for example, the regions of France, Belgium, the Netherlands and Germany.

Another important development of rail connecting services highlighting positive joint efforts at a regional level is the launch of the direct return London-Amsterdam service, accompanied by improved border crossing arrangements. In 2017, Eurostar launched the first direct London-Amsterdam service, but this service was outbound only to begin with, due to the need for existing agreements between the United Kingdom, France and Belgium signed in 1993, to be modified to include the Netherlands, to facilitate return services. A new treaty concerning Frontier Control arrangements extends the existing model of “juxtaposed border checks” to the Netherlands; whereby passengers are checked, at the point of departure, by border officials from the departure and arrival countries. Another treaty provides for the Netherlands to oversee train security and station security for services operating from the Netherlands to the United Kingdom. These new arrangements have enabled direct services between the two countries to start operating in October 2020, without the need to change trains at Brussels, making it easier for passengers to complete their journey.

Box 1 Example of efforts made to improve services and rolling stock in the Russian Federation

A lot of work has been done to increase the number and volume of passenger transport operations in the Russian Federation. The national passenger railway carrier, the Federal Passenger Company, has seen a 3.7 per cent increase of the number of passengers per year, in 2019. The number of passengers per kilometre and per year also increased by 2.2 per cent. To ensure the attractiveness of the passenger rail transport, efforts have been made to offer modern services, such as Wi-Fi and air conditioning.

This will be supported by further rolling stock by 2025, thanks to the long-term contract for the renewal of carriages signed by the Federal Passenger Company. This contract includes the development of a new concept for sleeping carriages, the transition to innovative rolling stock, the transition to two-car trains, the introduction of air suspension and fixed carriage price indexing order.

The digital sales system is continually being improved. It is a first step in the development of a complex of digital services called "Innovative Mobility" aimed at implementing multimodal transportation.

The Russian Federation cooperates with its partners from Belarus, Poland and Czechia to attract more passengers. Routes have been defined to preserve the connectivity on international journeys. Their frequency has been increased, for example for the Prague-Warsaw-Moscow route as set out in the tables below.

Box table 1: Passenger transportation on the route Moscow – Warsaw – Prague

No. 9/10 MOSCOW – WARSAW "East-West" Tariff (EWT) operation of trains/carriages in 2018	
Traffic frequency	3 times per week
Average carriage number	4 carriages (including 1 Moscow-Brest carriage)
Passengers carried	27.6 thousand people
Capacity usage	57.9%
Journey time	18 hours 33 minutes
Depart Moscow / Warsaw	15 hours 51 minutes / 15 hours 55 minutes
Arrive Warsaw / Moscow	8 hours 24 minutes / 13 hours 11 minutes
No. 21/22 MOSCOW – PRAGUE "Global Price" (GP) operation of trains / carriages in 2018	
Traffic frequency	Once a week
Average carriage number	8 carriages (including 3 Moscow-Brest carriages)
Passengers carried	18.5 thousand people
Capacity usage	60.9%
Journey time	28 hours 27 minutes
Depart Moscow / Warsaw	19 hours 12 minutes / 6 hours 24 minutes
Arrive Prague / Moscow	21 hours 39 minutes / 11 hours 45 minutes

Source: Federal Passenger Company, Russian Federation.

The establishment of a uniform set of rules for international passenger rail transport, like the freight green lanes,¹⁰ could be developed. Establishing such a set of rules is an inter-sectorial issue and could be considered by the transport authorities in close coordination and cooperation with all other relevant authorities. Exchanging good practices between states might also help shaping such a common vision, strategy and set of rules. The amendment of the AGC could also be beneficial to the development of the international passenger rail transport, by including international rail passenger hubs.

¹⁰ https://ec.europa.eu/commission/presscorner/detail/en/ip_20_510.

3.3.2 A focus on sustainability

The Dutch intervention reminded that to get climate neutrality in Europe in 2050, CO₂ emissions in transport have to be reduced by 90 per cent but the transport sector needs to act as one. Developing passenger rail transport on distances up to 800 kilometres and potentially even further, can drive down CO₂ emissions by 2 to 8 million tonnes each year. A ministerial declaration was adopted on the development of international passenger transport by 27 states (all EU member States excluding Cyprus and Malta, but including Norway and Switzerland) and presented 4 June 2020.¹¹ It followed a position paper published by the Dutch ministry in January 2020.¹² The declaration recognises the need to include international rail transport in the greening of transport, the EU Green Deal, and it recognises states have to work together on facilitating this transport. Based on this declaration a Platform of the signing members was set up and work is ongoing on four areas (passenger experience, passenger network, Green Deal/infrastructure, regulatory framework). The platform intends to develop a European agreed agenda on facilitating this important market.

CER, in its intervention, reminded delegates that there are huge expectations from the EU Green Deal. To reach a zero emissions economy by 2050, a low emission mobility, it is essential to involve rail transport: it is the most energy efficient transport mode. However, for this to be effective all transport modes should pay their fair price for the operation of services, covering also their external costs. More generally, to contribute to the promotion of railway services in the framework of the Green Deal, electrification, digitalisation (for example through 5G, ERTMS) and reducing rail freight noise need to be at the centre of common efforts.

On this point, in the United Kingdom, industry analysis suggests that emissions from international rail connections could be up to 90 per cent lower than equivalent air routes.

3.3.3 The development of new services such as integrated ticketing schemes can contribute to make rail passenger transport more competitive and connected with other transport modes

The ability to purchase through-tickets or using other integrated ticketing schemes to enable travel by rail across several networks could unlock further demand. In Ukraine, in the framework of a pilot project on railway stations concession, ticketless solutions are being deployed, offering increased multimodal transport possibilities.

In the European Union, the Shift2Rail initiative works on an integrated research and innovation programme for rail transport, driven by the EU policy, in terms of capacity increase, operation reliability, reduce emissions, energy efficiency, reduction of the life cycle cost and punctuality increase. This initiative focuses also on improving the customer experience by giving priority to international rail ticketing, to offer seamless multimodal travel across Europe. The aim is to work towards a network connecting European capitals, representing the achievement of single market for European rail, but also offering social and economic results, that are especially important to recover from this pandemic period. The goal is not only to look at dedicated or combined services, but to offer a service which is fully integrated to facilitate the movement of people inside and at the EU borders. New services can eliminate the current barriers between EU States but also at the borders of the EU. Shift2Rail is working on vehicles and the operational environment (command control signalling). Two innovative programmes have been developed on the intelligence onboard of the vehicle and on the use of digitalization an automation, covering the moving block, localization with satellite positioning and 5G. All these elements should reduce the barriers between states but also increase the capacity and the performance of the rail system.

Finally, providing a robust framework for passenger rights to be able not only to access modern, integrated ticketing solutions, but also the right to refunds and compensation when things go wrong will also be important factors in passengers' travel preferences and requirements, making the rail transport more attractive.

11 Ministers declaration on international rail passenger transport 4 June 2020: <https://www.permanentrepresentations.nl/permanent-representations/pr-eu-brussels/documents/publications/2020/06/04/political-statement-for-coalition-of-the-willing-development-international-rail-passenger-transport?s=09>.

12 <https://www.tweedekamer.nl/kamerstukken/detail?id=2020D06910&did=2020D06910>.

4. CONCLUSION

International passenger rail transport remains of particular importance in the current pandemic situation. Railway transport still suffers from competitive disadvantages, but with appropriate policies, innovations and investments, these disadvantages can be reduced. Many of the good practices shared during the workshop can be applied throughout the region.

In the UNECE region, several initiatives have been initiated that stimulate cross-border passenger transport, and policies directed at an international level, as a result of joint regional efforts, will hopefully facilitate their implementation.

Innovative passenger services are also crucial for rail transport to compete with the other transport modes. Their integration in a multimodal approach is essential, so that passengers can benefit from a seamless transport network.

The current COVID situation has had a strong negative effect on international passenger transport and rail has also suffered from this, however there is the possibility of grasping the benefits of reduced air travel over the past few months to draw international passenger transport back, but through the rail sector.

The efforts necessary to recover from the COVID-19 pandemic situation and to further develop international passenger rail transport could benefit from the current focus offered by the common interest for a greener transport in the ECE region, the possible advantages of passenger rail transport compared to air transport (for direct city-to-city connections on high-speed rails for example) and the context set by the Resolution No. 264.

Member States, through the activities of the Working Party on Rail Transport of the Inland Transport Committee, can make a considerable contribution to the improvement of international passenger rail transport through the updating of relevant legal instruments under their purview to reflect the growing need of passengers to travel long distances with surface transport.



ANNEX

A.1 Data Sources

Through a common questionnaire with the International Transport Forum and Eurostat, UNECE publishes rail passenger figures (both in terms of passenger numbers and passenger-km) for ECE member States, data for which are broken down between national and international journeys. As an example of data availability, at the time of writing the public database shows total passenger numbers for 37 ECE member States for 2018, while the international passenger breakdown is shown for 34 of these.

In addition to this general source, Eurostat (through its legal acts) also collects a variety of relevant datasets with more specific data. For example, two datasets international passenger numbers from the country, split by destination country, and passenger numbers into the country, split by origin country. Data availability shows around 21 countries with relevant data for 2018. However, the absence of figures for some key European international rail partners like Austria, France, Italy and Netherlands make any analyses of these data less than complete.

The final international data source at the European level considered relevant for this document was another Eurostat table, which has regional data based on the European Nomenclature of Territorial Units for Statistics at level 2 (NUTS 2 regions). The “Tran_r_rapa” table covers both national and international rail passenger loadings and unloadings by NUTS 2 region. This allows a richer analysis of international passengers, travelling between different regions (and thus city pairings can typically be seen, though not in all cases). The dataset is only collected every five years, and so the latest year is 2015, although data availability in this dataset is typically better than the two mentioned above. This is helped by each origin/destination pair being requested from both the origin and destination country, so that data gaps from a single country do not always lead to coverage problems (although this situation leads to its own challenges).

A.2 Regional Data from Eurostat

As mentioned above, the Eurostat “Tran_r_rapa” dataset covers origin and destination of rail passenger journeys between NUTS 2 regions, and the data are only collected every five years. NUTS 2 regions are at the level below countries in the Eurostat nomenclature, and represent “basic regions for the application of regional policies”. In the NUTS 2016 classification,¹³ there are 281 separate NUTS 2 regions to consider.

A.2.1 Process

Using statistical software, 2015 data with non-negative values, and also where the origin country did not equal the destination country, were isolated, yielding 11,444 different data points (out of the more than 60,000 in the original dataset). The data were further filtered by only considering observation pairs with more than 100,000 passengers per year (approximately 273 passengers per day), to make the analysis simpler and the results clearer.

A.2.2 Data Challenges

As each country reports e.g. Paris>London and London>Paris traffic, so each origin/destination combination appears four times. For the purposes of this analysis, it was assumed that the destination country in each case would likely be more accurate, as a country may collect origin information for border security purposes. This still leaves each relevant origin-destination pair with either one or two values, depending if one or both countries have reported data for it. In order to account for these different cases, the mean of the value(s) multiplied by two was used.

A further challenge was what to do when a country has reported passenger numbers only to a country, and not to a specific region. The simplest solution was to adjust each of these manually to run to the country’s capital in lieu of any extra information, but this may of course create some anomalies. For both countries and NUTS 2 regions, their geographical mid-point or “centroid” was taken for their coordinates, and again this has created obvious discrepancies where these mid-points are not close to major cities (for example, one Swiss NUTS 2 region covers both Geneva and Lausanne, but its centroid is relatively far from these two cities).

13 As the latest data year was 2015, NUTS 2013 classifications are used in the dataset. See correspondence data here <https://ec.europa.eu/eurostat/web/nuts/history>.



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The development of international passenger rail transport

International rail passenger transport is of fundamental importance to the movement of people across borders in the ECE region. Its central role was highlighted in Inland Transport Committee Resolution No. 264. The COVID-19 pandemic offers, beyond its negative economic impacts that remain to be recovered from, the opportunity to reconsider the role of rail transport in the ECE region and further promote it in the post-pandemic recovery.

The workshop dedicated to “The development of international passenger rail transport in the context of ITC Resolution No.264”, held during the seventy-fourth session of the Working Party on Rail Transport on the 18 November 2020, provided an overview of the situation of international passenger rail transport in the ECE region and the impact of the COVID-19 pandemic.

It showed that joint efforts are necessary at several levels and in various fields: at the national level where investment in infrastructure and rolling stock, improvement of passenger services are necessary, and at the regional and international level, where border crossing formalities often need to be harmonized and simplified.

In the ECE region, the current focus on sustainability in the transport sector may offer the opportunity to national, international and private stakeholders to participate in the development of international passenger rail transport by giving a special attention to intermodality, with the aim to get a seamless network, more efficient and attractive.

It was agreed that international rail passenger transport needs to be developed further and facilitated by the creation and implementation of appropriate legal instruments at a Pan-European level.

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