



Integrating Danube Region into Smart & Sustainable Multi-modal & Intermodal Transport Chains

## Market analysis for passenger transport (Report)



Synthesis report

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DIONYSUS National Report

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## 4 Abbreviations

Abbreviation	Explanation
<b>IWT</b>	Inland water transport
<b>RCI</b>	river cruise industry
<b>DR</b>	Danube region
<b>IWW</b>	inland waterway
<b>IPT</b>	inland passenger terminal



## 5 Scope of the document

This report identifies and quantifies the potentials for passenger transport on the Middle-Danube which has major touristic potential. Special focus is given to the river cruise market segment. The report is based on secondary sources as well as information being provided by the passenger river transport industry.

## 6 Introduction of passenger transport in the Danube

Based on national reports from Austria, Slovakia, Hungary, Croatia, Serbia, Bulgaria and Romania, in this summary, general and section-specific statuses and challenges are introduced the Middle-Danube has.

Rhein-Main-Danube canal open in 1992, the end of the Yugoslavian war and introducing Schengen brought foreign passengers to the entire Passau-Black Sea route.

Average age group of passengers mostly covers elder people, 65+ year-olds.

The coronavirus pandemic resulted an economic disaster in IWW tourism. Certain companies tried shifting to domestic passengers instead of international tourists.

Slovakia and Hungary operate river ships in the capital areas for commuters as part of public transport.

Port services shall be improved, standardized and functions shall be reconsidered where freight and passenger transport purposes are handled parallelly.

Synergies between ports, pontoons and cities shall be optimized. Their optimal number and locations shall be reconsidered.

Navigable conditions are not equal along the observed section from Austria (250 days/year) till the Romanian delta (Lower-Danube suffers from being far from full capacity).

Since the ride from the Black Forest to the Black Sea takes 15 days, tourists rarely travel along the Danube, rather on the Upper-Danube. Destinations, attractions and further potential touristic sites in Lower-Danube countries lack good marketing and country branding.

## 7 Overview of the current situation

- European shipping on the Danube has been badly affected due to the pandemic.
- Tourism and passenger transport largely came to a virtual standstill 2020.

### 7.1 Passenger traffic

#### 7.1.1 Current situation

##### 7.1.1.1 AUSTRIA

###### *Key findings*

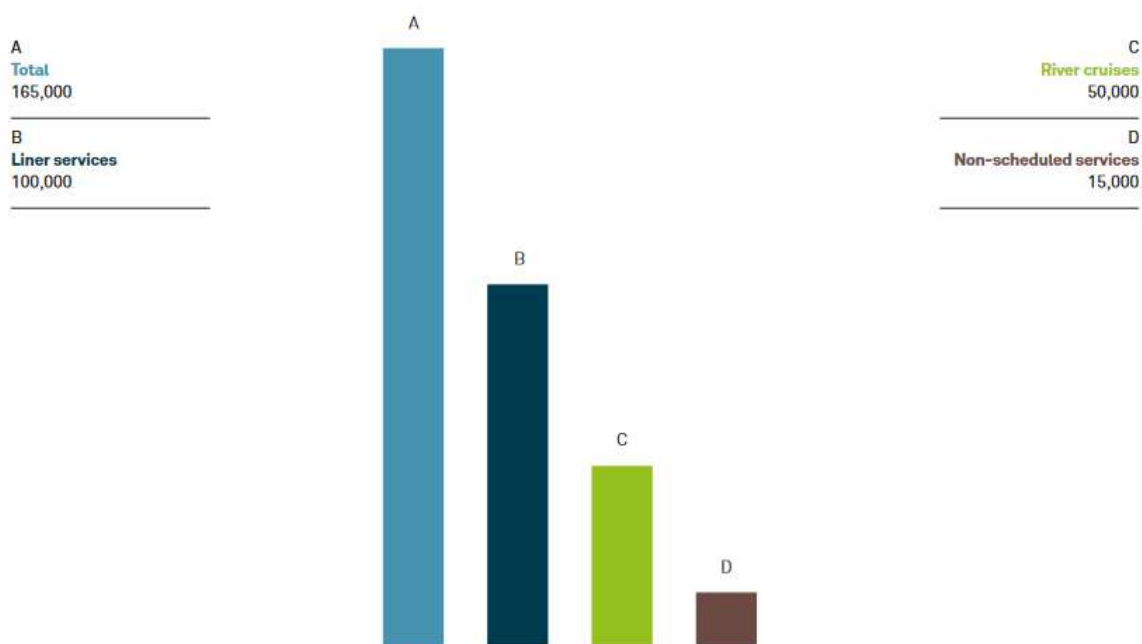
- Overnight stays on the Upper Austrian Danube decreased 50%, whole Austrian section 90% due to pandemic
- Pre-covid era provided excellent career prospects
- Pandemic caused problems in keeping qualified employees
- More intense communication on requirements, measures, general sense of responsibility needed with the society
- Changing demands individual tourism experience served by suitable infrastructure
- Getting used to the pandemic and crisis within the tourism industry
- Online registrations and contactless services will spread
- Environmentally oriented and climate-conscious travel and adventure offers
- Passenger and cabin shipping was completely shut down during the lockdown
- Specific hygiene requirements and distance regulations introduced
- Measures launched to improve the eco-friendliness of European transport system
- IWT contributes to reduce GHG emissions
- "Program for Environment-Friendly Inland Waterways Shipping" was developed and implemented based on international research results and in the implementation of the National Action Plan for Danube Shipping
- Eco-friendly fleet modernization and application of new technologies promoted to companies
- Alternative fuels are planned to introduce to shift from diesel e.g., LNG, hydrogen propulsion; to introduce it internationally is a challenge
- River Information Services (RIS) support both cargo and passenger transport
- Eco-friendly fleet modernization
  - Application-oriented research (e.g., retrofit, new drive technologies such as LNG or hybrid drives).
  - Evaluate land infrastructure needs for alternative fuels.

- Utilize and disseminate research results (e.g., construction of innovative Danube ships, innovation clusters, practical manuals on emission reduction, supporting technologies and training for fuel-efficient driving, participation in the introduction of eco-friendly technologies).
- Participation in the further development of regulations and standards for economic increasing the environmental friendliness of inland navigation (e.g., emission and fuel standards).
- Support modernization investments ("environmentally friendly inland waterway vessel funding program")

*Collapse in passenger transport / 88% drop in passenger numbers*

After the strong growth of the past years, passenger transport recorded a dramatic slump as a direct consequence of the pandemic and the associated strict regulations. Only around 165,000 passengers were carried on the Austrian stretches of the Danube in 2020, which is equivalent to a decline of 88.0% in comparison to 2019. River cruises suffered the most severe drop, carrying only around 50,000 passengers (–90.7% compared to 2019). The number of cabin vessels operating on the Austrian section decreased to 59 (–69.3%) in 2020, of which four were new vessels. In total, they completed 1,007 trips (–83.1%). Ten Danube cruise ships moved their services westwards in 2020. 133 ships were taken out of service due to the pandemic and its repercussions. They were only used occasionally for training or bunker trips.

**1. Figure Passengers on the Austrian Danube 2020**



Source: Annual report viadonau 2020

### *Passengers on the Austrian Danube 2020*

- Liner services carried around 100,000 passengers (–86.5%) in 2020.
- DDSG Blue Danube Schifffahrt GmbH reported a total of 49,300 passengers (–82.3%) on its liner services in the Wachau region and Vienna.
- The two Twin City Liners carried 13,614 passengers (–91.5%) between Vienna and Bratislava
- Fähre Dürnstein GmbH & Co. KG reported 19,036 passengers (–7.8%) on its Danube Taxis in the Wachau region.
- Another 1,679 people (–42.3%) used the services of Donauschifffahrt Ardagger GmbH, travelling on the MS Donaunixe and the MS Maria.
- Non-scheduled services accounted for only around 15,000 passengers (–85.7%) in 2020.
- DDSG Blue Danube Schifffahrt GmbH carried 7,400 passengers (–84.6%) on its themed, special and charter cruises
- 1,624 passengers (+4.6%) took the non-scheduled services of the MS Carnuntum operated by Event-Schifffahrt Haider e.
- U. Donauschifffahrt Ardagger GmbH reported 1,087 passengers (–82.0%)
- 1,072 persons (+17.5%) travelled with Fähre Dürnstein GmbH & Co. KG.

#### **7.1.1.2 BULGARIA**

In 2019 the number of ships that arrived in Bulgarian Danube ports was 10 772, 2 328 of which were sailing under Bulgarian flag. In 2020 the number was slightly lower – 9 618, with 3 800 of them registered in Bulgaria. The majority of these vessels, however, were transporting freight.

As mentioned above, passenger flow in the Bulgarian section of the Danube is entirely dependent on the activities within the river cruise sector. Therefore, data regarding RCI number of passengers and ships on an annual basis will be provided in this chapter.

Over the last five years the development of the river cruise sector in Bulgaria has been following a tendency of stable growth with the numbers of ship visits and tourists rising gradually with every year. The global spread of the COVID-19 pandemic, however, drastically changed that trend. Throughout 2020 there were numerous accidents involving massive spread of the virus among passengers of cruise ships on many locations around the world, which led to authorities imposing prolonged quarantines on vessels and travelers remaining trapped on board for indefinite time. This caused a significant decline in the interest in RCI. Furthermore, at some point governments of all European countries imposed restrictions on traveling which greatly hindered tourist activities. Despite the partial normalization in the health situation throughout Europe, tourism and travelling in general are still conducted in limited volume and with certain technical complications (restrictive measures on border crossing, health protocols etc.).

The table below shows the number of passengers that visited Bulgarian ports on river cruise trips from 2017 to 2020. The data clearly demonstrates the upward trend which occurred prior to the pandemic, and the sharp decline that followed.

**1. Table Passenger traffic in ports (2017-2020)**

Port / Terminal	2017	2018	2019	2020
<b>Vidin</b>	22230	29925	43292	1818
<b>Lom</b>	3510	4788	4247	909
<b>Oryahovo</b>	2860	2793	3699	0
<b>Somovit</b>	0	0	0	0
<b>Nikopol</b>	6214	12369	14796	202
<b>Svishtov</b>	3311	3412	3278	0
<b>Ruse</b>	44109	46524	66723	2013
<b>Tutrakan</b>	3300	7049	8768	0
<b>Silistra</b>	9750	9842	11234	0

Source: Self edited

The tendency for a dramatic decline was also observed in the number of ships visiting Bulgarian Danube ports, as the table below shows.

**2. Table Number of ships in ports (2017-2020)**

Port	2017	2018	2019	2020
<b>Vidin</b>	171	225	316	18
<b>Lom</b>	27	36	31	9
<b>Oryahovo</b>	22	21	27	0
<b>Nikopol</b>	48	93	108	2
<b>Svishtov</b>	62	61	92	0
<b>Ruse</b>	333	352	487	20
<b>Tutrakan</b>	34	53	64	0
<b>Silistra</b>	75	74	82	0

Source: Self edited

There is still no official data on number of ships and passengers that visited Bulgarian ports in 2021. Nevertheless, while conducting our research we discovered that during that year a slight recovery was observed in the RCI activities in Bulgaria and in the Lower Danube section as a whole, in comparison to 2020. The first cruise ship for the year “NESTROY” arrived in Ruse on June 25th. This goes to show that the active season was significantly delayed, compared to previous years, when it used to start in March or April. “NESTROY” sails under the flag of Switzerland. The 9 days cruise started in Vienna and went all the way to the Delta. The first passengers were mainly Austrian citizens. In Ruse they visited the popular local tourist site - the Rock-hewn Churches of Ivanovo. On the way back the visitors took a flight home from Bucharest. The second cruise that visited Ruse this year was conducted by the ship “BOLERO”, which started its journey from Passau, Germany, and was moored at the port of Ruse on June 27th on its way to the Black Sea. The number of cruise ships that visited Ruse up until August 18th was 28, with the overall number of tourists being 2988. Most of the trips were cancelled or rescheduled for 2022.

In a statement to the media Capt. Ivan Zhekov, head of the River Supervision – Ruse Directorate of the Executive Agency Maritime Administration, noted that forecasts at that time predicted the overall number of cruise ships and tourists that visit Ruse to be slightly higher by the end of the season if compared to 2020. Nevertheless, the total volume of RCI activities is expected to remain significantly lower in comparison to the period prior to the pandemic.

By the beginning of July 2021 approximately 300 tourists on five cruise ships have visited Vidin, which is the second most popular Bulgarian city for cruise tourism after Ruse. Most of them were German citizens. They paid a visit to the Belogradchik Rocks, the Magura cave (23 km away from the town of Belogradchik) and to an opera concert held in the town of Belogradchik. All of the visitors had been vaccinated against COVID-19. According to representatives of the Belogradchik municipality a total number of 60 cruise ships was expected to visit the Port of Vidin during 2021 with the average number of tourists on a single ship being around 120.

In Bulgaria there are no government or private entities that collect, analyze, or provide any data whatsoever regarding the number of passenger-kilometers conducted on the Danube River. Therefore, such information is not available to include in the report. The situation is similar considering data about the number of passengers travelling on the Bulgarian section of the river on a monthly basis. Nevertheless, taking into account the fact that passenger traffic in the country is solely composed by cruise activities, it would be an accurate representation to state that the most active period for the movement of people via the river coincides with the river cruise tourist season which roughly lasts from May to October.

### 7.1.1.3 CROATIA

On the Danube, there are four docks: Batina, Aljmaš, Vukovar and Ilok. Batina, Aljmaš and Ilok have floating docks, while Vukovar has the busiest and best equipped port, located on the well-kept bank in the city centre. The dock facilities are located on a converted ship, with a restaurant on its deck and a multimedia hall in the belowdecks used for the reception and customs control of passengers and information about Croatia’s tourism potentials.

The full capacity of the Danube waterway in Croatia has not yet been reached. Cruises on the Danube are a welcome boost to the development of continental tourism, especially in the eastern part of Croatia, which still suffers great consequences of the war aggression.

#### 3. Table Terminal specifications

Port and Terminal Name	Location (km no.)	Terminal capacity	Quay length or No. of simultaneous ships	Statistics (no. of passengers passed on 2017,2018,2019 vs. 2020)	Activity during pandemic [% from normal]
<b>Passenger terminal Vukovar</b>	rkm 1333 + 000 right bank of Danube River	1x berth	75,20m 1x steel floating facility and 3x vessels	Avg. 36,082 Vs. 706	1.95%
<b>Passenger terminal Ilok</b>	rkm 1298 + 680 right bank of the Danube	1x berth	57,22m 1x steel floating facility and 2x vessels	Avg. 7,577 Vs. 0	0%
<b>Passenger terminal Batina</b>	rkm 1425 + 500 right bank of the Danube	1x berth	14,53m 1x steel floating facility and 1x vessel	Avg. 5,380 Vs. 600	11%
<b>Passenger terminal Aljmaš</b>	rkm 1380 + 200 right bank of the Danube	1x berth	14,53m 1x steel floating facility and 1x vessel	Avg. 5,794 Vs. 0	0%

Source: Self edited

### 7.1.1.4 HUNGARY

On Hungarian IWW currently there are mostly holiday and tourist travel, while commuting is only in a small extent. Inland passenger transport sector realized a million increase in number of passengers in the turn of the millennium, then between 2001 and 2005, traffic decreased to a third. According to KSH (Központi Statisztikai Hivatal – Hungarian Central Statistical Office) the share of waterborne passenger transport is very low compared to other modes.

As can be seen in the table below, the number of passengers and passenger-km did not change in the previous years. Certainly, the coronavirus pandemic caused a significant decrease in 2020. Otherwise, Q3 was the busiest period in 2017, 2018, 2019 and in 2020 as well.



**4. Table Number of passengers, passenger-km on the Danube, 2017-2020**

Period	Number of passengers carried, thousand	Passenger-km, million
<b>2017.</b>		
I.	31	0
II.	182	4
III.	456	6
IV.	12	0
<b>Total</b>	681	10
<b>2018.</b>		
I.	7	0
II.	181	3
III.	476	6
IV.	20	0
<b>Total</b>	684	9
<b>2019.</b>		
I.	12	0
II.	176	2
III.	472	6
IV.	24	0
<b>Total</b>	684	8
<b>2020.</b>		
I.	11	0
II.	46	0
III.	476	5
IV.	23	0
<b>Total</b>	556	5

Source: KSH

### 7.1.1.5 ROMANIA

#### Key findings

- Number of passengers transported on IWW decreased since 2015 on national level. An increase with 17% was registered in 2020 compared to 2019.
- Passenger-kilometer decreased year by year as well
- Compared to other modes, inland passenger transport is quite small, under 0.05%

The passenger traffic on national level is presented below.

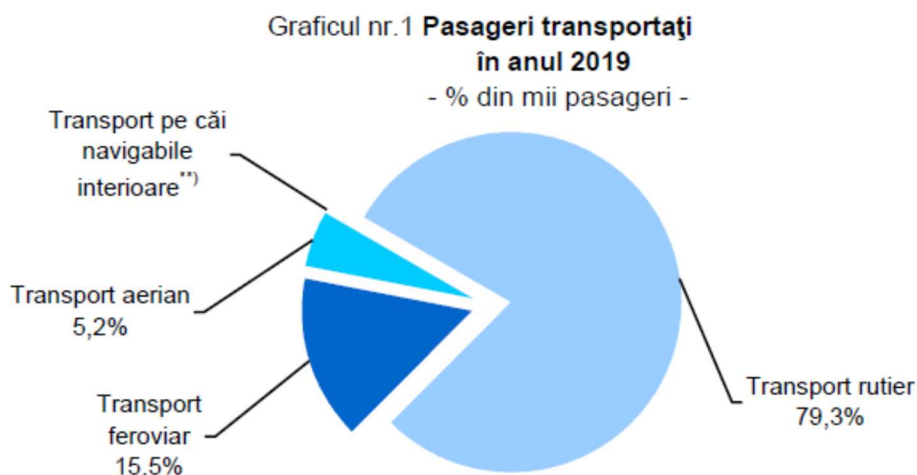
**5. Table Passenger traffic in Romania (2015-2020)**

Year	Passengers, thousand	Passenger-km, thousand
<b>2015</b>	169	9250
<b>2016</b>	153	7650
<b>2017</b>	153	7650
<b>2018</b>	120	6000
<b>2019</b>	111	5572
<b>2020</b>	134	6699

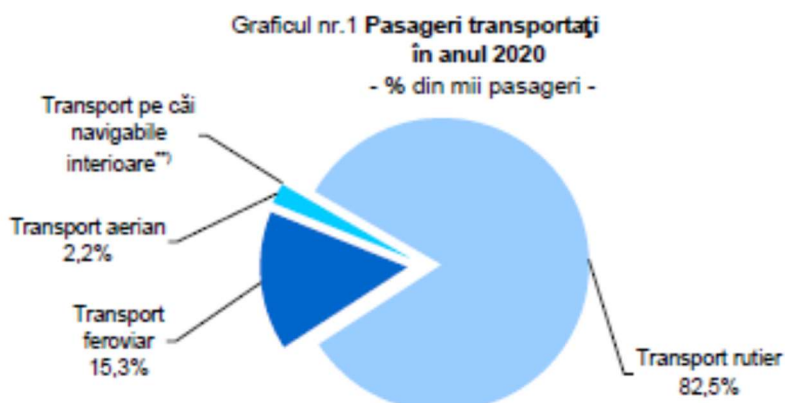
Source: Self edited

The statistics presented shows that the number of passengers transported on inland waterways decreased since 2015 on national level. An increase with 17% was registered in 2020 compared with 2019.

## 2. Figure Passenger transport in Romania (2019)



## 3. Figure Passenger transport in Romania (2020)



Compared with other modes of transport, the transport of passengers on inland waterway in Romania is quite small, under 0.05%.

### 7.1.1.6 SERBIA

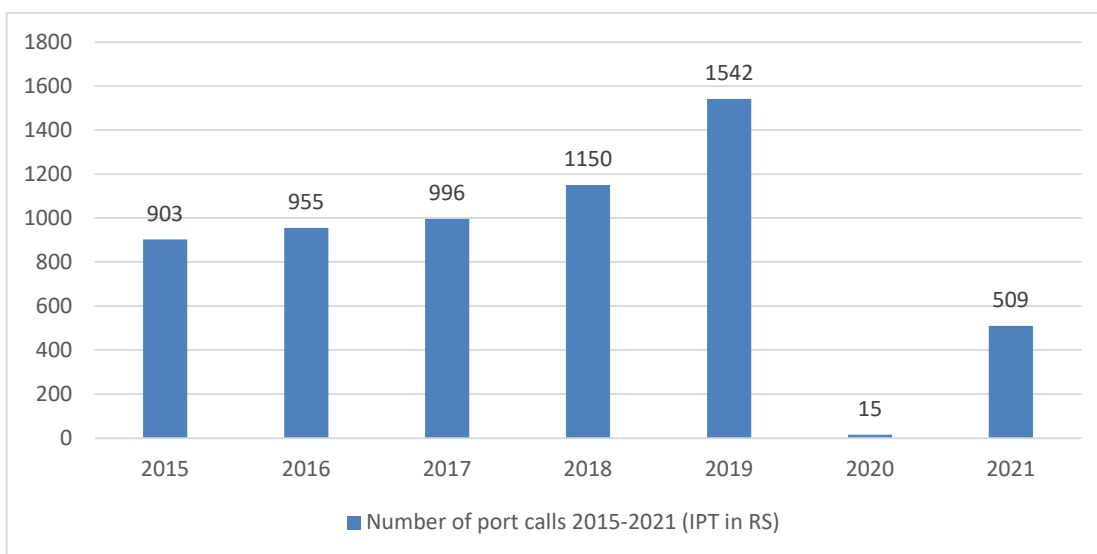
Today, six passenger terminals are in use for RCI in the Republic of Serbia: Belgrade, Novi Sad, Donji Milanovac, Golubac, Smederevo and Kladovo. Nautical seasons in the Republic of Serbia recorded stable and significant trend of growth, until 2020 and closure of cruising due to pandemic. Since 2015, when PGA has established the analytics in cargo and passenger traffic, the number of port calls and passengers has been increasing until 2020. Last year, a slight improvement has been noticed.

When it comes to 2022, by the date of finishing this national report the nautical season in RS haven't started yet.

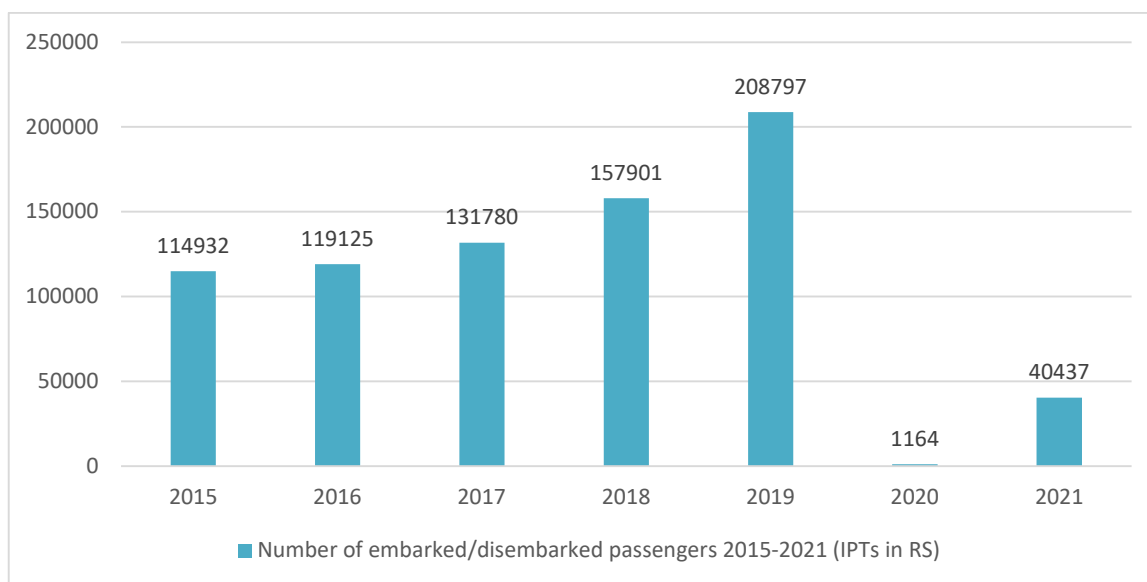
It is important to note that results achieved in 2019 were envisaged for the period until 2025 in the Strategy on waterborne transport development of the Republic of Serbia.

Statistics of number of port calls and embarked/disembarked passengers for the period 2015 – 2025 is given in figures below.<sup>1</sup>

**4. Figure Number of port calls on IPT in Serbia (2015-2021)**



**5. Figure Number of embarked/disembarked passengers in Serbia (2015-2021)**



<sup>1</sup> In 2015 Agency introduced a web-based platform for reporting and invoicing of port dues (PEP). Based on this platform PGA has relevant and accurate data on volume of passenger traffic. The data is shown in mentioned figures.

### 7.1.1.7 SLOVAKIA

#### Key findings

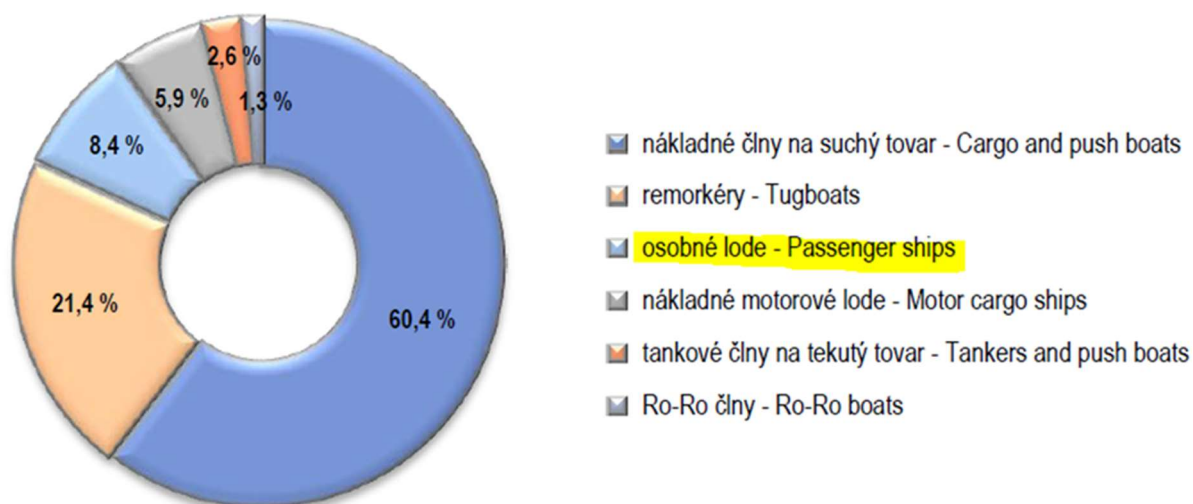
- Distance travelled has been growing
- Number of landings in Slovak passenger ports between 2015-2019 decreased
- Number of passengers transported in Slovak ports between 2015-2019 increased
- Slow growth due to outdated port infrastructure and limited waterfront infrastructure
- Old town port needs to be strengthened by an additional location of a second port to expand capacities

The pre-COVID 19 operating activity in the passenger port was characterized by an increase in the number of passengers handled. The reason for the slow growth is the outdated port infrastructure, but also the limited waterfront infrastructure (access to ships, parking lots, platforms). The capacity parameters in the passenger port, which is located on the free flow of the Danube River (port of Bratislava), are limited mainly by the fairway. The capacity of the Old Town port as well as the related waterfront infrastructure appears to be exhausted, and it is necessary to look for an additional location to strengthen the activities of passenger shipping.

**6. Table Passenger ships registered in Slovakia**

Year	Number of passenger ships
<b>2015</b>	16
<b>2016</b>	14
<b>2017</b>	12
<b>2018</b>	14
<b>2019</b>	13
<b>2020</b>	statistics not yet available
<b>2021</b>	statistics not yet available

## 6. Figure Structure of ships in 2019

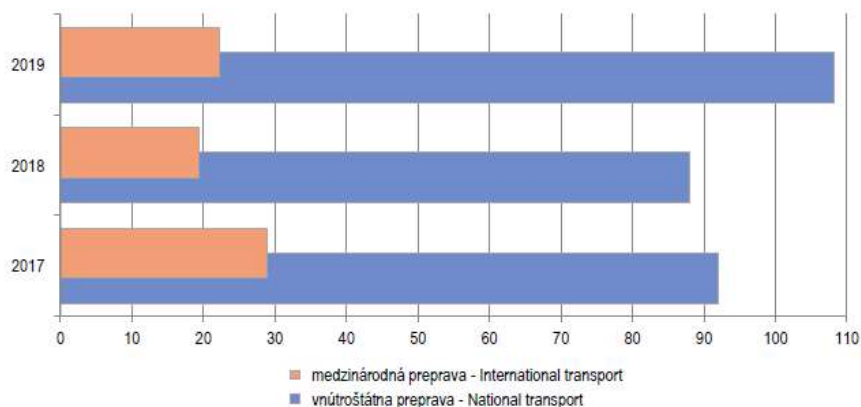


## 7. Table Selected indicators of passenger transport - national level

	Transported passengers (thous.)	Performances (mill. pass. -km)	Average worked distance (km)
<b>2015</b>	132,2	13	26,7
<b>2016</b>	135,7	8,2	26,4
<b>2017</b>	115,6	8,7	75,3
<b>2018</b>	101,9	7,4	72,6
<b>2019</b>	123,4	6,2	50,2
<b>2020</b>	statistics not yet available		
<b>2021</b>	statistics not yet available		

Source: Statistical Office of the Slovak Republic

### 7. Figure Structure of Transport of passengers (thousand) – national level



Source: Statistical Office of the Slovak Republic

### 8. Table Number of landings in Slovak passenger ports (2015-2021)

Months	2015	2016	2017	2018	2019	2020	2021
<b>January</b>	106	12	13	19	22	26	0
<b>February</b>	88	1	5	6	5	14	0
<b>March</b>	126	44	38	62	60	8	0
<b>April</b>	327	233	265	316	297	4	0
<b>May</b>	457	379	406	465	429	4	42
<b>June</b>	502	441	458	494	438	38	89
<b>July</b>	539	443	438	488	474	192	190
<b>August</b>	492	442	428	362	470	276	302
<b>September</b>	450	447	436	435	452	203	302
<b>October</b>	455	361	379	247	414	25	234
<b>November</b>	175	86	90	93	163	2	57
<b>December</b>	92	83	107	122	143	2	33
<b>Total</b>	<b>3 809</b>	<b>2 972</b>	<b>3 063</b>	<b>3 109</b>	<b>3 367</b>	<b>794</b>	<b>1 249</b>

Source: VPAS

**9. Table Number of passengers transported in Slovak passenger ports (2015-2021)**

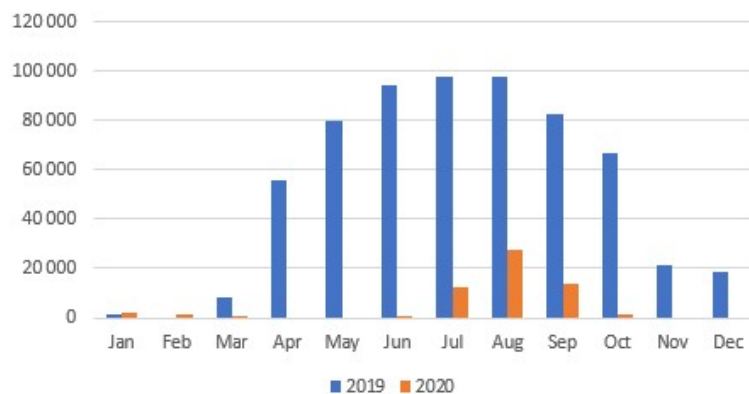
Month / Year	2015	2016	2017	2018	2019	2020	2021
<b>January</b>	1 248	1 106	970	1 225	1 594	2 060	0
<b>February</b>	0	0	0	0	0	1 102	0
<b>March</b>	4 431	6 424	4 684	7 313	8 058	358	0
<b>April</b>	36 197	33 283	41 876	50 330	57 120	0	0
<b>May</b>	68 203	65 361	65 462	83 388	83 199	0	400
<b>June</b>	82 432	75 728	78 518	93 005	96 724	877	6 649
<b>July</b>	86 276	80 246	84 851	95 438	100 518	12 473	17 513
<b>August</b>	88 184	80 449	88 729	80 175	101 464	28 938	30 569
<b>September</b>	68 713	75 192	76 146	77 457	86 481	19 069	30 457
<b>October</b>	55 866	54 188	57 248	42 226	70 861	1 464	23 425
<b>November</b>	9 194	10 136	11 091	11 250	21 339	0	4 907
<b>December</b>	10 582	9 862	13 564	16 210	20 081	0	3 068
<b>Total</b>	511 326	491 975	523 139	558 017	647 439	66 341	116 988

Source: VPAS

COVID 19 pandemics has significantly struck the industry and VPAS identified 80% decrease in number of passenger vessels landings and 90% decrease in transported passengers.



## 8. Figure Passenger throughput in the public passenger ports (total)



Source: VPAS

### 7.1.2 Forecast, predicted trends

#### 7.1.2.1 AUSTRIA

*Forecast – predicted Trends for River Cruises*

- Considering the need for innovation regarding infrastructure, fleet modernization and education and training in the European research agenda
- Digitization via the implementation of intelligent transport systems (ITS) contributes to safety and eco-friendly performance
- By 2025 most ships, systems and components shall be connected to the Internet
- Hybrid systems e.g., energy efficiency and eco-friendly fuels predicted
- Further development and implementation of RIS by EU countries
- Booming shipbuilding for cruises and the Danube region
- Due to ongoing travel restrictions, passengers are expected to be out overseas

Tour operators have adjusted their offers to include more national routes

Operation of cruise shipping depends on the pandemic situation. Scenarios:

- 1) complete lifting of quarantine in all countries
- 2) easing or maintaining quarantine measures only in some countries
- 3) maintaining restrictions on passenger transport

*Transport policy framework in Austria*

- Federal Ministry for Transport, 2015: Action Program for the Danube 2022 aims ecology and flood protection in addition to navigation itself
  - waterway infrastructure, lock operations, provision of user information (RIS), transport development, fleet modernization and knowledge management

- Scheduled to run until 2022, several projects and initiatives contribute to achieving these objectives or have already been implemented successfully

### *Tourism in Austria*

#### *Structure*

The starting point in Austria is excellent: idyllic nature, clean water, high security, diverse cultural attractions - this is the unique combination that makes Austria attractive to guests from all over the world. More than 40 million guests from Germany and abroad come every year (before Corona). That is five times as many as our country itself has inhabitants. An impressive achievement. Austria not only scores with security, but also with the high quality, a very good price-performance ratio and the internationally appreciated hospitality.

#### *Trends*

Even if tourism is one of the growth sectors worldwide, the environment is becoming more and more challenging: growing international competition, social and technical upheavals. The digital transformation of our society is changing our daily lives and does not stop at the tourism industry. The tourism industry must therefore increasingly position itself digitally in order to acquire, retain and entertain customers. It will be crucial for tourism providers to gain access to the right data and to use it in a targeted manner, to offer guests a sophisticated digital infrastructure and to optimize sales, communication and marketing accordingly. The "customer journey" along the value chain moves into the center of action. What counts in the future is providing the right person with the right message at the right time via the right channel. And that in real time.

#### *Future*

The UNWTO expects that the number of tourists will reach 1.8 billion travelers in 2030 - despite the global slump due to Corona. Mature markets like Austria will continue to grow, but emerging markets will catch up and show higher growth, thereby expanding their global market shares. Europe is and will remain the most popular travel region worldwide, although the strongest growth is in Asia. Short breaks and spontaneous trips will have higher market shares in the future. Security is a key element.

#### *National funding schemes*

In addition to the strategic and legal framework, Austria is also initiating funding pools for specific topics at national level that are designed to complement the European funding programmes to drive the development of inland navigation in Austria. The current Austrian funding schemes are accessible in the European funding database for inland navigation.

### *Legal framework for inland navigation in Austria*

The legal provisions for inland navigation in Austria are defined by European regulations and their transposition into national law on the one hand and by the specific national legislation on the other.

The strategic planning, control and monitoring of the administration of federal waterways rests with the Federal Ministry for Transport, Innovation and Technology itself.

By law, all measures carried out on expanses of water must be implemented with the greatest possible care for the environment. Waterways must be planned, constructed and maintained in such a way that they can be used safely by all stakeholders with due consideration of and according to all laws pertaining to navigation.

### *Navigation Act (Federal Law Gazette I 62/1997)*

The Navigation Act sets out the framework for navigation on Austrian waters and contains regulations concerning waterways, shipping facilities, commercial navigation laws, ship authorisation, ship command and schools for skippers.

## **7.1.2.2 BULGARIA**

The course for the development of passenger transport in the Bulgarian section of the Danube River throughout the next decade will be shaped by the influence of factors which could differ in scale, duration, or area of impact. They could be classified into two main groups – global and local/national factors.

On a global scale the development of passenger traffic in Bulgaria will mostly depend on the main tendencies within international RCI. During the last several years, prior to the COVID-19 pandemic outbreak, there has been an overall increase in the popularity of river cruise tourism around the world and particularly in Europe. It is very probable that this trend will slowly but steadily recover. From an economic perspective it has been registered that the profile of the social groups that are most engaged in cruise tourism is gradually shifting from higher income tourists to representatives of the middle class. This trend has the potential to significantly boost the numbers of passengers. In the field of politics, the development of the RCI will mostly depend on the progress in some of EU's strategic policies, including integration among member states, free movement of goods and people, development of the common European market, enhancement of transnational connectivity etc. In this regard too there is great probability that the dynamic will remain positive. A possible risk factor in this area could be potential events of destabilization in areas external to the EU, which could lead to higher migrant flows and tighter border control within the union. The health situation should also be taken into consideration. Despite the fact that to some extent most governments have already established procedures and protocols to contain the

pandemic, the negative impact of the COVID-19 situation on tourism and transnational movement in general is still significant.

On a national level the most important factor will be potential plans for investments in infrastructure modernisation and development, including programmes that benefit from European funds. This could be achieved through the implementation of projects for the improvement of river port facilities, and the road and railroad networks in the Danube region as a whole. Such incentives would be greatly beneficial both for the quality of service in the areas of ports and for the tourist activities further inland. Some soft measures such as promotion of tourist attractions and creation of customer service infrastructure could also have positive impact. Generally, from a financial perspective the sector is very dependent on state incentives since the potential for own investments is scarce. Further, the dominant share of passengers on river ships in Bulgaria in the future will remain that of foreigners as the country's demographic potential is too modest to cause any significant change even if some spike of interest towards RCI is to occur.

In terms of particular ongoing and planned projects for the development of river transportation there are several main strategies and programmes that have major impact on the sector. The document that is directly dedicated to water transport is the Strategy for development of maritime and river transport and ports of the Republic of Bulgaria. This programme however has a horizon until 2015 and has not been updated further. Thus, currently there is no programme solely focused on the development of the waterway transport in Bulgaria, which is a huge gap in the country' set of strategic documents in the sector.

The main strategies in the field of transportation in general are the Integrated Transport Strategy for the period until 2030 and the Transport Connectivity programme 2021 – 2027. They give a comprehensive overlook of the whole transport sector and the state's vision for its development through implementation of investment projects, and therefore have direct impact on ports. Some of the projects envision modernisation of infrastructure, improvement of navigation conditions and quality of fairway as well as increasing the role of digitalisation for better monitoring of traffic and quality of services.

Another document with potentially significant influence on port activities is the National Plan for the Development of Combined Transport in the Republic of Bulgaria for the period until 2030. However, currently the plan is in the phase of preparation and there are no draft versions available, which makes it impossible to assess its potential impact on the sector. Additional programmes in the transportation field are the Strategy of sustainable tourism development in Bulgaria 2014 – 2030, and the Connecting Europe Facility. Other strategies that are not explicitly focused on transport but do have potential to benefit this area of activities are the National Recovery and

Resilience Plan, the Interreg VI-A Romania-Bulgaria Programme, and the Operational Programme Development of the Regions 2021-2027, which all envision investments in port development.

All the above-mentioned documents however are mostly focused on measures in support of freight transportation (mainly infrastructure modernisation projects) and include little to no incentives for the development of river cruise industry, which is the main drive behind passenger flow volumes in the Bulgarian section of the river. Thus, it could be stated that national policies considering the enhancement of the movement of people on the Danube provide little potential for rapid growth.

In regard to this chapter of the report, it could be concluded that it is most probable that the future course for the development of passenger transport in the Bulgarian section of the Danube River will be moderately positive, with numbers of visitors and ships in the country’s ports steadily increasing with each year. Nevertheless, developing a precise forecast with a significant degree of certainty and a horizon until 2030 is in reality very challenging, considering all the above mentioned global and local factors that influence the sector. In the Integrated Transport Strategy for the period until 2030 a prediction of future development is provided, which could partially demonstrate the scale of the expected positive trend. The forecast in the strategic document presumes that if the intensity of national politics in regard to RCI remains as it is currently, the number of passengers visiting Bulgarian ports would grow by 5% annually for the next 10 years, after which the increase would drop to 1% per year. The data from the projection is provided in the table below.

**10. Table Forecast for the development of river cruises (passengers)**

	2009	2014	2020	2027	2034	2044	2047	2050
<b>Ruse/Svishtov</b>	9 244	8624	11557	13964	16012	17853	18378	18553
<b>Vidin/Lom</b>	16393	17213	23067	26723	29504	34237	35983	3593
<b>Total</b>	25637	258837	34624	40669	45516	52090	54361	54536

### 7.1.2.3 CROATIA

The following investments in ports are planned in the area under the jurisdiction of the Vukovar Port Authority:

- Expansion of the existing port for passenger ships in Vukovar

In the next ten years, it is planned to invest in the expansion of the existing port for passenger ships in Vukovar. This project envisages the formation of a berth for mooring passenger ships in parallel with the existing coastal fortification. There is no permanent

mooring of vessels at the passenger port, only transshipment of passengers. This project does not envisage construction works, nor obtaining a building permit, since the pontoon and all its equipment are not subject to the Construction Act.

The project of expanding the passenger port is closely related to the project of Hrvatske vode "Regulation of the right bank of the Danube from rkm 1333 + 000 to rkm 1331 + 000 and urban planning of the city of Vukovar". The project "Regulation of the right bank of the Danube from rkm 1333 + 000 to rkm 1331 + 000 and urban planning of the city of Vukovar" designed mooring elements at the location of the existing port and downstream for an additional three berths, while the project of passenger port extension refers only to floating facility design. and its accommodation in space. For the project of regulation of the right bank of the Danube, Hrvatske vode has obtained a building permit, and the beginning of the works is expected. The implementation of the passenger port expansion project is planned in four phases. The first phase is planned at the location of the existing passenger port, while the remaining three phases, which include the construction of three additional berths downstream, are planned after the project "Regulation of the right bank of the Danube from rkm 1333 + 000 to rkm 1331 + 000 and urban planning of Vukovar". Also, as part of the Croatian Waters project downstream from the pier, it is planned to build a protective breakwater on the site of the existing communal port "Marina". With the construction of the breakwater, the formation of a protected port area for accommodating boats is achieved, and it is necessary to relocate the existing municipal port, i.e., to fit it into the newly created waters of the municipal port "Marina".

Given the upward trends in the market for cruise services, there is a growing need to provide services that do not directly mean just mooring vessels for the purpose of disembarking and embarking passengers (for example, vessel maintenance services). Such services will be possible to provide only in ports that will be defined by the legislative framework and purposes that will be different from those that have passenger ports, and in which it will be possible to perform small-scale maintenance on river cruisers or other vessels. Also, the expansion of services would further increase the opportunity for profiling the passenger port of Vukovar (and / or other ports on the Danube) to obtain the status of a starting port for river cruisers (so-called homeport). There are prerequisites for the port of departure in terms of general transport connections and close proximity to Klis Airport.

- Construction of a new passenger port Vučedol within the project "Archaeological Park Vučedol"

The construction of the new passenger port Vučedol is planned on the right bank of the river Danube at rkm 1328 + 000, directly in front of the Museum of Vučedol Culture. It is necessary to ensure a simple and safe berth and the entry and departure of tourist and excursion boats without the possibility of a permanent berth. The formation of a

pontoon pier measuring 12x4 m in parallel with the existing coastal fortification is planned. Project-technical documentation for the construction of the port of Vučedol was prepared in 2019. The construction of the pier is part of the strategic project "Archaeological Park Vučedol", so the project for the construction of the pier has already secured funds from the Operational Program Competitiveness and Cohesion 2014-2020.

- Construction of a communal and passenger port on the Island of Sports in Vukovar

The project of building a communal and passenger port on the Island of Sports in Vukovar continues with the project of Hrvatske vode "Arrangement and flood protection of the Island of Sports in Vukovar" which carried out construction work on the arrangement of the coastal fortification. The old confluence of the river Vuka and the Danube has been converted into a port for mooring boats. Today, the port is in function for mooring vessels, but it does not have the necessary facilities for mooring vessels, so they are moored on improvised berths. Three separate pontoons will be built for the communal port, on which a berth for 80 vessels will be provided. A pontoon will be set up for the passenger port to accommodate smaller ships. In addition to mooring smaller boats, the pontoon will also be used to moor boats and yachts. The new location of the passenger pier is located in the north-eastern part of the waters of the port of the Island of Sports.

- Construction of a passenger dock in Ilok

According to medium term plans by the port authority, financial resources are already envisaged for the upcoming year regarding the preparation of documentation for the construction of the dock in port of Ilok. The docking infrastructure has to be upgraded due to wear and tear over the past years.

- Construction of a communal port in Batina

In the next ten-year period, it is planned to implement the project of building a communal port on the right bank of the Danube River from rkm 1425 + 400 to rkm 1425 + 300, downstream from the existing passenger port in the settlement of Batina. The municipal port would provide new berths for a minimum of 40 boats and vessels for sports and leisure up to 6 m in length, and 10 berths for boats and vessels up to 10 m in length. Documentation for the needs of the technical supervisory body responsible for supervising the construction of the floating facility. In addition to the project-technical documentation, the project also envisages the construction of a pontoon marina and its installation on the location and execution of construction works.

#### **7.1.2.4 HUNGARY**

##### *Shore power connections*

Since some ports have shore power connection, shipping becomes more and more eco-friendly. Austrian ports e.g., Passau and Regensburg implemented improvement

on this field. Experiences show it is a more expensive technology than vessels using their generator. RCI needs green port solutions, but it shall be provided in a competitive price for the companies.

#### *Green Award*

The independent and international Foundation, Green Award provides certification among others for inland ships going beyond the industry standards in terms of safety, quality and environmental performance. The Green Award has three certificate levels: bronze, silver and gold, plus a platinum label to stimulate further innovations. More and more attention is given to the following aspects through evaluation:

- new energy-saving technology
- cleaner engines
- safety
- engines and additional requirements (emission requirements)

#### **7.1.2.5 ROMANIA**

- forecasts till 2030 not identified
- passenger transport on IWW decreased compared to other modes

#### **7.1.2.6 SERBIA**

##### *Key findings*

- new docks and pontoons in Zemun, Kostolac (Viminacium), Veliko Gradiste (Ram), Apatin, Sremski Karlovci, Banostor financed by the Ministry of tourism
- concept for Belgrade to become the regional centre of RCI: starting/ending point for cruise trips through Serbia, Bulgaria and Romania with a Romanian destination: Tulcea
- increase in number of tourists expected

#### ***Ongoing and planned projects***

##### *IPT in Zemun*

Government of the Republic of Serbia has declared the port area in 2014. Municipality prepared technical documentation, while PGA has obtained construction permit in 2018. Jointly financed by Ministry of tourism, PGA and Municipality of Zemun, works were finalized in 2020. In the meantime, PGA has completed the process of port operator selection. **IPT in Zemun will be ready to welcome first cruises in nautical season 2022.**



### 9. Figure IPT in Zemun



#### *Kostolac (Viminacium)*

Archaeological site Viminacium is one of main tourist attractions along the Serbian stretch of the Danube. Therefore, Ministry of tourism financed the procurement and reconstruction of the 70 meters long barge into the passenger dock. In the meantime, local authorities worked on the spatial planning documentation and prepared part of the necessary technical documentation.

In 2021, the Government of Serbia, upon the initiative of PGA, declared port area in Kostolac, on the right bank of the river Danube at approximate rkm 1095. PGA has invested into works on dock positioning with steel pilings as well as additional works on the equipment of the IPT in 2021. Also, the port operator was elected in 2021 and **IPT is going to be ready for the opening in the nautical season 2022.**

### 10. Figure IPT in Kostolac

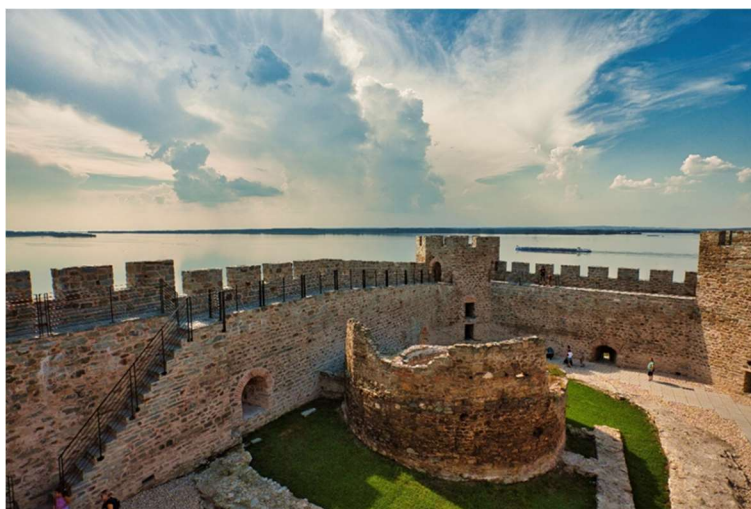


### *Veliko Gradiste (Ram)*

Along with its reconstruction, Ministry of tourism has financed procurement of the 70 meters long barge adapted to the passenger dock. In 2019 Government has determined port area along the right bank of the river Danube at approximate rkm 1078.

PGA is financing infrastructure works on dock positioning with steel pilings as well as additional works on the equipment of the IPT. In parallel, PGA will perform the procedure for the selection of port operator. **It is expected that IPT in Veliko Gradište (Ram) will be ready for the season 2023.**

#### **11. Figure Ram Fortress**



### *Apatin*

Project started some time ago when local authorities attempted to build a IPT facility with floating concrete dock. Unfortunately, due to the heavy nautical and weather conditions the structure was hit and submerged by the floating ice. This proved that concrete dock is not appropriate solution for given conditions.

In 2020 PGA has prepared part of the technical documentation necessary for the determination of the port area at the left bank of the river Danube at approximate rkm 1401+400, while local authorities prepared corresponding spatial planning documentation. Financially supported by the Ministry of tourism, local authority has completed reconstruction of the facility. Steel pilings and the access bridge were repaired, along with new dock made of steel. Two dolphins with floating bollards are assuring conditions for safe berthing of passenger ships.

### *Sremski Karlovci*

Located very close to Novi Sad, Sremski Karlovci have already proved to be point of interest for RCI. During the last decade, this small town with rich cultural heritage

became one of the must-see attractions for all tour operators of cruise ships who stops in Novi Sad.

In 2017, Government declared the port area of IPT in Sremski Karlovci on the right bank of the river Danube at approximate rkm 1244. PGA has selected Public utility company “Belilo” for the port operator, and local authority with the financial support of the Ministry of tourism started with construction of the IPT. Access road has been completed as well as 42 meters long floating part of the dock. Positioning of the dock with steel pilings and construction of the access bridge are going to be completed in the following period

#### *Banostor*

On the slopes of Fruška gora, along the bank of the Danube in the plains of Srem, there is a village Banoštor. The village where the main street is the Danube and, they say, every house has a wine cellar. Banoštor is well known for its ancient crafts, gastronomy, production of wine and manifestation ‘Banoštor grape days’.

At the moment, local authorities in Banoštor prepared corresponding spatial planning documentation. Technical documentation is also being prepared.

#### *Initiative: ‘Belgrade – the regional center of RCI’*

In September 2021, the Port Governance Agency signed a Memorandum of Understanding in the field of inland waterway transport with the Romanian National Company „Maritime Danube Ports Administration” SA Galati (APDM). The cooperation between the two port administrations covered by the Memorandum includes the development of RCI.

Considering that in the previous period, the Agency worked intensively on the development of passenger terminals and nautical tourism, PGA intends to launch an initiative to make Belgrade a regional centre of RCI. The concept of the initiative implies that Belgrade will be the starting/ending point from which cruisers would sail through Serbia, Bulgaria and Romania. The final destination of the cruise would be the Romanian city of Tulcea, in the immediate vicinity of the Danube Delta. Establishing such a tour would increase the number of tourists and would further raise the visibility of Serbian (and regional) nautical potentials.

#### **Forecasts**

Infrastructure projects of new IPTs on the Danube will enable their better position and bigger visibility in Europe. New IPTs in RS could contribute to the increased number of tourists, further strengthen the connectivity of tourist offer and tours and develop the economy via nautical tourism.

In subchapter 7.1.1 it is mentioned that results achieved in 2019 were envisaged for the period until 2025 in the Strategy on waterborne transport development of the Republic

of Serbia. RCI is a 'booming' industry, and the number of port calls and cruisers were increasing each year. Bearing this in mind, our opinion is that after the complete normalization of the situation, the tourist demand in whole Europe will grow, which will have impact on IPTs in RS.

### **7.1.2.7 SLOVAKIA**

#### *Key findings*

- OPS infrastructure along the river till 2025 to facilitate the development of alternative fuel market
- transforming riverbanks in passenger port Bratislava
- after pandemics and restrictions, raise to pre-covid performance is expected

#### *Planned projects*

One of the main challenges ahead of us in construction of OPS infrastructure alongside the river until 2025 in accordance with EU Directive 2014/94/EU to support the development of the alternative fuel market for the transport sector and the deployment of the relevant infrastructure. VPAS is currently in the stage of reproject preparation for transformers on the riverbanks in passenger port Bratislava. Funding has not yet been defined.

#### *Forecast*

Before the COVID-19 pandemics there has been a strong rising trend visible in passenger transportation. The consequences changed the statistics significantly. Thanks to accumulated demand and limited offer during lockdowns and restrictions we can expect strong uptrend in this field in next seasons. This is already visible in comparison between years 2020 and 2021 when thanks to the even the slight release of restrictions caused 76% increase in the number of passengers transported and 57 % in the number of landings in Slovak passenger ports. When pandemics is over, and restrictions are lifted completely we can expect rise up to pre-covid performance in few seasons. Unfortunately, exact numbers and/or predictions are not available.

## **7.2 Market analyses**

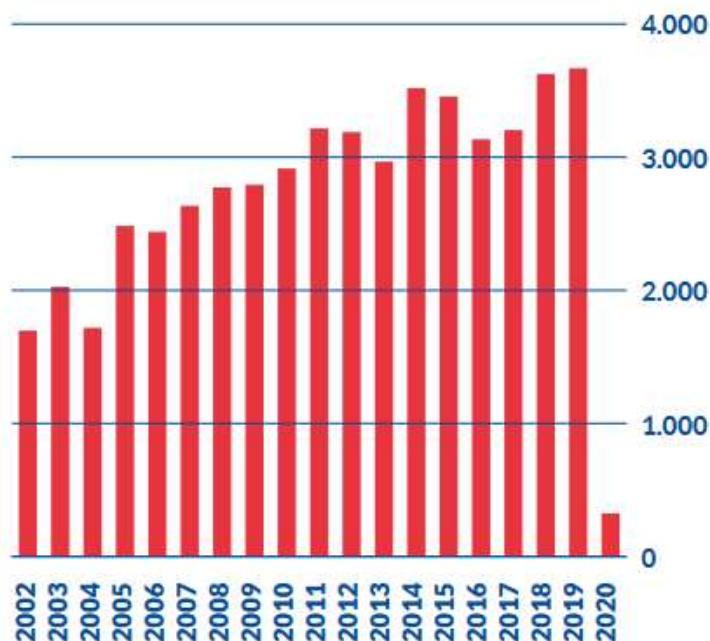
### **7.2.1.1 AUSTRIA**

After a strong growth recently, passenger transport recorded a dramatic slump due to the pandemic and the associated strict regulations.

- 90.7% fewer passengers on river cruises
- Decline of 86.5% for liner services and 85.7% for non-scheduled services
- Four new cruise ships in operation on the Danube

Following figure presents the annual amount of passenger vessels on the Danube.

## 12. Figure Number of passenger vessels



### 7.2.1.2 BULGARIA

As mentioned above, in Bulgaria there is no publicly accessible statistical information regarding inland waterway passenger transportation, which also includes the sector's share of the country's gross domestic product. In general, according to official data from the Ministry of Tourism and the World Travel and Tourism Council in 2020 (most recent information available) the overall contribution of tourism industry to GDP was 11.6%. In comparison, the sector's share was approximately 11.8% in 2019, 11.9% in 2018, and 11.7% in 2017. It should be taken into account that the percentage provided displays the indirect input of tourism in GDP, whereas direct contribution of the sector has remained around 3.0% during the last five years. As a whole, the impact of tourist industry for the formation of the country's gross domestic product has been stable, although only from a proportional perspective. As a total value the income generated through tourist activities has certainly dropped due to the effects of the spread of COVID-19. Other factors, such as political and security instability in some external to EU countries from Eastern Europe, including Ukraine, Belarus, and Russia which form a significant share of the total number of foreign tourists in Bulgaria, has also contributed to the decline. This, however, is to a greater degree relevant to sea tourism, while in RCI the main negative factor has been the global pandemic.

In the country the main normative act settling public relations in regard to ports, their development, management, and operation is the Maritime spaces, Inland waterways and ports of the Republic of Bulgaria Act and the structure of the port sector is

complemented by the Merchant Shipping Code. In the government sector the main actor in the area of waterborne transportation is the Ministry of Transport and Communications. The management of ports of national importance (with a total number of 20) is entrusted to the Bulgarian Ports Infrastructure Company. Ports of regional importance (30) are predominantly with municipal ownership (most of them managed through concession agreements) and private. Navigation in the Bulgarian section is regulated by the Executive Agency Maritime Administration. Despite not being directly involved, some other institutions are also relevant for the development of ports, such as: Ministry of Finance (customs), Ministry of interior (firefighting and civil protection authorities), Ministry of environment and water (basin directorates, regional environment and water inspections), etc.

The main Bulgarian companies that provide cruise services on the Danube are Balkan Tours and Dunav Tours Cruises EAD. Currently the latter remains the only Bulgarian company which offers river cruises on the Danube River on its own ships. Most of these are not carried out in the Bulgarian section of the river. The company has over 50 years of specialization in river cruise tourism, and provides its services to tourists from Western Europe, USA, Canada, Russia, Bulgaria, and others. Otherwise, there is a large number of tour operators and agents on the Bulgarian market that offer cruises along the Danube River, but only as intermediaries for foreign ships. Some of them are Top Travels, Via Travel, Ocean Travel, Glamour and Joy and Maris Travel.

As it was mentioned above in the report, cruises in the Bulgarian section of the river are conducted solely by foreign companies, with the largest operator being *Viking River Cruises*. Some other organisations with significant activities in the area are *AmaWaterways*, *Riviera Travel*, *Tauck World Discovery*, *Uniwold River Cruises*, *Globus*, *CROISIEUROPE*, *Thurgau travel*, *Phoenix Reisen*, *GTA Touristics*, *Lueftner Cruises*, *Nicko Cruises*.

Our research concluded that there are no government or private schemes for funding fleet expanding and modernisation, which is another major point of concern. There are different tools, provided by bank institutions and international funds, which could be used for the purchase of private boats or fishing vessels, but none of these could actually be implemented for the acquisition of passenger ships. As it was presented in previous chapters of the report, there are several national and European strategies and programmes that include financing schemes for the development of port activities along the Danube. However, they are almost entirely focused on port infrastructure development and local connectivity. Partially this is due to the already mentioned lack of internal transportation services for passengers on the Danube in Bulgaria, which in reality excludes any direct participation of government actors in the sector, with strategic national efforts being focused on economically more beneficial leisure services, such as sea and mountain tourism. This trend is further exacerbated by the

current unsatisfactory socio-economic conditions of Bulgaria's Danube Region compared to other parts of the country, which makes it less popular for activities other than tourism.

In Bulgaria there are various organisations and associations that are engaged in providing support for the development of tourism. Some of them are the *Bulgarian Tourist Chamber*, the *Bulgarian Tourist Union*, the *Bulgarian Hotel and Restaurant Association*, the *Association of Bulgarian Tour Operators and Travel Agents*, the *Bulgarian Association of Travel Agents* etc. None of these, however, is primarily focused on cruise tourism. In fact, on a national level there is no common waterway transport association, unlike road and railroad transport, where such organisations exist.

### **7.2.1.3 HUNGARY**

Currently, there are hardly any clear movements in the market regarding RCI. Although the following actions have been taken:

- Companies not being able to survive the economic crisis caused by the pandemic and restrictions, may sell their fleet partially or entirely
- Restart has begun since 2021 Q2
- The greatest challenge the sector faces is fluctuation of the crew, especially captains. Staff shifted to cargo vessels resulting less experienced crew in passenger transport.
- Companies shall change profile from international tourists to domestic passengers

#### **Stakeholders**

*Department for Shipping Authority of the Ministry of Innovation and Technology*

The activities of the department include the performance of tasks related to training, qualifications, registers, ports, seafarers, designation and licensing in the area of national competence, in particular matters related to the approval and registration of training leading to the acquisition of seafaring qualifications, national customs. – and matters related to the establishment, commissioning, maintenance, operation, decommissioning and approval of the operating regulations of ports and related shipping facilities in ports and border ports, matters related to the list of instructors and examiners of training leading to the acquisition of maritime qualifications.

*MAHART Passnave Kft.*

MAHART PassNave Ltd. is the largest, marketleading passenger shipping company in Hungary, providing comprehensive services operating all year round.

Sightseeing day and night, venues, catering, private events, weddings and other organizations are provided by several companies shipping in the Budapest Danube section:

- Armada Hajózási Kft.
- Európa Rendezvény Iroda Kft.
- Legenda Kft.
- Rubin Group
- Sailor Kft.

#### *Representative organizations*

Hungarian Federation of Passenger Fleet Operators, HUNPASS (Személyhajósok Szövetsége) has been operating since 2002. The aim of the Federation is to provide information and assistance – without making profit –, to promote the exchange of information, experience and knowledge for professionals in the field of waterborne passenger transport and those interested in these fields. Furthermore, the Federation is responsible for providing professional conciliation and interest representation for Danube passenger transporters, including shipping professionals, individuals and companies operating in the field of shipping.

In order to achieve the goals above, HUNPASS pursues the following activities:

- Provide members and interested parties with the technical, economic and legal knowledge they need, familiarize them with the laws and regulations, and does not provide legal representation facilities the effective exchange of information and experience between members and stakeholders;
- Organizes conferences and professional forums;
- Provides assistance to its members in the administration of Hungary, including information on the necessary official procedures advocacy and advocacy activities for its members, including liaison with public authorities, service companies and other natural and legal entities;
- Performs tasks related to the protection of the professional interests of its members;
- During the preparation of legislation, participates in the drafting of legislation and gives professional opinions on draft legislation and proposals;
- Helps members and stakeholders prepare for changes in legislation and shipping standards;
- Provides professional training opportunities for shipping professionals by organizing conferences and disseminating professional materials (with consistent consideration of non-profit operating principles for both association members and association employees);



- Develops proposals and initiatives to promote the goals of the association as effectively as possible;
- Cooperates with advocacy, professional and other social organizations with similar purposes and/or activities, including Hungarian and international organizations.

Members: Bartender Bt., Rubingroup, Európa Rendezvény Iroda Kft., MAHART Passnave Kft., Panoráma Deck Kft., Sailor Kft., Legenda Kft., Balatoni Hajózási Zrt., Veelncei-Tavi Fejlesztési Nonprofit Kft., Gróf Széchenyi Rendezvényhajó, Kláris Irodahajó Kft., ARMADA Hajózás, MAHART Magyar Hajózás Zrt., Zoltán Gőzös Közhasznú Alapítvány

#### **7.2.1.4 ROMANIA**

- Shipping companies handle large investments, ships with increased facilities and staff
- Infrastructure providers are public and private.
- Dedicated passenger terminals in Orsova, Tulcea, Galati and Constanta
- Quality of infrastructure is different in each port
- Ships berth to pontoons not to vertical quays
- Public port infrastructure is administrated by national companies (APDM and APDF) under the authority of the Ministry of Transport and Infrastructure
- Private investments in basic infrastructure are to accommodate cruise ships
- Service providers are all private and offer touristic programs.
- Ministry of Entrepreneurship and Tourism is responsible for establishing destination management organizations (dmos) and promotion of tourism
- ANAT (National Association of Travel Agencies) represents professional interests at regional, national and international level in tourism
- Financial support to develop tourist sites and attractions and sustainable urban mobility are provided within the ops "Regions in growth" and "Development of the regions"
- Bad navigation conditions, low water level, not improved so far
- Information system is planned to develop
- Funding for multifunctional vessels, modernization and construction of facilities for improving transport safety and environmental protection including port facilities for safe, efficient and secure inland waterway and sea transport.
- Improving navigability planned to be financed by CEF
- Cross-border cooperation with Bulgaria for better connectivity regarding new bridge, port infrastructure

### 7.2.1.5 SERBIA

- Major tour operators are constantly trying to introduce new destinations, innovate existing tours and organize thematic ones for different age categories, interests, and affinity of their clients.
- 10-29-day tours organized by 6 companies
- Association of transport: groups for port operators and for river shipping. Group for port operators gathers operators on ports and inputs in Serbia, group for river shipping gathers shipping companies and shipping agents
- Association of tourism: promoting IPTs and nautical potentials of Serbia

#### *Cruise lines calling IPTs in RS*

River cruise is very dynamic market. Despite the complexity and demanding organization of such cruises, major tour operators are constantly trying to introduce new destinations, innovate existing tours and organize thematic ones for different age categories, interests, and affinity of their clients.

Some cruise lines calling IPTs in Serbia, currently offered by tour operators are listed below. More detailed information, itinerary, dates, and prices are available on their websites.

*Viking River Cruises* in its offer currently have two cruises with stops in Belgrade and Golubac:

- Passage to Eastern Europe, 11-day cruise covering 5 countries starts in Bucharest (Giurgiu) and ends in Budapest;
- European Sojourn, 23-day cruise covering 8 countries starts in Amsterdam and ends in Bucharest (Giurgiu).

*Tauck* has also two cruise offers covering visits in Belgrade and Novi Sad:

- Grand European Cruise, 25-day experience through the heart of Europe, from Amsterdam to Constanza and Bucharest;
- Budapest to Black Sea, 13-day cruise through romantic lower Danube, from Budapest to Constanza and Bucharest;

*Uniwold* sell three tour programs with stops in Belgrade, Golubac and Donji Milanovac:

- Ultimate European Journey, 25 days from Amsterdam to Bucharest (Giurgiu);
- Portraits of Eastern Europe, 19 days from Prague to Bucharest (Giurgiu);
- Highlights of Eastern Europe, 10 days from Budapest to Bucharest (Giurgiu);

*Grand Circle Travel* in its offer currently have two cruises with stops in Belgrade and Novi Sad:

- Grand European Cruise, 29 days cruise covering 8 countries and 22 cities starts in Amsterdam and ends in Bucharest (Constanza);
- Eastern Europe and the Black Sea, 14 days cruise covering 7 countries and 10 cities starts in Budapest and ends in Bucharest (Constanza);

*Nicko Cruises* has four cruise offers calling IPTs in Serbia:

- Majestic beauty, 15 days cruise from Passau to Danube delta (Tulcea) and back, including stops in Belgrade and Novi Sad;
- Cities and Nature's spectacle, 12 days cruise from Passau to the Iron Gate and back, including stops in Novi Sad, Belgrade and Golubac;
- Experiences along the entire length, 15 days cruise from Passau to the Black Sea and Back, including stops in Novi Sad and Belgrade;
- All the way to kilometer 0 through 10 countries, 17 days cruise from Passau to Ukrainian Danube delta and back, including stops in Belgrade and Novi Sad;

*Avalon Waterways* offers a variety of cruises of different length, thematic and starting/ending places:

- Balkan discovery, 9/10/11/12 days cruise from Budapest to Bucharest, with stops in Novi Sad, Belgrade, Golubac and Donji Milanovac;
- The Danube from Croatia to the Black Sea, 9/11 days cruise from Zagreb (Osjek) to Constanta and Bucharest, with stops in Belgrade, Golubac and Donji Milanovac;
- The Danube from the Black Sea to Budapest, 11/12/13/14 days cruise from Bucharest (Cernavoda, St. Gheorghe) to Budapest, with stops in Donji Milanovac, Golubac, Belgrade and Novi Sad;
- The Danube from Germany to the Black Sea, 16/18/20/22 days cruise from Deggendorf to Bucharest (Oltenita), with stops in Novi Sad, Belgrade, Golubac and Donji Milanovac;

### *Associations*

When it comes to RCI, within the Serbian Chamber of Commerce and Industry there are two associations connected to this topic- Association of Transport and Association of tourism.

Association of Transport is divided into several groups, out of which the most important for RCI are Group for port operators and Group for river shipping. Group for port operators gathers operators on ports and IPTs in the Republic of Serbia, while Group for river shipping gathers shipping companies and shipping agents in RS. PGA each year organizes Annual consultations with mentioned groups, on which they have possibility to discuss achieved results and different initiatives aimed at the improvement of this industry.

PGA also has intensive and fruitful cooperation with the Association of tourism, especially in the scope of promoting of IPTs and nautical potentials of RS. In previous years, PGA together with the Association participated at the tourism fairs in Budapest, Vienna and Belgrade, promoting the project „Awake the Danube”. Besides the improvement of RCI, the PGA is also working on development of marinas and holds regular meetings with the Association of Tourism (Group for Nautical tourism and industry NATUS), to discuss this matter.

### **7.2.1.6 SLOVAKIA**

#### *Key findings*

- IWW passenger transportation is not monitored in official statistics
- Transport development strategy 2020 states IWT contributed to the GDP with EUR 32 438 000, but the share of cargo and passenger transportation is not clarified
- three Danube ports: Bratislava, Komárno, Štúrovo owned by VPAS
- Slovak water management enterprise – state company handles watercourses and tangible fixed assets, surface and groundwater
- Transport Authority exercises activities in the fields of rail transport, inland navigation
- Ministry of transport and construction – Water transport section
- Water management construction
- Slovak shipping and ports – passenger transportation, JSC operates three speedboats (112 seats), sightseeing boats PREŠOV (220 seats), MARTIN (160 seats) and the restaurant ship ŽILINA (120 seats).
- Twin City Liner connects Bratislava and Vienna
- no lobbyists, representative organizations
- no financial tools
- Operational Program 2014-2020

Share of inland waterway passenger transportation is not being tracked as separate defined category in official statistics. Last accessible information comes from Transport development strategy of the Slovak Republic until 2020 where inland waterway transportation contributed to Slovak GDP with 32 438 000 Eur and even this information was not split between cargo and passenger transportation.

#### ***Main stakeholders and market players***

##### *Verejné prístavy, a.s. / Public ports, JSC / VPAS*

Three passenger ports on the Slovak section of the Danube, Bratislava, Komárno and Štúrovo are owned by Verejné prístavy, a.s. (VPAS). Company acts as port authority and owns/leases the land in public ports, whole infrastructure and superstructure is owned

and managed by private operator(s). VPAS issues PORT REGULATION – common set of rules and regulations for all three public ports.

*Slovenský vodohospodársky podnik / Slovak water management enterprise*

State company provides care for watercourses and tangible fixed assets built on them, takes care of the quantity and quality of surface and groundwater. More information available at [www.svp.sk](http://www.svp.sk).

*Dopravný úrad / Transport authority*

The Transport Authority exercises activities in the field of railways and rail transport, civil aviation, and inland navigation to the extent and under the conditions established by the Transport Authority Act, as well as other competences according to special regulations applicable to railways and rail transport, civil aviation and inland navigation, in particular Act no. 338/2000 Coll. on Inland Navigation. Transport authority - Inland Navigation Division is responsible for:

- safety of navigation,
- professional investigation of shipping accidents,
- imposition of navigation measures,
- waterways and ports,
- permitting the state of floating facilities on waterways or in public ports,
- deciding on the establishment and cancellation of small vessel rentals,
- issuing permits for the organization of public events on waterways,
- eligibility of vessels,
- carrying out technical inspection of vessels and verification of operational suitability of vessels, calibration of vessels,
- issuing ship certificates and identity cards,
- keeping a register of vessels,
- ship 's crew,
- conducting tests to obtain the professional competence of vessel crew members,
- issuing licenses of crew members and service books,
- river information services administration of the river information services system and fulfillment of the function of the river information services center in order to improve the safety, efficiency and environmental friendliness of water transport.

More information available at <http://nsat.sk/en/home/>.

*Ministerstvo dopravy a výstavby Slovenskej republiky – Sekcia vodnej dopravy /  
Ministry of transport and construction of the Slovak republic – Water transport section*

The Water transport section is divided into:

- Department of Inland navigation,
- Department of a maritime authority.

The water transport section mainly performs the following tasks:

- creates and applies the principles of state transport policy in the field of water transport,
- elaborates concepts, programs, and projects for the development of water transport, including programs and projects co-financed by EU funds,
- applies the Connecting Europe Facility (CEF) for the development of TEN-T core corridors,
- represents the Ministry in inter-ministerial and international working groups in the field of water transport,
- cooperates with the relevant local authorities, considering the interests of inland navigation,
- constitutes generally binding legal regulations in the field of inland navigation and maritime navigation,
- creates conditions for the development of inland navigation and maritime navigation, including the development of public ports,
- coordinates the activities of organizations in the material scope of the section, for which the Ministry performs the founding function or ensures the exercise of shareholder rights according to special regulations,
- provides co-operation to other organizational units in the evaluation of commercial companies and state organizations falling within the material scope of the section,
- exercises regulation in the field of inland navigation,
- acts as a maritime authority.

More information available at <https://www.mindop.sk/en>.

#### *Vodohospodárska výstavba / Water management construction*

For more than sixty years, more than 350 water management, hydropower and engineering structures throughout Slovakia have been associated with the state-owned company Vodohospodárska výstavba. However, the name of the company is mainly connected with one of the largest water management projects in Europe - Gabčíkovo Waterworks. The Žilina Waterworks is also of great importance.

The company manages these hydropower works, ensures their efficient and safe operation as well as the production and sale of electricity. A long tradition in the field of construction of water works with hydropower use is a solid basis for further development of the company.

More information available at <http://www.vvb.sk/cms/>.

### *Slovenská plavba a prístavy – lodná osobná doprava / Slovak shipping and ports - passenger transportation, JSC*

Operator of the Bratislava passenger port and the leading operator of shipping passenger transport on the Danube River in Bratislava and its surroundings, providing a wide range of sightseeing cruises, passenger services on regular lines and cruises to order. In addition to regular high-speed lines between Bratislava and Vienna and sightseeing cruises in and around Bratislava, we offer free capacities for charter cruises.

Boat departures in Bratislava are directly from the Passenger port (main building), which is located on the Bratislava River embankment between the SNP bridges and the Old Bridge, just a few steps from the historical centre of Bratislava. Company operates three speedboats (112 seats), the sightseeing boats PREŠOV (220 seats), MARTIN (160 seats) and the restaurant ship ŽILINA (120 seats).

More information available at <https://www.lod.sk/>.

#### *Twin City Liner*

Twin City Liner is a shipping line connecting the metropolis of Bratislava and Vienna, the nearest capitals in Europe, which has been operating regularly between these cities since June 1, 2006. It is built through Norwegian-made catamarans, a lightweight fast ship of modern design / h. The journey to Vienna or Bratislava by this boat takes only about 75 minutes, is fully air-conditioned and also offers restaurant services. Cruise line industry benefits from the proximity to Vienna. Liner service operated by Austrian company (Twin City Liner) has brought significant attention of Austrians and tourist visiting Vienna to Bratislava. The fact that some of berthing positions (pontoons and equipment) are owned by Austrian operators stimulates the number of landings and visitations directing Bratislava.

More information available at <https://www.twincityliner.com>.

#### *Associations*

There are no lobbyists, representative organizations and/or associations associating market subjects of the passenger transportation industry.

#### *Support*

Currently there are no official financial tools to support river cruise transportation in particular in Slovakia.

#### *Operational Program Integrated Infrastructure 2014 – 2020*

The Operational Program Integrated Infrastructure (hereinafter referred to as “OPII”) is a programming document of the Slovak Republic for drawing assistance from EU funds for the years 2014 - 2020 in the transport sector, improving access to information and communication technologies and improving their use and quality. creating a

stable, innovation-friendly environment for all relevant actors and promoting increased efficiency and effectiveness of the R&D and innovation system as a key pillar for increasing competitiveness, sustainable economic growth and employment<sup>1</sup>. The global objective of OPII is to support sustainable mobility, economic growth, job creation and the improvement of the business environment through the development of transport infrastructure, the development of public passenger transport, the development of the information society and the support of research and innovation.

Investment priority 7i) is to be fulfilled through the following activities:

- A. Improving the navigability of the Danube waterway,
- B. Modernization and construction of public ports in Bratislava and Komárno,
- C. Introduction of modern technologies in the management of shipping and port operations and implementation of related technical measures,
- D. Introduction of regular passenger shipping on the Danube (Dunajbus),
- E. Pre-investment and project preparation.

## **7.3 Operational practices, models**

### **7.3.1 AUSTRIA**

A lot of information is already provided in DIONYSUS deliverable D.T3.4.1\_Country report Austria. No more information is available.

### **7.3.2 BULGARIA**

#### *Key findings*

- 11 ports and terminals in 9 locations
- Main ports: Ruse, Silistra, Tutrakan, Vidin
- Various ownership: state, municipal authority, natural or legal entity
- Number of concessional ports has been growing. Regulated by the Concessions Act
- State owned or private port operators have management functions regarding the independent commercial, investment, pricing, and organizational policy they conduct for the port terminals
- The Ministry of Transport and Communication monitors operators' activities through the EAMA and maintains and develops the port infrastructure through the BPIC
- 14 legal entities certified to perform shipbuilding and ship repair activities
- 4 companies qualified to provide welding services on ships
- 5 companies classified to conduct ultrasound inspection and thickness measurement
- 4 companies certified to repair underwater sections of vessels



- 2 companies provide repair and certification of fire and emergency equipment
- 4 of these companies operate on the Danube: 2 in providing shipbuilding services and underwater certification, 1 in Kozloduy, 1 in Ruse providing repairing services
- Ship owners provide cruise services

There are no Serbian flagged cruise ships. On the other hand, major shipping companies engaged in RCI are represented in the Republic of Serbia by the following agents: PPD, Agent plus, Yugoslav River shipping, Brodokomerc and Global Agent.

The most important tour operators maintaining cruise lines calling ports of the Republic of Serbia are Viking River Cruises, Tauck, Uniworld River Cruises, Grand Circle Travel, Nicko cruises, Crystal Cruises, Avalon Waterway.

Although there are no legal obstacles for the development of the RCI fleet flying Serbian flag, it is still not commercially attractive to Serbian shipping companies. Also, operational exploitation could be still difficult since Serbia, beside Ukraine and Moldavia, is the only country outside of EU borders on the middle part of the Danube stream.

However, increased possibilities for the docking of passenger vessels close to, or at locations with the tourist attractions, are creating the environment for the development of new products in the tourism industry – day cruises, and eventually new market for smaller passenger ships without cabins. Moreover, cross-border communication between cities in neighbouring countries along the Danube can be improved by establishing the liner services. Consequently, several vessels suitable for day-cruise/liner service were registered in Serbian shipping registry in recent years.

### **7.3.3 CROATIA**

- Passenger transport services: vast array of natural and historical beauty of Eastern Croatia
- Major shipping companies: Ostali, Viking River Cruises, Scylla, Dr. Luftner R, Apollo River Management, Croisi Europe, Ama Waterways

### **7.3.4 HUNGARY**

In Hungary, the following passenger ships and event boats are in operation owned by the above presented companies. The biggest fleets belong to companies: MAHART Passnave Kft., Sailor Kft., Armada Hajózási Kft., Panoráma Deck Kft. (Európa Rendezvény Iroda Kft.), Legenda Kft., Rubin Group. Although, as presented in chapter 8, Best practices, Center for Budapest Transportation applies a different operation structure regarding the fleet for commuters.

## **11. Table Name, type and owner company of passenger ships**

<b>Name:</b>	<b>Type:</b>	<b>Owner:</b>
<b>Budapest</b>	Passenger ship (river shuttle service)	Mahart Passnave
<b>Rákóczi</b>	Passenger ship (river shuttle service)	Mahart Passnave
<b>Táncsics</b>	Passenger ship (river shuttle service)	Mahart Passnave
<b>Hunyadi</b>	Passenger ship (river shuttle service)	Mahart Passnave
<b>Nagymaros</b>	Passenger ship (river shuttle service)	Mahart Passnave
<b>Visegrád</b>	Passenger ship (river shuttle service)	Mahart Passnave (Panorama Deck)
<b>Bogdány</b>	Passenger ship (river shuttle service)	Mahart Passnave
<b>Duna Corso</b>	Passenger ship (river shuttle service)	Mahart Passnave
<b>Szódliget</b>	Passenger ship (river shuttle service)	Mahart Passnave
<b>Gönyű</b>	Passenger ship (river shuttle service)	Mahart Passnave
<b>Dömös</b>	Passenger ship (river shuttle service)	Mahart Passnave
<b>Esztergom</b>	Passenger ship (river shuttle service)	Mahart Passnave
<b>Győr</b>	Passenger ship (river shuttle service)	Mahart Passnave
<b>Mathias Rex</b>	Passenger ship (river shuttle service)	Mahart Passnave (Sailor)
<b>Corvin</b>	Passenger ship (river shuttle service)	Mahart Passnave
<b>Hullám</b>	Passenger ship (river shuttle service)	Mahart Passnave
<b>Aquincum</b>	Passenger ship (river shuttle service)	Sailor
<b>ISTER</b>	Passenger ship (river shuttle service)	Sailor
<b>SAILOR</b>	Passenger ship (river shuttle service)	Sailor
<b>SIRONA</b>	Passenger ship (river shuttle service)	Sailor
<b>Fortuna</b>	Passenger ship (river shuttle service)	Armada Hajózási Kft.
<b>Prestige</b>	Passenger ship (river shuttle service)	Armada Hajózási Kft.

<b>Mirage</b>	Passenger ship (river shuttle service)	Armada Hajózási Kft.
<b>Primus</b>	Passenger ship (river shuttle service)	Armada Hajózási Kft.
<b>Secundus</b>	Passenger ship (river shuttle service)	Armada Hajózási Kft.
<b>Dunaföldvár</b>	Passenger ship (river shuttle service)	Armada Hajózási Kft.
<b>Attila</b>	Passenger ship (river shuttle service)	Panoráma Deck
<b>Millennium 1</b>	Passenger ship (river shuttle service)	Panoráma Deck
<b>Szentendre</b>	Passenger ship (river shuttle service)	Panoráma Deck
<b>Millennium 2</b>	Passenger ship (river shuttle service)	Panoráma Deck
<b>Halászbástya</b>	Passenger ship (river shuttle service)	Panoráma Deck
<b>Katalin</b>	Passenger ship (river shuttle service)	Panoráma Deck
<b>Pannónia</b>	Passenger ship (river shuttle service)	Panoráma Deck
<b>Európa</b>	Passenger ship (river shuttle service)	Panoráma Deck
<b>Gondola</b>	Passenger ship (river shuttle service)	Legenda
<b>Delfin I</b>	Passenger ship (river shuttle service)	Legenda
<b>Delfin II</b>	Passenger ship (river shuttle service)	Legenda
<b>Legenda</b>	Passenger ship (river shuttle service)	Legenda
<b>Ludwig</b>	Passenger ship (river shuttle service)	Rubin Group
<b>Rubin</b>	Passenger ship (river shuttle service)	Rubin Group
<b>Szent László</b>	Passenger ship (river shuttle service)	Rubin Group
<b>Rapszódia</b>	Passenger ship (river shuttle service)	Rubin Group
<b>Onyx</b>	Passenger ship (river shuttle service)	Rubin Group
<b>Európa Hajó</b>	Passenger ship (event organisation service)	Európa Rendezvény Iroda Kft.

<b>Gróf Széchenyi Rendezvényhajó</b>	Passenger ship (event organisation)	Gróf Széchenyi Rendezvényhajó
<b>Klárís Irodahajó</b>	Ecoship (Office rent)	Klárís Irodahajó

Source: Self edited

### 7.3.5 ROMANIA

International cruising lines are from

- Germany: Nicko Cruises / Phoenix Reisen / 1 AVista / Komm Mit / Leitner / Plantours
- Switzerland: Mitthelthurgau / Thurgau Travel / Cruiseaway / Viva Cruises / Rivage Fluss
- Austria: Lüftner Cruises / Amadeus River Cruises / GTA Skyways / Papageno Touristik / Klug Touristik
- Great Britain: Riviera Travel / Arena Travel / SAGA Travel
- Denmark: Quality Tours
- Spain: Crucemundo
- France: Croisi Europe / Rivages du Monde
- USA: Viking Cruises / AVALON / AMA Waterways / Uniworld / AHI Travel
- Australia: Scenic / Australian Pacific Tours / Emerald Cruises

### 7.3.6 SERBIA

- No Serbian flagged cruise ship
- Major shipping companies: PPD, Agent plus, Yugoslav River shipping, Brodokomerc, Global Agent
- Tour operators: Viking River Cruises, Tauck, Uniworld River Cruises, Grand Circle Travel, Nicko cruises, Crystal Cruises, Avalon Waterway
- Cross-border communication between cities in neighboring countries shall be improved by establishing the liner services.

### 7.3.7 SLOVAKIA

All lands in the territory of public port in Slovakia are owned by port authority, state-owned joint-stock company Verejn  pr stavy, a.s (VPAS). Berthing positions in passenger ports are as well owned by VPAS but are leased to private operators that use these berthing positions for their particular activities. They either use them for landing of passenger vessels or for floating facilities such as bars, hotels, restaurants, clubs etc...

















VPAS neither owns nor operates its own fleet. Vessels or fleets of vessels are owned and operated by independent private operators / agencies. In terms of repair and

































maintenance there are two major subjects, one located in port of Bratislava and one in the port of Komárno, both private subjects.


























## 7.4 Existing fleet

In this chapter national fleets are presented with technical details.

### 7.4.1 AUSTRIA

<input type="checkbox"/>	PRIMADONNA		1.7 m	114.0 m	18.0 m		-
<input type="checkbox"/>	KAISERIN ELISABETH 2		1.4 m	57.0 m	10.8 m		-
<input type="checkbox"/>	ADMIRAL TEGETTHO...		1.4 m	63.4 m	9.8 m		-
<input type="checkbox"/>	VINDOBONA		1.3 m	40.0 m	8.5 m		-
<input type="checkbox"/>	BLUE DANUBE		1.1 m	30.0 m	7.2 m		-
<input type="checkbox"/>	WIEN		1.0 m	36.0 m	9.0 m		-
<input type="checkbox"/>	CARNUNTUM		1.3 m	20.1 m	4.1 m		-
<input type="checkbox"/>	THEODOR KOERNER		1.7 m	87.1 m	16.6 m		-

<input type="checkbox"/>	WACHAU		1.6 m	95.6 m	22.2 m		-
<input type="checkbox"/>	DUERNSTEIN		1.4 m	63.4 m	9.8 m		-
<input type="checkbox"/>	SCHOENBRUNN		0.2 m	73.0 m	16.0 m		-
<input type="checkbox"/>	LANDSHUT		0.2 m	175.0 m	19.0 m		-
<input type="checkbox"/>	AUSTRIA		1.5 m	59.0 m	12.0 m		-
<input type="checkbox"/>	RENAISSANCE		0.2 m	26.1 m	5.2 m		-
<input type="checkbox"/>	FREUDENAU		1.3 m	48.3 m	7.2 m		-
<input type="checkbox"/>	SISSI		1.3 m	16.0 m	4.1 m		-
<input type="checkbox"/>	DONAU		1.2 m	78.0 m	11.0 m		-
<input type="checkbox"/>	SIEBNERIN		1.5 m	36.5 m	5.5 m		-
<input type="checkbox"/>	LINZERIN		1.3 m	60.0 m	9.0 m		-
<input type="checkbox"/>	DONAUNIXE		1.2 m	30.0 m	6.2 m		-
<input type="checkbox"/>	SKORPION		1.1 m	15.0 m	3.2 m		-
<input type="checkbox"/>	MARIANDL		0.1 m	32.0 m	6.0 m		-
<input type="checkbox"/>	WALROSS		1.2 m	18.0 m	4.0 m		-
<input type="checkbox"/>	MARIA		1.2 m	22.0 m	4.5 m		-

<input type="checkbox"/>	GISELA		1.3 m	54.0 m	8.0 m		-
<input type="checkbox"/>	ENNS		1.1 m	18.0 m	6.0 m		-
<input type="checkbox"/>	AUSTRIA PRINCESS		1.4 m	40.2 m	7.8 m		-
<input type="checkbox"/>	NIEDEROESTERREICH		1.1 m	29.6 m	5.4 m		-
<input type="checkbox"/>	MSMARBÄCH		1.0 m	17.0 m	4.0 m		-
<input type="checkbox"/>	LILOFEE	No photos for this Asse <a href="#">Upload now</a>	1.5 m	24.1 m	5.4 m		-
<input type="checkbox"/>	WALLSEE		1.2 m	108.0 m	11.0 m		-
<input type="checkbox"/>	SWITZERLAND2	No photos for this Asse <a href="#">Upload now</a>	0.2 m	100.0 m	10.0 m		-
<input type="checkbox"/>	BLUE LADY		0.2 m	14.3 m	4.6 m		-
<input type="checkbox"/>	ANTON BRUCKNER		1.1 m	72.0 m	8.0 m		-
<input type="checkbox"/>	MIRAGE		1.3 m	38.4 m	6.5 m		-
<input type="checkbox"/>	TWIN CITY LINER 1		0.9 m	32.9 m	8.0 m		-
<input type="checkbox"/>	SIGMA	No photos for this Asse <a href="#">Upload now</a>	0.0 m	20.0 m	5.0 m		-
<input type="checkbox"/>	WANSUNHANG5658	No photos for this Asse <a href="#">Upload now</a>	0.0 m	89.0 m	15.0 m		-
<input type="checkbox"/>	SCHWARZER PETER	No photos for this Asse <a href="#">Upload now</a>	1.3 m	22.0 m	4.0 m		-

## 7.4.2 BULGARIA

According to information published by the Executive Agency Maritime Administration, 495 maritime and river ships were officially included in the Register of Ships of the Republic of Bulgaria in 2018. In 2019 the number of vessels was 543, and in 2020 – 534. Of these, 148 ships in 2019 and 177 in 2020 were registered particularly by the Lom and

Ruse directorates of the EAMA, whose territorial scope includes the whole Bulgarian section of the Danube. Most of the entries, however, are performed due to change of ownership and technical data and they do not correspond to the actual number of new vessels.

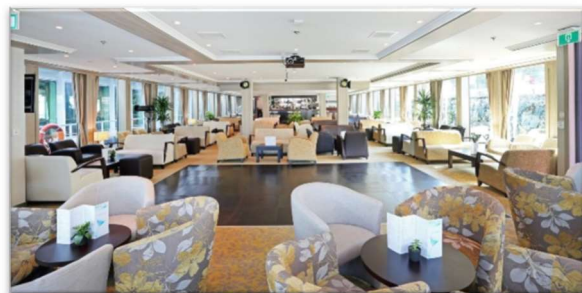
As it was mentioned earlier Dunav Tours Cruises EAD is the only Bulgarian company that organises passenger transport activities on the Danube River on its own fleet. It conducts river cruises on two of its ships - the motor ship “ARIANA” and the luxury motor ship “ELEGANT LADY”.

**12. Table Technical data "ARIANA"**

Lenght	Beam	Power	Flag	Passengers	Crew	Decks
<b>110 m</b>	11,5 m	2x1100 P.S.	Bulgarian	162	40	4

Source: provided by Dunav Tours Cruises EAD

**13. Figure Cruise ship “ARIANA”**



Source: provided by Dunav Tours Cruises EAD



**13. Table Technical data "ELEGANT LADY"**

Lenght	Beam	Power	Flag	Passengers	Crew	Decks
<b>110 m</b>	11,4 m	2960 P.S.	Bulgarian	128	30	3

Source: provided by Dunav Tours Cruises EAD

**14. Figure Design "ELEGANT LADY"**



Source: provided by Dunav Tours Cruises EAD

**15. Figure Cruise ship "ELEGANT LADY"**





Source: provided by Dunav Tours Cruises EAD

In addition to “ARIANA” and “ELEGANT LADY” Dunav Tours Cruises EAD owns three more cruise ships – “ADORA”, “RUSE PRESTIGE” and “SOFIA”.

Furthermore, small passenger services on the Danube River are provided on a local scale in the steamship “RADETSKI” which is a modern reconstructed version of a vessel, originally built in 1851. The ship has the status of a sailing museum and is owned by the National History Museum. It is located at the Kozlodui port.

Another vessel available for conducting passenger transportation activities is the ship “BELLA”, which, however, does not operate on the Danube, but in the area of Varna. It is used as a means of public transport for short trips that connect different parts of the city. The ship is owned by *Belferi Ltd*.

In Bulgaria there are also several ferry routes that go across the river and connect Bulgarian and Romanian cities, including the lines between Oryahovo and Bechet, Nikopol and Turnu Magurele, Svishtov and Zimnicea, and Silistra and Calarasi. These, however, are of local importance and do not have any significant impact on the passenger flow in the country.

The table below shows the available technical data for the above-mentioned vessels.

**14. Table Fleet of Major companies**

Type of boat	Quantity	Category of boat (hotel ship, sightseeing boat, party boat, standing ship)	Year of construction	Capacity (persons)	Speed (km/h)	Length / width / draught (m)
Motor ship “ARIANA”	1	Cruise ship	2012	162	n/a	110 / 11,5 / n/a

<b>Motor ship “ELEGANT LADY”</b>	1	Cruise ship	2003	128	n/a	110 / 11,4 / 1,55
<b>Motor ship “ADORA”</b>	1	Cruise ship	n/a	n/a	n/a	n/a
<b>Motor ship “RUSE PRESTIGE”</b>	1	Cruise ship	2004	164	n/a	n/a
<b>Motor ship “SOFIA”</b>	1	Cruise ship	1984 (renovated in 2001)	210	n/a	n/a
<b>Motor ship (imitation of a steam engine) “RADETSKI”</b>	1	Sailing museum	1966 (renovated in 2020)	n/a	n/a	57,4 / 7,6 / 1,31
<b>Motor ship “BELLA”</b>	1	Public transport ship	2001	70	n/a	20,8 / 4,94 / 1,52

Source: Self edited

### 7.4.3 CROATIA

As regards passenger fleet related to the river cruise industry there is no Croatian passenger ship, and all passenger terminals are used by international fleet operators.

### 7.4.4 HUNGARY

Based on publicly available data, we present the fleet and main technical parameters of the passenger ship Mahart Passnave and BKK. Even smaller companies have similar fleets to the types of vessels presented here, but no detailed data are available.

**15. Table Fleet of major companies**

Type of boat	Quantity	Category of boat	Year of construction	Capacity (persons)	Speed (km/h)	Length, width, draught
<b>Eureka</b>	1	event boat	1988	500	20	52,6m, 7,8m, 1,68m

<b>Rákóczi</b>	1	event boat	1964	400	22	57,5m, 11,3m, 1,58m
<b>Táncsics</b>	1	sightseeing boat	1963	400	23	57,5m, 11,3m, 1,55m
<b>Hunyadi</b>	1	sightseeing boat	1966	600	23	57,5m, 11,3m, 1,53m
<b>Moszkva</b>	5	event boat	1979-1983	150	20	38m, 6,5m, 1,3m
<b>Moszkva</b>	5	sightseeing boat	1977-1981	250	20	38m, 6,5m, 1,3m
<b>METEOR (hydrofoil)</b>	2	sightseeing boat	1988, 1992	112	60	34,5m, 9,5m, 2,35m
<b>VOSZHOD-2 (hydrofoil)</b>	3	sightseeing boat	1985, 1986	77	65	27,6m, 6,2m, 2m
<b>Polesje (hydrofoil)</b>	2	sightseeing boat	1992, 1993	53	65	21,3m, 5m, 1,03m
<b>Tabán</b>	1	passenger boat	1984	100	16	
<b>Budavár</b>	1	passenger boat	1967	150	20	
<b>Hófehérke</b>	1	passenger boat	1895	155	25	

<b>Hungária</b>	1	passenger boat	1985	100	16
<b>Lágymányos</b>	1	passenger boat	1966	150	20
<b>Lánchíd</b>	1	passenger boat	1982	100	16
<b>Pest-Buda</b>	1	passenger boat	1987	130	20
<b>Várhegy</b>	1	passenger boat	1982	100	14

Source: <https://www.mahartpassnave.hu/hu/>, bkk.hu

#### 7.4.5 ROMANIA

Large cruise ships are operated and registered by foreign companies, bringing tourists from all over the world.

The <https://www.adventure-life.com/romania> website present the offers for cruises in Romania for 2022 – 2023. Cruises last between 8 and 13 days and most of them includes destinations in Romania, Bulgaria, Serbia, Croatia and Hungary.

Some information for the ships are:

**MS VIVALDI** sails on the Danube and Rhine rivers and was built in 2009. She features three floors, an upper sun deck, and 88 guest cabins. The ship's dedicated staff is friendly, helpful, and eager to make your trip exceptional in every way. Her cabins are modern, and all are equipped with shower and toilet, hairdryer, satellite TV, and safe

- Max Passengers: 176
- Ship Type: River Cruise Ship
- Operated by: CroisiEurope
- Construction: 2009
- Length: 110 long
- Width: 11.40 m wide
- Cabins: 88 cabins
- Capacity: 176 passengers
- Facilities: lounge-bar with a dance floor - bar- dining room - large sundeck with deckchairs - lift - terrace - French balconies - gift shop. Central heating, 230V electricity, air-conditioning, radar, TV and video in the lounge, wifi on board.

First tour is expected to start on the 6<sup>th</sup> of May 2022, the port of embarkment being Oltenita (Romania, 87 km from Bucharest airport Henri Coanda, 1h30min drive). The ship will sail to the Danube Delta and then upstream Danube River till Budapest.

The **MS L'Europe** is a spacious, bright and clean ship designed to lodge 180 passengers in 90 cabins and sails on the Rhine and Danube rivers.

- Max Passengers: 180
- Ship Type: River Cruise Ship
- Operator: CroisiEurope
- Construction: 2006
- Length: 110 m long
- Width: 11.40 m wide
- Cabins: 90 cabins
- Facilities: lounge-bar with a dance floor, dining room, areas for an entertaining night, panorama bar, large sundeck with deckchairs, French balconies, lift

First tour in Romania is expected to start on the 26<sup>th</sup> of May 2022, the port of embarkment being Oltenita. The ship will sail to the Danube Delta and then upstream on the Danube River till Vienna.

### **MS Amamagma**

- Max Passengers: 196
- Ship Type: River Cruise Ship
- Operator: AMA Waterways
- Construction: 2019, The Netherlands
- Length: 443 feet
- Width: 72 feet
- Crew: 70
- Staterooms: 98
- Passengers: 196
- Registry: Switzerland
- Facilities: Sun Deck, pool, pop-up bar, Wellness Area and fitness center with professionally trained Wellness Host, hair salon, two spas for massage evening entertainment with musical performances highlighting local culture. Possibilities to play the role of “captain” while venturing out on the water in a zodiac boat or another leisure craft with MS AmaMagna’s new water sports platform.

Sail between Budapest and Giurgiu in 8 days.

**Scenic Pearl** was built in 2011 and, along with sister Scenic “Space ship” Scenic Ruby, was refurbished in 2019. Ruby and Pearl provide seamless luxury and comfort while

transporting passengers. Both vessels have been meticulously restored to include interior design elements that provide the same level of luxury as a boutique hotel.

- Max Passengers: 159
- Ship Type: River Cruise Ship
- Construction: 2011, The Netherlands
- Flag: Malta
- Owner: Scenic Tours Australia
- Speed: 12 knots
- Length: 135 meters (443 feet)
- Beam: 11 meters (36 feet)
- Gross Tonnage: 2720 gt
- Facilities: four decks: the Sun Deck, Diamond Deck, Sapphire Deck, and Jewel Deck, each of which houses a number of suites and cabins as well as a variety of public spaces and dining venues such as Crystal Dining, Riverview Terrace, Portobellos, and the Panorama Lounge Bar.

Cruises are scheduled between Budapest and Giurgiu port in 2022.

**SS Beatrice** is a 152-passenger ship that cruises along the waterways of Danube and Main Rivers. Traveling across Germany, Austria, and Hungary. It has amazing facilities and offers cuisine that resembles the culinary traditions of the regions visited on this journey.

- Max Passengers: 152
- Ship Type: River Cruise Ship
- The S.S. Beatrice
- Construction: 2009
- Refurbished: 2018
- Guests: 152
- Staff: 55
- Royal Suites: 2 (390 sq ft)
- Grand Suites: 2 (310 sq ft)
- Suites: 2 (225 sq ft)
- Staterooms: 60 (150 sq ft)
- Length: 430 ft
- Width: 37.5 ft

As well, cruises are scheduled between Budapest and Giurgiu port in 2022.

For trips in the Danube Delta Romania has pontoons – floating hotels, ranked with 3\* and 4 \* and a much smaller capacity than a cruise vessel. Such pontoons are owned by small private companies and can be rented.

**16. Table Accommodation places on ships in 2020**

Rank	Places
5*	30
4*	460
3*	312
2*	22
1*	0
<b>unclassified</b>	22
<b>TOTAL</b>	846

Source: INS

From the total 846 accommodation places on ships (pontoons), 460 are located in the Danube Delta and 50 on mountainous lakes.

**16. Figure Pontoons - floating hotels in the Danube Delta**



**7.4.6 SERBIA**

There are no Serbian flagged cruise ships.

Fleet management is rather flexible category and is subject to adaption to market conditions. The most used vessels are with a length between 110m and 135 m and a width between 11m and 15m. The average age of vessels is 8 years. The number of passengers on cruisers ranges from 80 to 200.



## 7.4.7 SLOVAKIA

17. Table Fleet of Major companies

Type of boat	Quantity	Category of boat	Year of construction	Capacity (persons)	Speed (km/h)	Length, width, draught
<b>Meteor</b>	3	speedboat	n/a	112	80 km/h	L 34,6 m W 9,5 m D 2,3 m
<b>Moscow</b>	2	sightseeing	n/a	220,160	25 km/h	L 38,2 m W 6,2 m H 5,7 m D 1,27 m
<b>Moscow</b>	2	restaurant	n/a	120	25 km/h	L 38,2 m W 6,2 m H 5,7 m D 1,27 m
<b>Harmónia</b>	1	event	n/a	420	n/a	L 41,9 m W 9 m
<b>Twin City Liner</b>			2018	250	70 km/h	L 39 m W 11 m D 0,8 m

## 7.5 Transport safety

In this chapter, we make a safety assessment of Danube inland waterway transport based on the data provided by the partners. Where available statistics on the number of accidents are available, we provide a comparative analysis of the data in the countries, as well as the major accidents of recent years and the safety systems and rules designed to prevent them.

## **7.5.1 Major accidents**

### **7.5.1.1 BULGARIA**

The large majority of accidents related to inland waterway transport in the Bulgarian section of the Danube are caused by the occurrence throughout the dry season of risk zones along the river, where the water depth goes critically low and it is more probable for ships to run aground. According to information provided by the Executive Agency for the Exploration and Maintenance of the Danube River there are 25 such bottlenecks between km 374,100 and km 610,000, including:

- The section between km 609 – 607 (Port of Somovit);
- The section between km 586 - 584 (Palec Island);
- The section between km 565 - 563 (Belene Island);
- The section between km 556 - 554 (Port of Svishtov);
- The section between km 547 - 544 (Vardim Island);
- The section between km 538 - 536 (The mouth of the River Yantra);
- The section between km 531 - 529;
- The section between km 523 - 520 (Batin Island);
- The section between km 463 - 460 (Mishka Island);
- The section between km 458 - 455 (Popina);
- The section between km 425 - 422 (Kosui Island);
- The section between km 422 - 420 (Dunavets Island);
- The section between km 414 - 412 (Albina Island);
- The section between km 407 - 404 (Garvan Island);
- The section between km 396 - 392 (Vetren Island);
- The section between km 385 - 382 (Chaika Island);

The most critical for navigation are the area of the Popina village and the areas of the islands of Belene, Vardim, Batin, Kosui, Albina and Garvan.

According to data published by the EAMA, throughout 2019 there were 99 days with water levels in the Bulgarian section of the Danube River being beneath 2.5 m. and in 2020 there were 47 such days. The number of ships running aground was 59 in 2018, 42 in 2019, and 22 in 2020. The fairway was partially or completely blocked on 9 occasions in 2019 (for 83 hours totally) and on 4 occasions in 2020 (for 51 hours).

According to information in news articles cases of ships running aground throughout the last decade were reported in 2012 – in the areas of Belene (three vessels which partially blocked the fairway), Somovit and Nikopol; 2013 – in the areas of Lom, Oryahovo and Belene (stranded vessel blocked the fairway); 2015 – at Svishtov; 2016 – at Belene (two vessels); 2018 – in the areas of Ruse (two vessels) and Svishtov; 2019 – at Svishtov; 2020 – in the area of Belene (two vessels which blocked the fairway); 2021 – Svishtov,

Popina (two vessels), Zagrazhden and Belene. Most of the cases occurred in the months of July, August, and September.

In general, the Executive Agency for the Exploration and Maintenance of the Danube River is responsible for the exploration and maintenance of the navigation conditions of inland waterways in Bulgaria. The institution is subordinate to and managed by the Ministry of Transport and Communications and is situated in Ruse. During the last three years the EAEMDR has been carrying out active dredging activities in the most critical parts of the river in order to minimize accidents involving ships running aground. Nevertheless, this measure is insufficient and the risk remains relatively high, especially during the summer season. In this regard it would be of great benefit for IWT if water level control facilities, which currently do not exist in the Bulgarian section of the river, were to be installed.

### **7.5.1.2 HUNGARY**

2019, Budapest, Margaret Bridge

The shipwreck in Budapest in 2019 was a water accident on the Budapest section of the Danube at one of the bridge openings of the Margaret Bridge near the Pest side of the riverbed on May 29, 2019 at 9:30 p.m., when the sunken Mermaid AIS (Automatic Identification System) In the accident, a Hungarian event boat called Mermaid collided with a Swiss cruiser ship MV Viking Sigyn also sailing, of which the Mermaid capsized and was completely submerged in the water. There were 35 people on the crashed ship at the time of the accident, 7 of whom were lifted alive. The police announced on their official website on June 14 that the search for the 215-kilometer section of the Danube in question would continue with 19 ships after the screening of the Mermaid. According to official reports made by the morning of July 6, the number of fatalities found was 27 (25 South Korean passengers and the ship's 2-member Hungarian crew), and the number of missing persons was 1.<sup>2</sup>

### **7.5.1.3 ROMANIA**

Incidents were not registered on the Romanian sector of the Danube involving passenger ships. The safety measures involving passenger's ships are high, especially onboard of vessels and the qualification of the deck officers.

Cruises industry on the Danube was hardly hit by the COVID 19 pandemic in the last two years. Nowadays, the risks of a military conflict, a war, in a Danube riparian country, Ukraine, can determine a decrease in the number of passenger or a totally blockage for

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<sup>2</sup> Source: [https://hu.wikipedia.org/wiki/2019-es\\_budapesti\\_haj%C3%B3katasztr%C3%B3fa](https://hu.wikipedia.org/wiki/2019-es_budapesti_haj%C3%B3katasztr%C3%B3fa)

this industry. The effects of such a crisis last longer than the risk itself in this kind of business.

#### **7.5.1.4 SERBIA**

There were no records regarding the accidents in cruising on Serbian Danube sector in previous years. It is important to stress that all IPT in the Republic of Serbia in the terms of safety meet all domestic and international standards, and they are fully equipped for safe operations (embarking and disembarking of passengers etc.)

#### **7.5.1.5 SLOVAKIA**

Sap 2005, Romanian cruise ship burned down

Evening of October 2, 2005, the Romanian cruise ship *Oltenita*, rented by a Danish travel agency, with 122 passengers on board, mostly Norwegians and Belgians. Around 3 p.m. fire started in the lower deck, where there were many small rooms, many old electrical wirings. As black smoke began to spread from below decks, he was spotted by a ship's mechanic. He wanted to start extinguishing him, so he broke the window, but injured his hand. The smoke was getting thicker and threatening passengers. The deputy captain of the ship ordered the evacuation of the ship. Panic ensued on the ship, people pushed towards exit, they left the burning ship over a wooden makeshift bridge and on the little boats, two passengers jumped from the boat into the water. 121 passengers, including the crew, managed to escape from the ship without serious injury, mostly without personal belongings, and 46 Romanian passengers without a passport. A 49-year-old Romanian singer, a member of the crew, who allegedly slept sick in the cabin, suffocated and died in her sleep. After noticing the accident on the Danube, people from the village of Sap helped the victims, brought them clothes and drinks. Romanian passengers (10 of them women)

They stayed in a special DTU facility in Gabčíkovo, after obtaining their passports at the Romanian consulate the next day they were able to travel by alternative carrier. Norwegians and Belgians stayed in Bratislava. Firefighters could not reach the source of the fire even after a day and a half, and finally the cruise ship *Oltenita* sank and burned down. However, there was 30,000 liters of diesel in the ship, which began to leak into the water, and an oil slick up to 60 m long and 10 m wide was formed on the surface. The workers of the Danube River Basin fenced it with a submerged wall and collected the escaping oil from the boat with dirt collectors. According to experts, it was not an ecological disaster.

Hrušov Reservoir 2011, collision of cargo and cruise ship

On April 13, 2011 around 2:00 AM in the morning a collision of the German cargo ship *Bavaria* loaded with 1,100 tons of corn and the Maltese cruise ship *Victoria* with 160 passengers on board took place on rkm 34 of the Hrušov VD reservoir Gabčíkovo near

Šamorín. No one was injured in the crash, the passengers escaped from the accident only with shock. The damaged ships were located outside the fairway, the passenger ship Victoria was damaged by a crack through which water entered the ship. Cargo ship Bavaria was damaged by about half of it and was hit by water, which threatened to sink it, with a total of about 15,000 litres of diesel in its tanks. and 600 litres of oil. After the accident, 13 firefighters from Dunajská Streda Šamorín and Galanta fire stations were sent to the location. They intervened with the help of 4 emergency vehicles, 3 boats and 1 ecological car. Firefighters gradually sealed the crack in the ship Victoria and drained the water, together with paramedics evacuated the sick passenger from the cruise ship and assisted in draining water, diesel and oil from the cargo ship. In the early evening, the passengers of the cruise ship were evacuated ashore. The pumping of water continued with two sludge pumps with a capacity of 1,350 l / min from the front of the ship with the engine room. This was followed by the transshipment of maize from the damaged cargo vessel, the wet cargo being transferred to the attached pusher and the dry cargo to the cargo vessel. The next day after the collision, Victoria left. The cargo ship was later towed to port of Bratislava, where it was lifted out of the water by a lift, the extent of the damage was determined and repairs were carried out in agreement with the shipowner. The accident did not interrupt traffic on the Danube.

Sap 2012, collision of a passenger ship and a tanker

On October 21, 2012, shortly after two o'clock in the morning, near the village of Sap near Dunajská Streda about 2 km below Gabčíkovo waterworks

Maltese passenger cabin vessel River Navigator collided with German cargo ship (tanker). The front of the passenger ship collided with the rear a German oil tanker apparently at a time when ships were passing by each other. On a passenger ship sailing from Amsterdam to Budapest impact caused a crack about 2 m above the waterline, therefore, passengers were not in direct danger. On board there were 128 American pensioners and 43 staff members. The ships reached the mouth of the overflow canal from the Hrušov reservoir, where they anchored. The crews of the ships did not report the accident to the Slovak Navigation Administration, but to the Hungarian neighbours, who informed the responsible fire brigade shortly after 8:00 am.

Both vessels were equipped with navigation devices for sailing at night and in heavy fog, which lasted until the morning. The State Navigation Administration investigated whether the cause of the collision was a navigation error. No fuel leaked into the river. Passenger continued her voyage to Budapest ship shortly before 12 o'clock.

Bratislava 2014, the impact of the ship into the pillar of the Old Bridge

On May 22, 2014 at about 9 a.m. an accident occurred in the Bratislava because cabin vessel Swiss Diamond on its way from Budapest to Vienna hit the third pillar of the dismantled Old Bridge. Vessel was damaged above and below the waterline, but there

was no danger of sinking. At the time of the accident, there were 92 passengers on board the ship - mostly Spanish pensioners and 29 crew members. Seven passengers were injured in the crash, two were treated by rescuers only on site, another four Spaniards aged 57 to 74 and one 35-year-old Slovak had to be taken to hospital. The Inland Navigation Division investigated the cause of the accident. The pillar could not be overlooked by the captain for blinding sun, as the ship sailed from east to west. The collision could have been caused by a technical problem for which the ship become unmanageable, a navigation error, or the captain's inattention or steering "by memory".

Gabčíkovo waterworks 2016, the crash of the ship into the dam

On September 11, 2016. Swiss cruise ship Anesha on the route Vienna - Budapest, with 160 passengers on board and about 50 crew members, crashed into canals of Gabčíkovo waterworks near the village Vojka. No one was injured during the crash. The crash was caused by the captain's negligence.

Prior to the repair, the diver had to determine the extent of the dam damage below the surface. To repair, they had to lower the level and temporarily suspend navigation on the Danube. During the repair, they filled the body of the dam and laid two layers of special asphalt-concrete seal. To ensure watertightness, an asphalt seal was applied on the surface. Repair and restoration took several days. The damage exceeded € 60,000.

## **7.5.2 Legal measures**

### **7.5.2.1 AUSTRIA**

*Waterway management in Austria*

Home to 350.50 kilometres of river, Austria accounts for 10% of the total Rhine-Main-Danube waterway. Besides the Danube itself, the Vienna Danube Canal (17.1 km) and short sections of the Danube tributaries Traun (1.8 km), Enns (2.7 km) and March (6.0 km) are classified as waterways.

via donau – Österreichische Wasserstraßen-Gesellschaft mbH is responsible for maintaining the Austrian section of the Danube waterway and its navigable tributaries and canals. The company was founded in 2005 by the Austrian Federal Ministry for Transport, Innovation and Technology (BMVIT) and is tasked with the conservation and development of the Danube waterway. The legal basis for all activities and services supplied by the company is provided by the Waterways Act (Federal Law Gazette I 177/2004). They include the establishment and provision of fairway parameters (waterway maintenance in accordance with the international provisions in force), the implementation of ecological hydraulic engineering and renaturation projects, the maintenance and restoration of river banks as well as the continuous provision of hydrographical and hydrological data. Regarding traffic management, viadonau operates an information and management system for navigation named DoRIS

(Donau River Information Services) and is responsible for the management of the nine Austrian Danube locks. The headquarter of viadonau is located in Vienna; in order to carry out its tasks, the company also owns four branch offices along the Danube and March rivers.

The quality of a mode of transport is primarily measured by the framework conditions that enable traffic to flow as uninterrupted as possible. If you look at its capacities alone, the waterway has long been the best in its class. Nevertheless, captains, especially in cross-border freight and cabin shipping, often have to overcome time-consuming hurdles on the Danube. In addition to the unavoidable locks, the most diverse border control procedures bring traffic to a standstill. Delays that not only affect the efficiency of freight transportation, but are also inconvenient for passengers. For viadonau logistics expert Simon Hartl, the starting point for the need for improvement in terms of administrative barriers is not least the ever-increasing use of the waterway by international passenger shipping: While existing tourism offers on the Upper Danube are being further optimized and cruises are also becoming increasingly popular outside of the tourist season, an opened up new tourist destinations on the Middle and Lower Danube. On the other hand, there has often been a lack of information on the sometimes very different border control formalities and a lack of coordination between authorities. Embedded in the European Strategy for the Danube Region (EUSDR), viadonau worked together with the countries bordering the Danube to develop practice-oriented solutions as part of a working group to remove administrative barriers - important milestones, especially for viadonau logistics expert Deniza Staewa, who, as head of the working group, focus on what we have achieved together. In the triad of "simplification, harmonization and digitization", the cross-border efforts quickly yielded forward-looking successes. In concrete terms: the publication of a handbook on border controls, which should be followed by the internationally standardized border control forms (DAVID, Danube Navigation Standard Forms) that are now gradually being introduced in the countries bordering the Middle and Lower Danube.

Standardization and digitization are also trumps in shipping itself. This is once again confirmed by Thomas Bogler from Viking River Cruises – from easier access to training and the job market in inland waterway transport to the inclusion of cruise ships in a digital information network for optimal safety and maintenance of the ships and tailor-made services for passengers. At the same time, the environment and ship technology moved even closer together. Propulsion technologies would be further improved - especially in the direction of hybrid and electric drives - and modern energy supply for ships at berths through integration into the shore power grid would also find its way.

One thing is clear: shipping and waterway administrations are following an increasingly modern, future-oriented course. The Danube plays an increasing role in the European transport network. What is their status in the individual Danube countries? Simon Hartl

is optimistic: You can not only rely on strong support from Brussels - while the Danube has always been an essential artery for Austria as a landlocked country, there is also a willingness in the other countries bordering the Danube to jointly develop the waterway. Excellent cooperation has developed, especially with countries such as Romania, whose section of the Danube with its direct connection to the Black Sea is particularly heavily frequented.

The coronavirus pandemic hit passenger shipping on the Danube particularly hard and led to a historic slump in an industry that had experienced steady growth in previous years. The pandemic is still a serious challenge for 2021. Corresponding forecasts are difficult for both Bogler and Hartl. Although freight shipping has come through the crisis well so far, there is still a lot of untapped potential. According to Hartl, however, it should not only be about the tonnage transported on the Danube, but also about the added value associated with the transport. The Danube proves to be almost predestined for oversized heavy transports - keyword: high & heavy - such as parts of wind turbines but also for renewable raw materials and recycling products. With the implementation of the vaccination plans that are now pending all over Europe, there can also be hope again in tourism shipping.

#### *Lock management with RIS in Austria*

The RIS systems to support lock management on the Austrian Danube consist of two main components:

- electronic traffic situation image from the DoRIS system
- electronic lock journal

There is also a connection to the European Hull Database and to the electronic reporting system for hazardous goods.

#### **17. Figure Visualisation of vessel traffic in the immediate proximity of a lock**



Source: viadonau



The AIS (Automatic Identification System), which provides seamless geo-positioning of vessels, is used for the planning of locking and the identification of the optimum time to enter the lock. This enables optimized planning of locking cycles, the avoidance of waiting periods and a reduction in empty lock cycles.

At the same time, vessels can send timely notification and can optimize their speed to reduce fuel consumption and costs where possible.

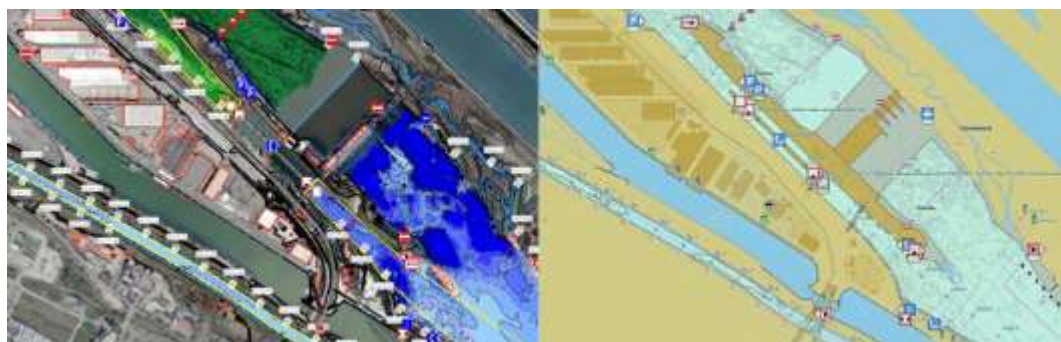
An electronic lock journal was introduced at the Austrian Danube locks. This system largely enables automated planning and documentation of all services at the lock.

#### *Fairway Information Services*

So-called Fairway Information Services (FIS) provide current information on the navigability of waterways and therefore support boat masters, fleet operators and other waterway users in the planning, monitoring and execution of inland waterway transport.

The most common way to publish fairway-related information is either through Electronic Navigational Charts (Inland ENC) or online via Notices to Skippers (NtS).

#### **18. Figure Freudenau power plant in Vienna**



Source: manual on Danube Navigation – viadonau

### **7.5.2.2 CROATIA**

Inland ports, their construction, technical conditions, maintenance as well as the method of management are regulated:

- Law on Navigation and Inland Ports,
- Regulation on Port ordinance,
- Regulation on technical and technological conditions for ports and safety conditions for navigation in ports and inland ports,
- Technical rules for the statutory certification of inland waterway vessels,
- Rules for technical supervision of inland waterway vessels.

Pursuant to the Law on Navigation and Inland Ports (hereinafter the Law), performance of activities the management of ports and ports on inland waters is the responsibility of port authorities. For the area jurisdiction on the Danube River, the Port Authority was established with its headquarters in Vukovar, and for the area jurisdiction of the Sava River in Vukovar-Srijem County, the Port Authority was established with its headquarters in Slavonski Brod.

The law defined the pier as part of a waterway and the land area directly connected to it is intended and equipped for mooring, anchoring and protection of vessels. The port area is an area a port managed by the port manager, which is used to perform port activities and on which is subject to a special regime of control of the arrival and departure of the vessel and the entry and exit of vehicles and persons.

The performance of port activities in ports is permitted on the basis of a concession or approval issued by assigned on the basis of public authority by the competent port authority.

Regulation on Port ordinance (hereinafter the Ports Regulation) defines the following types of docks:

- passenger,
- industrial and commercial,
- shipyard,
- sports,
- tourist,
- communal and
- special types of docks and winter quarters.

### **7.5.2.3 ROMANIA**

A recently entered in force Directive 2017/2397 establish standards for obtaining a Union certificate of qualification as a passenger navigation expert for the boat master. The Directive is applying for vessel constructed and equipped to carry more than 12 passengers.

It is worth to mention within this chapter the security is an important issue for the shipping companies as well as for the people who wants to travel. Any security risk is taken into consideration by the shipping company.

### **7.5.2.4 SERBIA**

In the Republic of Serbia, the following rules and regulations are applied concerning safety of inland navigation:

- Law on navigation and ports on inland waters
- Law on national affiliation and registration of vessels

- The customs law
- Law on border control
- Regulation on the conditions that must be fulfilled by ports, harbors, and temporary transshipment sites
- Regulation on the regime of border control of foreign and domestic ships
- Regulation on conditions for inland navigation and the rules of navigation on inland waters
- Regulation on determination of international and interstate waterways
- Regulation on categorization of international and interstate waterways
- Regulation on conditions under which a foreign vessel may navigate on state waterways in order to enter in domestic ports open for international navigation
- Regulation on types of RIS services and the beginning of their mandatory use
- Regulation on provision of security protection of ships, ports and aids to navigation on international waterways
- Rulebook on River Information Services
- Rulebook on technical rules for statutory certification Inland navigation vessels
- Rulebook on waterways, ports and harbors where the pilotage is compulsory for vessels
- Rulebook on prevention of pollution from ships
- Rulebook on ships certificates and books/documents
- Rulebook on the minimum number of crew members for the safe navigation of ships, which must have inland waterways ships and other vessels

The Law on navigation and ports on inland waters defines that navigation safety means the conditions, rules, technical rules and measures that must be met by vessels and crew, waterways, ports and harbours that ensure safe navigation.

The Regulation on the conditions that must be fulfilled by ports, harbours, and temporary transshipment sites contains the chapter dedicated to special requirements for passenger terminals open to international traffic. Article 23 of the mentioned Regulation prescribes whole set of conditions that IPTs must meet in order to ensure safe operations on the terminals, such as: nautical service and technical assistance when arrive or departure passenger ships 24 hours a day, year-round tourist-nautical season; effective control over the movement of passengers, crew members, the employees at the harbor and other persons whose movements, pausing and stay was granted by the competent authorities, luggage of passengers and crew members, or goods or materials relating to the cruise ship; proper marking of the IPT's area regulated by vertical, horizontal, and signal light and well illuminated; proper and functional fence on operative banks to prevent eventual dramatic decline in water (accident); access to emergency vehicles, police and rescue fire department must be marked and accessible at all times etc.

## 8 Best practices

In the following section, we summarize the good practices presented by the project partners as data provision, which are related to inland passenger transport. By presenting the good practices, the general public interested in the project and the partnership can learn about the tried and tested practices in each country, which may be suitable for implementation in other regions.

### 8.1 Digital registration from November 2020 – DDSCG - AUSTRIA

Digital guest registration via QR code is currently in preparation: Upon arrival, guests scan a QR code and enter the required data on their mobile phone (name, email address, telephone number). Local, table number and time are automatically registered by the system. Guests can voluntarily save their data permanently in their own smartphone, so that when they visit a restaurant again, only the QR code has to be scanned. The data is encrypted several times and is automatically deleted after 28 days. The digital guest registration is a cooperation between the Vienna Chamber of Commerce and the City of Vienna. It is scheduled to start in November 2020 and will be available free of charge.

### 8.2 The DANRiSS system - BULGARIA

The DANRiSS system is an example of an efficient way to control the ship traffic along the Danube. It was developed between 2017 and 2020 by the Executive Agency Maritime Administration in partnership with the Romanian Naval Authority as a project under the INTERREG V-A Romania – Bulgaria Programme. The main objective was to increase the cooperation potential and efficiency of both public institutions considering the surveillance of traffic within the common sector of the river. The project included activities that would help for the development of common IWT rules and procedures, avoidance of duplication of ship inspections, creation of a common database etc. This would enhance harmonization of procedures and decrease time spent by ships in ports.

### 8.3 The BULRIS system - BULGARIA

On a national level the BULRIS system serves a similar purpose as the DANRiSS. It was developed by the Bulgarian Ports Infrastructure Company and is in its essence a communications network which has the aim of providing efficient and safe navigation in the country's internal waterways. The system allows quick transfer of electronic data between vessels and land through the exchange of forecast information in real time. BULRIS operates in accordance with all technical guidelines for the planning, implementation, and operational use of River Information Services.

## **8.4 The Single Window System - BULGARIA**

The Single Window System organizes and enhances the prompt and efficient processing of submitted documents for entry and exit clearance of ships. It allows digital submission of electronic data for all vessels visiting Bulgarian river terminals. The information is provided by ship agents and is monitored and approved by the EAMA, Customs, Border Police and the BPIC. Through the Single Window port operators have access to real time data, which could be used to plan and perform more effectively all sorts of port activities.

## **8.5 Level of security in the passenger ports- CROATIA**

Best practice example derives from the need to ensure an added level of security to the ports to minimize possibilities of theft or damages to the property in ports and harbours.

Ports open to public traffic in Croatia are not fenced like marinas for example and in most locations, they are located in the towns' centre hence open to everyone, so the majority of the ports have a night watchman or sometimes even security personnel. Aside from covering ports with adequate lightning ports could move a step further by introducing security cameras or a CCTV system.

Video cameras are useful tools for monitoring and recording incidents that occur within the system's capability range. Video camera recordings provide a window into an event that may have occurred after the fact. Monitoring with a video camera also allows one to see what is going on in real-time. The cameras are monitored from the operations centre and provide 24-hour coverage protecting the port area from damage arising from any variety of hazards, losses or threats which is evident especially during the summer season when some tourist destinations have three or even four times the number of people than the locals during the winter.

Long term goal could be to be broadening the camera's capabilities by enabling visitors to see real-time monitoring via an app.

The port authorities, as administrative bodies, carry out all administrative and inspection work related to sea safety in the Republic of Croatia in accordance with their legal rights and duties. This best practice allows all ports and port authorities to add an extra layer of security for their users.

Because we're talking about video surveillance here, in accordance with identity protection laws and GDPR, this type of protection should be taken seriously so that it isn't abused, so care should be taken to comply with all legal regulations for this type of protection.

Given that the majority of Croatian port managing authorities operate with relatively limited and mostly outdated equipment and programs, the need for digitalization and automation of certain tasks in their respective management, video surveillance offers a solution for protecting property while also acting as a preventative measure by discouraging potential theft and obliteration. This practice could be applied in all ports and harbours.

## **8.6 FAIRway project - River maintenance boats - HUNGARY**

The aim is to provide up-to-date, reliable and consistent information on wading sections, water levels and advanced water level forecasting for the entire Danube section. These basic conditions are not only the basic elements of waterborne transport planning, but also fundamentally determine the design and sustainability of the waterway and the related planning processes in the water sector.

In Hungary, General Directorate of Water Management (OVF) purchased 3 special boats to measure and maintain Danube waterway on the Hungarian section.

The basic task of the boats is to designate a water depth-safe waterway for boats by placing buoys. In addition, they play an important role in the event of an icy price or a larger amount of drift, so the bow of the new boat has been designed to withstand even the most severe ice movement: the double-ribbed, 10mm-steel-reinforced bow makes up about one-fifth of the vehicle. Thanks to their flat bottom and their small draft, they can perform their tasks safely even in low water periods.

## **8.7 Riverbus 2.0- HUNGARY**

The Hungarian-developed amphibian sightseeing bus has been part of the Budapest waterfront for a long time, but based on experience, the vehicle has been further developed.

One of the most important developments is that instead of the previous steel-framed construction, the hull and superstructure of the new water bus are made entirely of aluminum. In addition to the corrosion protection considerations, this was mainly due to weight reduction, and the weight data of the finished vehicle confirmed the ideas of the design team led by chief designer Péter Barta. According to the manufacturer, the strength of a 4-6 mm thick, high-strength aluminum alloy hull far exceeds the loads caused by the significant wave heights typical of this water zone. Attached to this is a superstructure that is now welded instead of bolted, consisting of aluminum profiles with a wall thickness greater than the closed sections of the previous steel, complete with reinforced roll-over frames. The most important parts of the amphibian bus are protected by registered industrial design protection.

Both the two propulsions and the steering are completely independent of each other, symmetrical, with the same power and parameters. The new Swimbus has two more automatic fire extinguishing systems. The boat section was certified by Germanischer Lloyd and the road section by TÜV Rheinland.

## **8.8 Memorandum of Understanding in the field of nautical tourism in inland waterways - SERBIA**

A Memorandum of Understanding (MoU) in the field of nautical tourism in inland waterways was signed between Ministry of Trade of Tourism and Telecommunications the Port Governance Agency on September 8, 2021. The Memorandum will improve the economic environment and encourage further investments in the development of tourism and water transport. With this memorandum the visibility of Serbian nautical potential will grow and enriched by cultural sights and natural attractions of our country that will be present more closely to domestic and foreign tourists.

MoU emphasizes that nautical tourism is a development opportunity for Serbia, whose great potential is reflected in the network of rivers of almost 1,600 km in length and the Danube. Due to the development of these potentials Memorandum will contribute to stimulating investment activity. In previous period, Ministry of Trade, Tourism and Telecommunications of RS has allocated a total of 327.9 million dinars for international passenger terminals in the past six years.

Joint activities of the Ministry and PGA will greatly improve nautical tourism in Serbia mostly in area of construction and opening of new international passenger terminals and marinas. In the upcoming period two institutions will work together intensively on planning and improving the tourist infrastructure. Marinas and international passenger terminals are an important segment of passenger water transport and will complete the nautical offer of our country. The activities of the PGA will be focused on the planning of capital and priority projects and their implementation. The exchange of knowledge, experience and information with the ministry will be of key importance, so that, after several decades, the tourist potentials of the Danube and Sava will be fully used. Aim of the MoU is that joint projects in the field of nautical tourism is more efficient realization of infrastructure projects, bearing in mind that the construction and opening of new international passenger terminals and marinas will contribute to the development of local governments and increase total revenues from the branch of tourism in Serbia. MoU also enables possibility of joint promotion of Serbian nautical potentials on domestic and international market.

## **8.9 Awake the Danube - SERBIA**

Within its competences, PGA is engaged in other promotion activities of RCI. One of those is certainly the project “Awake the Danube”.

The Port Governance Agency of the Republic of Serbia, in cooperation with UN Development Programme (UNDP) started in 2017 the project under the prominent name – Awake the Danube, which reflects the firm intention of its creators.

The idea and goal of the project are strictly focused on the quality and safe development of domestic scheduled service and cruising on international passenger terminals on the Danube.

In other words, let us be the Danube and its shores and generously share it with all lovers of natural wonders intertwined with rich history.

Formally, the project's ambition is to support the promotion of nautical transport and tourism of the Upper and Lower Danube Region of Serbia, connecting all most significant towns into unique whole, as well as to contribute to the development of towns of this region which will be inscribed on the tourist map of Europe.

The first phase of the project, in which we awakened the shores in Smederevo, Donji Milanovac, Kladovo, Golubac and Veliko Gradiste – was successfully finished and it gave us the wind in the back for the second phase. During the project activities, international passenger terminals were opened in Smederevo, Kladovo and Gloubac. The plan of the Agency in the coming period, is to open the international passenger terminal in Veliko Gradiste (Ram), Zemun and Kostolac as well.

In 2019, the Port Governance Agency continued to work independently on the project, the goal was to restore the splendour of the Danube coast and its potentials in five more towns of the Upper and Middle Danube Region in Serbia, which are the following: Novi Sad, Zemun, Sremski Karlovci, Banostor and Apatin.

The aim of the project was to make the trip extremely comfortable for all future tourists who choose to sail the Danube, and make the set of sites and activities in the towns lying on the bank of this magnificent river accessible and numerous. In this manner we emphasize the unbreakable connection between towns and the Danube and increase their further potential.

Within the project “Awake the Danube”, the Port Governance Agency supplemented and published a brochure of the same name.

The updated brochure included, in addition to the existing ones, three new locations on the Danube - Apatin (“Town of Alas”), Banoštor (“Village with two suns”) and Kostolac (“Home of miners and Roman legionaries”).

Apart from interesting historical facts, legends, gastronomic recommendations, and cultural heritage of the municipalities that lie on the Danube, readers can find in the publication a story about the Roman heritage in Serbia - the Roman Limes - and learn more about the seven fortresses on the Danube.



Readers can find the brochure in electronic format on the website of Port Governance Agency: <https://www.aul.gov.rs/en/bulletin>

## **8.10 Regular passenger water transport on the Danube - DUNAJBUS - SLOVAKIA**

Two towns and three villages joined forces for the purpose of public shipping on the Danube. The city of Šamorín, the city of Bratislava, the Čunovo district, the municipalities of Hamuliakovo, Vojka nad Dunajom and Kyselica were founded in 2015 Association of municipalities Prodanubia especially for the purpose of supporting ecological local transport - passenger shipping on the Danube.

The main goal of the association is to alleviate the current critical situation in road traffic on the section between Šamorín and Bratislava. During the working week, approximately 20,000 cars move in this section every day. This happens in the morning or afternoon. To large-scale traffic jams that cause regular two- to three-hour delays.

DUNAJBUS is a line of passenger water shuttle transport, serving the community of towns and villages within the Danube region, which stretches from Bratislava to the Gabčíkovo reservoir. The basic aim is to provide a comfortable and convenient transport that will save the people of this region time, costs and at the same time allow to reduce the number of cars on congested roads, and thus reduce the impact on the environment. DUNAJBUS is characterized by reliable travel times, a fleet of modern vessels based on hybrid technology and reasonable transport costs, which as a whole provide passengers with high added value services. DUNAJBUS is operated by the Pro-Danubia association - the Association of Hamuliakovo, Vojka nad Dunajom, Kyselica, the towns of Šamorín and Bratislava, which was created specifically to support ecological local transport - passenger shipping on the Danube.

More information at:

Pro-Danubia Združenie obcí pre miestnu dopravu po Dunaji

Address: Dunajská 127/18, 90043 Hamuliakovo, Slovensko

Web: <http://www.prodanubia.sk/>

Email: [info@prodanubia.sk](mailto:info@prodanubia.sk)

Tel: +421 903 247 712

## **8.11 Twin City Liner - SLOVAKIA**

Twin City Liner is a shipping line connecting the metropolis of Bratislava and Vienna, the nearest capitals in Europe, which has been operating regularly between these cities since June 1, 2006. It is built through Norwegian-made catamarans, a lightweight fast

ship of modern design. The journey to Vienna or Bratislava by this boat takes only about 75 minutes, is fully air-conditioned and also offers restaurant services.

Main data about the new vessel:

- Number of passengers 250
- Vienna - Bratislava 75 min.
- Top speed 70 km / h
- Number of engines 4
- Length 39 m
- Width 11 m
- Draft 0.8 m

More information can be found at: +43 1 904 88 80 / [www.twincityliner.com](http://www.twincityliner.com)

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