



CONDUCT TWO CASE STUDIES OF PRIORITY AREA 3 OF THE EU DANUBE REGION STRATEGY:

LOT № 1 – STUDY OF THE FESTIVALS IN THE GENERAL CONTEXT OF THE TOURIST DEVELOPMENT OF THE DANUBE REGION;

LOT № 2 – STUDY OF THE DEVELOPMENT OF THE CRUISE TOURISM IN THE DANUBE REGION

LOT № 2 - STUDY OF THE DEVELOPMENT OF THE CRUISE TOURISM IN THE DANUBE REGION

FINAL REPORT

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RESUME OF THE STUDY

The **overall objective** of the present public procurement with subject "Conduct two case studies of priority area 3 of the EU Danube region strategy: Lot № 1 – Study of the festivals in the general context of the tourist development of the Danube region; and Lot № 2 – Study of the development of the cruise tourism in the Danube region" is to prepare studies, which will provide detailed, reliable and up-to-date information on the development of the cruise tourism, its contribution to tourism development in the Danube Strategy countries and in particular the achievement of one of the objectives of the Danube Strategy Action Plan for "Further development of the navigation and port system for cruise ships and private yachts on the Danube river".

In **territorial terms**, the study covers the Danube river in its navigable waterway from Kelheim, southern Germany to Sulina, Romania, with a total length of 2 414 km. The countries of Germany, Austria, Slovakia, Hungary, Croatia, Serbia, Romania, Bulgaria, Moldova and Ukraine fall into this range.

With regard to the **types of ports**, the survey includes all types of ports, regardless of their ownership, size and specialization, which have been identified (technically and legally, under the relevant national legislation) to handle cruise and passenger ships.

Subject of the study are **cruise companies** that offer cruises, made in entirety or in part on the Danube, cruise ships, as well as the cruises themselves - routes, ports, additional excursions.

Part of the study is related to the identification of the main **characteristics of the cruise tourist product, its current status and its development trends**.

Within the scope of the on desk survey for the study, information was sought, processed and analysed for all entities of the survey among multiple and different groups of sources - official sources at national level (national administrations and national branch organizations, national statistical offices), sources at macro-regional level as EC, Danube Commission, International Organizations in the Cruise Tourism and Water Transport Sector - CLIA, CCNR, IG River Cruise, UNWTO, WTTC; municipal administrations, port administrations, local and regional tourism organizations, business sources - cruise operators, travel agents; sites of executed projects, research and media publications on specific issues related to the topic.

The on desk survey resulted in identifying 98 destinations along the Danube with **ports (and quays) capable of berthing cruise ships**. The identified ports have 268 berths for handling passenger/cruise traffic. As a total number and capacity, along the Danube there are sufficient resources in terms of ports. However, ports structure along the river, considering all indicators - total numbers, densities, capacities - shows a serious imbalance with concentration in the Upper Danube countries and lagging in the Lower Danube countries.

71 of the identified ports are called from at least one program of at least one cruise operator, which accounted for 72.45% of all ports. Cruise program coverage is even higher for the berths - **235 berths or 87.69% of all are called in cruise ports**. Only two ports are present for all of the cruise operators - **Vienna and Budapest**. These cities, along with **Passau, Melk, Bratislava and Belgrade**, can be considered "hits" among the Danube ports.

The assessment of the potential of the ports not covered by the cruise line programs at this stage outlines as "promising" options Ens (Austria), Vac and Nagymaros (Hungary), Kladovo and Sremski Karlovci (Serbia).

Overall **transport accessibility of ports can be assessed as good**, especially in terms of road transport network. This is of importance in view of the fact that this is the most common mode of transport, but especially in terms of opportunities to provide additional services on the spot. Regarding the Bulgarian ports improvement should be sought at Nikopol, Svishtov, Tutrakan and Silistra as far as the road network they are accessed by, is lower class than desired.

The **railway network** coverage has its role as access to/from the starting and disembarking ports of the cruises. With the exception of the Upper Danube, the rate of use of rail transport is lower, while the coverage of the railway network is satisfactory, but this is without having a significant positive or negative impact on the development of cruise tourism.

In terms of cruise tourism and considering the main markets, of **the utmost importance is the connection to the air transport**. The Upper Danube has the best connectivity and Bulgaria is in a disadvantageous position as the closest national airports - Varna and Sofia are at a considerable distance from the Danube ports.

The Danube fleet is growing at a fast pace and **for the period 2012-2017 the number of cruise ships has increased from 124 to 170 (+37%)**. Experts estimate in 2019 about 188 sailing ship on the Danube.

The survey identified **41 cruise operators offering Danube cruises**. They operate their cruises on the Danube with a total of **175 ships with a total of 29 267 seats**. The distribution of Danube vessels by cruise operators is characterized by strong fragmentation. A total of 23 operators (57%) make cruises with up to 3 ships. At the same time, only 3 companies have 10 or more vessels on the Danube. **The undisputed leader is Viking River Cruises with its 30 vessels** (over 17% of all Danube vessels).

The current age structure of ships of the Danube fleet shows that **predominant in it are the new vessels**. For the 2020 season, cruises will be made by ships, 79% of which are manufactured and/or renovated in the period 2011 - 2020.

The **average number of crew staff on a Danube ship is 44-45 persons**, with an expert estimate that the **total number of the staff on cruise ships employed on the Danube is over 7 787 people**

- ship crews and tourist service personnel (hotel and other) . An important aspect is the **ratio of the number of staff to the number of passengers**, with an average value of 1/4 or 0.25. From this point of view, 118 of the vessels cover this level or better than it (72.4%).

The total number of cruise programs for 2020 is 496. If to this number are added their various variations, which are also available as standalone programs - 263, then a **total of 759 Danube cruise programs are on sale.** There is a clear tendency for the "clean" cruise package to be supplemented with 1-2-3 nights stay before or after it. These combinations make it possible to supplement a cruise with a visit to significant destinations that would have a marketing effect (e.g. Prague, Paris).

By early November, 33 cruise line operators had announced their sailing dates for their various 2020 programs. Within the announced dates, **3012 Danube cruises are expected to be implemented in 2020 under 397 programs.** At the time of the survey, 9 cruise line operators had not announced dates for their programs, and total 99 programs were without dates.

The cruise season starts in March and lasts until the beginning of January. The main concentration of cruises is between **May and October**, when 78.65% of all cruises are concentrated. It is noteworthy that there are quite a lot cruises from November to December, suggesting a trend of season expansion.

Top 5 **cruise operators by number of cruises** include Viking River Cruises (283), Phoenix Reisen (259), AmaWaterway (256), Avalon Waterways (239) and A-Rosa Cruises (218).

Overall **among cruise programs prevail those lasting from 6 to 9 nights**, which are 47% of all major programs. Programs with a duration of 10-14 nights (30% of all programs) also occupy a significant share, which tends to make **Danube cruises lasting 6-14 nights.**

Cruise programs cover the countries along the Danube river to different degrees, clearly outlining the **imbalance in the development of the Danube as a cruise destination.** The Middle and Lower Danube occupy 1/4 of the Upper Danube coverage. Particularly unfavourable is the situation for Moldova and Ukraine, who are present in the programs sporadically.

The price for a cruise package depends on the destination, duration, category of services, time of reservation in relation to the period of travel. Grouped by duration of the cruise on the Danube, prices range between 55 -239 Euros/overnight for a 7 day cruise to 107-559 Euros/overnight cruise with 11 or more overnights.

The main channel for the sale of cruises remains the traditional one - tour operator - travel agent - end customer. Travel agencies are responsible for the vast majority of cruise sales, for some cruise operators reaching 97% (AmaWaterways). The cruise is one of the few remaining products, in which the role of travel consultant is preserved. Even in the case of online sales,

the sales are accompanied by call centres, chat bots and other tools to further assist the customer in choosing a product.

In 2017, the number of tourists on Danube cruise ships amounted to 693 200 passengers (50% of all cruise tourists in Europe). For the period 2012-2017, its increase is 69% and for the last year it is 6.38%. According to the Central Commission for Navigation on the Rhine (CCNR), **the total number of tourists on river cruises in Europe in 2018 is 1, 64 million** and records very strong growth compared to 2017 - an increase of 14.6%.

In terms of market structure, the **USA and Canada remain the most important market, with a share of 37.7%** and about 618,000 tourists taking a river cruise in Europe. The next are **Germany (344,000 tourists, 21%) and the UK - 210,000 (12,8%)**. Other markets - France, Australia and New Zealand, Austria and Switzerland have a smaller share. The growth in all markets is at least 14%.

The **average age** of cruise tourists on the Danube is 67 years. **Every 2nd cruise tourist has a monthly income of at least 4000 Euro**, which shapes the profile of the mass cruise tourist as a user with time and financial resources. "Getting to know many countries in short time" is the most significant motive for deciding on a Danube cruise. An important role to choose a cruise is the motive "Comfortable way to travel". This outlines **the main competitive advantages - diversity (of countries and cultures) and the fleet**.

The **US is the largest market for cruise tourism worldwide** with total volume of cruise tourist flow from the US in 2018 of 13.09 million and it increased by 9.6% compared to 2017. **American cruise tourists are relatively younger than European tourists - 45-47 years of age**, with 78% of them travelling with a spouse or partner. The average duration of cruises is 6-8 days, and with the increase in the age group, the preference for longer cruise duration increases. **41% of travellers express a preference for Europe** as a destination. The majority of the trips are booked far before the trip itself - **32% booked 14-18 months earlier**. When booking, the main part of the clients is influenced by the information on the company's websites (52%). **Traditional advertising channels have very little impact** - TV/radio respectively - 8% and print media - 7%.

Germany is the largest European market for river cruise tourism. The number of tourists who booked a river cruise in 2018 reached almost half a million people - 496 270 tourists and increased by 5, 5% compared to 2017. Out of these, 174 687 tourists (35.2%) have taken a Danube cruise. The **total number of overnight stays on all river cruises was 3 507 024** and also increased (by 8.9%) compared to the previous year. Thus, **the average journey duration is 7.07 nights** (compared to 6.85 nights in 2017). The structure of tourists by age is dominated by those aged 66-75 years - 31.1%, followed by the age group 56-65 years - 26.7%.

The **UK and Ireland** are the other major markets with a steady upward trend. For the period 2012-2018, river cruise tourists from this market increased from 129 700 in 2012 to 232 300 in 2018. The **Danube is the most popular river cruise destination**, attracting 68 000 tourists in its

various sections (some of them in combination with Rhine). Total river cruise nights for 2018 are 1.83 million, which forms an average duration of one cruise of 7.9 nights. For the cruise tourism market, the average age of tourists is 57 years, where the structure, as expected, is dominated by the higher age groups - 60+ tourists form 55% of all tourists.

According to the observations of the Danube Commission, territorially the **cruises are performed mainly in the Upper Danube region - up to 82% of the total passenger volume**. Danube delta destination cruises remain in the range of 17-19%, while transport to/from Rhine ports provides about 30% of the passengers. Regardless of the disproportion, **the upward trend is common to all sectors of the river**.

For both major Bulgarian cruise ports - Vidin and Ruse, the 4-year period from 2016 to 2019 is marked with a positive upward trend in cruise ship calls. In Ruse, calls increased by 20% and for 2019 are 410, while for Vidin the increase is even more serious - from 181 in 2016, cruise ship calls increased to 336 in 2019 - an increase of over 85%. With regard to the number of tourists, it is expected that around 40,000 tourists will be catered for in Vidin by the end of the year, while for Ruse the number is expected to reach 60,000.

The review of **the berthing time of cruise vessels in ports and the offered additional services** outline trends of specialization of certain countries/ports in certain types of tourist products, like promoting of national specifics, in forming of leading ports and hit services. At the same time it is revealed changes in consumer tastes, expressed in thematic excursions, new forms of proposing and last but not least - through **the evaluations of the provided services**. TripAdvisor® presents 325 Danube cruises, 123 of which are rated 5, and for 94 cruises the rating is 4.5. **Cruise Critic** pays special attention to additional excursions during cruise voyages. For the Danube region are listed reviews for 19 excursions in 5 destinations - Bucharest, Budapest, Melk, Passau and Vienna, with total 1,448 number of reviews. All excursions are rated on average as very good and excellent.

Cultural tourism, as a kind of tourism, is the most widely represented in the cruise voyage. Its influence concerns the main motives for the journey itself and the contents of the tourist product. Only 2 of the 71 ports surveyed did not offer additional cultural tourist services. Services offered are dominated by traditional forms that involve mostly passive participation, but in addition to them, more and more **new forms of presenting** of existing services are emerging, diversity is being focused through **thematic profiling** and an entirely **new types of services** are being introduced. **Innovative forms in cultural tourism are characteristic of the countries of the upper Danube - Germany, Austria, Slovakia, Hungary**. There, the demand intensity encourages operators and destinations themselves to strive for product diversification. On the other hand, in the other countries, offered services are still very limited in scope and conservative in form - these countries are still at the "promotion" stage, which could turn into an advantage.

Developing in the natural environment of the Danube, cruise tourism is essentially predisposed to a **profound connection with ecotourism** and the integration of eco-tourism activities. There are some types of additional ecotourism services, which are provided in 22 out of 71 ports. However, the major target regions occupying it along the Danube are the Danube Delta and the Upper Danube (mainly its river course in Austria). There is a **tendency of change of consumer behaviour from passive observation to active experience**, expressed in increase in destinations and in expanding the range of active eco-tourism activities. Among the **places with untapped potential** for eco tourism mostly stands out the area of Iron Gates Gorge and adjacent Djerdap National Park in Serbia. Considering the potential of Bulgaria, it is undoubtedly in the integration of the protected zones along the river - the Persina and Rusenski Lom Nature Parks and the Srebarna Nature Reserve.

Among the specialised forms of tourism, **gastronomic and enotourism** (gourmet and wine) are among the most compatible and effectively integrated types of specialised tourism. Their penetration into cruise tourism is large-scale and intensive because the very idea of getting to know other nationalities and cultures is related to contact with their cuisine and traditions. There are 8 specialised wine cruise programs.

Although the combination of cruise and wine is most commonly associated with the Krems region, Austria, **in territorial terms the integration of cruise tourism with gastronomic and oenological tourism can be traced in any country along the Danube**. In Bulgaria related to the culinary and wine special additional services are available only from the port of Vidin - tasting of local wines and tasting yogurt and local pie (banitza). In other words, there is a very serious potential in the Bulgarian part of the Danube valley to intensify the cruise-wine/culinary combination, especially in ports such as Svishtov and Ruse.

At present, **there is a lack of a focused integration of festival events into cruise tourism**. At the same time, each destination maintains a calendar of events through which it can further diversify the stay of tourists. This requires a proactive position from the destinations to submit their calendar to cruise operators and even, where possible, tailor the event program to the cruise ship schedules.

The value chain of cruise tourism is extremely long and rich, covering 25 types of entities, organisations and administrations that add value in the process of preparing and realisation of the cruise tourism product. The specific **direct economic benefits of a cruise destination** can be summarised as: (a) direct expenditures of the cruise tourists and ship crews; (b) direct costs incurred by cruise companies for payments to local suppliers; (c) employment - direct and in connected sectors.

The latest serious **study of the benefits of cruise tourism in the Danube region** was carried out in Germany and Austria and it shows that only within 5 months (June-October) the contribution of cruise tourists to the regional economy is at least 110.7 million Euros. In the structure of

these revenues 46% are costs for additional excursions; 17% - additional expenditures by the tourists; 19% - operating costs from the ships themselves; 13% fees and 5% transportation costs for tourists to the port.

The main "players" in the cruise sector are the **companies - the ship-owners** of the cruise vessels, the cruise operators (not always the owner operates the ship), **local tour operators** who partner with the cruise ships and do the service on the shore, **public authorities** at different levels, branch and professional organizations of both the tourism and transport sector, the **customers** who, through the generated demand, actually model the product and provoke its development.

The key thematic areas of interaction between the business and the administration are legislation and administrative procedures, including tax and labour legislation, ecological norms and environmental impacts, port development, provision of additional services, destinations marketing, the balance of benefits between the cruise business and the destinations.

Given the nature of cruise tourism, **communication at transnational level – in this case EU level** is even more important, as the Danube cruise product is developed in many countries and needs an unified framework for this. At present, at EU and individual country level (with few exceptions), **river cruise tourism is underestimated** and remains beyond the scope of dedicated planning. The EU **lacks a comprehensive strategy** and consistent action to develop it, in contrast with maritime cruise tourism for its focus on coastal and maritime areas.

Communication between the cruise industry and administrations on national level is severely constrained in most countries. At present, real partnerships are developed mainly operationally at lower territorial levels - with municipalities and regional structures.

Against the background of increasing requirements (e.g. in the environmental field) and the desire to develop alternative routes (new ports, new services), **insufficient/missing infrastructure is emerging as an important determinant of future development**. The construction and development of ports is an expensive and time-consuming process, so different models of partnership between operators, administration (local and national) and port authorities are applied.

Although in rare cases it is the main user, the cruise industry suffers the disadvantages or benefits the advantages provided by the degree of development of the **transport infrastructure** in a wider context, especially with regard to the existence of connections with other modes of transport and especially the possibility of access to ports.

The problem of **overcrowding of tourist destinations** is characteristic of the smaller cities such as Regensburg, Melk, Passau. In order to avoid conflicts of interest, there is a continuous dialogue between the operators and the destinations, seeking solutions such as the construction of additional port infrastructure, the use of adjacent/alternative ports, the introduction of maximum capacity indicators; identification of alternative attractions;

development of products in other parts of the river in order to balance the tourists; targeted investment and implementation of flexible arrangements for organizing traffic around and to the port.

In addition to the above barriers, there are also internal, **sectoral problems** - the increase of ships and their concentration along certain routes; labour shortages, industry fragmentation.

In 2017 the cruise industry provides a record 47.86 billion Euros to the European economy, according to the new data from the Cruise Lines International Association (CLIA). This represents an increase of 16.9% compared to 2015. The direct costs generated by the cruise industry amount to 19.70 billion Euros.

In terms of employment **between 2015 and 2017, the cruise industry generated more than 43,000 new jobs** across Europe, with 403,621 already employed in cruise and cruise line businesses.

Europe is **the second largest generating market in the world - 6.96 million trips**, up with 7.8% in 2017 compared to 2015. Europe remains **the second most popular cruise destination** - after the Caribbean, attracting 6.50 million passengers in 2017, up with 6.1 percent from 2015.

Cruise lines spent 5.6 billion Euros in European shipyards in 2017, an increase of 22.4% compared to 2015. It is expected that in the period 2017-2021 66 new cruise vessels will be produced with a total value of over 29.4 billion Euros.

The **International Cruise Line Association (CLIA) estimates worldwide cruise passengers in 2018 at 28 515 000 tourists**, with a trend of 6% annual growth. **North America (USA and Canada) is the leading market**, generating almost half of the total tourist clients - 14, 24 million tourists. Western Europe attracts 6, 73 million tourists and is second, ahead of the Asia region with 4.24 million.

Global trends of the last decade, which have secured the growth of the cruise industry and affect all cruise destinations and all types of tourism, can be summarized as follows:

- **Cruise tourism market growth.** Cruise tourism is attainable to a wider consumer market.
- **Evolution of cruise ships.** Vessels are getting bigger, more luxurious, and cruise routes are becoming more crowded. The upward trend of increasing single cabins numbers, which is a result of important socio-cultural trend like the one of the individualization.
- **Creating experiences.** Experiences become more and more important when choosing a vacation. The tourist wants involvement and is constantly looking for new events and incentives.
- **Strong degree of theming**

- **Cuisine with an emphasis on health.** The number of alternative or specialty cruise ship restaurants is increasing, with world-class food made with locally sourced ingredients. A healthy, balanced and varied menu is a key issue in this regard.
- **Self packaging.** More and more travellers are extending their cruise vacation individually with a beach break, a city trip or a tour of a designated area of the destination before or after the cruise.

In addition, trends are emerging in terms of **travel motivation and new target groups** - pursuit of responsible travel, off-season adventures, the segments of the working nomads, the Generation Z, the feminists, the single travellers, etc.

To these general trends should be added specific **trends related to Danube cruise tourism**, such as opening up to a younger audience by offering more active products (e.g. bike cruises, hiking tours) and thematic programs.

The main recommendations for future development address two priorities: **making full use of the potential of the Middle and Lower Danube** and **improving the overall framework for the development of cruise tourism** and include measures in various fields:

- Improving port and connecting infrastructure
- Diversification of cruise programs
- Expanding the offering of additional excursions
- Strategic planning at EU level similar to the one for the marine and coastal areas
- Establishing a reliable model for monitoring of tourism development, incl. by introducing effective procedures for statistical monitoring and periodic survey of cruise tourists
- Improving business administration partnerships, especially at national and macro regional level
- Promoting regional cooperation between cities/ports in order to create routes/ programs in a single diverse destination instead of individual separate tour packages
- Joint marketing activities to promote the region, consistent with the main markets and profiles of the tourists
- Increasing the understanding of the economic benefits of cruise tourism and also the possibilities for their distribution

1. INTRODUCTION

Cruise tourism, with its 28 million tourists, is certainly not the largest segment of the tourism market, but its growth rate in recent years, doubling its volume since 2010, has made it one of the most dynamic. Designed as type of tourism for the elite, the cruise changes dramatically and opens to customers of different ages, with different incomes and different interests.

For the Danube region, however, cruise tourism is not just tourism. In the context of the Danube Strategy, it is one of the instruments for the development of the region as an unified tourist destination, promoting economic activity along the river basin and ensuring connectivity between the countries of the region.

Bulgaria is considered to have the conditions to be a cruise state, since it belongs to the Danube region, ports are built and traditions are established,. At the same time, the development of cruise tourism so far remains beyond the scope of national tourism policy, its benefits are being challenged and the potential remains undeveloped.

This defines the Ministry of Tourism's interest in the topic and defines the purpose of this Public procurement with subject "Performing two case studies within Priority Area 3 of the EU Strategy for the Danube Region with 2 (two) lots: Lot 2: Study for the development of cruise tourism in the Danube Region. The study has to provide detailed, reliable and up-to-date information on the development of cruise tourism, its contribution to tourism development in the countries of the Danube Strategy, and in particular about the achievement of the objective of the Danube Strategy Action Plan in relation to develop shipping and port system for cruise ships and private yachts along the Danube.

1.1. Methodological notes

1.1.1. Objectives of the study

The specific objectives of the study are subordinated to the overall objective - to provide detailed, reliable and up-to-date information on the development of cruise tourism and its contribution to tourism development in the Danube countries and are defined as follows:

- To determine the current status and extent of use of ports capable of accepting cruise ships calls.
- To identify which are the "main players" in the system of cruise tourism - cruise companies and other stakeholders, and the nature and extent of their interaction.
- Determine the specific dimensions of the demand for Danube cruises in both quantitative and qualitative terms.
- Identify trends in demand, major markets, tourist profile, seasonality, etc.

- Define the specific economic benefits of cruise tourism.
- To explore the relationship with other types of tourism and services on the shore
- Identify obstacles and major problems for the development of cruise tourism
- Determine the status of the last mile infrastructure and overall transport accessibility to and from the cruise ship's starting and ending points.

1.1.2. Scope of the study

From a territorial point of view, the study covers the Danube in its navigable waterway from Kelheim, Southern Germany to Sulina¹, Romania, with a total length of 2 414 km. Germany, Austria, Slovakia, Hungary, Croatia, Serbia, Romania, Bulgaria, Moldova and Ukraine fall within this range.

From a physical-geographical and geological point of view, the Danube is divided into three parts - the Upper, Middle and Lower Danube, which is accepted in all spheres, so it is used in the study as a means of defining the different parts of the river.

- Upper Danube - from the springs to Győny, Hungary (km 2783 -1791)
- Middle Danube - from Győny to the end of the Iron Gate gorge, Serbia/Romania (km 1791 - 931)
- Lower Danube - from the Iron Gate gorge to the Delta (km 931 - 0)

The study does not cover the tributaries of the river and artificially constructed channels and associated ports and cruises. An exception is made for the Danube-Black Sea channel and the port of Constanta, located on the Black Sea coast and accessible via the Danube-Black Sea channel, as well as for river ports, in the immediate vicinity of their inflow into the Danube (Belgrade, Osijek). In both cases, these waterways and ports are an inherent and necessary element for the implementation of specific Danube programs.

With regard to the **types of ports**, the survey includes all types of ports, regardless of their ownership, size and specialization, which have been identified (technically and legally, according to the relevant national legislation) to handle cruise and passenger ships. Ferry ports and marinas are excluded from this scope.

One of the subjects of the sub task 2 is the survey of the **cruise companies** operating on the Danube, which sets specific requirements/constraints for the surveyed companies, e.g.:

¹ The distances on the Danube river are measured from its mouth (Sulina). From Sulina to Galati they are measured in nautical miles and from Galati to Ulm - in kilometers. Measurement in nautical miles ends at the port of Galati, where is the last marker (mm 80). Source: Danube Commission

- The companies to be directly responsible for the preparation and implementation of the program. The survey **does not include** ship-owners, shipping agents and travel agents **unless they also act as cruise operators**.
- Cruises to be made in whole or in part on the Danube.

Considering the working definition of cruise tourism below, it is **beyond the scope** of the study and it does not cover journeys made by **regular water transport**, as well as **day trips** by ships for cruise purpose and excursions.

1.1.3. Key definitions

In order to avoid disparities between different national legislation on ports, the study uses the definitions laid down in EC Regulation (EU) 2017/1084, where:

“**port**” means an area of land and water made up of such infrastructure and equipment, so as to permit the reception of waterborne vessels, their loading and unloading, the storage of goods, the receipt and delivery of those goods and the embarkation and disembarkation of passengers, crew and other persons and any other infrastructure necessary for transport operators in the port;

“**inland port**” means a port other than a maritime port, for the reception of inland waterway vessels;

“**port infrastructure**” means infrastructure and facilities for the provision of transport related port services, for example berths used for the mooring of ships, quay walls, jetties and floating pontoon ramps in tidal areas, internal basins, backfills and land reclamation, alternative fuel infrastructure and infrastructure for the collection of ship-generated waste and cargo residues;

“**port superstructure**” means surface arrangements (such as for storage), fixed equipment (such as warehouses and terminal buildings) as well as mobile equipment (such as cranes) located in a port for the provision of transport related port services;

“**access infrastructure**” means any type of infrastructure necessary to ensure access and entry from land or sea and river by users to a port, or in a port, such as roads, rail tracks, channels and river locks;

“**inland waterway vessels**” mean vessels intended solely or mainly for navigation on inland waterways or in waters within, or closely adjacent to, sheltered waters;

For the purpose of the study, the following terms are used with the corresponding content:

port - as defined in EC Regulation 2017/1084. In the study areas, it is also used more broadly - as a generic term for all types of vessel mooring structures and facilities or for designation of settlements on the Danube where stops are made within cruise programs

wharf (Ship station/Anlegestelle (Deutsch)) - terms for specially equipped places where the shore has a connection to vessels. When the water depth at shore is not sufficient, it may include a facility built/installed in the river (including floating structure, e.g. pontoon). In some of the countries surveyed (Germany, Austria, Hungary), these are regulated as a type of mooring place (in the broad sense - as a type of port) used to disembark/board passengers. Unlike the ports (Ports/Hafen (Deutsch)), they do not have their infra- structure and superstructure complexity.

berth - A berth is a specially designed structure in the port or on the shore for mooring, providing a vertical front for secure mooring of the ship and the possibility of loading or unloading/boarding of passengers. The survey considers only the main ship's locations, i.e. without the possibility of tying a 2nd, 3rd, etc. ship board to board. For the ports, where passenger ship services were identified, but there was not found technical information about the berths, it is accepted that the number of berths is the **minimum of only one (1 position)**.

Cruise tourism

So far, no single definition of the term "cruise tourism" has been derived, with different authors start from the same basis, although they emphasize different elements or aspects. According to Schäfer, a "cruise" refers to a form of tourist travel by sea (by water) with a set number of participants, which combines different types of services - accommodation, meals, entertainment and animation. It is carried out on a predetermined route, visiting different ports where excursions on land can be made. In order to be able to speak of a cruise, in addition to the initial and final ports, at least a call at one more port must be provided and at least one night on water to be realised (Schäfer, 1998). In doing so, the substantial transport service of moving from one place to another remains in the background, at the expense of staying on board, which is the main element of this form of travel (Freyer, 2006). In addition, Dowling compares a cruise ship to a floating resort that has amenities such as restaurants, bars, sports facilities, shops, and is not inferior to hotels on the shore (Dowling, 2006).

Based on these definitions and in view of the purpose of the study, in its implementation we will adhere to the following working definition:

"Cruise tourism is a voyage by cruise ship on a fixed route and with stops at designated places (ports of call), with a duration of at least 48 hours, which includes all inclusive service on board and other tourist services on shore" (working definition).

For the purpose of the study, the following terms were also used with the following content:

Danube cruises - cruises that are made in whole or in part on the Danube. In order to consider a cruise as a Danube cruise for the purposes of the study, it is assumed that it includes at least one port on the Danube River

Cruise company/cruise line operator/cruise line. In practice, different terms are used to refer to the cruise voyage organizer - cruise company, cruise operator, cruise line, and more. In order to emphasize their function to organize the cruise, and also by analogy with their activity with that of the tour operators, the concept of "cruise operators" was adopted in this study.

Cruise ship - a passenger ship that is equipped with cabins, dining facilities, etc., carrying more than 12 passengers² and used for cruise voyages;

Cruise programs. It is a practice to combine the cruise package with an additional program before / after the cruise and sell it as a complete program, i.e. more than 1 offer (program) may be available for the same cruise voyage. Therefore, in order to distinguish cruise programs (port-to-port package) from the combined programs, for the study they have been referred to as "core programs" and "options" respectively.

1.1.4. Main stages. Information sources

According to the approved Technical proposal the study of Lot 2 of the procurement order, was carried out in two main stages.

In the **first stage** - the on desk survey, information was sought, processed and analysed for all survey items - ports with the possibility of handling cruise ships on the Danube, cruise operators, cruise ships, programs, statistical information, information on consumer opinions and ratings etc. According to the specific item, the search was carried out among many and different groups of sources:

- **official sources at national level.** This group covers sites of national administrations and national industry organisations in the tourism and water transport sectors, national statistical offices and others.
- **macro-regional sources** such as the EC, the Danube Commission, the European RIS portal, the Danube Logistik portal on Via Donau, etc.
- **international organizations** in the cruise tourism and water transport sectors, with the most useful being CLIA, CCNR, IG River Cruise and others; World organizations such as UNWTO, WTTC, etc.

² <http://www.imo.org/en/OurWork/Safety/Regulations/Pages/PassengerShips.aspx>

- **municipal administrations, port administrations, local and regional tourism organizations** whose websites were used to search for more detailed information and / or to further verify certain data or assumptions;
- **business sources.** Their identification was done with keyword search and followed by assessment of the relevance to the purpose of the survey:
 - web site of cruise operators
 - web portals for cruise tourism
 - specialised web sites for passenger transport or cruise tourism
- sites of **completed projects with related topics** (for example with regard to national specifics in legislation and governance, the national reports of the DAPhNE project have been used as the main source;
- **research publications** in the field of inland water transport, cruise tourism and tourism in general;
- **media publications** on specific topics

At the **second stage** of the implementation, a survey had be conducted with the interested in the development of cruise tourism groups - cruise operators, national (and country) authorities, local authorities, local and regional tourism organizations. For each group of respondents was developed a questionnaire and a questionnaire was also prepared in a web-based online form for ease of responding and for greater responsiveness. Invitation letters were sent to 31 cruise operators, 18 national administrations and organizations and 96 local administrations and tourist organizations.

Due to the low activity on the part of the respondents, as a **third stage** of the execution of the study, the team conducted an urgent survey of secondary sources, which had to compensate as far as possible the missing information from the questionnaires. This search was oriented to:

- official sources at national level. This group covers sites of national administrations and national industry organisations in the water sectors;
- macro-regional sources such as the Danube Commission, international organizations and others;
- port administrations and regional tourist organizations;
- scientific institutions, web sites of projects and surveys, specialised media;
- web sites of cruise operators

1.1.5. Problems encountered during the execution of the study

In carrying out the study team had to cope with the objective problems of different nature, some of which have an impact on the results:

- The main problem for the execution of this study was the **low activity of the respondents** to the prepared questionnaire. Respondents were further requested twice to participate within the deadline for answering the questionnaire. Unfortunately, the activity was extremely low, yielding only 6 answered questionnaires - 1 from national authorities, 4 from municipalities and 1 from a local tourism organisation.

The questionnaire was intended to provide primary information on topics or issues of sensitive nature or such information, for which the respondents were the sole source. The team did its best to compensate it by replacing this survey method with other methods, but given the nature of the information, the required level of validity, up to date and coverage relevance was not reached for all issues. Topics that were subjected to alternative source search were:

- liaison with administrations - scientific materials, expert opinions, research on cruise tourism;
 - economic benefits of cruise tourism (incl. tourists spending in ports); aggregated data from international/national sources; surveys for some destination;
 - information about the stay in ports - offers of cruise operators (indirect information about useful stay and preferred additional services); schedules of arrivals for individual ports; surveys for some destination;
 - statistical information – refer to the text below
- **Statistical problems:** Cruise passenger transport, especially the segment of river cruises thereof, are not tracked as a separate category by statistical organizations in different countries (hence absent in EUROSTAT).

On the one hand, they are considered as part of tourism or as part of passenger water transport, and at times accounted by both. At the same time, according to the 2008 WTO tourism statistics recommendations, cruise passengers are not regarded as tourists but as day visitors. For this reason, for example, they are covered in the category "number of tourists", which the cross border statistics reflects as such, but are not reflected in other statistical classifications - number of overnights, for example. In transport statistics, ships and passengers fall into the relevant categories but are not subdivided into sea/river, cruise/regular/daily excursions. All this makes it almost impossible to retrieve the information based on standard national tourist statistics.

On the other hand, the very nature of the product "cruise tourism" is extremely prone to duplication of data - within 1 trip 1 tourist can be counted (or accounted for) separately in each country and in all ports in its territory, which the cruise vessel calls.

Therefore, to gather statistical information, the search was planned directly at source - cruise operator. When the survey method could not produce results, the following sources were considered and studied as adequate sources:

- **Web sites of cruise companies.** Only there could be expected cruise tourists to be accounted only once and so to gather reliable tourist information with minimal risk of data duplication;
 - **International professional organizations** (which in turn also use data from the cruise companies)
 - Targeted surveys of selected themes and aspects. A major disadvantage of these surveys is usually the limited territorial coverage - within a municipality or region or country that has performed these surveys;
- **The period of executing the study.** The study period turned to be a problem in gathering information about cruise programs, since many of the programs for the past part of the 2019 season were no longer accessible, and not all operators had announced all the proposals for the 2020 season. With these circumstances at hand, for the cruise programs analysis and additional services has been accepted the 2020 season as the base, although there is no guarantee that cruise schedules will be fully implemented.
 - **Availability, access, quality and quantity of information:**
 - **Lack of aggregated information.** This is valid for each component under the study - Danube ports, cruise operators, cruise ships, tourist flow, etc. For example, available port databases (Danube Commission, European Federation of Inland Ports, etc.) include only ports of national importance and/or those currently used for international transport. Even they lack dedicated selection of ports of call for passenger ships, and at some places there is no indication at all of this type of shipping. This necessitated further review of each individual port, seeking information from secondary sources;
 - **Information fragmentation/partial information.** For most ports passenger transport is an ancillary/complementary function, so there is a lack of detailed information about the technical parameters of the relevant port facilities. The whole needed information on passenger ports, covering all the elements and characteristics, is available only from very few sources, so where possible information from several sources has been combined;

- With regard to information related to the tourist flow, it is even more fragmented, often contradictory or incomparable across sources, which has made it extremely difficult to assemble the overall picture;
- **Limited public information.** In some countries, information on the internet is extremely scarce, most of all for Moldova and Ukraine and partially for Hungary, Serbia and Slovakia;
- **Language barrier.** For some countries - Slovakia, Hungary - the available information is mainly in the national language, which made it difficult to retrieve it;

2. REVIEW AND ANALYSIS OF THE EXISTING PORTS AND INFRASTRUCTURE ALONG THE DANUBE RIVER

2.1. Results of the on desk survey

2.1.1. Cruise ships ports of call. Review by country

2.1.1.1. Germany

The German section of the Danube River, which also includes the beginning of the navigable part of the river, starts at km 2 414 and is 203 km long.

Waterway management and navigation in Germany are managed by the Wasserstraßen- und Schifffahrtsverwaltung des Bundes (WSV). Among the main tasks of the agency are the construction, management and maintenance of the waterways, as well as that of the state-owned navigation facilities - locks, ports, etc.).

The main ports are:

Kelheim - Located at the junction of the Main-Danube Canal and the Danube. It is also the first port city in the navigable stretch of the river. Port Kelheim (Kelheim Hafen) does not dock passenger ships. On the other hand, two wharves are being built within the city, which are used for day cruises: Kelheim / Donau, located on the Danube and Kelheim / Altmühltal, located on the Main-Danube Canal.

Regensburg is the largest German port on the Danube, owned by Bayernhafen GmbH & Co. Passenger/cruise ships are not served in the harbour, but jointly with the city government through Stadtwerk.Regensburg GmbH operate the southern quay along the Danube shore from km 2379,175 to km 2378,488, with 4 berths there. The berths are used to dock cruise ships. On the left bank where the North Quay is located, wharves of individual local shipping companies are established - Personenschiffahrt Klinger and Arbeitskreis Donau-Schifffahrts-Museum, Donauschiffahrt Wurm & Noé GmbH, etc., which are generally used for day cruises.

The passenger port Passau is in Germany with the largest capacity port and it is located in three zones.

- Passau-Alstadt is located in the old part of the city and has 14 berths, out of which 6 are exclusively dedicated to cruise ships;
- Passau-Lindau is 2.5 km down the river Danube, with 4 berths, is also used mainly for cruises;
- In recent years, Bayernhafen GmbH & Co. KG together with the Passau city government are building a 3rd zone for docking of passenger ships. The Passau-Recklau port offers 4 berths for vessels up to 135 m in length.

Table 1 Ports and wharves for passenger ships in Germany

N	Location	KM	Bank	No of berths
1	Kelheim/Donau	2414	left	4
2	Regensburg	2379,075 - 2378,488	both	11
3	Walhalla/Donaustauf	2368,69 - 2368,83	left	2
4	Bach an der Donau	2362,100 - 2361,00	left	2
5	Straubing	2321,1	right	1
6	Deggendorf	2285,165	left	1
7	Vilshofen		right	2
8	Passau	2228 - 2223,130	right	22

2.1.1.2. Austria

On the territory of Austria, the Danube flows for 350.51 km (1872.70-2222.21) and this section is almost entirely inland for the country.

At national level, the role of port administration is represented by the Ministry of Transport, Innovation and Technology ("BMVIT"). According to the Waterways Act (BGBl. I Nr. 177/2004), Viadonau (Via donau - Österreichische Wasserstraßen-Gesellschaft mbH) fulfills all federal government tasks in the planning, procuring and control of hydro-technical engineering projects. In particular, the regulation, protection and development of the water bodies, as well as flood prevention, play an important role in the Viadonau portfolio of characteristics.

Within the Austrian provinces the regional government administrations (Bezirksverwaltungsbehörden) are granted the competences on ports.

The Federal Inland Waterways Navigation Act³ defines the main types of ports and their characteristics:

³ <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10012703>

- **Port (Hafen)** is a navigation structure consisting of at least one basin and equipped with means of securing (anchoring) vessels for the purpose of servicing, delivery or safety;
- **Berth/Dock (Landungsplatz)** is any place where a mechanical connection is made between a vessel and the shore;
- **Wharf (Lände)** means berths equipped with means of securing (anchoring) vessels other than ports

The law distinguishes public and private ports. Public ports are accessible for all vessels, while private ports can be called into with the permission of the owner.

Public ports in Austria are:

Vienna. The passenger terminal of the port of Vienna (Schiffahrtszentrum) is the largest passenger port in Austria. It offers 12 berths on the main quay (Handelskai) on the Danube shore, intended mainly for cruise tourism, and several more on the Danube canal and in the outskirts of Vienna used for excursions and tours.

Linz. Passenger ships are not serviced by the Linz port (Hafen Linz). However, a series of quays have been built along the river to handle passenger flow.

Enns. The port of Enns offers 1 passenger berth operated by WGD Donau Oberösterreich Tourismus GmbH.

Krems. Similarly to the port of Linz, the port of Krems does not serve passenger ships, with passenger traffic being served on additionally constructed tourist quays.

Austria has a very wide network of ports built in almost every settlement along the river, independently of the public ports,. The management of these ports is granted to different operators.

The largest number of ports and wharves in Upper Austria operates WGD Donau Oberösterreich Tourismus GmbH, the regional tourism organization of the province (DMO/C (Destination Management Organization/Company)), operating 19 wharves;

In the province of Lower Austria, Donau Schiffstationen GmbH (briefly Danube Stations) operates 36 wharves for BRANDNER Schiffahrt, for the Government of Lower Austria and for its own account.

Table 2 Ports and wharves for passenger ships in Austria⁴

⁴ The table summarizes only those used for cruise tourism (including day trips), according to information from WGD Donau Oberösterreich Tourismus GmbH and Danube Stations. ViaDonau publishes periodically a complete atlas of all the ports along the Danube in Austria.

N	Location	KM	Bank	No of berths
1	Engelhartszell	2200,600 – 2200,100	right	3
2	Niederranna	2194,700 – 2194,600	left	1
3	Wesenufer	2198,800 bis 2192,700	right	1
4	Schlögen	2186,800 bis 2186,700	right	1
5	Obermühl	2177,800 – 2177,700	left	1
6	Untermühl	2168 – 2167,9	left	1
7	Aschach an der Donau	2160,500 – 2160,400	right	1
8	Brandstatt	2157 – 2156,900	right	1
9	Ottensheim	2144,100 – 2144	left	1
10	Linz	2135,300 – 2134,400	right	6
11	Mauthausen	2112,500 – 2112,400	left	1
12	Enns	1,6 (river Enns)	left	1
13	Wallsee/Altarm	2093,61	right	1
14	Grein	2079,200 – 2079	left	2
15	Sarmingstein	2072,400 – 2072,300	left	1
16	Ybbs	2058,800 – 2058,700	right	1
17	Marbach	2049,500 – 2049,300	left	1
18	Pöchlarn	2044,600 – 2044,400	right	1
19	Melk ⁵	2036,500 – 2035,700	right	7
20	Emmersdorf	2036,200 – 2035	left	2
21	Aggsbach-Dorf	2027,650 – 2027,530	right	1
22	Spitz	2019,390 – 2019,200	left	2
23	Weißkirchen	2013,400 – 2013,200	left	2
24	Rossatz	2008,100 - 2008	right	1
25	Dürnstein	2009 – 2007,800	left	3
26	Krems	2003,100 – 2002,100	left	5
27	Tulln	1964 – 1963,800	right	1
28	Wien ⁶	1934,500 – 1927,8	right	15
29	Hainburg	1884,200 – 1884	right	1

2.1.1.3. Slovakia

The Slovakian section of the Danube is 171.09 km long between river km 1708.3 and km 1880.2.

The Ministry of Transport and Construction is at the top of the organizational structure in the water sector. The Water Transport Directorate, the Inland Waterways Directorate and the Maritime Office ensure the development of inland waterway transport.

⁵ Including Melk/Altarm

⁶ Incl. Wien Schifffahrtszentrum and Wien/ Nußdorf

Slovak law defines a port as a territory comprising a water area, buildings and facilities for cargo handling, storage and transport of goods, embarkation and disembarkation of passengers and for the protection of vessels, as well as for their repair, reconstruction or construction.

There are two types of ports in Slovakia - public and private. The state ports are managed by the Public Ports Company (Verejné prístavy, a.s.), created by law in 2008, which is 100% state-owned. Verejné prístavy, a.s. is responsible for the maintenance and development of the ports, as well as has the right to permit port operators in them.

The public ports in Slovakia are:

- Bratislava port
- Komárno port
- Štúrovo port

Slovak shipping and ports - passenger transport, a.s. ((Slovenská plavba a prístavy – lodná osobná doprava, a.s. - SPaP-LOD), is the operator of the passenger port in Bratislava and the leading operator of passenger transport along the Danube in Bratislava and its surroundings. It provides a wide range of cruises for sightseeing, passenger transport on regular lines and cruises on demand. It offers regular high-speed lines between Bratislava and Vienna, sightseeing cruises in and around Bratislava and charter cruises.

Table 3 Ports and wharves for passenger ships in Slovakia

N	Location	KM	Bank	No of berths
1	Bratislava	1870.450 - 1867.400	both	20
2	Komárno	1 768.100 - 1 767.200	left	4
3	Štúrovo	1 718.800 - 1 718.300	left	4
4	Devin		left	1

2.1.1.4. Hungary

The Hungarian section of the Danube (km 1433.00–1850.20) is 417.2 km long.

Based on the legislation, the Ministry of National Development is authorised to manage national ports of common interest or corresponding hydro-technical facilities. Similar powers for all other types of ports and hydro-technical facilities have been vested on the Government Office of the Capital City Budapest.

The following types of ports are distinguished (GKM Decree No. 50/2002. (XII. 29.)), intended for service of cruise traffic and according to their purpose

- **A commercial port.** In its usual activities, this type of port also provides services related to passenger ship calls;
- **Passenger port:** a passenger service port which can be:
 - o a wharf, where embarkation/disembarkation of passengers is provided at one or more facilities;
 - o a quay, where mooring is possible directly to the shoreline
- **Mooring place by floating structure:** a place where mooring can be carried out for the purpose of embarking/disembarking passengers by means of a floating structure fixed to shore and with port equipment. It can be a stand alone structure or part of a port.

A total of 19 national ports have been designated as public ports. During the survey it was found that 15 of them did not serve passenger ships and for 2 of them information could not be found. Only 2 of the ports are used also for passenger transport - the Komárom port and the MOHÁCS Port Border Crossing port.

Hungary has a wide network of berths for cruise/passenger ships, apart from the above list and category of ports. This is due both to the overall legal and management framework, which implies the creation and operation of port facilities also outside of the major harbours and there is a long-standing traditions of river navigation and public transport along the river.

MAHART PassNave Passenger Shipping Ltd. is the largest passenger transportation company in Hungary. Following the privatization process completed in 2008, 84% of the company shares was owned by Masped Zrt., but since 2013, the Hungarian state is again the majority shareholder. MAHART PassNave's activity focuses on the provision of inland waterway passenger transport, cruises, journeys with hydrofoil vessels, water events, etc. Among other things, the company is also a port operator providing services in the field of passenger transport. It operates a total of 49 berths in ports, wharves and single mooring structures. In the Hungarian capital, MAHART PassNave operates 30 berths used for both domestic cruises and regular passenger lines and international cruises.

The other operator identified in the study is the Austrian **Danube Stations**, which operates two berths in Budapest.

Table 4 Ports and wharves for passenger ships in Hungary

N	Location	KM	Bank	No of berths
1	KOMÁROM	1769,8 - 1768,8	right	2
2	ESZTERGOM	1718,98 - 1718,44	right	3
3	DÖMÖS	1699,7	right	1
4	Nagymaros	1694,6	left	1
5	VISEGRÁD	1693,42 - 1693,25	right	3

6	VÁC	1679,6	left	1
7	SZENTENDRE	11-10 (Szentendrei Dunaag)	right	2
8	Budapest	1650,65 - 1643,2	both	32 ⁷
9	Százhalombatta	1620,720	right	1
10	Solt	1559,1	left	1
11	Kalocsa (Fokto)	1515,7 - 1515,6	left	2
12	BAJA	1478,96	left	1
13	MOHÁCS	1446	right	1

2.1.1.5. Croatia

With its 137 km length, the Croatian section of the Danube is the third shortest national section along the river (after those of Moldova and Ukraine). In all its course through the country the Danube river is the state border between Croatia and Serbia.

At national level, the Ministry of the Sea, Transport and Infrastructure is the authority in charge of navigation and port operations and the Agency for Inland Waterways is responsible for the river Danube and the other inland waterways.

In addition, the Vukovar Port Authority is the public institution for the management and development of the Vukovar port and all public interests of Croatia along the Danube River.

Croatia's Navigation and Inland Ports Act defines the port as a part of the waterway and the land area immediately adjacent to it that is designated and equipped for mooring, anchoring and safety of vessels, loading, unloading and storage of goods, and embarking and disembarking of passengers, where activities are carried out that are economically, transport wise and technologically sound and related to goods or vessels.

The Port of Vukovar is the main Croatian port on the Danube. In 2006, a passenger terminal was built within it. Port passenger terminals also are operated in the cities of Ilok, Batina and Aljmaš.

Although not directly located on the Danube, the port of Osijek (river Drava, km 21) is present in many cruise programs and should also be considered as part of the Danube ports.

Table 5 Ports and wharves for passenger ships in Croatia

N	Location	KM	Bank	No of berths
1	Batina	1425 + 500	right	1
2	Aljmaš	1380,2	right	1
3	Osijek	21,400-21,282,Drava	right	1
4	Vukovar	1333	right	1
5	Ilok	1298,68	right	1

⁷ incl. 2 berths, operated by Danube Stations

2.1.1.6. Serbia

The stretch of the Danube on the territory of Serbia is 587 km long - from km 1433 to km 846. Along the river 137.6 km are the border with Croatia and 229.35 km - with Romania.

In accordance with the Navigation and Inland Waters Act (ЗАКОН о пловидби и лукама на унутрашњим водама):

- The port (Luka) is the water and water adjacent area that is constructed and equipped to handle domestic and foreign vessels, for loading and unloading, storing and processing goods, receiving and delivering goods by other modes of transport (road, rail, intermodal and pipe transport), embarking and disembarking of passengers, and providing other logistics services.
- Wharf (pristan) is part of the port infrastructure intended for loading and unloading of goods and passengers in the designated port area ...
- Dock (Pristaniste) is the water body and related space with it, which is constructed and equipped for the reception of internal water vessels, their embarkation and disembarkation, and for storing only certain types of goods, and embarkation and disembarkation of passengers;

The port management is entrusted to the **Port Management Agency**, which concludes concession contracts with the operators in the individual ports.

Serbia is pursuing the most intensive policy for promoting passenger water transport among the countries subject of the survey, with 3 new Danube ports being built since 2017 and another 3 planned for construction. Thus, there are currently 8 passenger ports operating on the territory of the country.

Table 6 Ports and wharves for passenger ships in Serbia

N	Location	KM	Bank	No of berths
1	Novi Sad	km 1254	left	2
2	Sremski Karlovci		right	1
3	Beograd	km 0,750 Sava river	right	6
4	Smederevo	1116-1111	right	1
5	Veliko Gradiste		right	4
6	Golubac		right	1
7	Donji Milanovac	990	right	1
8	Kladovo	933	right	1

2.1.1.7. Romania

In Romania the Danube flows for 1,075 kilometres and this is more than 1/3 of the total length of the river. This is also the longest stretch in a single country compared to any other country along the Danube river.

The Ministry of Transport is the state authority in the field of water transport. The Maritime Danube Ports Administration (**CN Administrația Porturilor Dunării Maritime**) operates under the authority of the Ministry of Transport and manages the entire port infrastructure located on the river sea sector of the Danube River **from km 0 to km 255**.

The **Danube River Ports Administration Co. - Giurgiu** plays the role of port authority in almost all ports located on the Danube River between Bazias and Cernavoda.

The N.C. Maritime Ports Administration plays the role of port authority for the Romanian maritime ports of Constanta, Мидиа and Mangalia. As Constanta is the last port of the Danube - Black Sea canal, the port also receives river vessels from the Danube traffic.

Port infrastructure is state-owned and managed by the port administration, while port operations are carried out by private companies that provide and maintain their own facilities, including buildings and cargo handling equipment. Some of the ports (Turnu Magurele, Sulina) are handed over to the respective municipalities.

Table 7 Ports and wharves for passenger ships in Romania

N	Location	KM	Bank	No of berths
1	Moldova Veche	1050-1047	left	1
2	Orșova	953 – 957	left	2
3	Drobeta Turnu Severin	927- 931	left	3
4	Cetate	810-811	left	1
5	Calafat	793 – 796	left	1
6	Turnu Magurele	597	left	1
7	Giurgiu	489-497	left	5
8	Oltenița	428-431	left	3
9	Calarasi	371-376	left	1
10	Cernavoda	298-299	right	3
11	Fetesti	48 (Borcea arm)	left	1
12	Harsova		right	1
13	Brăila	167-175	both	4
14	Galați	151 -149,35	left	1
15	Isaccea	53-56 sm	right	1
16	Tulcea	70-73	right	2
17	Chilia Veche	43-46	right	1
18	Sfantu Gheorghe	4 (Sf. Gheorghe branch)	left	1
19	Sulina	0	right	1

20	Constanta		1
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2.1.1.8. Bulgaria

The Bulgarian section of the Danube River stretches between km 845,650 and km 374,100, with its length of 471.55 km being entirely border with and shared with Romania.

Pursuant to the Law on the Maritime Spaces, Ports and Inland Waterways of the Republic of Bulgaria, a port for public transport is any port in which port services and other accompanying activities by/on ships and land operated vehicles are available, which is accessible without restriction to all ships and cargo. The country has 38 ports and port terminals, of which 15 are ports of national importance, 20 are regional and 3 are special purpose ports.

The management of the infrastructure of ports of national importance is entrusted to the **Bulgarian Ports Infrastructure Company** by the Ministry of Transport, Information Technology and Communications. Ports of regional importance are predominantly with municipal ownership (most of them concessioned to private companies) and private. Navigation in the Bulgarian section is regulated by the **Executive Agency "Maritime Administration"** (EAMA).

The study identified 11 ports and terminals⁸ in 9 locations that have facilities and whose operators are registered to service passenger ships. The main ports are the **Port Complex - Ruse**, operating in 3 terminals - the Central Passenger Quay of Ruse (Port Terminal Ruse - Center), Silistra Port and Tutrakan Port, and **Vidin Port - Center**. It should be noted the presence of 2 private ports - "**Prietis**" (concession by the municipality of Ruse) and "**East Point**" - Silistra.

Table 8 Ports and wharves for passenger ships in Bulgaria

N	Location	KM	Bank	No of berths
1	Vidin	791.300 - 789.900	right	4
2	Lom	742.500 - 742	right	1
3	Oryahovo	679.500 - 679	right	1
4	Somovit	607.550	right	1
5	Nikopol	597.55 - 597.45	right	1
6	Svishtov	554.730-553.670	right	1
7	Ruse ⁹	495.980 - 493.800	right	4
8	Tutrakan	432.670	right	1
9	Silistra ¹⁰	375.870 - 375	right	3

2.1.1.9. Moldova

Moldova is the country with the shortest access to the Danube, which it received in 1998 under an agreement with Ukraine. Its length is only 570 meters long, but it is sufficient for the

⁸ Ro-Ro terminals are not included

⁹ Incl. port "Pristis"

¹⁰ Incl. port "East Point"

construction of the port of Giurgiulesti. The port complex consists of a passenger terminal and a cargo quay on the Prut River operated by the state-owned enterprise Ungheni River Port, and a privately constructed and operated International Free Port (GIFP) consisting of five terminals at the Danube and Prut river confluence as well as a business park.

Table 9 Ports and wharves for passenger ships in Moldova

N	Location	KM	Bank	No of berths
1	Giurgiulesti	133.8	left	1

2.1.1.10. Ukraine

As by the officially adopted route of the waterway¹¹, the Ukrainian section of the Danube is 53.94 km long (from km 79.63 to km 133.57). The actual length of the entire Ukrainian section from the confluence of the Prut River in the Danube to the mouth into the Black Sea of the Danube (Chilia/Kilia channel) is 160 km.

At national level, the institution responsible for ports is the Ministry of Infrastructure (Ministry of Infrastructure of Ukraine). The Administration of Ukrainian Seaports (Administration of Seaports of Ukraine (AMPA)) is directly responsible for port management and covers the Danube ports as well. There are 3 ports along the Danube River, two of which also handle passenger ships - Izmail and Ust-Danube (Vilkovo Passenger Port).

Table 10 Ports and wharves for passenger ships in Moldova

N	Location	KM	Bank	No of berths
1	Ismail	92-92,6 (Kilia channel)	left	1
2	Vylkove (Ust-Dunaisk)	19 (Kilia channel)	left	1

2.2. Analysis of ports and existing port infrastructure

2.2.1. Territorial distribution and density of ports

98 destinations along the Danube were identified, covering 268 berths with the possibility of docking cruise ships, this being the result of the on desk survey of the official sources, followed by a comparison with cruise operators' offers.

Table 11 Cruise ships ports of call on the Danube

Country	River span	Ports			Berths		
		Number	Ratio (%)	Density (per km)	Number	Ratio (%)	Average number
Germany	212,9	8	8,16	26,61	45	16,79	5,63

¹¹ The Danube Delta is formed around the 3 channels of the Danube - Kilia (107 km), Sulina (64 km) and Georgievski (70 km). For measuring the official waterway of the river and the distances on it, the Sulina channel is used, which is adopted in the study as well.

Austria	350,51	29	29,59	12,09	66	24,63	2,28
Slovakia	171,9	4	4,08	42,98	29	10,82	7,25
Hungary	417,2	13	13,27	32,09	51	19,03	3,92
Croatia	137,5	5	5,10	27,50	5	1,87	1,00
Serbia	587,35	8	8,16	73,42	17	6,34	2,13
Romania	1075	20	20,41	53,75	35	13,06	1,75
Bulgaria	471	9	9,18	52,33	17	6,34	1,89
Moldova	0,57	1	1,02	0,57	1	0,37	1,00
Ukraine	53,94	2	2,04	26,97	2	0,75	1,00
TOTAL	2414	98	100,00	24,63	268	100,00	2,73

2.2.1.1. Distribution of the ports and density by the sections of the Danube

Total for the Danube the density of established ports is average 1 port on every 25 km for the length of the river waterway from 2414 km to the mouth at Sulina.

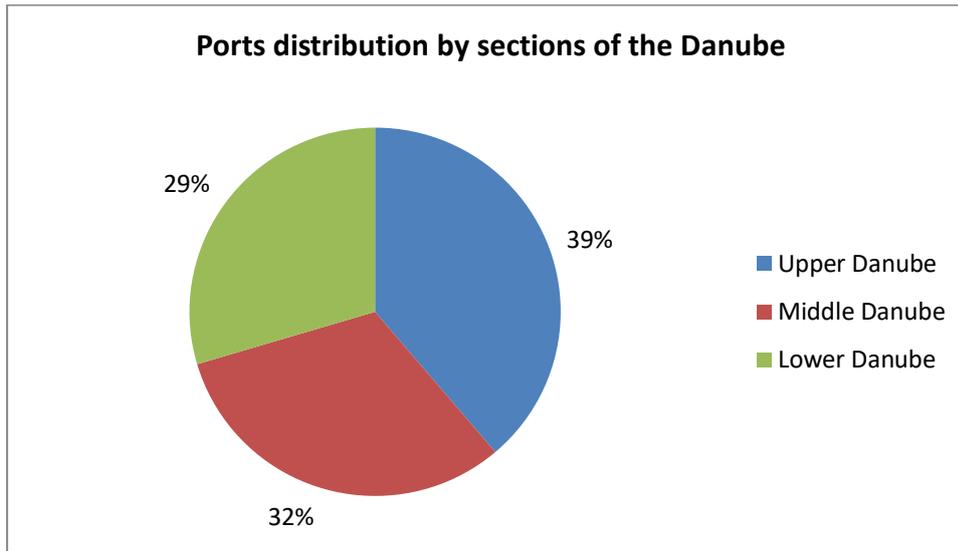
The ports show some differences in distribution and significant disparities in concentration considering the individual sections of the river.

The Upper Danube (km 2414 to km 1791) has the highest number of ports - 38 or 39% of all ports along the river. With a river stretch of 623 km, the concentration of ports is an average of 1 port on every 16.39 km.

31 ports (32%) are located along the **Middle Danube (km 1791 to km 931)**. However, due to the longer length of this section (860 km), the concentration of ports decreases significantly and is below the average for the river - 1 port at every 27.74 km.

The most unfavourable situation is on the **Lower Danube (km 931 - km 0)**, where the number of ports is lowest - 29 and this is combined with the longest length of the waterway (931 km.). As a result, the concentration of ports in this section is 1 port per 32.1 km and is well below the average for the entire river.

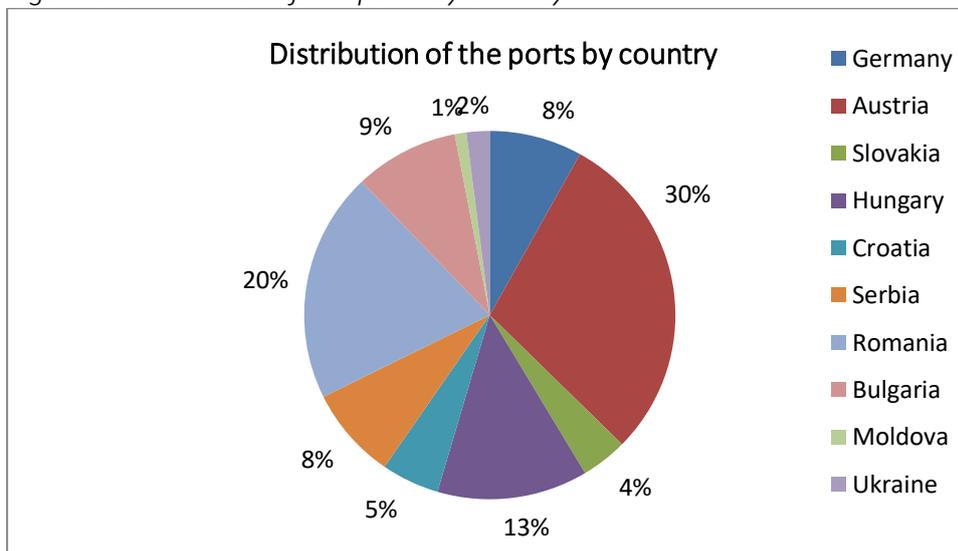
Figure 1 Ports distribution by sections of the Danube



2.2.1.2. Distribution of the ports by countries

The distribution of the ports by country shows a serious imbalance. More than 63% of all ports are concentrated in 3 countries - Austria (29 ports, 30%), Romania (20 ports, 20%) and Hungary (13 ports, 13%), while 4 countries provide only 12% of ports (Croatia - 5 ports, Slovakia - 4 ports, Ukraine - 2 ports, Moldova - 1 port), while intermediate figures show Germany - 8 ports, Serbia and Bulgaria - 9 ports (8%, 9% and 9% respectively).

Figure 2 Distribution of the ports by country



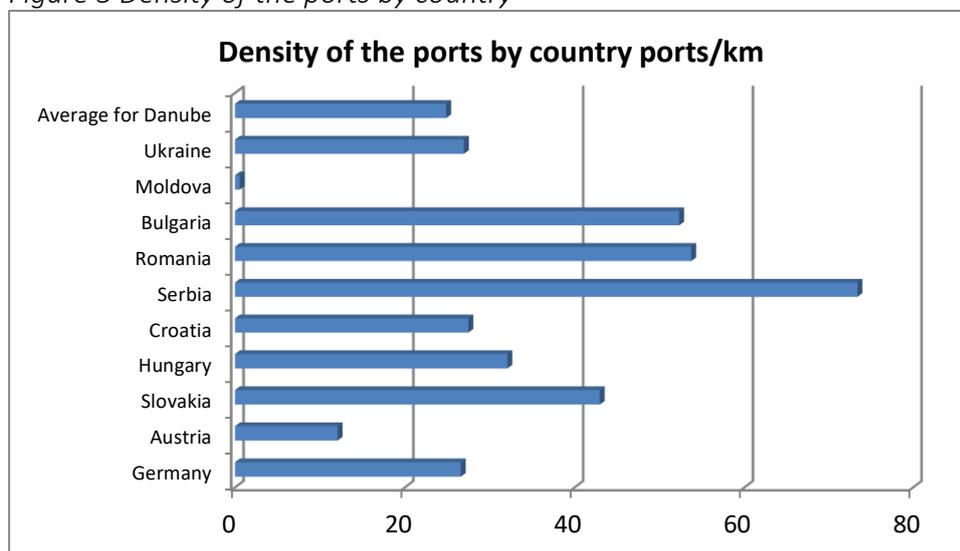
Compared to the length of the river section in the corresponding country, the number of ports shows a significantly different picture. The density of the ports in Moldova is the highest, but this is due to the extremely short stretch of the river, belonging to the country - only 570 m, with the port of Giurgiulesti providing a "density" of 1 port per 0.57 km.

On the other hand, the other country with values above the Danube average (1 port per 24, 89 km) - Austria, has 29 ports that cover a 350.5 km river stretch and have an average density of 12.1 km per port.

Germany, Ukraine and Croatia have average indicators, with average density of 1 port per 26.61 km (for a Danube navigable length of 212.9 km) for Germany, for Ukraine - 1 per 26.97 km (for a stretch of 53.94 km), and for Croatia - 1 port per 27.5 km (137.5 km of the Danube waterway).

Other countries show a significantly lower concentration of ports, for Hungary being 1 port per 32.09 km, and in Slovakia - 1 port per 42.98 km. The density of ports in Bulgaria, Romania and Serbia is the lowest, with the lag being several times the average density for the Danube. For Bulgaria and Romania it is 2 times lower, respectively 1 per 52.33 km and 1 per 53.75 km, while in Serbia the indicators are almost 3 times lower - 1 port per 73.42 km.

Figure 3 Density of the ports by country



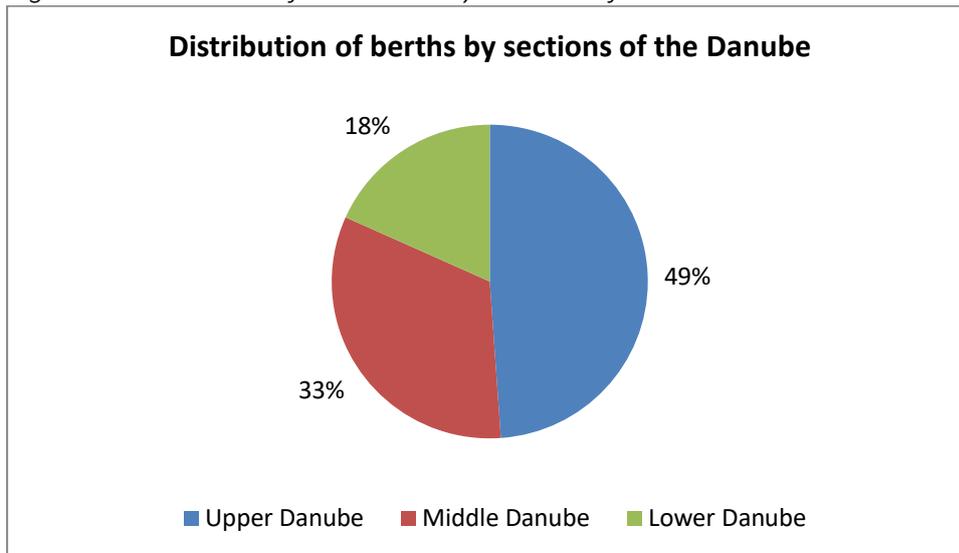
Excluding the specific case of Moldova, it can be summarized that all the countries of the Middle and Lower Danube are lagging behind in terms of the density of the port network. In view of the potential for the development of cruise tourism, the promotion of its intensity and the expansion of its "map" and the crucial importance of ports as a tool for the realization of cruise travel, these results outline the weakest starting position for the Lower Danube region, respectively requiring a serious need for additional investment.

2.2.2. Capacity of the ports

The identified ports have 268 berths for serving passenger traffic and cruise. In this numbers are not included emergency berths, anchorage, winter shelters and board to board mooring.

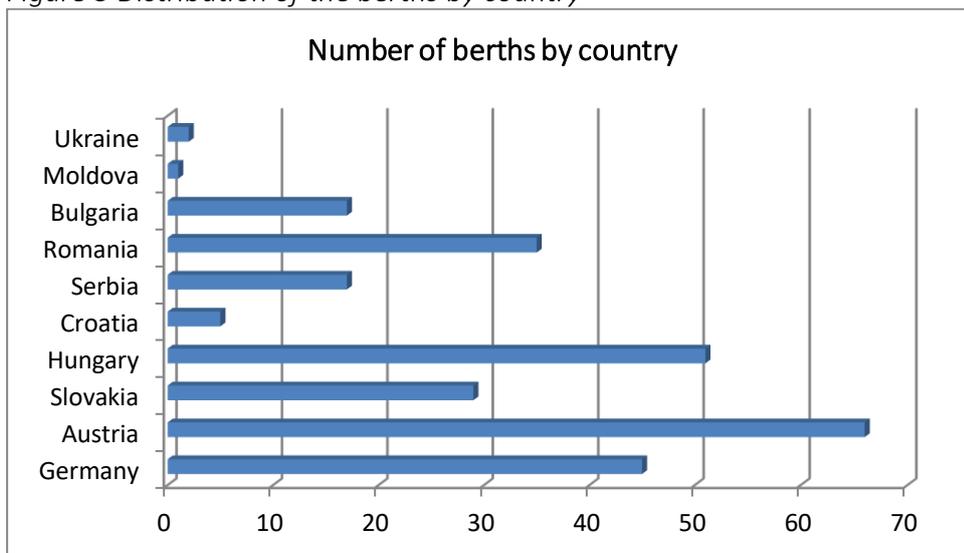
The total allocation of berths shows a significant concentration in the area of the Upper Danube, where are concentrated almost half (49%) of all berths, while in the Middle Danube there are 88 (33%) and for Lower Danube - only 49 (18%) .

Figure 4 Distribution of the berths by sections of the Danube



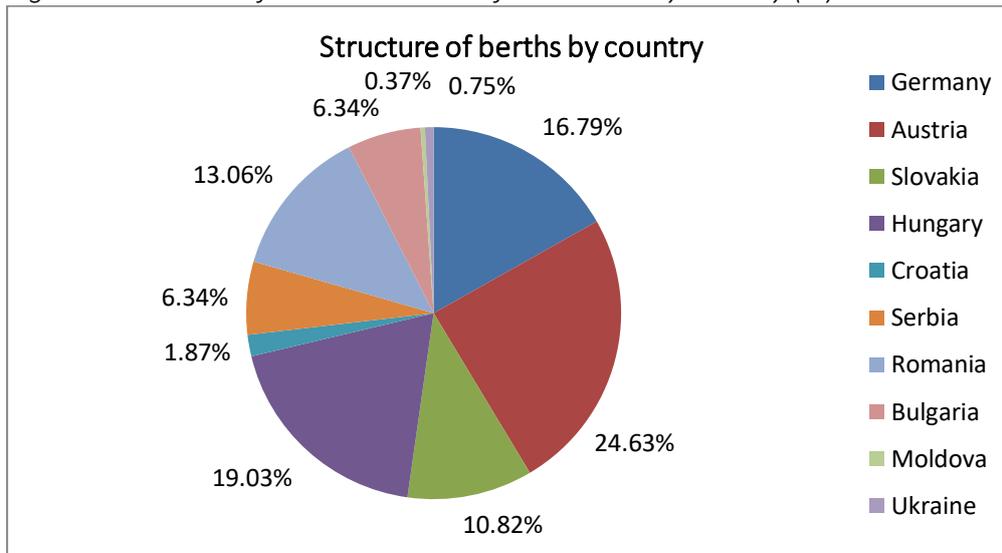
The distribution of berths by country explains the discrepancy in the distribution by sections. The largest number of berths are operated in Austria - 66, Hungary - 51 and Germany - 45.

Figure 5 Distribution of the berths by country



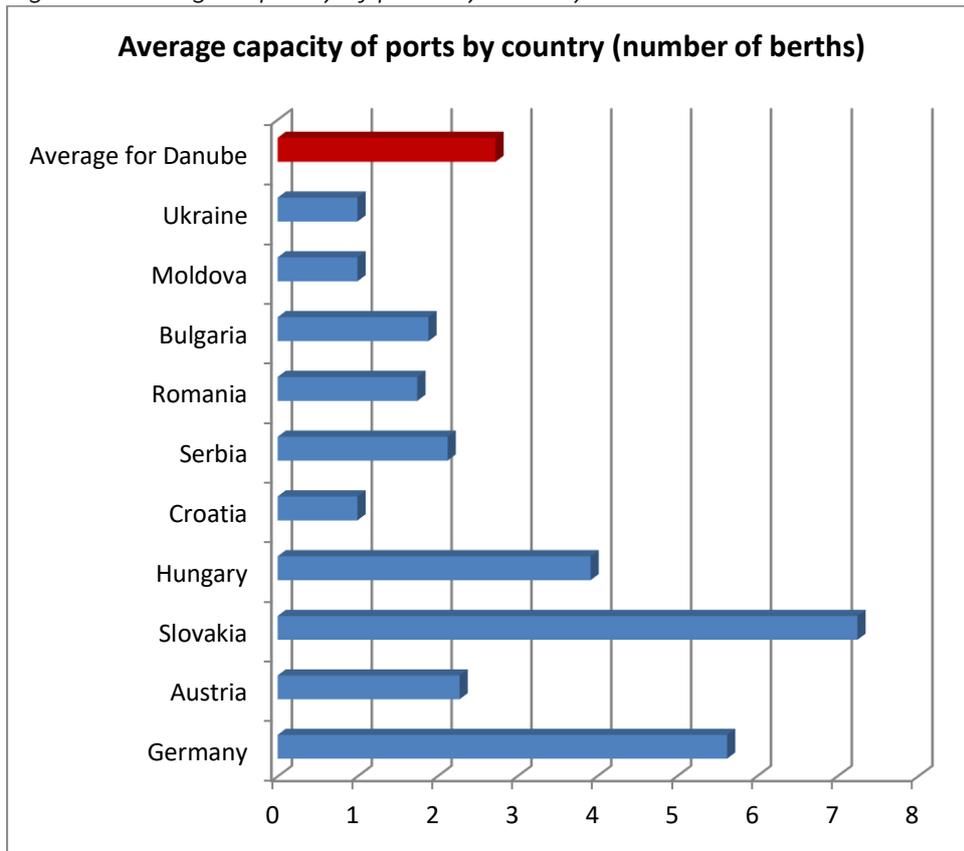
In these three countries more than 60% of all berths are present and if we add Slovakia with its 29 berths than the Danube section of the river before entering the Balkans will have 71, 3% of all berths.

Figure 6 Structure of the distribution of the berths by country (%)



Taking into account the established number of ports and berths for the whole surveyed area, an average capacity of 2.73 berths per port is calculated. This average is significantly higher in Slovakia (7.25), Germany (5.63) and Hungary (3.92), while all other countries show values below the average. The average capacity of the ports in Ukraine, Moldova and Croatia is the lowest - 1 berth per port.

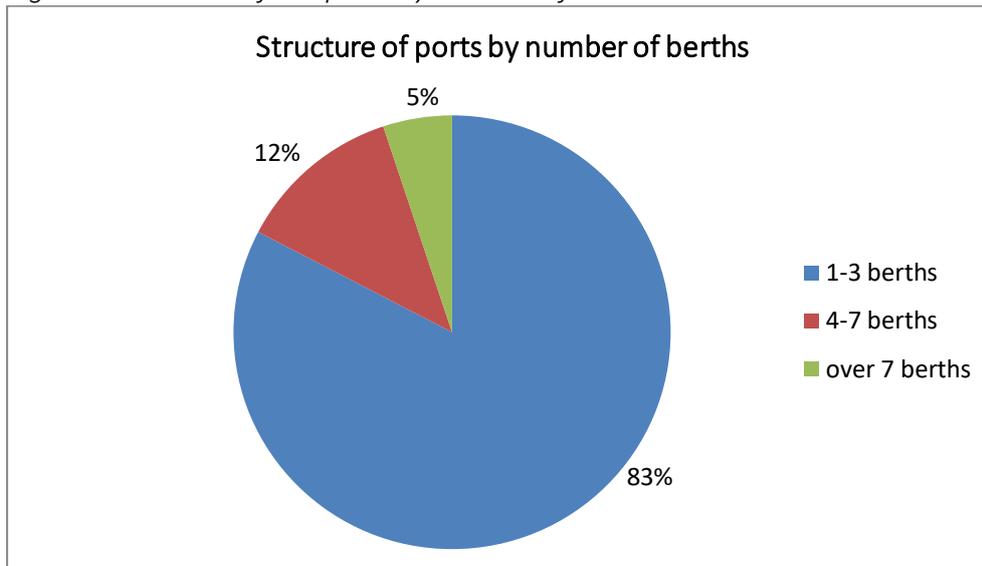
Figure 7 Average capacity of ports by country



The particular distribution of berths in ports show an extreme dominance of ports with 1 to 3 berths - 81 ports, or 83% of all ports. The presence of an overwhelming number of small capacity ports can be seen as an impediment to traffic intensification, which in turn is offset by the density of ports, i.e. through the possibility of using alternative ports. At the same time, although of low capacity, the larger number of ports provide access to a wider area and is a prerequisite for the introduction of new destinations.

The small ports group is available and prevalent in all countries (with the exception of Slovakia), while for Croatia, Moldova and Ukraine it includes all established ports. From the point of view of the types of ports, this group is the most diverse, but with similar frequency occur both universal ports, which have established in their area a dedicated passenger transport berth, as well as purposefully built independent wharves in small settlements.

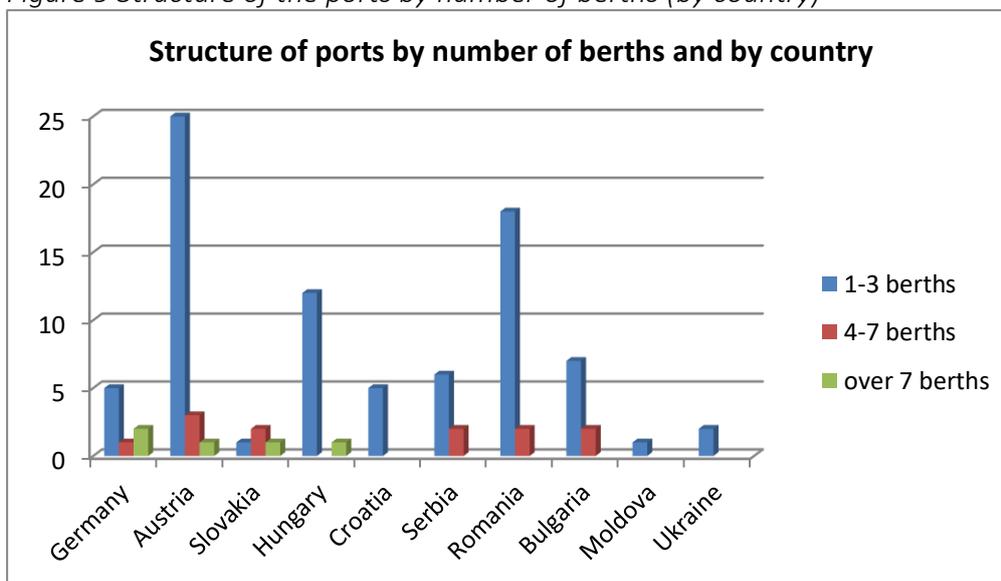
Figure 8 Structure of the ports by number of berths



The group of ports with a capacity of 4-7 berths covers all together 12 ports in Germany, Austria, Slovakia, Serbia, Romania and Bulgaria (Kelheim, Linz, Melk, Krems, Komarno, Sturovo, Belgrade, V.Gradishte, Giurgiu, Braila, Vidin and Ruse). Characteristic of this group is that the berths are organized in (separate) passenger terminals or ports within the traditional and universal port complexes. The exceptions are Kelheim, Melk and Krems, where the berths are located in specialized passenger/cruise wharves.

The group ports and 8 more berths covers only 5 ports - Regensburg, Passau, Vienna, Bratislava and Budapest, but they together have in total 100 berths or 37.45 percent of all identified berths. In all ports of this group, berths are situated along the Danube River, mainly in the central urban areas, thus facilitating the tourist flow and accessibility of the ports with other modes of transport.

Figure 9 Structure of the ports by number of berths (by country)



2.2.3. Ports infrastructure and superstructures

In general, the available information on ports and wharves is fragmentary and not sufficiently coherent with respect to all necessary and/or available elements of the port infrastructure and superstructure. For many of the identified ports information about some of the elements could not be found, while for others it was completely missing, although several sources were used in the survey, including satellite images (Google Maps).

It is also important to note that, under European and relevant national legislation, the availability of a certain port infrastructure is a prerequisite for a port to be licensed, and even in most countries, the availability of such infrastructure is part of the very definition of a "port". Therefore, it can be assumed that the established operational ports of cover at least the basic level of the required port infrastructure and the collected information rather serves as a guide as to what types of facilities and services are provided to passenger/cruise ships.

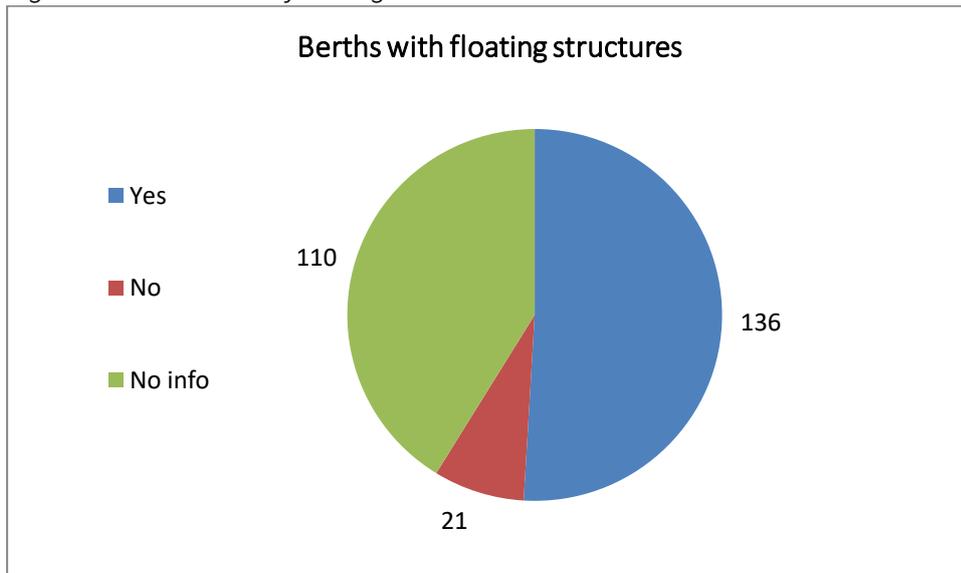
2.2.3.1. Port infrastructure

A pontoon or other floating structure is used to moor the ship to the shore at places with varying water levels (or at insufficient water levels at the shore), i.e. most often when the berth is established directly along the river bank. From this point of view, these facilities cannot be regarded as a specific acquisition, but as a prerequisite to ensure the embarkation/disembarkation of passengers on board of the ship.

At the same time, when the situation permits, disembarkation/embarkation can be done directly from the shore - most often in the harbour of a port or by structure permanently built into the river.

Therefore, pontoons and other floating structures, quay walls, gangways and the like should not be regarded as a prerequisite and element for the assessment of ports, but rather they are their specific characteristics. Within the study, just more than half of the berth locations were identified of using pontoons or other floating structures (barges).

Figure 10 Berths with floating structures



The situation regarding the need and availability of quay walls is similar. They primarily have the function of facilitating the overall spatial organization of the port and the provision of specific cargo handling services, passenger services, etc., while playing a safety and shore protective role.

The construction of a quay wall depends on the purpose it has to serve and the specific hydrological, geological and climatic conditions, as well as on the purpose of the port itself. For example, they are compulsory for cargo ports, as on them are situated port facilities eg cranes, railway lines, etc.

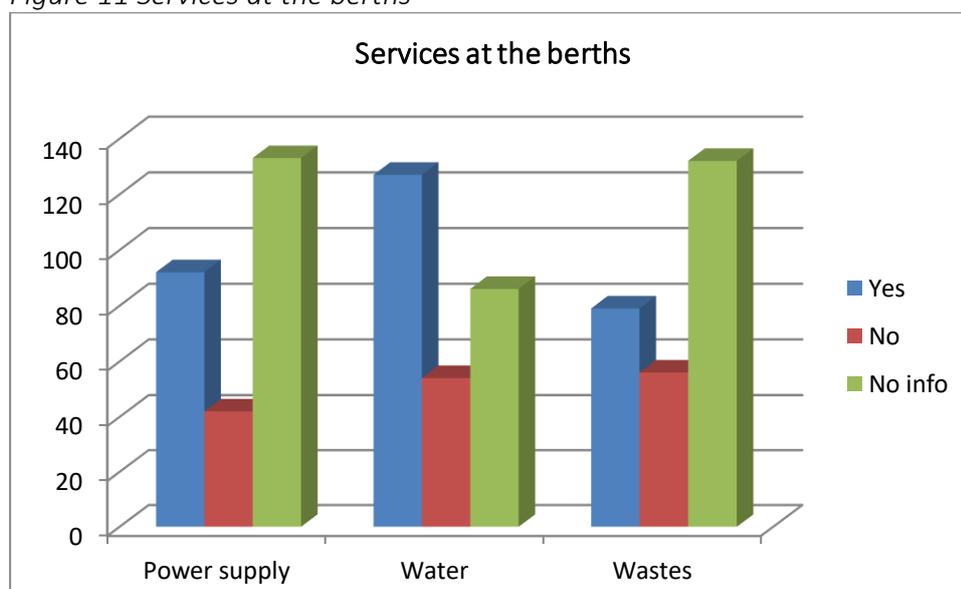
From the tourism point of view, the presence of a quay wall in an urban environment implies the subsequent development of the adjoining territory in promenades, recreation areas, development of food and beverage and entertainment establishments, etc. At the same time, it cannot be considered as a mandatory element for passenger terminals and ports. The survey shows that they are present within the ports as well as along the river banks within most of the locations. In smaller settlements and in those with lower traffic intensity and minimal number of ships, under suitable hydrological conditions, quay walls are not constructed.

The concrete results show that more than half of the berths (134) are at quay walls, with mooring being carried out directly to a floating structure or to another ship. For the other 133 berths reliable information was not found.

Typical for all ports is to provide certain services at the berths, when docking passenger ships like mostly it is water supply, access to the electrical grid and unloading of various types of waste from the ships (including separate reception of household wastes, drainage of santine waters, etc.).

- The gathered information shows that 92 berths have conditions for providing connection to the electrical grid (34.5% of all). At 42 of the berths (15%) it was indicated that this was not possible, while reliable information was not found for the others.
- Water supply is provided at 127 of the berths covered, which represents 47.6% of all. The share of berths that do not offer such a possibility is 20.22% (54).
- For 79 of the surveyed berths there is of some type of wastes, which is almost one third (29.6%) of all. For many berths, this type of information was not found (49.44%).

Figure 11 Services at the berths



2.2.4. Utilization of ports

2.2.4.1. Cruise ports. General overview

At the second stage of the on desk research the identified ports were compared with the ports, stated in the Danube programs of the leading cruise operators. For the research were reviewed in all 372 programs and 41 operators.

As a result, it was found that 71 of the identified ports are called in by at least one program of at least one cruise operator, which represents 72.45% of all ports. Cruise programs coverage is even higher for berths - 235 berths or 87.69% of all are docked at in cruise ports.

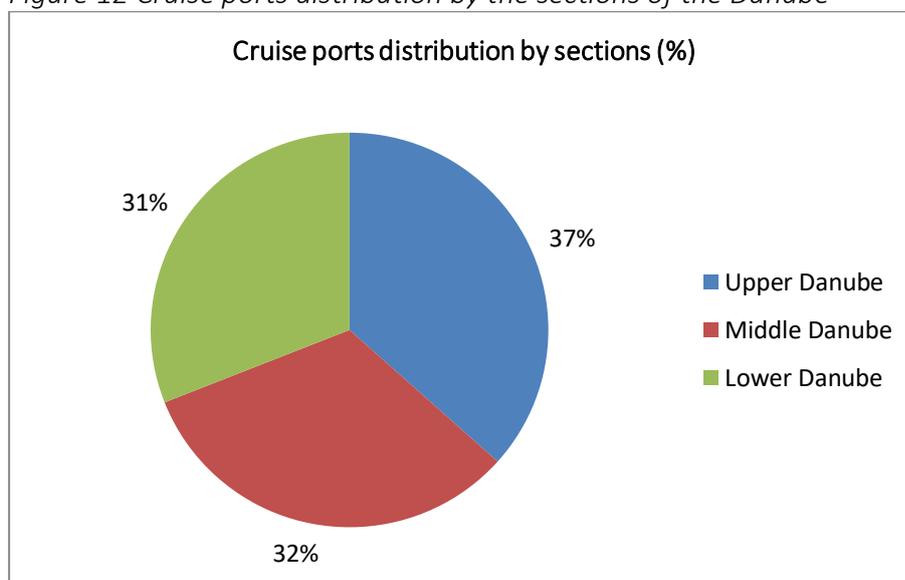
Table 12 Ports and berths along the Danube included in cruise programs

Country	Ports			Berths		
	Total	Included in Cruise program	Ratio (%)	Total	Included in Cruise program	Ratio (%)
Germany	8	6	75,00	45	41	91,11
Austria	29	19	65,52	66	56	84,85
Slovakia	4	4	100,00	29	29	100,00

Country	Ports			Berths		
	Total	Included in Cruise program	Ratio (%)	Total	Included in Cruise program	Ratio (%)
Hungary	13	9	69,23	51	47	92,16
Croatia	5	5	100,00	5	5	100,00
Serbia	8	4	50,00	17	10	58,82
Romania	20	15	75,00	35	30	85,71
Bulgaria	9	6	66,67	17	14	82,35
Moldova	1	1	100,00	1	1	100,00
Ukraine	2	2	100,00	2	2	100,00
TOTAL	98	71	72,45	268	235	87,69

The results show insignificant deviations, when calculated by the sections of the river. In the Upper Danube section with 38 ports, 26 of them (68%) are covered by programs. The highest proportion of ports is included in the Lower Danube, which is 75.86% (22 out of 29 ports), while in the Middle Danube the indicators are 23 "cruise" ports and 74.19% respectively. Considering these values of the ratios, the distribution of the cruise ports in the different sections demonstrates almost identical structure contrary to the structure of the ports as a whole.

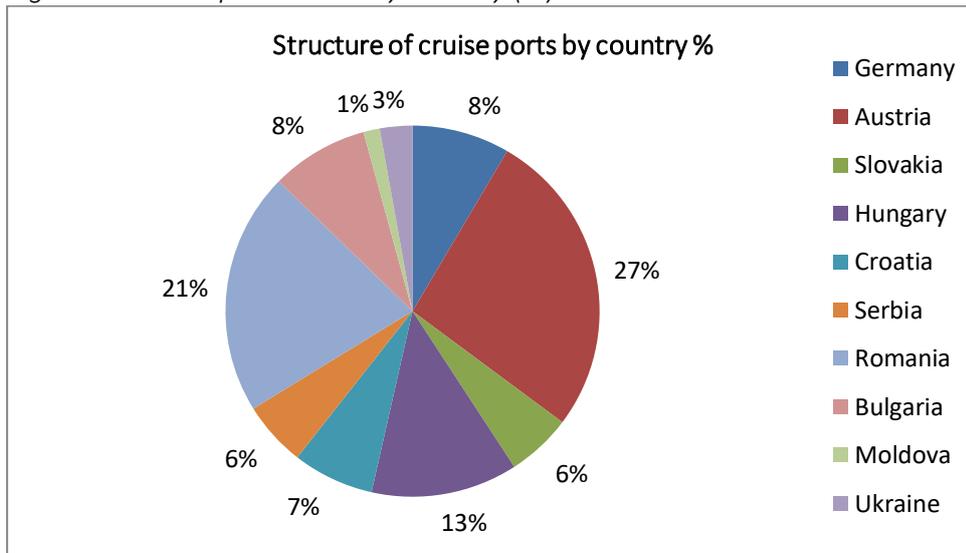
Figure 12 Cruise ports distribution by the sections of the Danube



2.2.4.2. Cruise ports by country

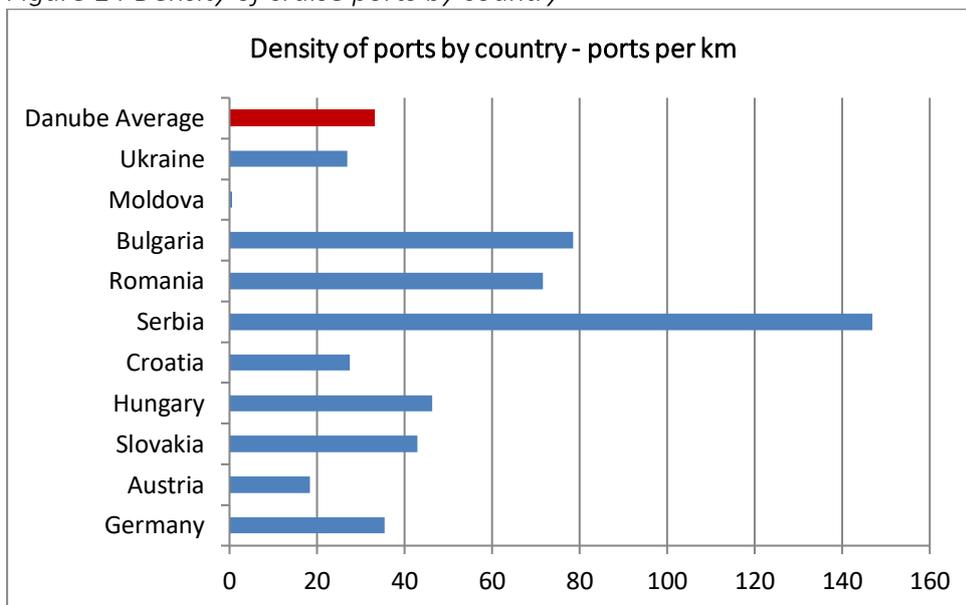
The distribution of cruise ports by country provides a more balanced structure compared to the distribution of ports in general. The largest number of cruise ports are located in Austria – 19 and Romania - 15, covering respectively 27% and 21% of cruise ports share. Next is Hungary, whose 9 cruise ports form 13% of the share. With relatively equal share are Germany (6 ports), Slovakia (4 ports), Croatia (5 ports), Serbia (4 ports) and Bulgaria (6 ports), and their share is between 6% and 8% of the cruise ports. Ukraine and Moldova have the smallest share - 3% and 1% respectively.

Figure 13 Cruise ports share by country (%)



Relative to the length of the Danube in the territory of the country concerned, these results provide a highly disproportionate picture of the density of cruise ports. At an average density of 1 port per 33 km for the entire waterway, 5 countries have indicators below or around this value - Moldova (1 per 0.57 km), Austria (1 per 18.45 km), Ukraine (1 per 27 km), Croatia (1 per 27.5 km) and Germany (1 per 35.5 km). In Slovakia and Hungary, there is a slight increase in the average level - 1 per 43 km and 1 per 46.4 km respectively, while in Romania, Bulgaria and Serbia the density of cruise ports is much lower than the average for the Danube - Romania (1 per 71.67 km), Bulgaria (1 per 78.1 km) and Serbia (1 per 146.84 km).

Figure 14 Density of cruise ports by country



The overview of cruise programs, without going into detail about the intensity of loading of individual cruise ports, outlines several groups of ports for use by cruise operators:

- Only two ports are present at each of the cruise operators - Vienna and Budapest. These cities, along with Passau, Melk, Bratislava and Belgrade, which are included in programs by 30 to 37 operators, can be considered as "hits" among the Danube ports;
- 8 ports - Regensburg, Linz, Durnstein, Esztergom, Kalocsa, Mohacs, Novi Sad and Ruse are present in more than 50% of the operators (between 20 and 29) and are "traditional" as a choice.
- 33 of the cruise ports are present in 1 to 3 operators (15 ports by only 1 operator);

2.2.4.3. *Ports with potential*

The assessment of the potential of the ports not included in the programs of the surveyed cruise operators should be based on a detailed analysis of a number of aspects - location along the river and interaction with neighbouring ports, availability of tourist resources, technical facilities, market interest, etc. At this stage, as "promising" options may be considered:

Enns, Austria. The city has several attractions and opportunities - the historic centre of the city, the "Lauriacum" Museum (one of the most important collections of Roman heritage in Austria). The Danube cycle route and the special cycle ferry is an opportunity to combine with cycling tourism. Next to it is the Mauthausen port, which is used by some cruise operators.

Vac and Nagymaros, Hungary. The most interesting among places not covered by cruise programs in Hungary is Vac, a city with a rich history and many cultural attractions, it is the centre of many cultural events, including Világi Vigalom - a three-day festival of music and performances held on the city's waterfront street. Due to its location - on the left bank of the Danube just opposite Visegrad, Nagymaros can be used as an alternative port when visiting the Visegrad Castle.

Kladovo and Sremski Karlovci, Serbia. Cruise programs cover only 4 of the 8 identified ports in Serbia, due to the fact that they have all been commissioned in the last 2-3 years. Among the "missing" with the most serious potential are:

- Kladovo, located at the end of the Iron Gate gorge, the starting point for Djerdap National Park and it is the alternative port of Drobeta Turno Severin;
- Sremski Karlovci - a historical city rich in cultural sights, a centre of wine tourism and host to many cultural events;

3. SURVEY OF CRUISE COMPANIES ALONG THE RIVER

3.1. Danube cruise operators

The survey identified 41 cruise operators offering Danube cruises.

3.2. Danube cruise programs

The survey period is in 2019 and information was only available about the programs to be completed by the end of the year (ie October, November and December only), which could not give a comprehensive coverage of the volume of the Danube cruise tourism. The study therefore **focused on the announced 2020 programs**, which, although for the coming period, provide a more complete picture.

3.2.1. Program numbers and distribution within cruise operators

The total number of major cruise programs for 2020 announced by cruise operators is 372. Taking into account the fact that part of the programs offer voyages on both directions of the river as two independent trips, with separate routes, although they bear the same name as a program, the total number of programs is **496¹²**. When to this numbers are added their different variations, which are also available as separate programs - 263, then a total of 759 Danube cruise programs are on sale.

By early November, 33 cruise operators had announced their **sailing dates** for their various 2020 programs. Within the announced dates, **3012 Danube cruises are expected to be implemented in 2020 under 397 programs**.

At the time of the survey, 9 cruise operators had not announced dates for their programs, so programs without scheduled dates for the voyages are 99. It is not certain whether the lack of information means cancellation for 2020 or a forthcoming late announcement of sailing dates.

Top 5 cruise operators by number of cruises includes Viking River Cruises (283), Phoenix Reisen (259), AmaWaterway (256), Avalon Waterways (239) and A-Rosa Cruises (218). Although some data is not available for all operators, as well as the number of cruises is also a function of their duration, but given the ships they operate, it can be assumed that these are the 5 major Danube operators.

Table 13 Number of cruises by cruise operators for 2020¹³

Cruise operator	Number of cruises (2020)	Share (%)
AmaWaterways	256	8,50
A-ROSA Cruises	218	7,24
Avalon Waterways	239	7,93
CroisiEurope	140	4,65
Emerald Waterways	165	5,48
Gate 1 Travel	114	3,78
Scenic Tours	100	3,32
Tauk World Discovery	156	5,18
Uniwold River Cruises	147	4,88
Viking River Cruises	283	9,40
Lüftner Cruises / Amadeus Cruises	42	1,39

¹² This number is the base for the analysis that follow

¹³ Included are only announced dates of cruises

Cruise operator	Number of cruises (2020)	Share (%)
U River cruises	30	1,00
Nicko Crusies	150	4,98
Regina River Cruises	38	1,26
Travel Marvel	49	1,63
CruceMundo	8	0,27
The river cruise line	25	0,83
Boat bike tours/ Best bike boat tours	122	4,05
Crystal Cruises	51	1,69
Feenstra Rijn Lijn	5	0,17
Phoenix Reisen	259	8,60
1AVista	56	1,86
Viva Cruises	39	1,29
PlanTours	26	0,86
DDSC Blue Danube	41	1,36
RivCru	20	0,66
Fred. Olsen Cruise line	6	0,20
Chervona Ruta	2	0,07
DCS-Touristik GmbH	35	1,16
Vantage Deluxe World Travel	33	1,10
Reisebüro Mittelthurgau AG (Excellence River Cruise)	59	1,96
Riviera Travel	98	3,25
Total	3012	100,00

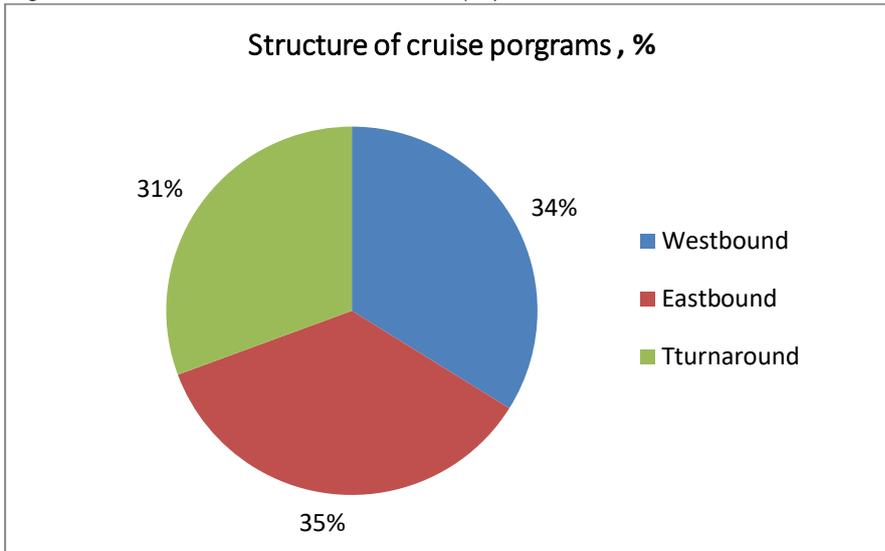
3.2.2. Cruise programs characteristics

3.2.2.1. Direction structure

Looking at the direction in which they occur, the main cruise programs show a relative balance between the eastbound and westbound voyages (east and west) - respectively 176 and 168 programs are offered in the separate directions¹⁴. This balance is logical because planning is done in such a way as to avoid empty voyages.

¹⁴ Most programs are offered in both directions

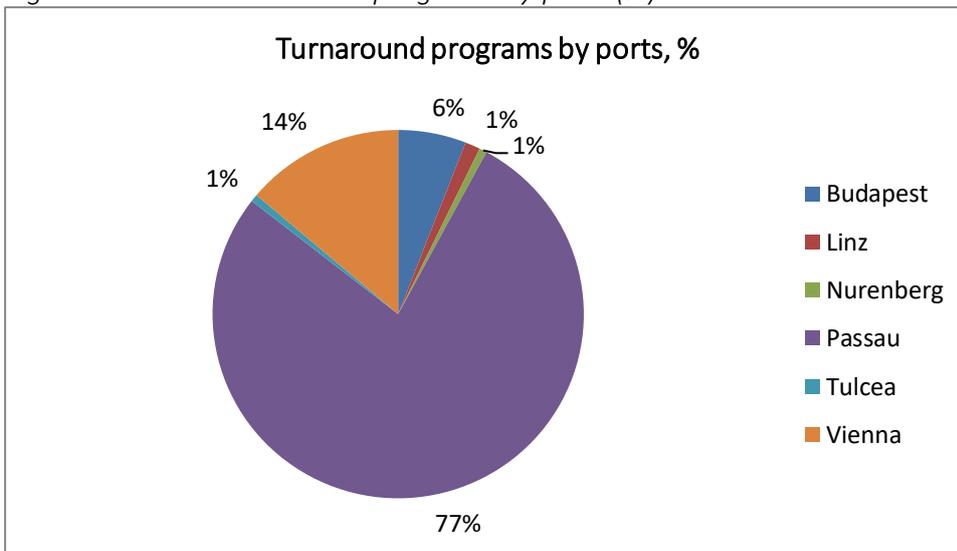
Figure 15 Cruise direction structure (%)



Of interest is the number of turnaround programs in which the start and end ports are the same. In these programs, due to the return to the starting point, the distance along the river is less than if the voyage is in one direction only for the same time duration. This may, on the one hand, limit the number of countries involved (depending on the location of the port and the direction of travel), but on the other, it allows calls to more ports and closer ports.

The ports from which such programs are offered can be considered as the main hubs of cruise tourism on the Danube. The main ports of this kind are Passau, where 118 programs are implemented, Vienna (21) and Budapest (9). Single cases are noted in Linz (2 programs), Nuremberg (1 program that includes Danube ports) and Tulcea (1 boot & bike program). Outside the Danube region, but also including voyage on the Danube, turnaround programs are offered from Nuremberg, Amsterdam, Basel.

Figure 16 Turnaround cruise programs by ports (%)



3.2.2.2. Timewise structure

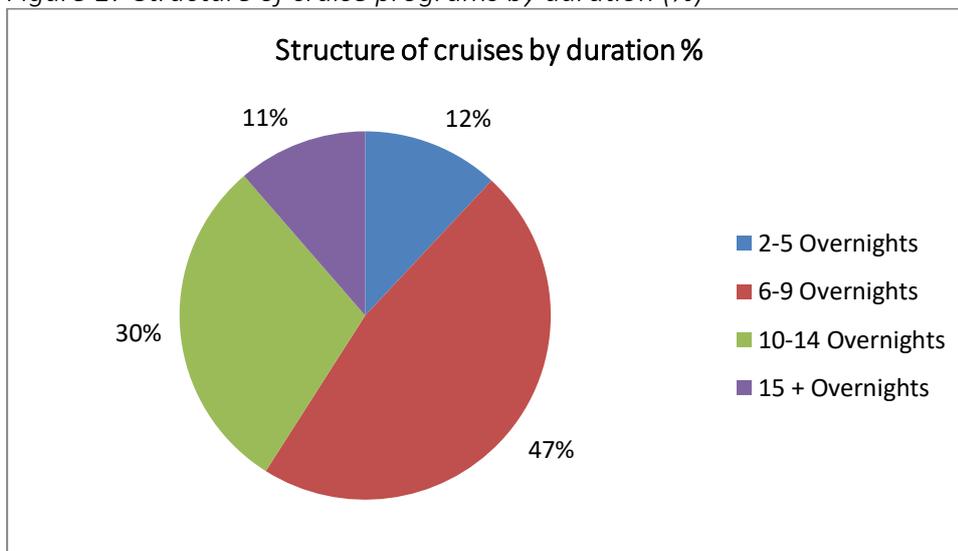
The longest cruise program, part of which is on the Danube, has 28 overnights - Croise Europe's "Cruise across Europe from Budapest to Berlin" program, and the longest program on Danube only is offered by Fred Olsen Cruise Line - Cities & Scenery of the Historic Danube program, lasting 21 overnights. According to the number of overnights, the most often are cruises with a duration of 7 overnights - 176 programs.

Table 14 Number of cruise programs by duration, 2020

Duration	Number
2 overnights	2
3 overnights	18
4 overnights	14
5 overnights	25
6 overnights	19
7 overnights	176
8 overnights	25
9 overnights	13
10 overnights	28
11 overnights	21
12 overnights	13
13 overnights	5
14 overnights	80
15 overnights	13
16-19 overnights	16
20-28 overnights	27

As a whole cruise programs with duration of 6 to 9 overnights are predominant in the offerings and they count for 47% of all basic programs. Programs with duration of 10-14 overnights (30% of all) occupy a significant share and form the trend of Danube cruises to be with duration of 6 – 14 overnights.

Figure 17 Structure of cruise programs by duration (%)



3.2.2.3. Distribution by country and ports

Cruise programs cover the countries along the Danube at different extent and it is obvious the misbalance of the development of the Danube as a cruise destination.

Table 15 Cruise program coverage by country¹⁵

Country	Number of programs	Share (%)
Germany	395	79,64
Austria	441	88,91
Slovakia	301	60,69
Hungary	396	79,84
Croatia	104	20,97
Serbia	135	27,22
Romania	121	24,40
Bulgaria	106	21,37
Moldova	1	0,20
Ukraine	4	0,81

Based on the gathered data clearly can be outlined three distinctive groups of countries:

- **Germany, Austria, Slovakia and Hungary**, e.g. the countries of the Upper Danube, which appear in more than 60% of the offered programs, while for Austria this percentage reaches nearly 89%.
- **Croatia, Serbia, Romania and Bulgaria**. These countries are present in 21 to 27% of the programs.
- **Moldova and Ukraine**. Cruise programs reaching these countries are rather by exception.

A complex of factors determine this concentration in the upper Danube - socio-economic, the degree of development of water transport (including the number and density of ports), marketing and others. To these factors we have to add:

- Proximity to the major European markets – Germany, Netherlands, France, Austria;
- Proximity to the Rhine-Main-Danube channel - the main connection of the Danube to the waterways of Central and Western Europe, which allows the inclusion of these countries in combined cruises on several rivers;
- Better transport connectivity (international airports and flights) compared to the other part of the river, etc.

¹⁵ The share of individual country is calculated on the base of 496 programs, where both directions programs are counted as separate programs

At ports level, the results complement the picture by giving insight how to identify leading ports as presence in cruise programs for each country:

Table 16 Leading ports according number of programs (by country)

Country	Port	Number of programs
Germany	Regensburg	203
	Passau	379
Austria	Linz	171
	Melk	269
	Durstein	154
	Vienna	436
Slovakia	Bratislava	262
Hungary	Esztergom	87
	Budapest	396
Croatia	Osijek	48
	Vukovar	47
Serbia	Novi Sad	72
	Beograd	133
Romania	Giurgiu	68
	Oltenița	29
	Tulcea	24
Bulgaria	Vidin	64
	Ruse	89
Moldova	Giurgiulesti	1
Ukraine	Vylkove	4

3.3. Danube fleet

3.3.1. Cruise ships numbers

The number of vessels serving the Danube cruise programs has increased significantly in recent years as a result of the increasing demand for Danube cruises, with upward score of 37% over the period 2012-2017. After a short period of more moderate development (2018), in 2019, the cruise sector in Europe is acquiring 19 new vessels¹⁶, 14 of which sail in the Rhine-Main-Danube region (incl. "Adora" - the new ship of "Danube Tours" operated by Phoenix Reisen).

Table 17 Numbers of cruise ships on the Danube, 2012 – 2019

Year	2012	2013	2014	2015	2016	2017	2018	2019
Number of ships	124	137	150	170	168	170	178*	188*

Source: ViaDonau; *expert estimation

At this rate of increase and the expected new vessels it is possible to estimate that in 2021 the "level" of 200 might be reached.

¹⁶ <https://binnenschifffahrt-online.de/2019/04/schiffstechnik/9031/>

The survey found that the identified cruise operators were operating their cruises on the Danube with a total of **175 ships with 29 267 seats**. Taking into account Given the expert estimation of the numbers of Danube vessels in 2019 across the Danube, it can be assumed that the vessels identified in the survey constitute the vast majority of the Danube fleet and are sufficient in number for the reliability and adequacy of the subsequent analysis.

3.3.2. Distribution of vessels by cruise operators

The distribution of Danube vessels by cruise operators is characterized by strong fragmentation - many operators operate with a small number of vessels, respectively, with a small capacity.

Table 18 Danube fleet – distribution by cruise operators¹⁷

Company	Number of ships	Number of cabins	Max number of passengers	Share of ships	Share of cabins	Share of seats
AmaWaterways	10	807	1612	5,71	5,53	5,53
A-ROSA Cruises	5	494	1118	2,86	3,39	3,83
Avalon Waterways	7	543	1084	4,00	3,72	3,72
CroisiEurope	9	689	1382	5,14	4,72	4,74
Emerald Waterways	5	460	900	2,86	3,15	3,08
Gate 1 Travel	4	278	550	2,29	1,91	1,89
Scenic Tours	8	652	1296	4,57	4,47	4,44
Tauk World Discovery	6	362	716	3,43	2,48	2,45
Uniworld River Cruises	4	280	560	2,29	1,92	1,92
Viking River Cruises	30	2850	5700	17,14	19,54	19,54
Lüftner Cruises / Amadeus Cruises	6	487	950	3,43	3,34	3,26
U River cruises	1	66	120	0,57	0,45	0,41
Nicko Crusies	8	683	1365	4,57	4,68	4,68
Regina River Cruises	3	195	391	1,71	1,34	1,34
Travel Marvel	3	252	504	1,71	1,73	1,73
CruceMundo	2	154	308	1,14	1,06	1,06
The river cruise line	2	192	372	1,14	1,32	1,28
Boat bike tours/ Best bike boat tours	6	399	813	3,43	2,74	2,79
Crystal Cruises	3	190	380	1,71	1,30	1,30
Donau Touristik	1	82	164	0,57	0,56	0,56
Dunav tours	4	324	633	2,29	2,22	2,17
McCruise	1	70	140	0,57	0,48	0,48
Favorit Reisen	1	95	220	0,57	0,65	0,75
Feenstra Rijn Lijn	1	59	105	0,57	0,40	0,36
Gran Circle Travel	2	162	324	1,14	1,11	1,11
Princesse de Provence Cruises	1	74	152	0,57	0,51	0,52
Quality tours Aps	1	45	90	0,57	0,31	0,31
Select voyages	1	88	176	0,57	0,60	0,60

¹⁷ The number of vessels and their capacity, accordingly their share participation, exceeds 100% since several vessels are used by more than one operator

Company	Number of ships	Number of cabins	Max number of passengers	Share of ships	Share of cabins	Share of seats
Phoenix Reisen	12	1070	2096	6,86	7,34	7,18
1AVista	6	452	906	3,43	3,10	3,11
Viva Cruises	3	199	391	1,71	1,36	1,34
PlanTours	2	142	277	1,14	0,97	0,95
DDSC Blue Danube	3	307	614	1,71	2,10	2,10
RivCru	1	77	154	0,57	0,53	0,53
Fred. Olsen Cruise line	1	79	156	0,57	0,54	0,53
Chervona Ruta	2	350	720	1,14	2,40	2,47
DCS-Touristik GmbH	1	89	178	0,57	0,61	0,61
APT Luxury Travel	2	164	328	1,14	1,12	1,12
Vantage Deluxe World Travel	3	276	528	1,71	1,89	1,81
Reisebüro Mittelthurgau AG (Excellence River Cruise)	6	480	960	3,43	3,29	3,29
Riviera Travel	8	657	1295	4,57	4,50	4,44
TOTAL	185	15374	30728	105,71	105,41	105,32

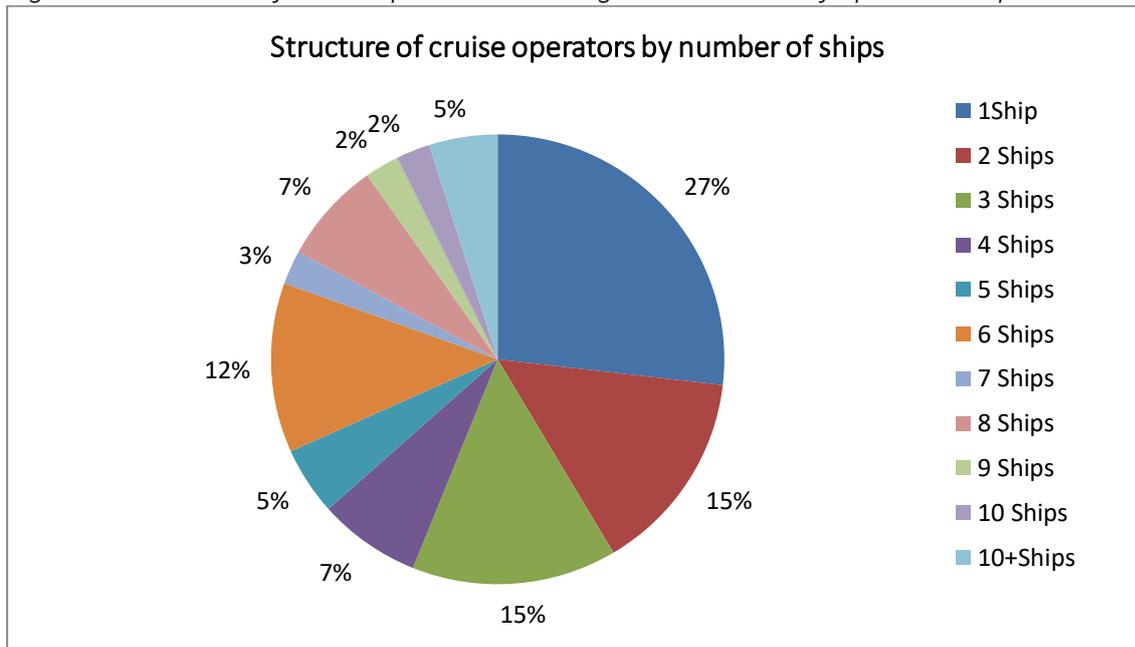
It should be noted that some ships are used by more than one operator (which is why the sum of the shares in the above table exceed 100%). They are:

Table 19 List of ships used by more than one operator

MS Primadonna	Boat&Bike, DonauTouristik, DDSC Blue Danube
MS Vivtor Hugo	Excellence / CruisiEurope
MS Treasures	VivaCruises / Tauck
MS Amadeus Silver	Phoenix Reisen / Lueftner Cruises
MS Sofia	Phoenix Reisen / Dunav Tours
MS Rousse Prestige	Plantours / Dunav Tours
MS Ariana	Phoenix Reisen / Dunav Tours
MS Elegant Lady	Plantours / Dunav Tours
MS Crucestar	Crucestar / Crucemundo/Rivcru

A total of 23 operators (57% of all operators) operate cruises with up to 3 ships, with the majority (11 operators, 27%) operate with only 1 vessel.

Figure 18 Structure of cruise operators with regard to number of operated ships



At the same time only three companies have 10 or more ships on the Danube. The undisputed leader is Viking River Cruises with its 30 ships (over 17% share of all ships on the Danube)

Table 20 Top 5 cruise operators by number of ships on the Danube

Top 5 cruise operators – number of ships		
1	Viking River Cruises	30
2	Phoenix Reisen	12
3	AmaWaterways	10
4	CroisiEurope	9
5	Nicko Crusies	8
	Riviera Travel	8
	Scenic Tours	8

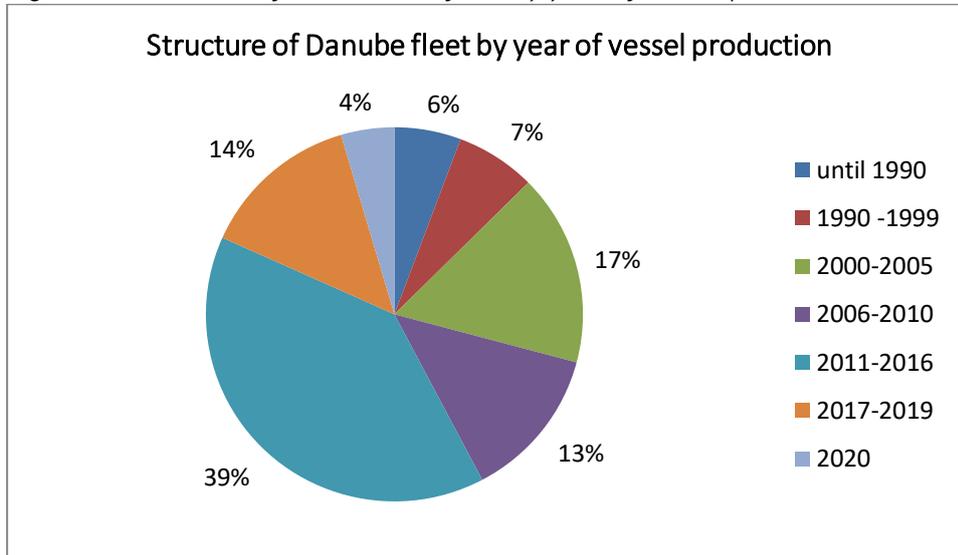
The positive side of this structure is the greater chance for individual Danube destinations, especially the less popular ones, to attract interest and to partner with a cruise tour operator. On the other hand, severe competition is forcing operators to seek program diversification opportunities and/or more focused specialization, which is a prerequisite for integrating new products and services.

3.3.3. Age of the Danube fleet vessels

The structure of the Danube Fleet according to the age of the vessels shows continuous renewal, which will continue as a process also in 2020 - according to the announced cruise programs for the next year, 8 new ships will be launched. This is provoked by two major factors - increased environmental requirements that older engines cannot meet, and increased consumer demands about the conditions and expected services on board of a cruise ship.

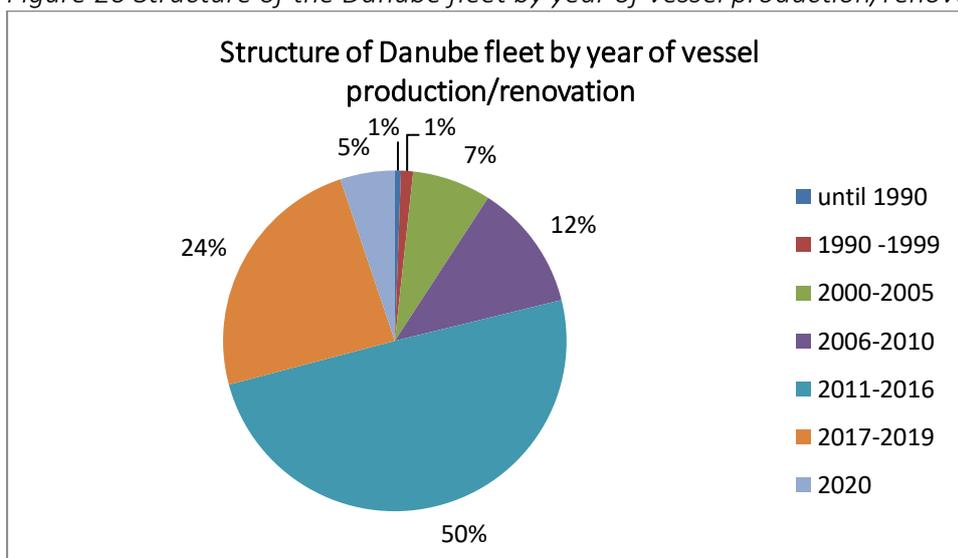
The current age structure of the vessels of the Danube fleet shows that new vessels prevail - the number of ships produced after 2010 is 93 and together with the planned for 2020 (8 ships) make up 57% of all ships. In addition, 30% of the fleet is made up of ships built between 2000 and 2010 (52 ships). Only 13% of the ships have a year of production before 1999.

Figure 19 Structure of the Danube fleet by year of vessel production



The situation is even more significant if the renovations of the vessels are taken into account. For the 2020 season, from this point of view, cruises will be made by ships, 79% of which were manufactured and/or refurbished in the period 2011 to 2020, and the proportion of ships produced or refurbished until 1999 will be only 2%.

Figure 20 Structure of the Danube fleet by year of vessel production/renovation



3.3.4. Types of cruise vessels on the Danube

The specifics of the waterway, combined with economic efficiency and technology have an impact on the technical parameters of the Danube ships. At present Danube cruises are realised with the following main types of cruise ships¹⁸:

Small ships with length below 110 m

In this group are present mainly older ships with length less than 110 m and breadth of up to 11 m. They have limited capacity and at present for this reason their production is limited. They are used for the low cost segment of the cruises.

Ships with length of 110 m

Production of such type of ships is wide spread after year 2000, when the maximum dimensional "standard" becomes length of 110 m and breadth of 11.5 m. The breadth dimension is defined by the width of the European river and channel locks.

Ships with length of 135 m

At present in the inland waterways the biggest ships are with length of 135 m and breadth of 11.5 m.

Ships with "over"- breadth dimensions

In recent years, some vessels have been manufactured with a standard length of 135 m, but with a breadth exceeding the usual one and with "over-breadth" of 17, 20 or even 23 m. Due to their inability to pass through the channel locks, these vessels are restricted to sail only the waterway where they were initially placed on water (e.g. Rhine or Danube). A typical example of such a ship is the AmaMagna of AmaWaterways launched on the Danube in 2019, and her breadth is 22 meters.

3.3.5. Capacity of the Danube cruise ships

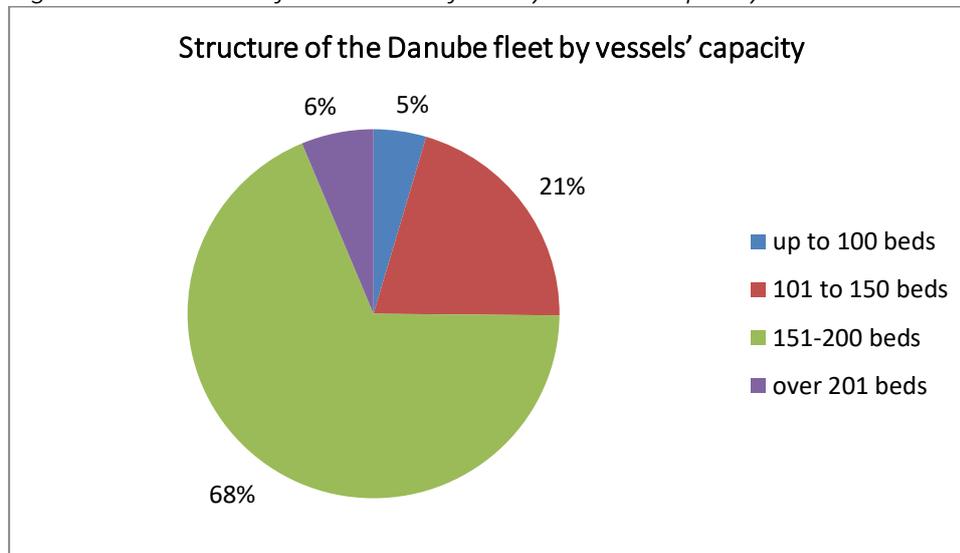
Cruise ships on the Danube are limited in their capacity, generally because of the optimum physical dimensions of a vessel (135 m long/11.5 m breadth). With these dimensions, the average capacity of a ship is 166.7 passengers accommodation.

In terms of capacity, ships of the Danube fleet are strongly dominated by ships with accommodation for between 151 and 200 passengers. These are 120 ships or 68% of all ships. Between 101 and 150 accommodations offer 21% of the ships (36). Ships with up to 100 beds

¹⁸ Source: IG RiverCruise

are only 8 (5%). The largest one is the Ukrainian Rosa Victoria, belonging to Chervona Ruta, with a total of 400 accommodations, for cruises on the lower Danube (to Fetesti).

Figure 21 Structure of the Danube fleet by vessels' capacity



In addition, it should be noted that the maximum number of decks registered on Danube vessels is 3 decks with cabins. This is also the prevailing number of decks for most ships (only 20 are ships with 2 decks with cabins). Increasing the capacity of the Danube Fleet is possible, within these limiting conditions, mainly through increasing the number of vessels.

3.3.6. Crews

Of the 175 identified ships sailing on the Danube, for 163 was available data for the crews. The total number crew personnel employed on these ships is 7253 persons.

On this basis the average number of the crew of a ship can be calculated at 44.5 person and for identified 175 cruise ships on the Danube the expert estimate of employees of cruise ships are over 7787 persons - crew members and tourism (hotel and other) service staff.

An important aspect is the ratio of the number of crew personnel to the number of passengers, with an average value of 1/4 or 0.25. From this point of view, 118 of the vessels are at this level or above it (72.4%) and only 11 of the vessels are with ratio 0.2 and below it (6.75%).

3.4. Interaction with responsible administrations

3.4.1. Defining the basic payers

The cruise business combines virtually two economic sectors - tourism and water transport, which makes the picture very diverse, with many participants involved, consumers and regulators¹⁹. The main "players" can be defined as follows:

Cruise ship owners. They can be only owners, which have transferred the operation to other companies, or they can also directly manage the ships.

Cruise operators are the companies that manage the ships and organise the cruise voyages. In some cases they do it on their own and in others they hire ship management company for the vessel navigation services or for the tourist/hotel part;

Local tour operators, which partner with cruise operators for the services on the shore.

Public authorities at different levels. At national level these are the tourism and maritime and navigation administrations, which set the general framework in these fields of tourism and navigation and indirectly structures that administer labour legislation, taxation, visa regime etc.

At regional and local level the leading role is of the municipalities. Quite often they are responsible for the ports infrastructure, as well as for the access infrastructure, for local taxes and levies, urbanisation of adjacent zones to the ports, management and access to different tourist sites of interest etc.

Industry and professional organisations from both sectors – tourism and transport. While tourism and marketing organisations are more like a consumer of the product (except WGD Donau Oberösterreich Tourismus GmbH), professional organisations in the shipping sector represent the interests of the cruise business and in this function it should be the key partner to the administration.

The clients, who by generating the demand for the services model the product and provoke its development.

3.4.2. Main areas of interaction

The key thematic areas in which communication and interaction between business and administration at the destination level outside the purely navigational area are (or need to be) addressed are further discussed in Section 8, insofar as they cover the main prerequisites / obstacles for the development of cruise tourism. They can be summarized as follows:

¹⁹ Source: <http://www.igrivercruise.com/pdf/Directory-V1-de.pdf>

- **Legislation and administrative procedures** - the degree of harmonization between countries is still not at the necessary level, and going through 5-7-10 countries the operator is faced with many and mostly different administrative procedures and regulations. Communication is particularly intense with regard to:
- **Tax legislation and in particular VAT** - plus the state of the Danube cruise tourism - multiple countries (some EU Member States, others not), operators from Member States or from third countries, numerous sites with numerous tax events - all this complicates the procedures of accrual and deduction;
- **Labour legislation** and access of labour migrants from third countries;
- **Eco norms and ecological impacts** – arena of constant conflict of interests;
- **Navigable conditions of the waterway.** The maintenance and management of the waterway is responsibility of the national administrations in the corresponding stretch, while the cruise operators are main consumers;
- **Port development** and the practical models for partnership between operators, local administrations and port authorities;
- **Additional services**, as well the quality of the services and integration of new proposals;
- **Balance of benefits** between the cruise business and the destinations;
- **Destination marketing** and integration new sites and thematic elements in the tourist product
- **Etc.**

Considering the statements here above, and given the nature of cruise tourism, communication at supranational level - EU level is even more important, since the Danube cruise product is developed in many countries and needs an unified framework.

Experts estimate that communication between the industry and national level administrations is severely hindered in most countries. At certain level the reason is in the fragmentation of the industry - because the absence of the relevant professional organisations, individual companies tend to have individual contact with the respective administration, which reduces the chances of their problems being taken into account. Another objective barrier is related to the ownership and management of the shipping companies - a significant part of them are not European, especially the larger ones, which further complicates their contact with the administrations concerned.

At present, real partnerships develop mainly operationally at lower territorial levels - with municipalities and regional entities insofar as they are directly involved in the implementation of the cruise voyage with regards to the use of ports, the use of services on the shore and common marketing initiatives.

4. TOURISTS AGREGATED DATA

4.1. Tourists volume and structure

As already stated above, at national level in the individual countries there are serious gaps in the statistical information about cruise tourism, which is also a problem for the whole Danube region. So currently there is no institution providing summarised, relevant and reliable information about the development of cruise tourism, and in particular river cruises, also along the Danube.

With regard to navigation on the Danube, the **Danube Commission (DC)** is of paramount importance at international level, providing , inter alia, statistical information on freight and passenger traffic on the river. And if for inland freight this information is based on data from ports, considered reliable and real, then for passenger transport, things are different because of two main reasons:

- So far as the river is still considered primarily as a transport corridor for industry and commerce, DC attention presumably focuses on cargo ports. Data about their passenger terminals and tourist traffic services are collected and provided "as an exception";
- Entirely passenger ports and especially small wharves (in Austria, Germany, Hungary) are left out of the "scope" of the port information of the DC;
- Passenger traffic statistics are generated on the basis of "national flag", so all cruise ships flying the flag other than that of a member state of the DC remain outside it. For example, ships from Switzerland, Malta, etc., which make up more than 50% of the Danube cruise ships, are not covered.

DC tries to compensate for these shortcomings by conducting periodic market surveys and process data from:

- Gabčnkovo on the Slovak-Hungarian border, which allows to monitor traffic, including the one from/to Vienna, Passau and the Rhine direction
- Mohacs on the Hungarian-Croatian border - used as a place to track cruises to the Lower Danube and the Delta.

The DC, based on these estimates, tracks the development of cruise passengers for the period 2012-2017 as follows²⁰:

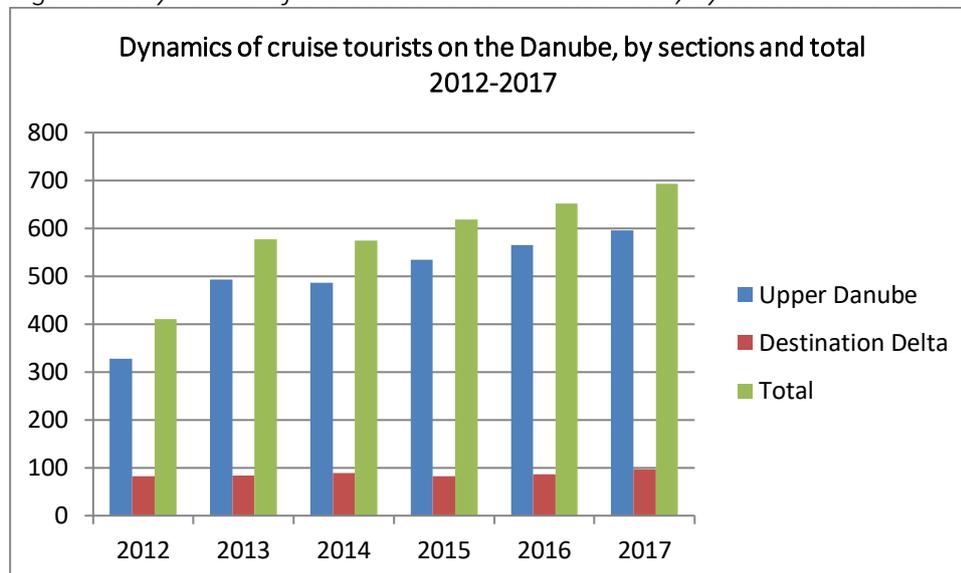
Table 21 Cruise passengers on the Danube, 2012-2017 (in thousands)

	2012	2013	2014	2015	2016	2017
Upper Danube	328	493	486	535	564,7	595,5
Destination Delta	82	84	89	83	86,9	97,7
Total	410	577	575	618	651,6	693,2

Source: The Danube Commission

In 2017, the number of cruise ship tourists on the Danube reached 50% of all river cruise tourists in Europe and amounted to 693 200 passengers. For the period 2012-2017, its increase is 69%, and for the last year alone (2017 compared to 2016) it is 6.38%.

Figure 22 Dynamics of cruise tourists on the Danube, by sections and total 2012-2017



Source: The Danube Commission

At European level, another major source of information on inland waterway transport is the Central Commission for Navigation on the Rhine (CCNR²¹), which provides in its survey Inland Navigation in Europe, Market Observation, 2019 general and comparative data for the inland waterways sector.

The total number of river cruise tourists in Europe for 2018 is 1.64 million and it scores very serious uptrend compared to 2017 – an increase with 14.6 %.

²⁰ <https://www.danubecommission.org/dc/en/danube-navigation/market-observation-for-danube-navigation/market-observation-for-danube-navigation-results-in-2017/>

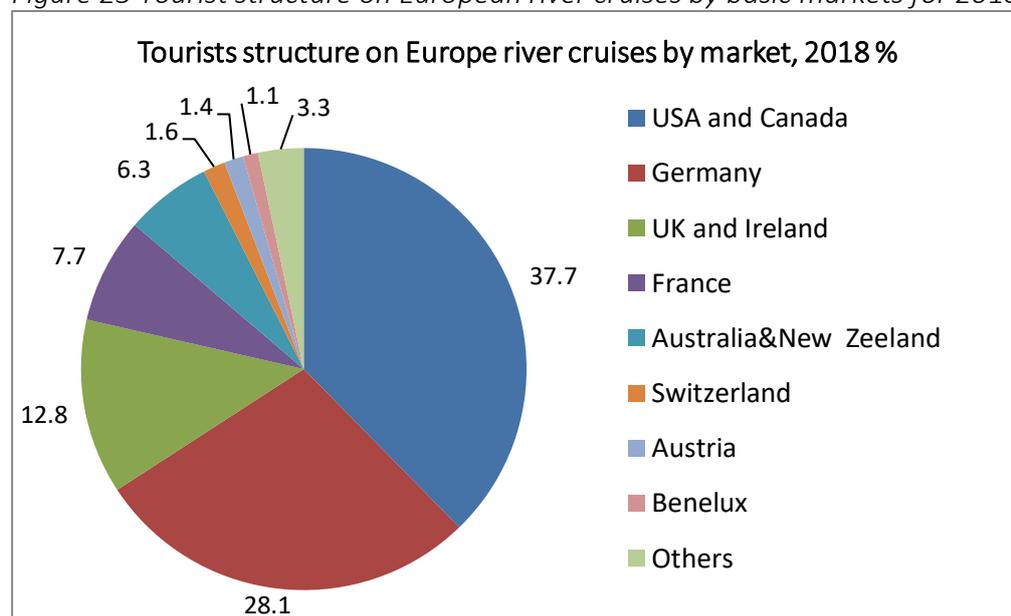
²¹ <https://www.ccr-zkr.org/>

4.2. Structure of cruise tourist by nationality. Major markets

By the structure of the markets, the US and Canada remain the most important market with a share of 37.7% and about 618,000 tourists using river cruises in Europe. This is followed by Germany (344,000 tourists, 21%) and the UK - 210,000 (12.8%). The other markets - France, Australia and New Zealand, Austria and Switzerland have a smaller share.

The UK market (31%) shows a significant increase, while the two main markets - North America and Germany - are growing at a similar rate - 14.3% and 14.7% respectively. There is a trend in increasing the number of tourists from new markets - Asia, Scandinavia. Russia, Eastern Europe. This segment is growing by 41%.

Figure 23 Tourist structure on European river cruises by basic markets for 2018, (%)



Source: CCNR

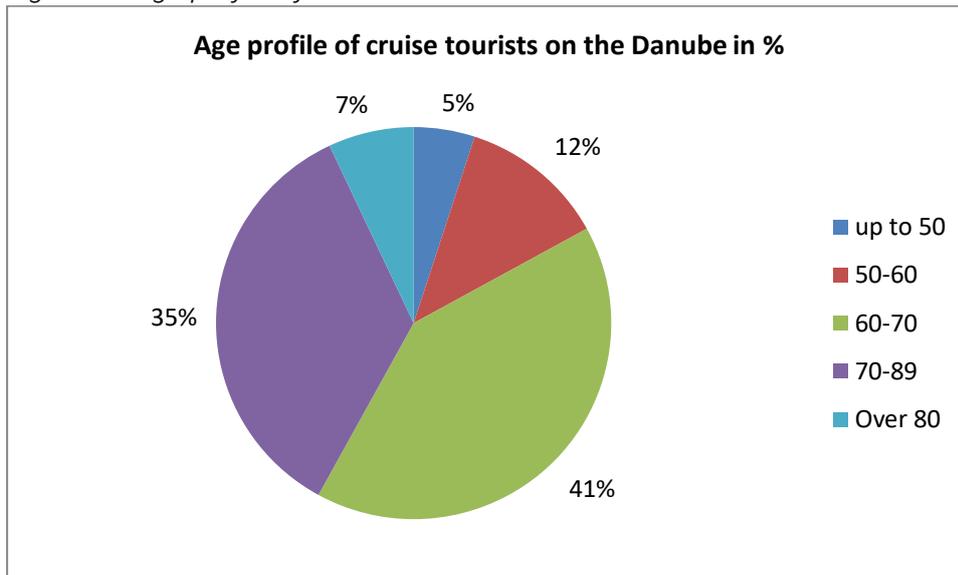
A survey of the profile of cruise tourists across the Danube has not yet been conducted. However, some existing regional studies, most notably the CenTouris - Centrum fuer marktorientierte Tourismusforschung der Universitaet Passau²², may be considered as a starting point for analysis. It was commissioned by ARGE Donau and covers the Danube waterway in Germany and Austria. Given the extraordinary concentration of tourists in this part of the river, the results of the survey can be considered as relevant to the entire study area.

Age structure of cruise tourists

The average age of cruise tourists on the Danube is 67 years. The age group "60 to 70" represents 41% of all tourists and together with the group "over 70" - 35%, they strongly dominate over the other groups.

²² CenTours – Center for market oriented tourist survey of the University of Passau

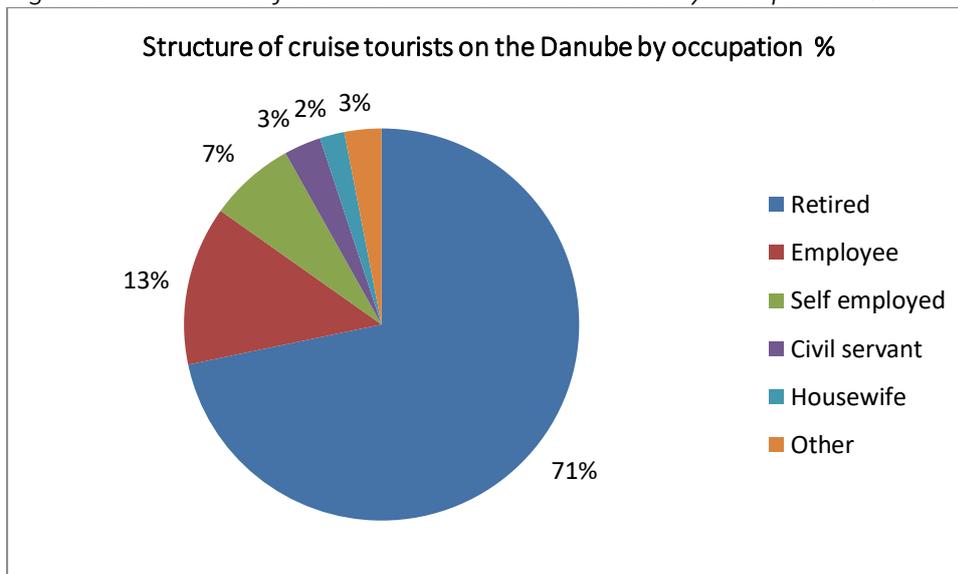
Figure 24 Age profile of cruise tourists on the Danube in %



Source: CenTours

Within this structure the main occupational group is of the pensioners – 71%

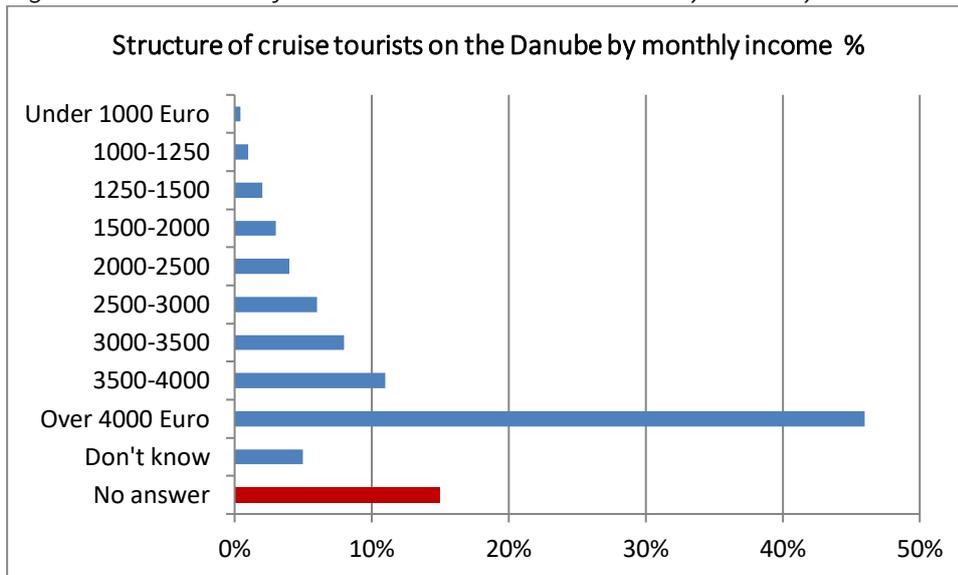
Figure 25 Structure of cruise tourists on the Danube by occupation %



Source: CenTours

On the other hand, every 2nd cruise tourist has a monthly income of at least 4000 Euro, which shapes the profile of the mass cruise tourist as a user with available free time and financial resources.

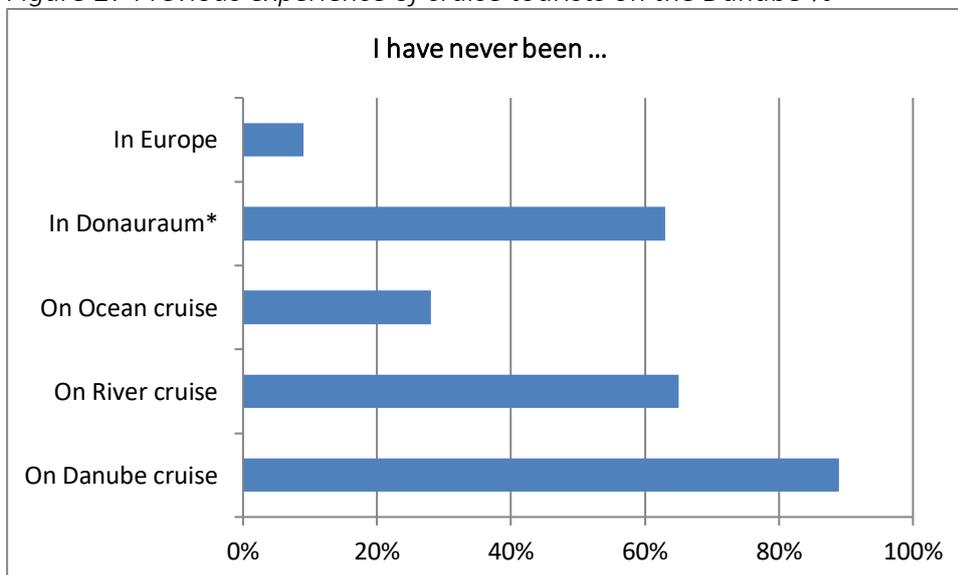
Figure 26 Structure of cruise tourists on the Danube by monthly income %



Source: CenTours

An interesting aspect that may suggest both consumer habits and the development potential is related to the study whether and what previous experience users have. The result is that the majority of tourists (63%) are for the first time on the voyage to the destination, and as many as 89% are for the first time on a Danube cruise.

Figure 27 Previous experience of cruise tourists on the Danube %



Source: CenTours *Germany and Austria Danube waterway

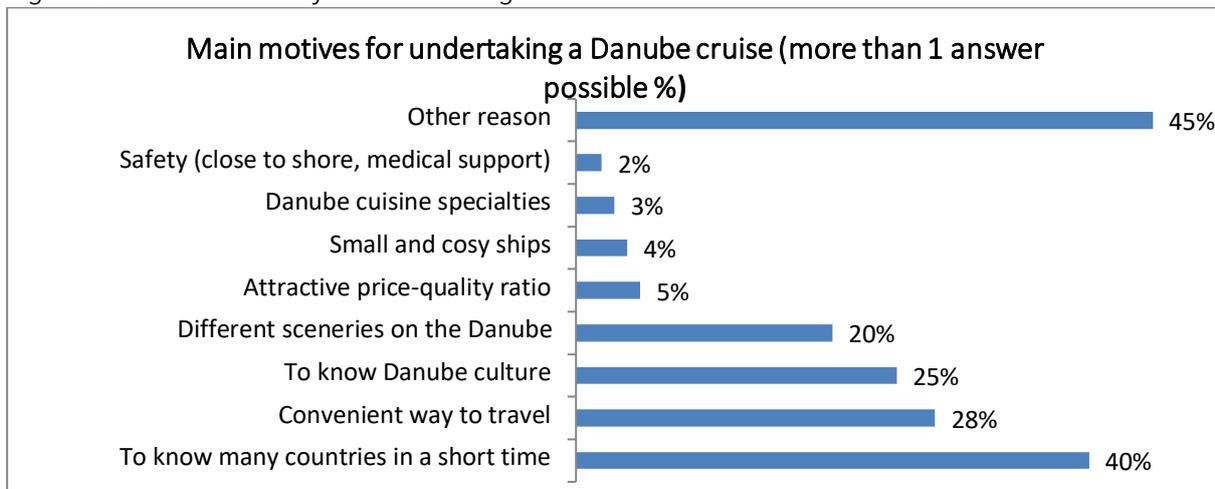
The low values of "in Europe" - only 9%, suggest that consumers are mostly from the Old Continent or that they are from another part of the world, but this trip is not their first trip to Europe. In the second case, this would mean that the Danube Region is not the first association and not the most desired destination in Europe.

The high score of "I have not been on a river cruise" reveals the serious potential of river cruise tourism if opened to a wider audience. On the other hand, the combination of the high results

of "I have not been to Donauram*" with the high share of tourists who are on the first Danube cruise leads to the conclusion that many people choose to visit and explore the area for the first time precisely by river cruise (probably including those who were already in another part of Europe).

These conclusions are confirmed by the results of the study of the main motives for travel. "Getting to Know Many Countries in a Short Time" is the most significant motive for deciding on a Danube cruise. An important role plays the motif "Convenient way to travel". Other significant motives are "Getting to know the Danube culture" and "The diverse Danube landscapes". The "Other Reason" motif is most often associated with a specific city/region or with the Danube itself.

Figure 28 Main motives for undertaking a Danube cruise %



Source: CenTours

USA

The US is the largest market for cruise tourism globally, including river cruise tourism in Europe and the Danube. The total volume of cruise passengers from the US in 2018 is 13.09 million, an increase of 9.6% compared to 2017²³.

The general profile summarizes American cruise tourists as being relatively younger than European tourists, with an average age of 45-47 years, and 78% traveling with a spouse or partner. Cruise tourists are dominated by those with an annual income of up to \$ 125,000 - 70%.

The average duration of cruises is 6-8 days, with the increase in the age group, the preference for longer cruises increases. 41% of travellers express a preference for Europe as a destination.

The majority of the voyages are booked far before the voyage itself - 32% booked 14-18 months earlier. Another significant part of the tourists - 31% booked 4-6 months before departure.

²³ <https://cruising.org/-/media/research-updates/research/clia-global-passenger-report-2018.pdf>

When booking, the main part of the clients are influenced by the information on the company websites (52%) and the opinion of their spouse/partner (31%). Traditional advertising channels have very little impact - TV/radio respectively - 8% and print media - 7%.

Germany is the largest European market for river cruise tourism. The number of tourists who signed up for a river cruise in 2018 reaches almost half a million people - 496 270 tourists and increases by 5, 5% compared to 2017. For the whole period from 2010 to 2018, their number generally follows a positive trend²⁴.

Figure 29 River cruise tourists, German market, 2010-2018



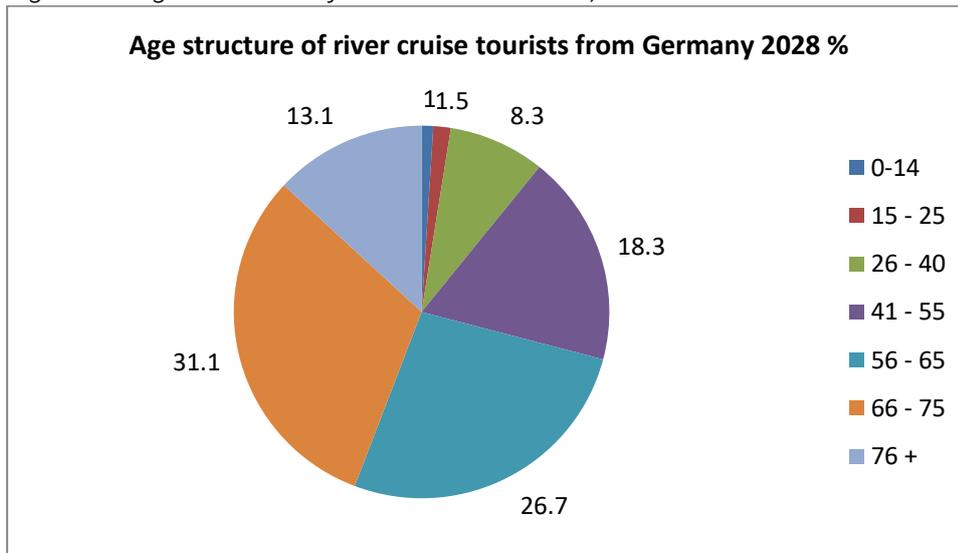
Source: IG River Cruise

The share of tourists taking a Danube cruise is 35.2% or 174 687 tourists from all German river cruise tourists. The total number of overnights spent on all river cruises was 3 507 024 and also increased by 8.9% compared to the previous year. Thus, the average voyage duration is 7.07 overnights compared to 6.85 overnights in 2017.

The structure of tourists by age is dominated by those aged 66-75 years - 31.1%, followed by the age group 56-65 years - 26.7%.

²⁴ IG River Cruise, presentation of ITB-Berlin, 2019

Figure 30 Age structure of river cruise tourists, German market 2018 %



Source: IG River Cruise

The **UK and Ireland** are the other major markets with a steady upward trend. Cruise Lines International Association (CLIA) estimates UK and Ireland cruise tourist in 2018 to 232,300, an increase of 10.4% from 2017. According to CLIA²⁵ data for 2012 - 2018, cruise tourists on river cruises from this market increased from 129,700 in 2012 to 232,300 in 2018.

According to this association for 2018, the **Danube is the most popular destination**²⁶ for river cruises, attracting 68,000 tourists across its various sections (some of them combined with the Rhine). In total, Danube and Rhine attract 58% of river cruise tourists from the UK and Ireland.

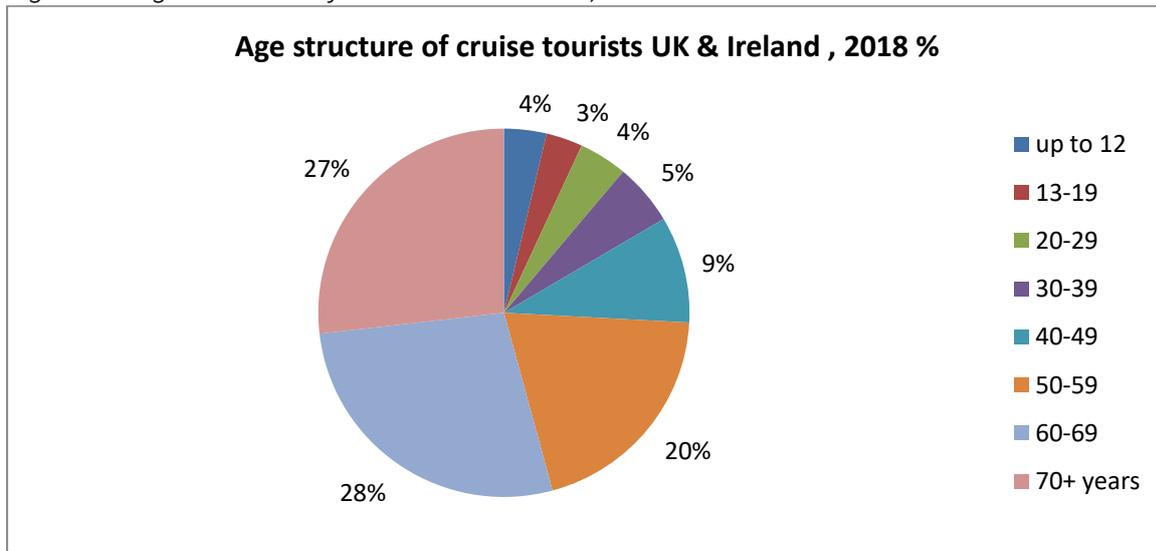
Total river cruise overnights for 2018 are 1.83 million, which forms an average duration of one cruise at 7.9 overnights. In parallel, there is a tendency for increased interest in longer cruises.

For the whole cruise tourism market segment, the average age of tourists is 57 years, with the structure as expected is dominated by the higher age groups - 60+ tourists make up 55% of all tourists.

²⁵ <https://www.cruiseexperts.org/media/8470/river-cruise-review-2018.pdf>

²⁶ <https://www.cruiseexperts.org/media/8470/river-cruise-review-2018.pdf>

Figure 31 Age structure of river cruise tourists, UK and Ireland market 2018 %



Source: CLIA

Cruises are usually booked 32 weeks in advance. 9 out of every 10 tourists have declared their intention to travel again in the coming years²⁷.

Bulgaria

Over the last 10 years, nearly 70,000 Bulgarians have used some type of cruise voyage²⁸. Overall, their number is growing, with 11,000 for 2018, up 9% from 2017. For this 2019 year it is expected the increase again to be in the range of 8-10%.

The most popular cruise destinations among Bulgarians are the Greek islands, the Mediterranean and the North Sea, but there is also interest in more distant destinations like the Caribbean²⁹. Typically, booked packages are with duration of 4-7 days.

Bulgarians travel mainly with their spouse or with their entire family - 40% and 26% respectively. 18% travel with a friend, 12% with a group of friends and 4% travel alone.

According to observations of tour operators, the increase in interest is mainly due to the advantage of cruises to combine holidays and excursions at a price comparable to other offers for holidays abroad. About 95% of travellers would choose this form again.

Against this background, it is very difficult to estimate the volume and profile of Bulgarian cruise tourists on the Danube. For 2019, Danube Tours, the only Bulgarian cruise operator, had only one cruise for Bulgarians (MS Ariana with a capacity of 162 passengers). Certainly Bulgarian

²⁷ <https://www.cruiseexperts.org/media/8467/ocean-and-river-cruise-review-2018.pdf>

²⁸ <http://www.travelnews.bg/bg/ekskurziite-na-kruiz-narastvat-nad-12-000-balgari-shte-patuvat-na-prez-tazi-godina/>

²⁹ <https://www.mediapool.bg/okolo-70-000-balgari-sa-izbrali-kruizite-za-pochivka-news290901.html>

tourists also travel on other Danube cruises, but when booking through foreign cruise operators, their number and profile cannot be determined in the course of this study.

4.3. Territorial distribution of tourists

Cruise traffic monitoring is mainly performed at three points:

- At the Austrian-German border at Passau, given the fact that Passau is the start/end point of cruises from/to Vienna and Budapest and to/from the Middle and Lower sections of the river;
- Gabčnkovo on the Slovak-Hungarian border, which allows to monitor traffic, including also the one from/to Vienna - another major hub for cruise tourism;
- Mohacs on the Hungarian-Croatian border is used as a place to track cruises to the Lower section of the river.

The monitoring at these three points in 2018 reveal that:

- The Austrian-Border at Passau has been crossed by 3 406 cruise vessels, which is an increase with 6% compared to the numbers of 2017;
- At Gabčnkovo 3 945 ships have sailed with 548 800 passengers on board (data of DC)
- At Mohacs the ships are 754 with 103 500 passengers, with an increase in passengers with 6.6% compared to 2017, (data of DC)

Based on these observations, the Danube Commission defines the territorial distribution of the cruise tourists, and for the Upper Danube region it reaches 82% of the total number of tourists. Delta destination cruises remain stable at 17-19%, while transport to/from Rhine ports provides about 30% of the passengers.

4.3.1. Data about tourists numbers for selected countries

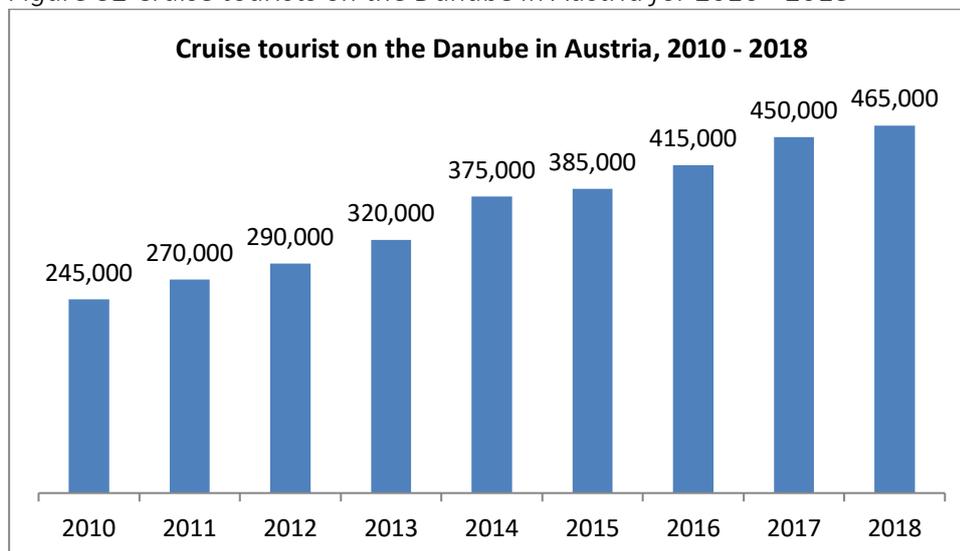
Given the shortcomings in the statistics described, it is very difficult to present a general picture of the whole region with detailed information by country. This is the reason why for the study was adopted the model of presenting 1 country from each section of the river, through which to observe the trends respectively in the Upper, Middle and Lower Danube.

As a result, it is found that, despite the differences in the territorial distribution of the tourists, the tendency for increase of the numbers there of is common to all sectors of the river, with higher rates for the Middle and Lower Danube.

Austria

Austria is among the few countries that maintain, in some form, statistics on river cruise tourism. In the "Annual Report on the Danube Navigation in Austria"³⁰, Via Donau estimates cruise tourists at 465,000, an increase of 3.3% compared to 2017, and the total number of cruises realized is 5 197 (an increase of 4.4%). This reinforces the trend of annual growth of tourists, and for the period 2010 - 2018 their number has almost doubled.

Figure 32 Cruise tourists on the Danube in Austria for 2010 - 2018



Source: Via Donau

Serbia

In 2018 the Serbian ports have been called in by 1 142 cruise ships with the total number of passengers being 157 087. Leading destination is Belgrade where more than 50% of the port calls have been realized.

Table 22 Numbers of port calls and passengers of cruise ships on the Danube in Serbia for 2018

Port	Number of calls	Number of passengers
Belgrade	587	81.155
Novi Sad	347	46.490
Donji Milanovac	143	20.335
Golubac	44	6.225
Veliko Gradiste	21	2.873
Total	1142	157 078

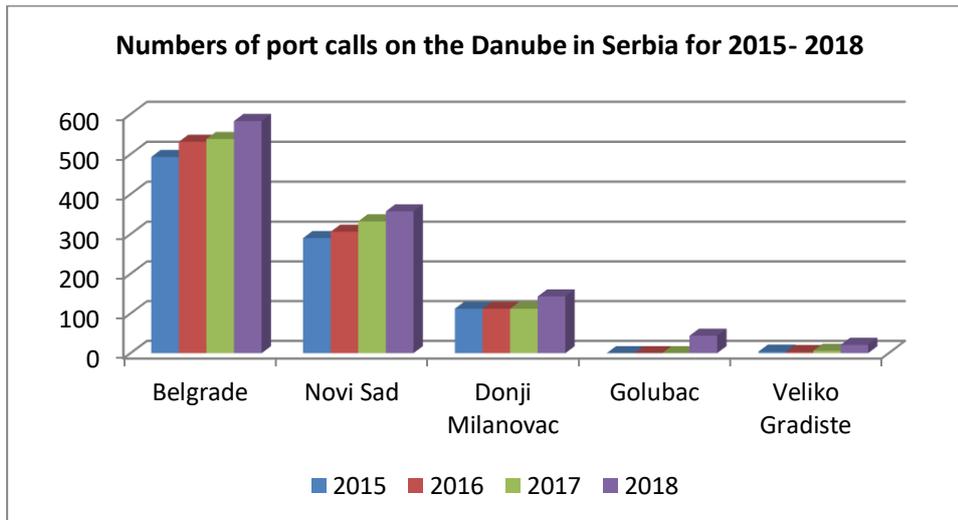
Source: Port management agency

The data for the last 4 years show that in 2018 is continuing the upward trend. For the first time for this year, calls in D. Milanovac are increasing and Golubac appears on the cruise map.

³⁰

http://www.viaddonau.org/fileadmin/content/viaddonau/01Newsroom/Dokumente/2019/Broschueren/Annual_Report_Danube_Navigation_2018_en.pdf

Figure 33 Numbers of port calls on the Danube in Serbia for 2015- 2018



Source: Port management agency

Cruise tourists had increased for the same period with 42 394 or with nearly 40% compared to 2015.

Figure 34 Numbers of passengers on cruise ships in Serbia for 2015- 2018



Source: Port management agency

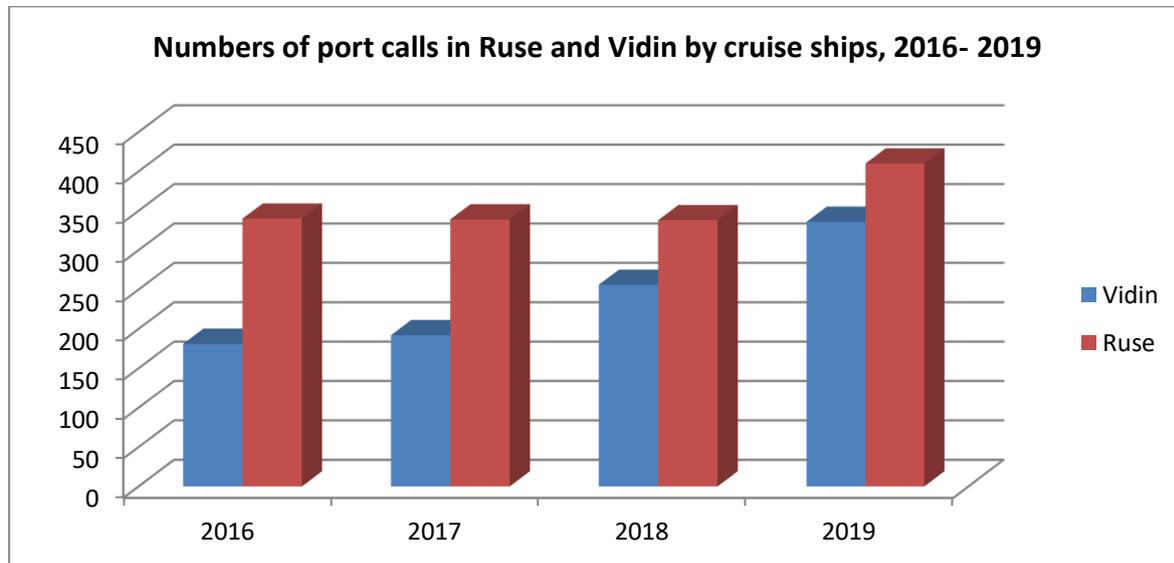
Bulgaria

No source has been identified for Bulgaria, which provides and makes publicly available information about the volume of cruise traffic. The data below is generated from filled in questionnaires from the municipalities of Vidin, Svishtov and Silistra and media publications.

In both major cruise ports - Vidin and Ruse, the 4-year period from 2016 to 2019 is associated with a positive upward trend in cruise ship calls. In Ruse, calls increased by 20% and for 2019

they are 410³¹, while for Vidin the increase is even more notable - from 181 in 2016, cruise ship calls increased to 336 in 2019 - an increase of over 85%.

Figure 35 Numbers of port calls in Ruse and Vidin by cruise ships, 2016- 2019



For the other two ports for Svishtov and Silistra the port calls are accordingly 90 and 6, based on the information from the filled in questionnaires.

As far as the number of tourists is concerned, by the end of the year in Vidin are expected to be served around 40 000 tourists and for Ruse their number is expected to reach 60 000.

4.4. Cost of cruise voyage

The cost of a cruise depends on a number of factors - destination, duration, category of services, booking time versus travel period.

According to their duration, the prices of the Danube cruises vary within the following limits³² (excluding the cost of flights):

- 4-7 overnights - from 55 to 239 Euros per overnight
- 8-10 overnights - from 100 to 703 Euros per overnight
- 11+ overnights - from 107 to 559 Euros per overnight

³¹ Data for 2019 is forecast, based on the bookings of cruise operators

³² <https://www.kreuzfahrten.de/>

On the main European market for river cruises - Germany, in 2018 the average price for a cruise is 1 191.24 Euros. For the realized volume of cruises and the generated revenues from their sales, the **average price of the package for one day of cruise is 168.57 Euros³³**.

4.5. Tourist offering

4.5.1. Basic periods

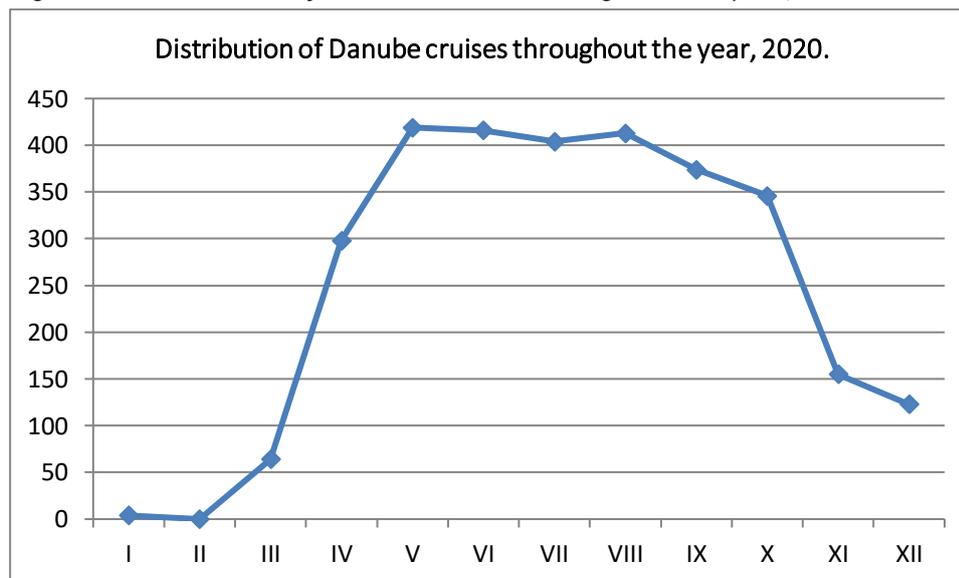
Based on the announced dates of cruise programs for 2020 (3026 in total) it can be concluded that the cruise season starts in March and lasts until January. Due to the fact that only 4 cruises are announced for January (one program A-Rosa lasting 3 nights), we can consider the period March-December as the active season for cruise tourism.

The first date of the season is on March 8 again of A-Rosa program - a 4-day Passau-Vienna-Linz-Passau cruise. The first date of a cruise reaching Bulgaria is March 22 for the 7-day AmaWaterways program of the Budapest - Giurgiu voyage.

The main concentration of cruises is between May and October, when 78.65% of all cruises are concentrated. At least 350 sailings are planned per month for this period, most of them in May (419) and June (416).

It is noteworthy that there are a considerable number of cruises in the period November - December, respectively 155 and 123, which suggest a tendency to expand the season, although strongly dependent on the meteorological and navigable conditions. Cruises during this period are generally shorter and mostly along the Upper Danube.

Figure 36 Distribution of Danube cruises throughout the year, 2020



³³ IG River Cruise, presentation at ITB-Berlin, 2019

4.5.2. Major types of cruises

In addition to the description in item 3.2.2. above, we can provisionally divide the cruise programs in the following 4 groups:

- **Programs combining several rivers.** In general, they have emerged since 1992 with the opening of the Main-Danube Canal, which connects the Danube with the other Central and Western European rivers. Usually they include a combination of the Danube and another waterway: the Danube - Main-Danube Canal; Danube - Main/Rhine. Most often, these programs reach to or depart from Passau, Vienna or Budapest, while the other endpoints are typically Nuremberg, Amsterdam or Basel. However, there are several programs that reach even the Black Sea (Constanta) offered by Tauck and Gran Circle Travel and these are the longest Danube programs, lasting 24-25 overnights.
- Another main group of cruises sail the **Upper Danube**, usually starting from or ending at Regensburg or Passau for voyages to or from Vienna, Bratislava, Budapest. Their usual duration is 7 - 10 days, and depending on the type of program they may be shorter - 4 - 6 days. This group includes the main number of programs and sailing dates.
- The main part of the Lower Danube programs start from Passau / Regensburg and usually reach Giurgiu or the Delta. Their usual duration is 14-16 days.
- The last, smallest group of programs are the programs to or from the Lower Danube and the Delta departing or ending from or to Budapest. They have a relative diverse duration, lasting between 7 and 12 days.

There is no program only within the Lower Danube (Serbia, Romania and Bulgaria), which is noteworthy to mention, despite the considerable length of the river section. This can be explained by a combination of the low recognition and interest by traditional markets and lack of sufficient demand within the region. However, such "regional" cruises remain as a potential development opportunity like for example Belgrade - the Delta; Vidin - the Delta; Giurgiu or Fetesti - Belgrade.

The types of programs by duration are discussed in section 3.2.2. here above, but particular attention should be paid to certain types of programs, tentatively called extended cruises or "cruise +"³⁴:

There is a clear tendency for the "pure" cruise package to be supplemented with 1-2-3 overnights before or after it to the extent that such variants almost double the total number of programs. These combinations make it possible to combine the cruise with visits to significant destinations that would have marketing effects (e.g. Prague, Paris, Munich, Salzburg).

³⁴ Working definition

This creates a significantly longer, but also richer and more attractive package for the market (especially for the overseas markets), which in turn creates more benefits to the destination (the before/after part of the package is a fully comprehensive excursion with hotel accommodation and meals, local transport, additional services).

This is also one of the main opportunities for expanding the offerings. Such combined packages are not available in more than half of the countries like Slovakia, Croatia, Serbia, Bulgaria, Moldova, Ukraine. For Bulgaria, for example, the possible options are:

Vidin as a start or end point of the cruise:

- 1 or 2 days in Sofia
- 3 or 4 days in Sofia, Plovdiv, Istanbul

Ruse as a start or end point of the cruise:

- 1 or 2 days in Varna
- 3 to 4 days in Varna, Istanbul

For the implementation of this type of package it is crucial:

- The integration of the new start/finish port in the overall schedule of the vessel concerned for the season (in order not to have or minimize the empty voyage before/after the cruise)
- The transport links, in particular airline connections from the start/end point, to allow tourists to arrive/leave without difficulties;

4.5.3. Types of attractions and services on the shore

Refer to item 5 and item 7.

5. ANALYSIS OF CRUISE SHIPS BERTHING TIME AT PORTS. ADDITIONAL SERVICES

The berthing time of cruise ships at ports is important for two main aspects:

- As a distribution of cruises, respectively, as the intensity of calls to individual ports, which forms the "volume" of the cruise tourists to the respective port;
- As an on shore element in the contents of cruises within which destinations can offer the realization of specific additional excursions and services at the shore;

That is why the analysis seeks to answer the two leading questions for each port - how many ships are calling in and most of all what additional services are offered to tourists.

The stated effective berthing time is only an additional characteristics, which aims only to show the minimum time for tourists on shore in the different ports. When it was not possible to use port calling schedules and in the absence of information from the surveyed respondents, berthing time was derived based on the length of the additional services offered.

5.1. Review by country

5.1.1. Germany

Regensburg is the first major cruise port on the Danube. As it is in the list of UNESCO, it is logical there to be offered ancillary services focusing on its cultural heritage - various **tours of the old city** - standard, student-led, highlights, etc., sightseeing, organ concerts or church choirs. However, there are **offers of special interests - culinary tours, including visits to Michelin star restaurants, dance courses, beer tastings, visits to golf courses**. Regensburg is the starting point for visits to the rest of Bavaria, with **excursions to Munich** widely offered by cruise operators.

A specific service available only in the larger centres in Germany, Austria and Hungary is the "**private car&guide**" service, i.e. the opportunity to rent a car with a guide and explore the region by yourself.

Passau is the port with probably one of the most diverse tourist offers as ancillary services across the Danube. Several city tour options are available that are more or less limited by the length of the berthing time. In contrast, the provision of specialized tours and attractions is extremely diverse - culinary tours and demonstrations, beer tours and tastings, organ concerts, Roman heritage, religious tours, hiking and biking trails, krampus mask show³⁵ and even flights with small planes and helicopters. There are also many options for excursions to other tourist destinations by bus, boat or bike - Salzburg, Munich, Cesky Krumlov, Neuschwanstein, Regensburg, Scharding and others.

Other ports have less to offer, but there are specific and even unique Danube offers such as a **visit to a BMW plant (Kelheim)** or **tours of the Bavarian Forest National Park (Deggendorf)**.

Table 23 German ports – additional services, berthing time, calls intensity

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
Kelheim	7	37	105	3 - 5 hours	City tour & the Weltenburg Narrows and Weltenburg Abbey (4:30 h.) / Liberation Hall and Weltenburg Monastery (4:30h.)
					Tour of a working BMW factory
					Weltenburg & Danube Gorge (3h.)

³⁵ Similar to "kuker" mask ritual

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
Regensburg	19	203	1045	2 - 9 hours	City walking tour (1:00 - 4:15) / '2,000 Years in One Hour' Regensburg walking tour / Jewish Regensburg / My town guided young city tour - by students / The saints and history of Thurn and Taxis Palais (3h.) / Thurn and Taxis Christmas Market Bavarian culinary tour/ Sausage making class (4h.) / Bavarian sausage-making workshop Choral concert at a local church a =visit to the Michelin-starred Storstad Bavarian dance class at a local beer haus the Regensburg Golf Course Weltenburg Monastery & boat excursion through the Danube breakthrough & Kelheim / Weltenburg Abbey & the Danube narrows (5h.) / Guided Excursion to the Benedictine Monastery in Weltenburg Walhalla bike tour; Excursion to Kuchlbauer Brewery / Microbreweries of Bavaria (3h.) 'From Hops Field to Beer Stein' farm visit Munich highlights (8:30h.);
Straubing	3	9	32	1 - 3 hours	City tour
Deggendorf	3	13	87	1 - 3 hours	City tour and the St. Peter's Church (or Ursuline Convent Church) Bavarian forest village and Theresienthal glass factory visit / Bavarian forest adventure Bike the Danube trail; Straubing village stroll;
Passau	40	379	2449	2-12 hours	City tours: "City of Three Rivers" walking tour / Walking tour and Christmas Markets / Walking tour, organ recital & Christmas market (3:30h.) / Passau walking tour & beer tasting (2:30h.); Roman times and Roman dishes (2h.) / Passau walking tour & organ concert (2h.) / Passau panoramic tour with mini hikes / Passau: Churches & Cathedrals of Passau Flightseeing over Passau (2:30h.); Bavarian beer tour / Bavarian Beerfest (3h.) / Aldersbacher brewery tour & beer tasting (3:30h.) / Hacklberg Brewery (2:30h.); Culinary tour / Bavarian Country Cooking Class(Uniworld) / a demonstration of preparing gingerbread (Tauck) Krampus mask show Hike the Passau hills (3:30h.); Hike to the Aggstein castle (2h.) / Hiking along the Ilz River (Uniworld) / Treasure Hunt Trek; Passau Castle hike / Ilz River Splash Passau geocaching scavenger hunt / Bavarian showshoe hike (4h.) Danube Bike tour / Passau bike tour to Erlau / Bicycle ride along the Inn River /Bavarian river biking Pedal Passau / Bavaria by e-bike (2:30h.) a full-day Guided Excursion to Salzburg / Salzburg highlights (9:30h.) / Best of The Sound of Music and Salzburg Show (Scenic) a full-day Guided excursion to Cesky Krumlov Bavarian cruise & baroque town of Schärding (4h.); Fairytale Neuschwanstein Castle by plane (9:30h.);

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
					Burghausen Castle by private car (6h.)
					Medieval Regensburg by private car (8h.) / Regensburg and its romantic Christmas market (7:30h.)
					Munich exploration by private car (8h.)
					Treetop walk in the Bavarian forest National park by private car (4h.) / Museum Village Bavarian Forest
					Excursion to Aldersbach
					Excursion to Linz
					Private half-day car/van & guide (4h.);

5.1.2. Austria

The overview of Austrian ports and their coverage as a variety of onshore services by cruise line operators clearly outlines tourist hotspots, but also displays different profiles across the river sectors.

Vienna is undoubtedly the port with the richest additional offers that integrates to the maximum the city's cultural heritage into cruise tourism offers. There are numerous offered **city tours**, and the range of variations allows them to respond to any possible length of stay on shore. At the same time, in the search for uniqueness and recognition, there is a tendency to formulate a specific topic that puts emphasis on a particular layer of the city's resources. On the other hand, there are offered also fully **themed tours**, as well as attractions and events presenting the typical scenes of the city - music, heuriger, art, etc. As with the other ports in Germany and Austria, there are plenty of opportunities for **cycling and hiking** focused in or near the city. In general, tourist offers are concentrated on the city itself, with few suggestions for trips to other places (mainly Bratislava).

Another major centre in Austria - **Linz**, also demonstrates variety of city tours, but it offers a much more balanced in-town to out-of-town ratio, offering not only a few opportunities for visits to other tourist destinations in the range of 2.5 - 4 hours by bus.

The third location with a concentration of additional offers is Melk. The main part of them are developed around the abbey - one of the mandatory sites for a cruise on the Upper Danube, presenting it in a wide variety of additional excursions - solo visits or in combination with another entity, attractions, tasting, etc.

The other ports on the Austrian Danube are subordinated to two main topics - cycling and wine. All wharves between the German-Austrian border and Linz are used as ports for the embarkation/disembarkation of tourists combining cruise tourism with cycling or hiking, and for some of them this is their only function in regards to cruise tourism (Schlößen, Obermühl, Untermühl, Aschach, Brandstadtt). A major factor is the tourist infrastructure on the shore, which includes the Danube Bike Trail and the Donau Steig - the Danube Walking Route.

The other leading theme for the wharves between Melk and Vienna is **wine**, which is realised through tastings, visits to the vineyards and participation in Events. Most of the ports in this section link their offers to Melk Abbey for bike tours, bus trips. Of course, there are also local proposals for city tours and sightseeing, especially in Krems and Dürnstein. The ports along the river also are the starting point for trips to Salzburg and Cesky Krumlov. Due to the longer duration of the excursions, the groups board the ships at the next port.

Table 24 Austrian ports – additional services, berthing time, calls intensity

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
Engelhartzell	3	12	160	1 - 3 hours	City tour;
					Guided Tour to Haus am Strom/ Walk across the Power-Station Jochenstein / Excursion to the Jochenstein Lock
					Visit the Engelszell monastery
					Guided hike
					Bike tour to Brandstatt / to Untermuehl / to Aschach / to Obermühl
Schlögen	2	3	11	n/a	Bike tour to Linz
Obermühl	1	1	7	n/a	
Untermühl	2	2	23	n/a	
Aschach	2	4	39	n/a	
Brandstatt	1	3	32	1 - 3 hours	Visit the Ottensheim and Wilhering beer gardens of local breweries;
					Bike tour to Linz
Linz	31	171	1147	2 - 10 hours	City tours: Linz with City Express (1h.) / Linz walking tour (2h.) / Linz walking tour and Christmas market / "UNESCO City of Media Arts" walking tour / Linz city walk & tramway ride (3h.) / Linz town and country - opera house and cider farm visit / Graffiti and urban art at Linz' mural harbor
					the Quellness Golf Resort / Beckenbauer Golf Course
					Castle and Clusture bike tour / "Cultural Mile" bike tour;
					Guided Hike up to Mount Pöstlingberg;
					Full-day adventure to Salzburg / Half-day Salzburg excursion / Full-day excursion to Salzburg including Salzkammergut and lunch (9:30 h)
					Austrian Lake District excursion / Austrian countryside (4:30 h.)
					Full-day Český Krumlov, Czech Republic (8:30 h.)
					Trip to Steyr
					Mauthausen concentration camp memorial (4 h.)
					Private full-day car/van & guide (8 h.) / Private half-day car/van & guide (4 h.)

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
Mauthausen	2	5	59	1 - 3 hours	St. Florian Monastery / Guided Tour of Mauthausen Concentration Camp; Guided Bike Tour / Bike tour to Grein
Grein	8	22	237	1 - 4 hours	Guided City walk / Guided tour - Burg Clam / Exclusive castle visit with private reception Excursion to the Mauthausen Memorial Bike tour to Melk
Ybbs	3	6	90	3 - 4 hours	City tour / Visit to the Ybbs-Persenbeug hydro-electric power station (3h.) / Visit to Maria Taferl (3h.);
Pöchlarn	2	7	80	n/a	Guided tour to Benedictine monastery Melk
Melk	35	269	1695	5 - 7 hours	City tour Excursion to the Melk Abbey (1:45h.) / Excursion to the Melk Abbey and a wine tasting / The Abbeys of Göttweig & Melk (6h.) / Excursion to the Wachau with Melk Abbey & Mulled Wine Party (4:30h.) Excursion to the Arstetten Castle (3:30h.) Danube bike tour / Wachau on wheels (bike through the Wachau Valley); Morning hike / Aggstein Castle hike; the Niederösterreichischer Golfclub Everything happen for a Riesling (wine tasting) / Tour of the Schlumberger wine cellar & tasting of Schlumberger specialties Excursion to Dürnstein (3h.); Excursion to Oberndorf & Salzburg
Emmersdorf	3	14	35	1 - 2 hours	City tour Excursion to Melk Abbey (2h.) / Excursion to Melk Abbey and wine tasting (4h.)
Spitz	3	10	90	2 - 4 hours	City tour / Evening walk Wine World Experience with wine tasting / Guided Visit that shows the production of regional wine Guided bike tour;
Weißkirchen	7	20	253	1 - 2 hours	City tour Wachau Valley bike tour / Weissenkirchen to Melk bike tour / Bike tour to Pöchlarn Guided walk through the town of Dürnstein (2:15h.) / Dürnstein walking tour and Melk Benedictine Abbey; Dürnstein Fortress hike; Apricots and Sweets tasting; evening wine tasting at local winery Excursion to Krems
Dürnstein	28	154	990	3 - 5 hours	Dürnstein walking tour and wine tasting (2h.) / Dürnstein village and saffron workshop Tour the Aggstein and Servitenstift Schönbühel castles; Hike to Dürnstein castle ruins (2:30h.) / Hike to the Kuenringerburg Castle

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
					Excursion to the Wachau Saffron Manufactory / Dürnstein wine estate visit with wine tasting / Schloss Gobelsburg winery & tasting (3h.) / Apricots and Sweets tasting The Lock concert Excursion to the Wachau including Melk Abbey and wine tasting (4:30h.) Golf club Lengenfeld Kamptal-Donauland Bike tour to Pöchlarn / Bike tour to Krems / Biking tour to Melk Wachay Valley by helicopter (45min) Excursion to Spitz
Krems	18	47	375	3 - 5 hours	City tour / Krems old town & confection demonstration (3h.) / Excursion to the Benedictine abbey of Göttweig with guided walk through Krems (3h.) Wine World Experience with wine tasting / Herzogenburg Monastery & wine tasting (4h.) / Schloss Gobelsburg winery & tasting (3:30h.) / Guided Visit that shows the production of regional wine, etc.; Bike tour to Pöchlarn/ Bike tour to Melk / Guided Bike Tour from Krems to Spitz/ Wachau Valley by bicycle (3:30h.) Guided canoe Tour; Wachau and Melk excursion (4:30h.) Cartoon Museum
Tulln	3	5	34	n/a	Bike tour to Klosterneuburg / Bike tour to Vienna
Vienna	40	436	2770	6 - 36 hours	Vienna City tour / "Imperial Vienna" tour; "Imperial Vienna" tour with Maria Theresa Christmas Market / "Imperial Vienna" tour with Town Hall Christmas Market / Hidden Vienna tour / Insider's Tour of Vienna / Vienna by night / Imperial City highlights / Vienna walking tour / Vienna panoramic highlights with Old Town food and art walk / Vienna Mystery Tour / Jewish Vienna / Panoramic Vienna (3:30h.) / Vienna highlights (8h.) / Jewels of Vienna's ring (7h.) Guided Culinary Tour of Vienna's Christmas Markets / Artisan and Schönbrunn illuminated Christmas Markets / Schönbrunn Christmas Market /

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
					<p>Music and Viennese cafes - Konzerthaus concert hall (4h.) / Viennese music concert (2:30h.) / Royal Waltz Concert / Viennese highlights with Musikverein / Private Mozart and Strauss concert / Behind the scenes at the Vienna boys' choir (3h.) / Schönbrunn Palace & Vienna boys' choir (6h.) / Behind the scenes at the Lipizzaner Stallions (3:30h.) / Residence Orchestra Concert (2:30h.) / Concert of the Vienna Mozart Orchestra in the Brahms Hall / Waltz, two, three (waltz lessons);</p> <p>Guided Tour of Schönbrunn Palace / the Hofburg Palace (3h.) / Evening excursion to the Prater (3h.) / Historic farmers' market visit (3h.) / 'Morning with the Masters' at the Vienna Art History Museum / Schönbrunn for kids / Segway ride in Prater Park and watch Sacher Torte made;</p> <p>Traditional evening in Vienna / Heurigen Dinner (3:30h.) / Trip to Vienna's taverns (3h.) / tour of one of the biggest breweries of Vienna and Austria / Viennese coffee culture tour</p> <p>an exclusive royal dinner at the Palais Pallavicini / private evening in the Palais Ferstel</p> <p>Shopping the Spittelberg Quarter;</p> <p>Horse-drawn carriage ride (1:30h.)</p> <p>Guided Jogging Tour</p> <p>Klimt & Viennese gold workshop (3:30h.)</p> <p>the Fontana Golf Club;</p> <p>Paddle through the Danube Wetlands (3:30h.)</p> <p>Vienna region by bike / Guided Bike Tour / Vienna By Bike (City tour of Vienna on Bike) / Klosterneuburg Abbey bike tour / Alte Donau bike tour;</p> <p>Excursion by bus to the northern Vienna Woods with the abbey of Klosterneuburg (3:30h.) / Wienerwald (South) (3:30h.)</p> <p>Excursion to Burgenland & wine tasting</p> <p>Private full-day car/van & guide (8h.) / Private half-day car/van & guide (4h.)</p> <p>Excursion to Bratislava</p>

5.1.3. Slovakia

The main cruise port in Slovakia is Bratislava, which out-stands in intensity of calls within the highest among all Danube ports. This is due to the city's location on the main cruise line - Regensburg/Passau - Budapest and its proximity to Vienna. However, it is this proximity that

reasons the relatively shorter time for efficient ship berthing compared to Vienna and Budapest.

Offering additional excursions includes various variations of city tours, usually 2 to 3 hours, visits to Bratislava Castle, a panoramic boat trip, folklore programs and wine tastings, etc. An interesting element in the offers, which is also available in other Eastern European countries, is the so-called home hosted visits, which gives an opportunity to learn about the life of the host community and for intercultural exchange. In addition to Bratislava itself, additional excursions are offered to Komarno, National Park Center, Devin Fortress, Esztergom (Hungary).

Table 25 Slovak ports – additional services, berthing time, calls intensity

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
Bratislava	39	262	1817	2 - 24 hours	City tour (3h.) / "Coronation City" walking tour / Panoramic Bratislava (2h.) / Bratislava walking tour (2h.) / City tour with a scavenger hunt / Bratislava by Škoda (a trip through Slovakia's Communist past by hopping into a vintage car) / Tour of the lights through Bratislava at night (2h.) / Bratislava on foot and by tram (2h.) / Bratislava on foot with Pressburger Kipferl (2h.); / City tour & Chocolate Experience / Bratislava & Konditorei Kormuth / The festive streets of old town / Panoramic Bratislava & Beer tasting (3h.)
					Panoramic boat trip 'Under the bridges of Bratislava' (45min)
					Bratislava home-hosted visit (3h.)
					Traditional evening in Bratislava / Night out - 'tis the season
					Guided tour of the Imperial Schlossohof Palace (5h.) / With the classic car to the castle (1h.) / Evening tour to the castle;
					Bike trip around Bratislava
					Excursion to the Devin Castle - knight tournament and medieval games;
					Excursion to the countryside - wine-tasting and the Cerveny Kamen Castle;
					Esztergom and Szentendre, Hungary (5h.)
					Komarno and Bratislava (8h.);
					Excursion to Bibersburg
					Tour through the National Park Center
					Excursion to the Seefestspiele Mörbisch with the musical classic 'West Side Story'
Komárno	3	8	40	1 - 2 hours	Komarno on foot (2h.) / With the tourist train through the old town (1-1:30h.)
Štúrovo	1	2		n/a	
Devin	1	4	50	n/a	Bike tour to Bratislava

5.1.4. Hungary

The "Queen of the Danube" - **Budapest**, is comparable to Vienna for the intensity of cruise visits and for the rich suggestions for additional trips on the shore. **City tours** are 2-4 hours long, having a more general, panoramic nature or they are concentrated in certain parts of the city (Buda, Pest, Danube banks). Specialised tours are wide in coverage - hiking and biking tours, Jewish heritage, art novo tours, shopping tours, etc., as well as more in-depth visits to some of the landmarks - Gödiolo Palace, Parliament, Fisherman Towers and more. The **mineral waters** are also well-explored theme through offered visits to one of the Budapest public baths and spas, as well as the **socialist past** presented in the specialised tour "Life Behind the Iron Curtain". Popular attractions are hussars and **horse shows, wine and palinka tastings** and others.

Outside of Budapest, the main destinations for additional excursions are to the north - Esztergom, Szentendre and the Great Turn of the Danube, and to the south - the Hungarian steppe. It is precisely around these emphasis that tourist attractions are offered in the other ports along the Danube in Hungary. In the section upstream of Budapest, where **Komarom, Esztergom, Visegrad and Szentendre** are located, the main topic is cultural heritage with an emphasis on Esztergom, the fortress in Visegrad, as well as the natural phenomenon of the Big Turn. The proximity of the ports allows the start of the additional excursion from one of them and its completion in another, which is also often used offered bike tours.

To the south, between Budapest and **Mohács (Solt, Kalocsa)**, most of the additional excursions are devoted to the steppe and getting familiar with the traditional way of life, observing demonstrations of horse riding, wine tasting and local cuisine and other.

Table 26 Hungarian ports – additional services, berthing time, calls intensity

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
Komárom	2	4	18	n/a	
Esztergom	21	87	634	4 - 6 hours	Excursion to basilica of Esztergom (1:30h) / Basilica with Gran Express (1:30h).
					Excursion to Szentendre and Esztergom (5h.)
					Danube bend (4-4:30h.)
					Esztergom & Danube bend (8:15h.)
					Around Visegrad (3h.)
Visegrád	4	7	60	2-3 hours	Guided Visit to the Medieval Knights Tournament at Visegrád's Lower Castle;
					Hiking Tour to Count Dracula's prison tower;
					Guided canoe tour
					Bike tour to Esztergom
Szentendre	1	3	40	n/a	Bike tour to Esztergom

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
Budapest	40	396	2666	3 - 36 hours	City tour (4h.) / Queen of the Danube tour / Budapest by night (2h.) / Guided Walking Tour/ Half Day Taste of Budapest / City tour and a piano concert / Budapest panoramic highlights with Parliament visit / Panoramic Budapest (4h.) / Budapest Castle Hill city hike (4h.) / Snapshots of Budapest (6h.) Evening tour through the illuminated city of Budapest by bus (2h.) / Budapest by metro and on foot (3h.) / Budapest by nights with Strudel tasting and wine
					Sites: Gödöllő Royal Palace & Gardens (3:30h.) / Bird's Eye of Budapest / Grand market: taste of Hungary (3h.)
					Jewish Heritage tour / Dohány Street Synagogue & Jewish Budapest (3:30h.)
					Themed tour "Budapest's most beautiful art nouveau buildings" (3h.)
					Hungarian horsemen (3:30h.) / Horse show at Lázár Equestrian park (4h.);
					the Gellert Baths and Spa (3h.); / Budapest thermal bath (3:30h.);
					Traditional evening in Budapest (2h.)
					Biking tour (2h.) / Budapest by bike (3:30h.) / Bike tour to Szentendre
					Budapest by design (visit luxe design shops)
					Life behind the Iron Curtain (4:30h.)
					Wine tasting at Domus Vinorum (2h.) / Pálinkafolklore (2:30h.)
					Private classical music concert at the Gödöllő Royal Palace / Concert at the Duna Palace and city tour of Pest Side / Princesses of violin trio (2h.) / Concert at the Duna Palace and city tour of Pest Side
					Excursion to the Franz Liszt Academy
					the Pannónia Golf and Country Club
					Private full day car & guide (8h.);
					Szentendre & the Margit Kovács Museum (4h.)
					Highly acclaimed dining at Alabárdos (3h.)
					Hungarian Culinary Experience;
					Hungarian State Folk Ensemble;
					Danube bend to Visegrad (4:30-5h.)
Helicopter flights (1:30h.)					
Full-day excursion to Eger with wine festival in the „Valley of the Beautiful Women“					
Excursion to Puszta (7:30h.) /Puszta Rider Games Hungarian Puszta & Tanyacsárda / Excursion to the Puszta with a traditional display of horse-riding (4:30h.)					
Solt	4	7	65	2-3 hours	City tour
					Excursion to the Puszta with a traditional display of horse-riding (4:30h.);
					Excursion to Pécs (5h.)
Kalocsa	20	60	299	2-6 hours	City tour
					Excursion to Puszta (4h.)/ Puszta trip (4:30h.)

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
					Kellerdorf Hajós (3:30-4h.); Excursion to Pécs (5:30h.) Kalocsa Paprika House and Puszta Horse Show / A Taste of Rich Hungarian Paprika Bike tour Solt
Baja	1	1	7	n/a	Bike tour to Mohacs
MOHÁCS	23	87	341	2 - 5 hours	Mohács walking tour (2h.) / The walk of the town (Mohács+Kölked); Guided bike ride along the Danube / Bike ride to Kölked / Milling about (bike trip to a local mill); Guided Sightseeing Tour - St. Nicholas Watermill Excursion to the Puszta (4h.) Pécs excursion / Pécs marks the spot (a treasure hunt) Szekszárd wine tasting Excursion to Kopacki Rit nature park & sightseeing in Osijek, Croatia

5.1.5. Croatia

Although not directly located on the Danube, **Osijek** has established itself as a major stop along the Croatian waterway. **Vukovar** also shows a similar traffic intensity and the offers of additional excursions in both ports is also comparable - city tours of the respective city, demonstrations/tastings of local products, folklore programs.

The other three ports have only a service feature for embarkation/disembarkation for some additional shore excursions.

Table 27 Croatian ports – additional services, berthing time, calls intensity

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
Batina	3	6	17	n/a	City tour Excursion to Osijek Bike tour to Mohács
Aljmaš	1	2	10	n/a	City tour of Osijek (3h.) Kopački rit Natural Park (4h.)
Osijek	11	48	196	2 - 5 hours	Osijek: City tour (2h - 3h.) / Guided walking tour - Tvrđa A home-hosted lunch with a Croatian family / Meet the local village students / Osijek home-hosted visit & bicycle ride (4:30h.) Musical concert performed by artists of the music school of Osijek Biking tour (2h.) Osijek & Vukovar (4:30h.); Excursion to Kopački rit Natural Park (4h.)

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
					Croatian countryside & wine tasting (3:30h.);
Vukovar	18	47	151	2 - 5 hours	City tour and Eltz Castle / Evening excursion Vukovar (2h.) Excursion to Ilok (3:30h.) Vucedol Culture Museum and lunch at a family winery; Full-day tour of Osijek with private home-hosted lunch Discover Eastern Croatia (4:30h.) Home-hosted Croatian lunch and cultural exchange
Ilok	4	11	59	1-3 hours	Croatian wine tasting

5.1.6. Serbia

A common characteristic of all Danube ports in Serbia in terms of additional services is the availability of specific local offerings, where even the smaller Golubac and Donji Milanovac are real destinations, not just technical service stops of the cruise.

Belgrade is the largest cruise port in Serbia and since it is in the capital of the country, it offers rich opportunities for additional services - panoramic and pedestrian city tours, exclusive site visits and attractions, traditional folklore, tastings and music, bike and canoe tours, which are part of the offered experiences. In addition, there are options for out-of-town trips to various destinations lasting 3-5 hours.

Another important port is **Novi Sad**, which with additional services also presents itself as a destination for cultural tourism - city tours in the historic part of the city, Serbian cuisine and folklore, trips to monasteries and other historical places.

Table 28 Serbian ports – additional services, berthing time, calls intensity

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
Novi Sad	25	72	285	2 - 5 hours	City tour (3:30h.) / Novi Sad on foot (1:30h.) / “The Athens of Serbia” walking tour / City tour and the Petrovaradin fortress (3h.) / Krusedol and Novi Sad (4:30h.) / City tour of Novi Sad and excursion to Sremski Karlovci (3h.) / Novi Sad and Sremski Karlovci with wine tasting (3:30h.) Serbian Specialties Tasting; Fortress hike; Evening Petrovaradin Fortress visit Novi Sad bike tour / Bike tour to Ilok Canoe the Danube Trip to Sremski Karlovci (3:30h.) / Excursion to Sremski Karlovci & Fruska Gora National Park with monastery Krusedol Excursion to Jarak & Krusedol Monastery

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
					Krusedol Monastery & Beekeeping Museum and Zivanovic Winery; Honey & wine tasting
					City tour Belgrade incl. fortress Kalemegdan
					Excursion to Vukovar
Belgrade	34	133	541	3 - 12 hours	City tour (4h.) / Panoramic Belgrade (4h.) / "The City by Two Rivers" tour / Belgrade city tour with visit to the Royal Grounds of Karadjordjevic Dynasty Palace / Best of Belgrade (6h.) / Historic Belgrade on foot (3:30h.) / Belgrade by night (2:30h.)
					Royal Palace and Tito's Memorial tour / Tour to the National Opera Theatre / Behind the scenes at the Serbian Opera (2h.) / Evening excursion to the Artists' Quarter Skadarlija (3h.)
					Belgrade bike tour (3h.) / 'I Bike Belgrade' tour / Bicycling Belgrade (2:30h.) / Changing gears (biking to the Ada Ciganlija area)
					Traditional evening in Belgrade (2:30h.) / Fiery folklore and evening old town (2:30-3h.) / an exclusive dinner at the Royal Palace of Dedinje
					Food tour / Serbian BBQ cooking class / Quburich Brandy tasting;
					Paddle on (kayak excursion to Great War Island);
					Excursion to Novi Sad and the Krusedol monastery (5:30h.) / Excursion to Jarak & Krushedol Monastery
					Kovacica Art Colony (3:30h.);
					Excursion to Sremski Karlovci;
					Excursion to the temple St. Sava
					Panorama tour of Topola and Oplenac (4h.) / Excursion to Topola and Oplenac (4:30h.);
Golubac	5	13	105	1 - 5 hours	Fortress of Golubac
					Excursion to Golubac Castle and Lepinski Vir (4h.)
Donji Milanovac	11	44	182	1 - 3 hours	City tour
					Guided Tour to Lepenski Vir archaeological park (1:30-2h.)

5.1.7. Romania

The total number of tour operators and programs covering Romanian Danube ports is comparable to that of Serbia and Bulgaria, but distributed among a large number of ports determines their low traffic intensity. Another distinctive feature is the different balance of the complementary services offered - the ones offered at ports compared to those offered outside them.

The highlights of the Romanian Danube are indisputable:

The **Delta** itself is the target of a significant number of cruise programs and this explains why all ports in the eastern part along the river in Romania are mainly represented through additional

services based on it - excursions of different duration, with different types of vessels, etc. An additional highlight is "km 0" - the place and sign of the Danube inflow into the Black Sea (near Sulina).

Bucharest city tours are the other focus, being offered from almost all ports, no matter how far they are from it, e.g. independent of what would be the duration of this excursion. The third type of additional excursions are those to Constanta and the Romanian Black Sea coast around Constanta.

Table 29 Romanian ports – additional services, berthing time, calls intensity

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
Orșova	1	2		1,5 - 2 hours	City tour
Drobeta Turnu Severin	4	7		1,5 - 2 hours	City tour
Cetate	1	2		n/a	
Turnu Magurele	3	5	20	n/a	City tour Bucharest (8h.)
Giurgiu	22	68	326	2 - 9 hours	City tour
					Excursion to village festival Valeni
					City tour Bucharest (5:30h.) / Excursion to Bucharest (7h.) / Excursion to Bucharest (9h.)
Oltenița	12	29	180	2 - 9 hours	City tour
					Guided Tour of Bucharest / City tour Bucharest (5:30h.) / City tour Bucharest including dinner (7:30h.) / Excursion to Bucharest (9h.)
					Danube Delta Excursion
Cernavoda	6	11	18	9-10 hours	Guided Tour to Constanta / the Natural History and Archeological Museum / Excursion to Constanta (9:15h.) / Excursion to the Black Sea & Mamaia (full-day)
Fetesti	7	21	58	9-10 hours	Excursion to Constanta (9:15h.) / Black Sea tour (full-day)
					Danube delta tour (full-day);
Hirsova	1	2	6		Excursion Constanta and Black Sea Coast (5h.)
Brăila	4	7	38	5 - 7 hours	Small boat cruise to Kilometer "0"
					Excursion to Moldova with wine tasting and local specialities (6h.)
Galați	1	2	2	n/a	
Tulcea	9	24	120	5 - 7 hours	City tour
					the Danube Delta (4h.) / the Danube Delta on a speed boat (4h.) / Excursion to the Romanian Danube Delta with large boats (3h.); Exclusive excursion to the Danube Delta in small boats (3h.)
					Speedboat trip to km 0;
					Monasteries of Dobrudja (4h.)
Sfantu Gheorghe	1	6	23	2-4 hours	Guided Tour; Special Celebration to mark Kilometer "0"
Sulina	3	7	13	9-10 hours	City tour
					the Danube Delta (4h.) / the Danube Delta on a speed boat (4h.)

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
					Visit kilometer 0
					Excursion to Bucharest (9h.)
Constanta	3	9	34	5 - 7 hours	City tour / City tour & Black Sea tour

5.1.8. Bulgaria

Ruse, as the leading Bulgarian Danube port, has the highest intensity of cruise ship calls - 28 of the operators have included it in 89 cruise programs. The structure of the additional excursions offered, the leading role have the city tours, with different duration and scope, often combined with an excursion to the Basarbovo Monastery. It is strange for Ruse, as it a city with tourist resources, that this covers all the tourist offers within the city and the region. Many of the cruise programs offer excursion to Veliko Tarnovo with different options - with a traditional lunch, a visit to Arbanassi, a visit to a church in Arbanassi with a church choir, etc. Very often these excursions to Veliko Tarnovo continue to Svishtov, where tourists return on board of the ship.

The other excursion, offered as an option in Ruse is a city tour of the Romanian capital Bucharest.

The second major cruise port for Bulgaria is **Vidin**. The offer of additional services is dominated by 2 excursions (with different variations) - a city tour of Vidin with a visit to the Baba Vida Fortress and an excursion to Belogradchik (with or without lunch; with or without wine tasting). Other established types of additional excursions - home-hosted culinary demonstrations and tastings, as well as the option of a bike tour, are more complementary to the offer, at least as far as offered by individual cruise operators.

The ports of **Silistra** and **Tutrakan** are with minimal traffic intensity, mainly used as a starting point for additional excursions to Varna and less frequently to Veliko Tarnovo. Only in Silistra there is a small local proposal for a city tour with a visit to the fortress Medzhidi Tabia.

The role of **Nikopol** and **Svishtov** is similar. Cruise tourists are not detained in the cities or surrounding area, but take a trip to Pleven, Sofia or Veliko Tarnovo, respectively.

Table 30 Bulgarian ports – additional services, berthing time, calls intensity

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
Vidin	16	64	283	3 - 5 hours	Guided Sightseeing Tour; Guided Tour of Belogradchik /Belogradchik Rocks & Fortress (4h.) Hike to Belogradchik Fortress & Visit a local vineyard for a tasting

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
					Vidin home-hosted cooking demonstration (3:30h.)/ Banitsa pastry and yogurt tasting; Vidin bike tour
Nikopol	6	7	59	5 - 12 hours	Trip to Pleven (4h.) / Excursion to Pleven (6-7h.) Excursion to Sofia (11:30h.);
Svistov	2	4	9	n/a	Excursion to Veliko Tarnovo with Arbanassi and lunch (6h.)
Ruse	28	89	427	3 - 12 hours	City tour (3h.) / Ruse walking tour / Ruse highlights (3h.) / Ruse at night (3:30h.) City tour and the Basarbovski Monastery (4h.) / Ivanovo Rock Hwen Churches & Ruse Highlights / The Rusenki Valley and churches in Ivanovo (4h.) / City tour and the Basarbovski Monastery (4h.) Veliko Tarnovo excursion / full-day Guided Tour to Veliko Tarnovo / Excursion to Veliko Tarnovo (5h.) / Veliko Tarnovo & Arbanassi (8:30h.) / Excursion to Veliko Tarnovo & Arbanassi (10:30h.) / Excursion to Veliko Tarnovo & Arbanassi with Orthodox choir performance Bucharest excursion / Excursion to Bucharest (5:15h.)
Tutrakan	1	3	32	8 - 10 hours	Varna's Gold Treasures (with Lunchbox) (8h.) / Varna's Gold Treasures (10h.) Excursion to Veliko Tarnovo (7-7:30h.) / Veliko Tarnovo with folklore (8h.)
Silistra	1	5	7	8 - 10 hours	City tour and the Silistra Fort; Excursion to Varna

5.1.9. Moldova

Moldova and its port of Giurgiulesti are still rather exotic in cruise programs. The only operator to offer additional excursions from this port has focused on on shore programs that show local folklore and traditions.

Table 31 Moldova ports – additional services, berthing time, calls intensity

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
Giurgiulesti	1	1	11	3 - 4 hours	Unknown Moldova (3h.) Excursion to village festival Valeni

5.1.10. Ukraine

Ukraine is also an almost unknown destination in the context of Danube cruises, with interest focused on the Ukrainian Delta. This makes Vylkove (or Vulkove) the main port for cruises to reach this part of the river, with on-site excursions/boat trips through the Delta.

Table 32 Ukrainian ports – additional services, berthing time, calls intensity

Port	Cruise operators Number	Programs Number	Scheduled dates Number	Effective berthing time	Additional services (with variations)
Izmail	1	2	2	n/a	City tour
Vylkove	3	4	15	n/a	City tour
					Excursion by boat to the Ukrainian Danube Delta (3h.)

5.2. Clients' rating of Danube cruises and additional excursions on shore

The popular website **Tripadvisor**[®] presents 325 Danube cruises, with a total of 1464 user reviews, rated on a scale of 1 to 5. Overall, Danube cruises are rated very high, with 123 being rated 5, and for 94 cruises the rating is 4.5 and another 56 are rated 4. Only 19 cruises are with lower rating and only 2 cruises receive a rating of 2. There are no reviews yet for the remaining 32 cruises.

Considering the duration of the programs, there is a tendency of a lesser approval as the duration of the cruise increases. Rating 5 and 4.5 received all cruises with a duration of 3-5 overnights. For cruises with 6-9 overnights, 81% of the programs receive this rating, while for those with 10-14 overnights only 67% of the cruises can score it. The lowest is the share of excellent ratings on cruises "15+" - 51%.

Cruise Critic - one of the popular cruise sites, pays special attention to additional excursions during cruises, publishing reviews of tourists who rate individual excursions from 1 to 5. There are reviews for 19 excursions to 5 destinations in the Danube Region - Bucharest , Budapest, Melk, Passau and Vienna, with a total of 1,448 posts. All trips are rated on average as very good (8) and excellent (11), and 3 of them manage to earn the top rating - 5.

Table 33 Clients ratings of selected additional excursions on the Danube

Destination	Additional excursion	Number of reviews	Average rating
Bucharest*	Bucharest National Village Mseum	4	4
	Translyvania Tour Excursion Reviews	3	4
Budapest	City tour	306	4,5
	Highlights Tour	76	4
	The Castle District	63	4,5
	Culinary tour	12	4
Melk	Melk Abbey	226	4,5
	Washau Valley Tour	18	5
	Wine tasting	3	5
Passau	Walking tour	196	4,5
	St. Stephen's Cathedral	3	4,5

Destination	Additional excursion	Number of reviews	Average rating
	Brewery Tour	9	4
Vienna	Walking tour	163	4
	City tour	152	4
	Bike tour	10	4,5
	Belvedere Palace	27	5
	Schoenbrunn palace	157	4
	Wine tasting	15	4,5
	Danube vally	5	4,5

Source: *Cruise Critic*

6. ANALYSIS OF THE ECONOMIC IMPACT OF CRUISE TOURISM

6.1. Benefits for the destinations

6.1.1. Economic benefits

The value chain of cruise tourism is extremely long and rich, covering 25 types of entities, organizations and administrations that contribute value in the process of preparation and marketing of the cruise tourism product.

The direct economic benefits for the destinations can be summarised in several groups:

- **Direct costs of cruise tourists and ships' crews** realized on shore - food, merchandise, travel and other services;

The cruise tourist consumption pattern at a destination location is different from that of an ordinary tourist. On the one hand, the cruise tourist makes numerous visits to different places along the river, and if the cruise ship provides him with accommodation and related services (food and drink) during the trip, then the costs in the destination is guided mainly by what the destination can offer like landmarks, shops, etc.. On the other hand in the arrival/departure destinations after the cruise, the cruise tourist tends to stay longer and in fact significant percentage of these travellers tend to spend the night in a hotel, which significantly increases their costs.

To these costs can be added the costs of the crews themselves during the journey, including the costs of arrival and departure respectively from the first and last port for the season.

- **Direct costs realised by cruise companies** - payments to local suppliers (for goods, services, food, etc.); payments for passenger fees, port, navigation and other services

A cruise ship with an average of 160 guests is organized and operated in the same way as a hotel on land. The specifics comes from the fact that the ship is constantly on sail and rarely stays in one place for more than 12 hours, with all the logistics problems related to it.

IG RiverCruise addresses the need of local suppliers, i.e. the types of services and goods that companies purchase from local suppliers:

- Supplies for the hotel part (food, beverages, consumables) and for the ship as a vessel (fuels, oils, etc.) are purchased or procured by the head office of the shipping company (including those from local suppliers) and delivered locally to the appropriate port.
- Local tourist offers that fit into the operator's concept of the program and ancillary services, including: local guides, bicycle rentals, tourists transport, sightseeing, tastings, demonstrations, musical performances on board or on land, regional souvenirs, etc.
- On-board technical support (emergency repairs, emergency deliveries);
- Services in case of major changes in the travel schedule (transfers in case of water level problems, hotel accommodation for early/late tourists)
- Emergency supplies or services for the hotel part or guests (consumables, medications, doctor's visits, medical transport, etc.)
- **Employment** – direct and in related sectors

6.1.2. Marketing effects

From a certain point of view, a cruise can be compared to a panoramic tour of a city - a quick pass through the main tourist highlights and if the destination succeeds in intriguing the tourist, a further tour or a visit for a real exploration is forthcoming. Combining this logic with the luxurious and enjoyable environment of the cruise and the personal attention received, that characterises the product, it is no surprise that one of the main benefits of it, is the gained positive image of the destination that a cruise is able to create.

At the same time, destinations with advanced cruise tourism skilfully use it as an element of the overall branding, exploiting the commonly accepted cruise and cruise ship associations - a trip, a destination and an experience that is worth it.

6.2. Cruise tourism contribution to the European economy

In 2017, the cruise industry provides a record € 47.86 billion for the European economy, according to new data from the Cruise Lines International Association (CLIA)³⁶. This represents a 16.9% increase in comparison with 2015.

The direct costs generated by the cruise industry amount to € 19.70 billion, compared to € 16.9 billion in 2015.

³⁶ <https://es.cruiseexperts.org/media/2971/2017-europe-economic-impact-report.pdf>

In terms of employment between 2015 and 2017, the cruise industry generated more than 43,000 new jobs across Europe, with 403,621 already on cruise lines and cruise businesses. Salaries and other benefits for European workers amount to € 12.77 billion.

Europe is the world's second largest generating market - 6.96 million journeys, up with 7.8% in 2017 compared to 2015.

Europe remains the second most popular cruise destination after the Caribbean, attracting 6.50 million passengers in 2017, up with 6.1 percent compared to 2015.

European shipyards are the heart of the world cruise ship industry. Only for cruise ships were spent EUR 5.6 billion in European shipyards in 2017, an increase of 22.4% compared to 2015. It is expected that in the period 2017-2021, 66 new cruise ships will be produced with a total cost of over € 29.4 billion.

6.3. Estimate of the economic benefits for the Danube region

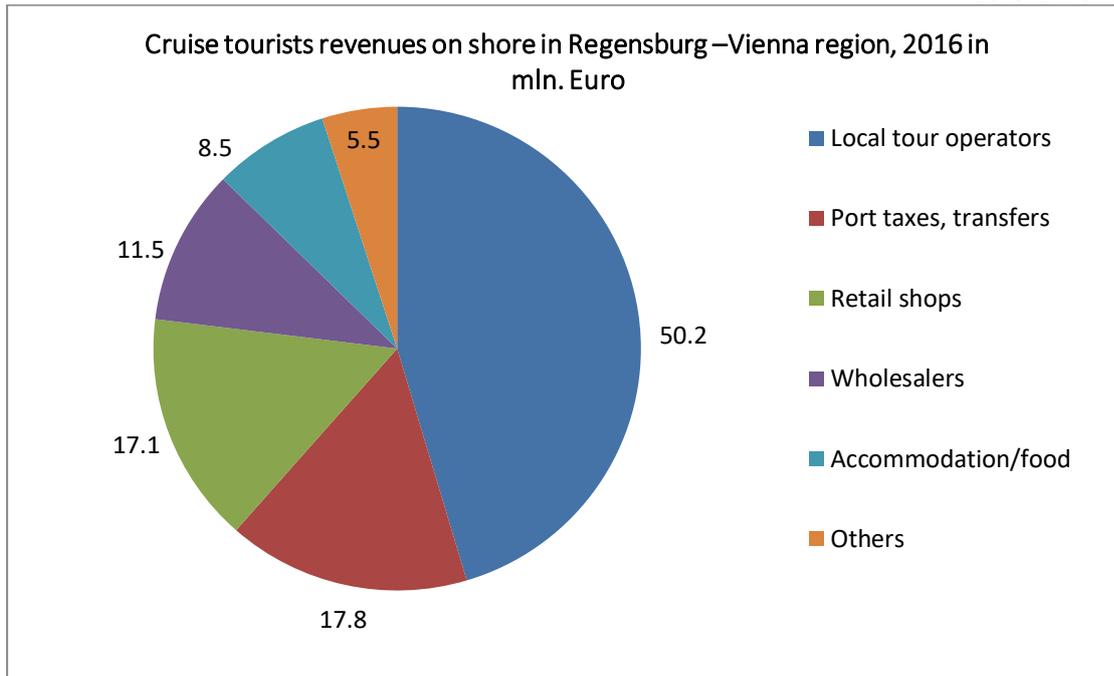
Despite their undeniable necessity, studies on the economic impact of cruise tourism in the Danube region are made rarely and unsystematically. The most up-to-date and relevant for the whole region (in view of the identified coverage of the cruise programs) is the aforementioned CenTours survey commissioned by ARGE Donau among cruise tourists and cruise operators, carried out in 2016. One of its objectives is to trace and identify what is the real economic effect of cruise tourism.

As a result, within only 5 months (June-October), the contribution of cruise tourists to the regional economy (Regensburg, Straubing, Deggendorf, Passau, Linz) was at least € 110.7 million. The estimate includes the cost of tourists realised on-site, costs of ancillary services, intrinsic fees, sales, additional costs of tourists related to the trip like parking, overnights before/after the cruise, transfers. There are probably other very high costs with regional effects beyond them, but due to insufficient information, they cannot be specified and summarised.

In addition to the costs, the structure of the costs was clarified:

- 46 % are for additional excursions;
- 17 % are additional costs of the tourists;
- 19% are operational costs for the ships;
- 13% are for taxes;
- 5% are transport costs of the tourists to the port, which include public transport, taxi, parking.

Figure 37 Cruise tourists revenues on shore in Regensburg –Vienna region, 2016 in mln. Euro



Source: ARGE Donau

Most of the costs are spent on local tour operators, who benefit mainly from additional trips, which are included in the cruise programs, but also from transfers to and from the ship. Cities, retail shops and hotels and restaurants also have a significant share.

In addition to the cost of the trip and the booked package, tourists spend an **average of € 27 per person during their descent on the shore**. These costs concern:

- First of all for souvenirs and memorabilia - 27%;
- For food and beverages in places to eat and drink - 24%;
- Purchases of clothes and shoes - 20%;
- Purchases of jewellery and watches (10%).

Tourists spend an average of **€38 per person on the excursion packages for additional excursions on shore**. These packages are paid to the respective cruise operator either in advance with the cruise package itself or during the trip.

This total revenue generates a pre-tax contribution to the region's purchasing power of EUR 41.2 million as a direct economic effect. This amount is equivalent to 1,170 jobs in the study region.

This data proves the benefit of cruise tourists, even if their package does not include the use of basic tourist accommodation and meals services at the destination.

7. ANALYSIS OF THE RELATION BETWEEN CRUISE TOURISM AND OTHER TYPES OF TOURISM

Although the all-inclusive is the major component of the cruise package on board, cruise voyage provides a wealth of opportunities to meet a variety of needs and specialised interests of passengers with the planned stops in different countries and ports. In addition, the services inherent to other types of tourism not only play a complementary or diversifying role for the cruise, but in many cases also are the main or additional motif for the trip itself.

The survey clearly outlines two basic tendencies:

- The share is increasing of thematic products aimed at answering the needs of narrower target groups . There are numerous cruise programs that are focused entirely or through the additional services offered, to a particular theme or to a particular strata of cultural heritage;
- The share of programs that combine a cruise with active outdoor recreation is increasing.

With regard to the Danube region itself, such development will imply a change of the image of the region and the "Danube" brand itself, making programs more dynamic and enriching them with new elements. The effect of these changes will be in gradual upgrading of the cruise tourism market with younger target groups and those with specialised interests.

7.1. Cultural tourism

Cultural tourism as a type of tourism is most widely presented in cruise tourism. Its influence affects the main motives for the journey itself and, as a consequence, the content of the product itself. Cultural tourism provides additional services to each program for most of the activities involved, both on board and on shore, in each country and in general in almost all ports called in. It is worth to say that only 2 of the 71 ports surveyed do not offer additional cultural tourist services.

Yet, **major destinations** with a predominant cultural tourism element can be outlined based on the intensity of cruise visits and the value of resources offered:

- Germany - Regensburg and Passau;
- Austria - Linz, Melk, Vienna;
- Slovakia – Bratislava;
- Hungary - Budapest, Esztergom and Kaloska;

- Croatia – Osijek;
- Serbia - Belgrade and Novi Sad;
- Bulgaria – Ruse

Although it is not located on the Danube, considering the cruise - cultural tourism link, Bucharest should be accounted for, as it is a major additional service in most Romanian ports.

Currently, the **types of services** offered are dominated by traditional forms, which involve mainly passive participation:

- City tours;
- Visits to major cultural and historical sites;
- Visits of musical and dance performances;
- Observation and tastings of traditional crafts

Along with them, under the influence of the changing profile and in the desire of the cruise companies to distinguish their product in order to gain a competitive advantage, increasingly are appearing **new forms of offering** of the existing services, the diversity through **thematic profiling** is being expanded and completely **new service types** are being introduced:

- The share of thematic city tours is increasing, e.g. Roman heritage, Jewish heritage; churches and monasteries, Christmas bazaars, etc.,
- New forms of presentation are introduced, like local students are used for guides, public transport (tram, metro) is used for the tour; evening tours are held;
- Introduction of new types of services that involves more active involvement of tourists like "treasure hunt" or aimed at increasing intercultural dialogue and understanding of the local community - home-hosted events or "make it as the natives do" activities;
- Expanding the range of involved sites, e.g. visits to industrial sites like hydro power plants, locks, factories;
- Forms of active participation are increasing with dance lessons, workshop-shops, etc. and interaction with tourists such as "Behind the curtains of ...";
- Increases in offerings with an element of exclusivity like dinner in a Michelin-starred restaurant or a palace, helicopter tours, concerts for selected audience, etc.;
- And others.

An example of an innovative approach of a wider integration is the announced program Cruising the Danube of Advante Travels - Romans, Amber & Habsburg Splendour - is an 8-day themed archaeological tour that uses and blends with A-Rosa's³⁷ traditional cruise programs. Or the special cruise for lovers of classical music - Amadeus River Cruises (Lueftner) offers in one of its dates under the Passau-Budapest-Passau program enriched with suggestions and experiences for connoisseurs - live classical music on board, concerts on the shore - at Melk Abbey, Moyzes Hall in Bratislava and in the Duna Palace in Budapest and visits of the famous opera houses in Vienna and Budapest³⁸.

Analysing the application of innovative forms in territorial aspect, the tendency is that they are characteristic of the countries of the upper Danube - Germany, Austria Slovakia, Hungary. The demand intensity there encourages operators and destinations themselves to strive for product diversification. On the other hand, in other countries, offering is still very limited in scope and conservative in form - these countries are still at the "promotion" stage, which could turn to be an advantage.

7.2. Eco tourism

Developing in the natural environment of the Danube, cruise tourism is essentially predisposed to a deep connection with ecotourism and the integration of eco-tourism activities. This interconnection is under intense development affecting various aspects of the cruise tourism product:

- “Eco” image. Legislation and administration requirements for the environmental processes and stability of vessels constantly increasing for cruise companies. At the same time, this segment of the market is growing, showing the same sensitivity and demand requirements as for the preferred tourist product. In these circumstances, complying to certain standards for ships is simply a commitment by cruise ship owners and operators and it is a competitive advantage. This is why cruise operators strive to shape and sell their product as minimally harmful and environmentally friendly.
- “Eco” cruises. In addition to cruises, for which the ultimate destination is the Delta and the exploration of its biodiversity (27 programs), there are programs on sale combining cruises with hiking and biking tours;
- “Eco” services. There is a tendency to change consumer behaviour from passive observation to active experience. With regard to additional tourist services in cruise

³⁷ <https://www.groupeisureandtravel.com/news-and-views/river-cruises-on-the-rhine-rhone-and-danube-available-with-andante-travels/8117.article>

³⁸ <https://www.groupeisureandtravel.com/news-and-views/rhine-and-danube-cruises-offer-soothing-strings-for-classical-music-lovers/6073.article>

tourism, this tendency tries to increase destinations and expand the offer of active eco-tourism activities. The most widely used types of services are:

- visits to nature protected areas
- observation of plant and animal species, natural phenomena and objects;
- boat trips
- walking tours
- canoeing or kayaking
- biking tours

Currently, such activities are provided not only in smaller or less developed economic regions along the Danube. Even cities with million inhabitants like Vienna are diversifying their profile with eco-tourism activities like tours in the Vienna Forest. Some type of additional ecotourism services are provided in 22 out of 66 ports. However, the identified major districts along the river are:

- The Danube Delta
- Upper Danube and mainly the Austrian section of the river

Analysing the territorial distribution and concentration of sites of ecotourism services and comparing them with the natural resources along the Danube, there are places with untapped potential, which stand out, especially the area of the Iron Gate Gorge and the adjacent Djerdap National Park in Serbia.

Another potential option in terms of cycling tourism is the Danube Cycling Path - its actual construction along the Lower Danube will also provide the necessary land infrastructure to allow for the implementation of combined programs of cruise + bike.

Considering the potential of Bulgaria, it is undoubtedly in the integration of the nature protected areas along the river - the Persina and Ruse Lom Nature Parks and the Srebarna Reserve. The potential benefits of including them are obvious in various aspects:

- Diversification of the overall offering of additional services on the Danube Cruises by including new sites of high scientific and cognitive value, where some of them are attractive as active recreation destinations - Rusenski Lom;
- Diversification of the "Bulgarian" offer as a whole, which at present is limited to cultural tourism offers;

- Expansion of offers in low-intensity ports - Silistra, Tutrakan, Svishtov;

7.3. Gastronomic and enotourism

When discussing specialised forms of tourism, gastronomic and enotourism are undoubtedly among the most compatible and truly integrated types of specialised tourism. Their penetration into cruise tourism is at large-scale and intensive because the very idea of getting to know other nationalities and cultures is related to contact with their cuisine and traditions. Consequently, it is not surprising the presence of specialised cruises with focus on wine - there are 8 specialised programs for connoisseurs as well as variety of places and forms of contact with cuisine and wine as a manifestation of the local community:

- Traditional degustation of wine and beer and typical local food;
- Specialised tours like beer and wine tours as an additional service;
- Visits to production sites like vineyards, breweries;
- Cooking lessons for different types of food;
- Cooking demonstrations including home-hosted;
- Visits to traditional local restaurants and pubs

Although the combination of cruise and wine is most commonly associated with the Krems region, Austria, in territorial terms the integration of cruise tourism with gastronomic and oenological tourism can be traced in any country along the Danube.

In Bulgaria related to the culinary and wine special additional services are available only from the port of Vidin - tasting of local wines during the excursion to Belogradchik and tasting yogurt and local pie (banitza). In other words, there is a very serious potential in the Bulgarian part along the Danube river to intensify the cruise-wine/culinary combination, especially in ports such as Svishtov and Ruse.

7.4. Festival tourism

Offering specialized cruises and including specialized additional tourist services is so common that no one doubts the emerging trend of thematic specialization of cruises.

Having this as a background it is strange the lack of integration of festival tourism into cruise tourism. In all surveyed ports – 66, in non of it is offered as an additional service a visit or participation in an identified festival event.

8. ANALYSIS OF BOTTLE NECKS AND HINDERANCES FACING THE DEVELOPMENT OF CRUISE TOURISM IN THE DANUBE REGION

8.1. Safety

The cruise site cruisemapper.com maintains a special program that monitors registration and announces cruise ship accidents and incidents, and passengers themselves can also report via a specially designed online form.

Cruise ship accidents and incidents can be classified as follows:

- **disasters** (sinking, grounding, capsizing, collision, allision, terrorist and pirate attacks, pollution, crashes and killings on land tours/shore excursions)
- **mechanical** (fire, propulsion issues, power loss) - often result in cruise cancellations.
- **sickness/illness** outbreaks - often result in delayed embarkation or itinerary changes.
- **deaths** (overboard jumps/missing passengers and crew members, drowning in ship pools, critical traumas, murder, suicide, Myocardial infarction/heart attack)
- **injuries** (rape, assault, battery, fractures by accidental falling/slipping)
- **crimes** (bomb threats, robbery, drug smuggling/possession, arrests for past fugitive warrants, theft, belligerent behavior etc.)
- **weather-related** (heavy fogs, squalls, storms, hurricanes) - usually result in itinerary changes and ports of call delays.

In general, river cruises are less prone to accidents and incidents - as river basins are safer than seas and oceans, ships are smaller, passengers are significantly fewer and from age groups that are careful in their behavior. For the period 2003 - 2018, 21 major accidents and incidents with river cruise ships have been registered worldwide, of which 8 are on the Danube:

- 2006 - MS River Empress of Uniworld crashed into a bridge near Melk, Austria. All passengers were evacuated successfully.
- 2009 - MS Avalon Tranquility by Avalon Waterways (currently Travelmarvel Jewel by APT River Cruises) collides with another ship during manoeuvring for docking in Linz.
- 2011 - Avalon Waterways MS Avalon Tranquility was hit by a barge near Passau. Passengers were evacuated and the cruise was cancelled.

- 2011 - MS Avalon Panorama of Avalon Waterways suffered propulsion system malfunction (damage to the propeller), which made her impossible to steer.
- 2013 - Viking River Cruises MS Viking Forseti sustains two incidents within 18 hours, colliding slightly with two different vessels. Due to the delay because of the incidents, the program had to be modified.
- 2014 - A-Rosa's MS ArosaMia hits into a facility, passing through the Jochenstein lock at the German-Austrian border; The cruise is cancelled.
- 2016 - MS Viking Freya of Viking River Cruises crashed into a bridge in the German section of the river, with death casualty of two crew members. Passengers were subsequently asked to continue their cruise with another vessel or to terminate their vacations.
- 2017 - Fire erupts on A-Rosa's MS ArosaRiva and causes the program to be cancelled.

It has to be noted that all incidents are in the upper section of the river, which, by nature of its natural conditions, is narrower and much more traffic than the other sections.

In 2019, two other incidents were reported, one of which unfortunately had death casualties:

- In May, Viking River Cruises' Viking Sigyn collides on to a smaller cruise ship in Budapest area, killing 19 South Korean tourists and a Hungarian crew, leaving eight others missing. The disaster happens at night, in bad weather and in one of the busiest sections of the river;
- In October, Phoenix Reisen's MS Prinzessin Isabella was hit by a cargo ship in the section between Tulcea and Ishmael, with 5 of the passengers slightly injured;

Despite the serious nature of some of the incidents, given the intensity of the traffic and their total numbers over a long time period, it can be concluded that navigation on the Danube is safe. Companies are constantly investing in management and safety systems to minimise risks.

The executive director of Avalon Waterways Pamela Hoffi believes that river cruises are one of the safest ways to travel. The Budapest accident, she said, "is the worst ship crash in Hungary in 75 years, which speaks to the overall safety of all passengers on this very popular and beautiful stretch of the Danube River."

As a result of some previous incidents, Avalon introduces rigorous training and testing standards and requires its captains to have years of real-life experience on their ships before being promoted to the highest rank. All Avalon ships also have state-of-the-art navigation equipment and sophisticated radar systems.

Security measures have also been strengthened by other companies. At Uniworld, most of its captains have decades of experience and have extensive and ongoing training simulations for various scenarios, which include occasions like congestions around bridges. "It's expensive, but it's worth every penny" (Ellen Bettridge CEO). All Uniworld ships are also equipped with radar, so the crew always has a full 360-degree view of what's around it.

"River cruises are still completely safe and there is plenty of room for European rivers to accommodate ships and for future growth." Marcus Leskovar, Executive Vice President of Amadeus River Cruises.

Cruise ship accidents, albeit rare, have double negative effect on the industry:

- Damage the image of the product;
- May block traffic on the river, in some cases for long periods, damaging river transport and tourism.

This can be seen as an occasion and a starting point for extending the joint actions of the countries along the river in relation to all groups of subjective factors that predispose to incidents or could prevent them:

- Maintenance of the waterway - dredging of sediments and any other obstacles that may directly or indirectly provoke an accident;
- Traffic management. With the development of navigation and river information systems, there has been very significant progress in this aspect;
- Uniform staff policy, incl. standards for professions and positions in river transport, system training, etc .;

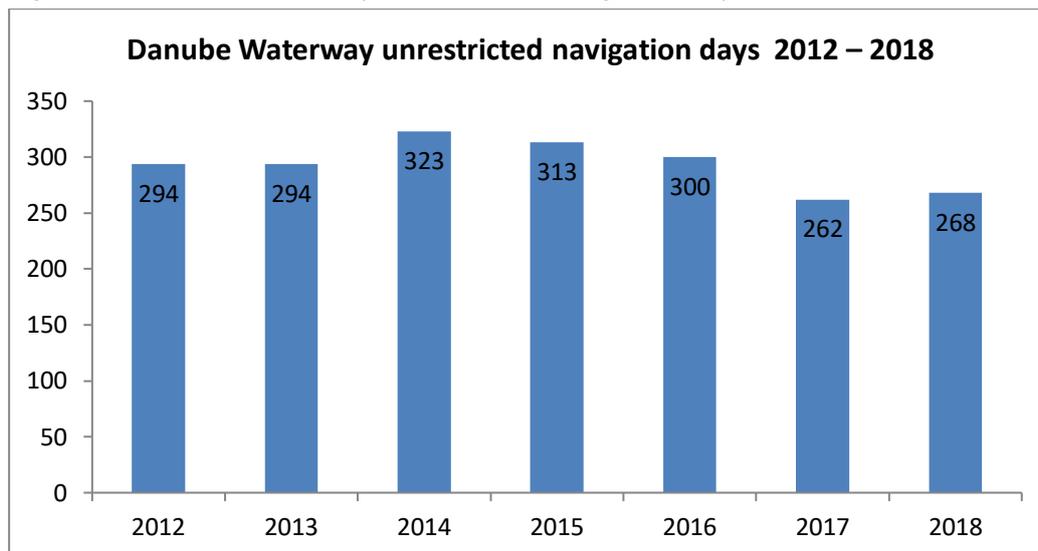
8.2. Waterway

The condition of the waterway is a basic prerequisite for the navigation. Due to objective (nature) or subjective (human activity) factors, waterway problems have direct consequences on the implementation of cruise programs that lead to cancellations, reprogramming of cruises and additional costs:

- Condition of the waterway - high waters, low water, change of watercourse, etc.,
- Technical problems - locks defects, collapse of dykes, etc .;

In the last 7 years there are various reasons for partial or complete closure of the Danube³⁹ river navigation - low water, high waters, ice drift, facilities accidents, etc. . For this period, the average rate for days a year without a closed section is 300 days which could not be reached in the last two years. In 2018, full passage days are 268 days, but the positive fact is that in the remaining days there was a closure of individual sections, for several hours a day instead of the entire waterway, as in the winter months of 2017.

Figure 38 Danube Waterway unrestricted navigation days 2012 – 2018



Source: Via Donau

Either way, the causes for closure of the fairway are difficult to predict, which puts the emphasis on the response options when they occur. In this respect, the Danube navigation system is constantly evolving and the actions of individual countries are synchronised with a view to ensuring the safety of ships and passengers. However, waterway problems remain one of the major problems because any closure, not only the sailing cruises are affected, but this triggers a chain reaction and disrupts the ship's timetables for the subsequent cruises.

8.3. Infrastructure and services

Against the background of increasing requirements (e.g. in the environmental field) and the desire to develop alternative routes (new ports, new services), insufficient/missing infrastructure is emerging as an important determinant of future development.

The international organisation IG RiverCruise⁴⁰, which represents the interests of cruise operators and ship-owners at European level and currently manages more than 240 ships through its members, defines the operators' expectations for cruise ships - what local

³⁹

http://www.viadonau.org/fileadmin/content/viadonau/01Newsroom/Dokumente/2019/Broschueren/Common_Danube_Report_2018.pdf

⁴⁰ <http://www.igrivercruise.com/>

authorities need to provide as infrastructure and services. They depend on the length of the berthing time of the ship - whether it berths to disembark passengers on a shore excursion or docks to stay overnight. In both cases, however, there are minimum requirements that are required and/or expected by the host destination:

- Legal certification of the wharf/port (availability of all necessary licenses and registrations)
- Enough space for the ship (up to 135 m)
- Safety of the ship mooring and mooring facility Ability to dispose of waste
- Providing conditions for safe embarking/disembarking of passengers (lighting, flooring, stairs, etc.)
- Power supply. If, for environmental (noise, emissions) or other reasons, vessels cannot keep their generators or motors running, they must be provided with alternative power supply
- Connection to the water supply network
- Access for cars and, where possible, buses and trucks, for additional excursions, boarding and disembarkation and loading of ships, appropriate road infrastructure and traffic organisation are required;
- Providing local public transport links between the port and the town centre, especially if the port is not within walking distance
- Organisation of the port to ensure safety when there is more than 1 ship
- Provision of tourist information (tourist information centre) and auxiliary buildings (eg toilets)

The construction and development of ports is an expensive and time-consuming process, so different models of partnership between operators, administration (local and national) and port authorities are applied. Here re frequent cases when companies construct their “own” ports, which they manage or lease afterwards. For the purpose they hire land from the municipality or private entities and invest in port infrastructure.

Although in rare cases is the main user, the cruise industry suffers the disadvantages or benefits the advantages provided by the degree of development of the **transport infrastructure** in a wider context, especially with regard to the existence of connections with other modes of transport and especially the possibility of access to ports.

In addition, the **services offered on shore** also are frame setting and with potential for impact in various aspects:

- Product diversification by provoking interest in new market segments and/or less popular sections of the river. Indirectly, this would also reflect in improving the territorial balance of its development;
- Expanding the economic impact of cruise tourism and increasing its benefits;
- Alleviation of pressure zones (congestion) by directing part of the tourists to new sites of interest;

8.4. Legislation

Spanning the territory of 10 countries, cruise tourism is forced to develop within complex administrative (legislative) frameworks, whereby the degree of unification of the relevant regulations and administrative procedures may be a factor in accelerating or delaying its development. The Danube River Basin as a single destination is generally benefited by the fact that 7 of these countries are EU Member States, but even within these narrower limits, the optimum degree of synchronization has not been achieved.

Synchronized legislation should promote the sustainable growth of the sector and promote the Danube as a sustainable but competitive destination:

- **Visa regime.** The region covers Member States and non-member countries, respectively. The visa regime is different and affects both guests from certain countries and employed crews on board from third countries.
- **Tax burden and spending of collected taxes and fees.** On the one hand is the introduction of new taxes and fees as the luxury tax in Hungary or a port tax for every passenger collected in almost all ports, which inevitably affect the final price of the trip. On the other hand, there is the issue how are spent the fees collected, in case when they are not used for reinvestment in ports and facilities.
- The constant change and increase of **environmental standards**, which provoke corresponding requirements for ships and facilities and investments to achieve compliance with them.
- There should be **clear rules on environmental protection**, rules that are cost effective, simple to apply and proportionate in view of the exceptional diversity of concerned entities - operators, ports, local and national authorities;
- On a practical level, this also means **unifying the various bureaucratic requirements** and documentation for landing, work permits, visa regime, wastes and waste water norms, etc.

Although not in the form of a law, we should also add here another missing element from the overall administrative framework for the development of cruise tourism on the Danube. Currently, at EU and individual country level, with few exceptions, river cruise tourism is undervalued and remains beyond the scope of targeted planning. The EU lacks a comprehensive strategy and consistent actions to develop it, in contrast to the attention received by maritime cruise tourism through a focus on politics for the coastal and maritime areas. The mere fact that, even from a statistical point of view, river cruise tourism is not "monitored" shows a misunderstanding of its potential and an underestimation of its economic impacts.

8.5. Destinations overcrowding

The problem of destination overcrowding is mainly characteristic of sea cruises due to the much larger scale of the ships, but also for river cruises and in particular those on the Danube, destinations and periods with typical congestion characteristics are observed. And if the big cruise centres, which are also big cities like Vienna and Budapest, cruise traffic is still capable of being absorbed, then for the smaller cities like Regensburg, Melk, Passau the problem is already there. Cruise ships dock directly in the historic centre and tourists from several ships are simultaneously on the shore or focused on specific "must see" sites.

In order to avoid conflicts of interest, there is a continuous dialogue between operators and destinations, which has to find solutions in various aspects:

- Congestion in ports: in the peak months, in certain ports, many ships call in simultaneously and there are situations reached when berthing is not possible. Possible solutions are the construction of additional port infrastructure, the use of adjacent/alternative ports, transparency and publicity of the port's berthing policy;
- In the cities: introduction of maximum capacity indicators - limit of ships or others (WTO Sustainable Tourism Destinations Guide offers a wide range); identification of alternative attractions; development of products in other parts of the river to balance the tourist load;
- Traffic around and to the port, which is a matter of dedicated investments and implementation of flexible traffic management schemes;

8.6. Problems of the industry

In addition to the above-mentioned barriers, there are also internal, industry-wide problems, the solution of which would optimize the processes in the sector and encourage its development:

- **The lack of "space"**. Increasing the number of ships and concentrating them on certain routes leads to overloading and shortage of berths in hot spots such as Vienna, Melk, etc., which additionally generates logistical problems. One possible solution is to provide (new) alternative ports.
- **Shortage of labour**. The problem affects both ship crews and F&B personnel. One realistic solution is to "import" staff for example from Asia, however it encounters many obstacles of national specificity in legislation.
- **Fragmentation of the industry**. With a large number of players, uniting into a representative industry association(s) is crucial to attracting the attention of political authorities to improve the business legislative framework.

8.7. Political instability. Terrorism

Recent years have shown that cruise tourism is highly sensitive to external factors such as political instability and unpredictability and acts of terrorism. In practice, they are capable of having a many times stronger negative impact rather than any other factor or prerequisite, affecting both the generating markets and the destination itself:

- Political instability. Crises should be addressed here such as those in Ukraine, which create an unfavourable business environment but also a negative image of the destination;
- Politically unpredictable environment. Political changes at national level leading to abrupt, short-term changes in legislation, taxes, etc. also have their negative effects;
- Terrorism. Every terrorist act has a tangible impact on reservations, especially from overseas markets;

9. SPECIFICS OF CRUISE TOURISM AND DEVELOPMENT TENDENCES

The main results of the analysis will be summarized in two main groups of conclusions:

9.1. Specifics of river cruise tourism

9.1.1. Basic characteristics

Compared to sea and ocean cruises, river cruises have certain specifics, which are related to the waterway and the vessel, the characteristics of the itinerary of the voyage, the facilities on board and the program of the journey itself.

- River cruises are made close to the land. Their stops are frequent and usually the ship moors for overnight in a port;
- River cruise ships are significantly smaller than sea vessels. The dimensions, along with the construction and depth of draft, allow them to enter into narrower and shallower areas. The limited capacity (usually up to 200 people) allows passengers to get to know each other during the voyage and create a friendly atmosphere. On the other hand, the space on board is smaller and restricted, which does not allow for such a diversity of services as in oceangoing ships.
- For river cruises, the emphasis is on time at the shore, on additional excursions and on the opportunity to contact other nationalities and cultures, at the expense of time and fun on board;

9.1.2. Technology and organization of cruise services

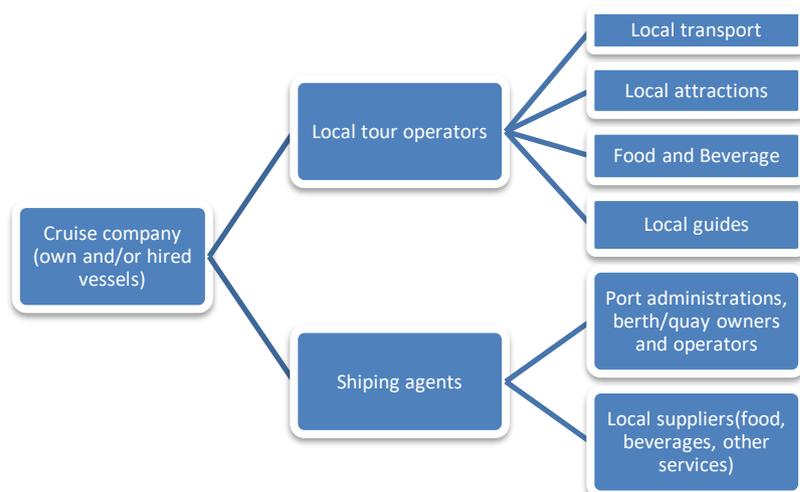
The cruise is a typical package tour. Usually, the package includes first to last port transportation, accommodation and all meals on board. When booking, the customer may request other services to be included in the package:

- Additional services on board of the ship;
- Additional excursions on shore;
- Transport and transfers to/from the port;
- Additional overnights before/after the cruise.

When ordered in advance, these services also become part of the cruise package. In addition, depending on the nationality of the tourist and the countries that the cruise voyage goes through, the costs of entry visas are necessary. Taxes like port fees, tourist taxes are usually included in the total price.

Figure 39 Cruise tourist package formation technology⁴¹

⁴¹ Source: "Cruise tourism in the Bulgarian section of Danube river", Marinov, V.; M. Asenova, V. Nikolova, 2014



9.1.3. Cruise typology

The typology of cruises is very diverse, distinguishing them by their different characteristics, by target groups, etc. This grouping is the result of practice, with new types constantly appearing, and it has a predominantly marketing purpose - for potential tourists to be easier to find possible tours and so to attract them.

Expeditionary (adventure) Cruises. The purpose of expedition cruises is to visit special destinations that would normally be inaccessible, such as the polar regions. This type of cruise is perfectly suited for curious and adventurous travellers. The cruise is mostly done by small ships with a small draft depth and moderate comfort. Common destinations for this type are the Amazon, Australia, Papua New Guinea, Iceland, the Galapagos Islands, the Falklands, Lake Chile and the fjords of Patagonia.

River cruises are made on navigable rivers. They use relatively small vessels that are suitable for sailing near river banks. Although small, river cruise ships can offer the highest level of luxury. River cruises are especially popular for couples, but also for single travellers.

Sea cruises are made in the large water basins - seas and oceans. Cruise ships are gigantic in size compared to other cruise ships. They offer travellers all the services and amenities they need, and are often seen as floating cities. Thematic cruises are organised throughout the year by a number of cruise companies, and the topics can be very diverse, for example golf cruises, culinary cruises, music or celebrity cruises, active bike cruises, wine cruises, etc.

Mini Cruises. A mini cruise includes the usual elements for every cruise, the only difference being that it lasts much shorter. Usually mini cruises start near home, are cheaper and ships are a little smaller, although they have all the comfort and luxury that one can expect.

Round the World cruises allow travellers to travel the world in a very peaceful way. Prices are generally quite high. Departure dates are usually in January and the tour lasts approximately sixty to one hundred and ten days. Between thirty and sixty ports are called in during the trip.

Classic or traditional cruises are those types of cruises where manners on board are subject to certain protocol rules - formal dinner wear, designated dinner time and captaincy are all part of the specific cruise experience. These are really the reasons people choose these particular routes. A number of classic cruises are also available for adults only.

Modern cruises operate large, new, modern ships and are mass-market oriented, often carrying 2,500 passengers or more. All of these ships have many eating and drinking options, often West End-style entertainment and are far away from the image that many people have about cruise.

Family cruises. Many cruise lines are actively targeting the family market with all conveniences specifically targeted at children, including children's clubs, specific entertainment for children, babysitting and children meals.

Luxury cruises. Many cruise ships look like hotels at sea (even the person in charge of guest service is called Hotel Manager) and at this level they are compared to the more affordable luxury hotel brands such as Hilton, Marriott and Sheraton. These lines can accommodate a large number of passengers, but at the same time to offer better cuisine, more comfortable cabins and a newer design.

Ultra luxury cruises. Similarly, certain cruise lines are compared to a six-star hotel. These are cruise ships where champagne is often included in the price, cabins are called apartments, and housekeeping is part of the experience.

LGBT Cruises - Cruises designed for the gay community.

Turnaround cruises - Cruises that start and end at the same port (destination).

Regardless of their type, all of these cruises offer a package with similar basic essentials – travel and accommodation on board the ship, all inclusive base, additional shore services, pre or post cruise services.

9.1.4. Distribution networks

The main channel for the sale of cruises remains the traditional tour operator - travel agent - end customer. A survey⁴² of 13 of the leading cruise operators shows that travel agencies are responsible for the vast majority of cruise sales. For all of them, the share of sales by agencies is over 50%, but for some it reaches 95% (Crystal River Cruises, Uniworld Boutique River) and even 97% for AmaWaterways. This shows the clear division of wholesalers and retailers.

⁴² <https://www.travelmarketreport.com/library/tmr/RiverCruiseReportCard2017-2018.pdf>

At the same time, direct sales to end customers are carried out entirely via the Internet - through the company's web site, with many of them not providing customer office information at all. Another specific feature is the maintenance of sub-pages for different markets - USA, UK, etc., with different layout, partially different content and prices, addressed to the relevant market.

This structure shows that the cruise product is one of the few remaining in which the role of the travel consultant is preserved. Even in the case of online sales, they are accompanied by call centres, chatbots and other means to further assist the customer in choosing a product. The reasons for this are in the very nature of the cruise - a product that is homogeneous in its main part (sailing) and is only offered by one supplier, ie. even if desired, the customer will not be able to package the product himself (except for pre/post -cruise services). Cruise tourism, on the other hand, is gaining popularity and the proportion of customers who book it for the first time is very high, which requires the assistance of a consultant.

Cruise WEB portals are also widespread - www.cruisemapper.com, www.cruisedirect.com, www.kreuzfahrten.de, www.flusskreuzfahrtberater.de, etc., which in addition to presenting current offers of cruise lines , they also provide, with search capabilities through various filters, detailed information about the ships and the companies themselves, as well as useful information about cruises as a product and the customers' rights.

9.2. Staff

CCNR estimates that 4,000 companies operate in the inland waterway transport sector in Europe, including various segments - river cruises, day trips on rivers, canals and lakes, ferry services. The largest number of companies is in Italy - 968, which is due both to the many operators on the Italian lakes and those on the canals of Venice. For comparison, only 7 companies were reported for Bulgaria - the least from all 21 countries concerned.

Employed in the sector in 2016 were 18 645, with the largest share in the three Rhine countries - Germany, the Netherlands and France - 5787, 3300 and 2 518 employed respectively, due to the intensive development of cruise tourism and daily trips along rivers and canals. By comparison, there are 329 employed in Bulgaria.

Actual data for the Danube are aforementioned in item 3.3.6.

The crew and staff of river vessels are usually composed of between 40 and 60 persons.

- **Ship Crew** - consists of about 8-12 officers and sailors;
- **Hotel Sector** - is managed by the hotel manager, who is responsible for the reception (3 persons), for the F&B sector - kitchen staff, headwaiter and 6-8 waiters, 2-3 bartenders, cleaning the cabins with usually 6-8 maids and the administration.

- **Cruise Manager.** The cruise manager is responsible for the passengers during the cruise time when they are not on board, as well as for all excursions before, during and after the cruise, whether prepaid and included in the package or purchased on site. He/she is also committed to organising the on-board visits of various performers and show programs. Since his/her obligations to tourists often do not end with the departure of the tourists at the last port, in the case of extended programs, the cruise manager does not usually stay on board. After completing all his/her engagements, he/she transfers to another cruise, i.e. not permanently attached to 1 ship.

Table 34 Exemplary staff positions for a 140 passengers river cruise vessel⁴³

Position	Number of staff	Position	Number of staff
Captain	1	Junior Chef	1
Second Captain	1	Technical Support	2
Pilot	1	Headwaiter	1
Engineer	1	Waiter	6
Sailors	4	Bartender	1
Hotel manager	1	Waiter at the bar	2
Receptionists	2	Chief maid	1
Night watchman	1	Cabin maids	5
Chef	1	Hairdresser	1
Assistant chef	1	Washing service	1
Party Chef	2	Musician	1

9.3. Cruise tourism development trends

9.3.1. Danube region competitive position

The European river cruise fleet⁴⁴ in 2018 includes 359 vessels with a total of 52 078 beds. It is concentrated mainly on the Central European waterways - the Rhine, Main, the Main-Danube, Danube and Elbe canals, and in this region is 75% of the entire fleet. In the Rhine-Main-Danube region alone, are concentrated 253 vessels.

In other regions, not connected with the Rhine and Danube navigable areas, there is also a significant increase of the fleet:

- Rhone - Saone - 22 vessels with only 10 in 2006;
- Seine - 20 vessels compared to 5 in 2006;
- Douro - 20 vessels compared to 6 in 2006;

In 2018, 10 new ships with a total of 1 501 beds were launched, with only 1 of these vessels operating outside the Rhine-Danube, on Douro. Due to the dynamics of the capacity of the

⁴³ Source: "Cruise tourism in the Bulgarian section of Danube river", Marinov, V.; M. Asenova, V. Nikolova, 2014

⁴⁴ Source: CCNR, Inland Navigation in Europe, Market Observation, 2019

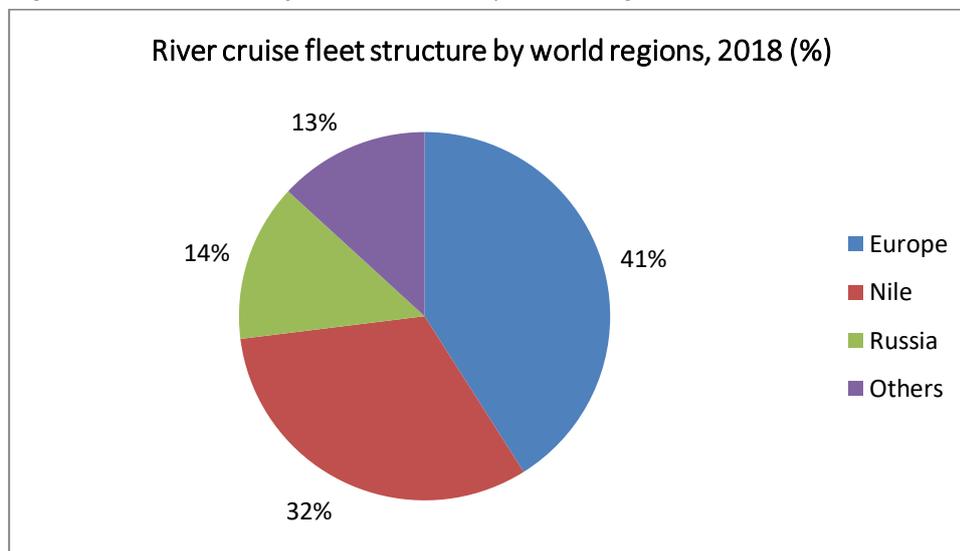
existing ships, the change in the total capacity of the cruise fleet is 13 ships with 1462 beds more compared to 2017.

Overall, the cruise fleet in Europe increased by 195 vessels for the period 2004-2018, which is a 119% increase for the period. The age structure of the fleet shows a peak in the number of ships in the period 2011-2015, when 31% of all currently operational ships were built. This peak ends in 2016 in part under the influence of terrorist attacks.

Globally, the total number of river cruise vessels is 875, where as:

- Europe holds the largest share of them - 359 vessels (41%).
- In the Nile and other African rivers, cruises are made by 280 vessels and this is the second largest region. However, its development is hampered by ongoing political crises;
- The Russian river cruise fleet has been declining since 2004 and has 121 vessels in 2018. In general, the vessels are relatively old, with a relatively small number of foreign tourists, which does not provoke interest in investing.
- The other two major river cruise regions - the Americas and Asian rivers have fewer ships with a marked trend of annual, albeit minimal, increase.

Figure 40 River cruise fleet structure by world regions, 2018



Source: CCNR

Against this background, and insofar as the number of ships is an indispensable indicator of consumer interest and the economic benefits of business, it can be concluded that the **Danube Region, as a destination, is a world leader in cruise tourism**. As an independent region, it is second only to the Nile, but given its excellent integration with the Main-Danube Canal and

through it - with the Rhine Basin, the Danube is an integral part of the most important river cruise destination in the world.

9.3.2. Demand potential and dynamics of tourists

Worldwide, the International Cruise Line Association (CLIA) is the organization whose statistical information is most trusted in professional circles. In annual publications, it provides up-to-date information on the development of the cruise market (total sea and river cruises).

According to its data⁴⁵, in 2018 the total volume of tourists amounted to 28 515 000 tourists with a trend of 6% annual growth (26 716 000 in 2017 and 25 155 000 in 2016). North America - USA and Canada - is the leading market, generating almost half of the total tourists - 14, 24 million tourists. Western Europe provides 6, 73 million tourists and is second, ahead of the Asia region with its 4.24 million.

As an individual country, the leading market is the United States with 13.091 million tourists, followed by China with 2.357 million and Germany - 2.233 million. Other European countries in the Top 10 are Great Britain and Ireland, Italy, Spain and France. The only market with a negative change from 2017 is China (-1.6%), the most significant growth being in Brazil (14.6%).

Table 35 Cruise tourism TOP 10 generating markets, 2018 (in thousands)

Country	Number of tourists	% change 2018/2017
USA	13 091	9,6
China	2 357	-1,6
Germany	2 233	3
UK and Ireland	2 009	2
Australia	1 345	0,9
Canada	971	5,4
Italy	831	8
Spain	530	3,9
France	521	3,4
Brazil	510	14,6

Source. CLIA

9.3.3. New tendencies in cruise tourism

The **global trends** of the last decade, which have fuelled the growth of the cruise industry and affect all cruise destinations and all types of tourism, can be summarized as follows:

- **Growth of the cruise tourism market.** Cruise tourism is accessible to a wider audience. From an elite type of tourism, it becomes accessible to middle-income people by providing services of varying degrees of comfort, different services and cruises of

⁴⁵ <https://cruising.org/-/media/research-updates/research/clia-global-passenger-report-2018.pdf>

different duration. The number of young passengers travelling for the first time, families of several generations or corporate groups is increasing.

- **Evolution of cruise vessels.** Ships are getting bigger, more luxurious, and cruise routes are becoming more crowded. The consequence is the globalization of the routes. Therefore, significant investments are made in on-board facilities and capacity in order to win over the competition and attract more passengers. Technological advances are not such a big obstacle in this process, but destination capacity can be a problem.
- **Vessels addressing a specific target group.** The tendency to increase numbers of single cabins is increasing, as a result of an important socio-cultural tendency such as individualisation. The number of single person households in Western societies is increasing, and this is something that some cruise companies respond to with special single concepts and offers. This quest for personalised cruise experiences caters to virtually every demographic group - from families with children, to singles, to the elderly. There are kid-friendly cruises with children's menus, kindergartens, teenage disco nights and children's entertainment programs, cruise vacations especially for single parents with children. At the same time, there are cruises on which children are not allowed.
- **Creating experiences.** Another important socio-cultural development over the past few years is that experiences have become increasingly important when choosing a vacation. The tourist expects more of a high quality product, reasonable price and good service. The tourist wants involvement and is constantly looking for new events and incentives. Cruise companies are doing everything they can to offer authentic experiences to capture the heart of the user.
- **Strong degree of theme focusing.** According to CLIA studies, nearly 78% of cruise agents see the potential for growth in specialised cruises, with two segments being highlighted - family cruises and themed cruises. With increasing experience, cruise tourists are becoming more requiring, leading to even greater demand for specialised cruise products. There is a growing interest in thematic cruises in the fields of food and wine, music, culture and art. In addition, consumer awareness of sustainability, authenticity, health and well-being is increasing. Increasingly, cruise lines offer active travellers short trips and shore excursions (such as mountain biking, snorkelling and cycling) and on board sporting activities. Some cruise ships also offer impressive spa facilities, often sponsored by the best branded spa partners. The increasing health awareness of consumers can be explained to some extent by the aging population - people nowadays live longer, healthier and more vital life.

- **Health-focused cuisine.** The number of alternative or speciality restaurants on cruise ships is increasing, with world-class food made with locally sourced ingredients. A healthy, balanced and varied menu is a key issue in this regard.
- **Self packaging.** More and more travellers are extending their cruise vacation individually with a beach break, a city trip or a tour of a designated area of the destination before or after the cruise.

The Florida-Caribbean Cruise Association⁴⁶ formulates the most important cruise tourism trends in terms of **travel motivation and new target groups** worldwide like:

- **Instagram Mania** (Instagrammable Cruise Travel): Instagram posts spark interest in travelling around the world to such an extent that posts with the hashtag #travel reach up to 351 million on a normal day and posts are both from the board of the ship and from any destination they visit;
- **Total Restoration:** Travellers, stressed by the hectic daily routine, look for ways to break away from their usual responsibilities, recover, and rejuvenate themselves. Cruise lines respond by offering complete wellness procedures in the form of spa experiences, oxygen bars on board, healthy menus for a wide variety of diets and naturally fitness innovations.
- **Achievement Over Experience:** Trips to gain experience and impressions have evolved into journeys of achievement as travellers seek involvement, a cultural experience instead of observation. The wish list becomes more goal-oriented and cruise lines meet this demand - tourists can conquer Machu Picchu or take part in a culinary workshop to prepare Cordon Bleu.
- **On-Board with Smart Tech:** Cruise lines have adapted wireless technologies for cruise travellers - key chains, bracelets and more, and more to get a highly personalised travel experience while on board or ashore.
- **Conscious Travel:** Tourists want to see the world in a responsible way. The cruise industry is more aware than ever before, working with local communities to preserve their heritage and apply innovations that reduce the pressure on nature. The industry also works with the destinations to bring the benefits of tourism to the local economies while protecting the local culture, landmarks and nature.
- **Access is the New Luxury:** Tourists leave their mark on destinations that were previously inaccessible, and others, which are still accessible only by vessel. They want to be among the first in their circle to experience Galapagos or Antarctica.

⁴⁶ <https://issuu.com/fcca/docs/2019-cruise-industry-overview-and-s>

- **Gen Z at Sea:** Generation Z⁴⁷ will become the largest generation of consumers over the next two years - even ahead of the Millennials (Gen Y). Like the previous generation, this generation prefers an authentic experience over material things and has an even greater desire to travel. The appeal of many destinations and unique experiences, such as a festival at sea, help this new generation be tempted by cruises.
- **Off-Peak Adventures:** The low season is growing in popularity, as if tourists were looking to escape from the cold to a tropical place or enjoy the cold in a new destination. Cruises offer some once-in-a-lifetime experiences - experiencing the cold months like seeing the Northern Lights, visiting a penguin colony or touring the Christmas Markets in Europe.
- **Working Nomads:** The reconciliation of work with pleasure time is steadily increasing. Staying away from the concept of "travel without devices", many modern travellers or "digital nomads" are choosing trips where they can work remotely. With WiFi, desks and work-friendly cafes, they can continue to work while enjoying a cruise vacation.
- **Female-Centered Cruising:** With the increasing number of travelling women, many travel companies are creating programs that focus on their interests and connect women with other women. Feminist-centred cruises can create a women empowerment community while providing them with an opportunity to explore the world around them and to visit famous feminist landmarks.
- **Going Solo:** With more Google searches for "solo travel" and "traveling alone" than before, travel alone is gaining popularity. Cruises allow you to travel alone without the hassle of organizing thousands of details as you reach even the remotest destinations and connect with other travellers and make connections.

Specific trends related to the Danube cruise tourism should be added to these general trends:

- Cruise tourism opens to a younger audience by offering more active products like bike cruises, hiking tours.
- Increasing interest in themed cruises, especially gastronomy and wine, music, art and culture; Having multiple vendors promotes the creativity in programs.
- Focusing on personalized on-board and shore experience with private tours and activities targeting specific segments - families, children, active tourists, etc.

⁴⁷ The "digital kids", born after the onset of the modern communication technologies

- Ships are changing. A la carte restaurants, wellness centres with fitness equipment and spa services, even indoor pools, are being introduced. Ships are actually becoming luxury hotels.
- Sustainable practices become basic requirements. Eco-certificates for vessels, energy-saving technologies, an intensive policy to reduce housekeeping services, etc.

9.3.4. Ecology

Waste management

Recognizing that waste management is essential to the environment, cruise companies introduce and follow waste management policies that often go beyond legal requirements.

All waste waters are treated according to international, national and local standards before each discharge, and bilge waters cannot be discharged at any time or anywhere.

Crews follow strictly specially designed waste management plans that aim to safely and hygienically collect, minimise, separate and process waste on board and deposition at approved/certified land sites.

Cruise companies often encourage the recycling and minimisation of passenger and crew waste through messages and video clips and brochures that result in annual recycling of 800,000 tonnes of waste, while passengers generate up to 70% less waste on average.

Air quality protection

In recent years, the cruise industry has invested heavily in new technologies that help reduce emissions

- Exhaust filters;
- Electric motors;
- Alternative fuels;
- On shore power supply to stop engines after mooring;
- Different sailing speeds

Improving fuel efficiency and reducing energy consumption

Better fuel efficiency is a win-win model for cruise companies, with lower costs and lesser environmental impact. Cruise companies are investing heavily in fuel efficiency improvements, while also retiring older ships from the fleet, which contributes to reduction of air emissions.

Companies reduce energy consumption by using heat-exchangers that recycle hot water for passenger cabin heating, installing special window shades to keep corridors cooler and reduce air-conditioning use, and switching to energy efficient LED lighting on newer ships, which represents only about 10 percent of energy consumed (an improvement of nearly 20%)

Other initiatives are:

- Eco-friendly hull coating, with new paints and varnishes calculated to reduce fuel consumption by about 5%;
- Optimisation of the propulsion and hull construction
- Solar panels that provide emission-free energy available at some ships;
- Testing of other alternative/renewable forms of energy (e.g. wind)
- Engines cooling water is also used in fresh water distillation evaporators for the air-conditioning system.
- Installations for desalination of water and minimisation of water use (showers and taps with low flow rate and vacuum toilets)
- High efficiency appliances and systems for heating, ventilation and air conditioning
- Automatic lighting and air-conditioning control systems

Waste water treatment

The advanced wastewater treatment systems introduced by cruise lines produce cleaner water than most sewage treatment plants in the US coastal cities. Many cruise lines use practices and procedures that are more environmentally friendly than required by law.

Passengers involvement

Acknowledging the importance of environmental management for both passengers and crews, the cruise industry is actively promoting their assistance through videos and multiple on board resources, conservation programs and recycling opportunities.

10. MAJOR DESTINATIONS AS A PART OF THE DESIGN OF CRUISE PACKAGES - CONNECTION WITH FESTIVAL TOURISM

As mentioned above, there is currently no dedicated integration of festival events and happenings into cruise tourism, or at least festivals are not used as an advertising element for cruises, nor are they advertised to be visited.

It is very likely that the opportunity to attend a festival or event will be announced during the cruise voyage and such a combination may actually happen, but in the absence of advance announcement, both parties, cruise operators and destinations, lose.

It is an explicit fact that festivals are usually short in duration and it is difficult to match the cruise program with the time of their performances, and also it is impossible to advertise an one-off event for a cruise program with 10, 20 or more starting dates.

At the same time, each destination maintains a calendar of events through which it can further diversify tourists' stay, whether as a special additional service or simply as an option for leisure on the coast. For this purpose, a pro-active position by destinations is required to submit to the cruise operators their calendar and even, where possible, to tailor the event program to cruise ship schedules.

For cruise operators, this is another tool that could contribute to a more complete representation of the destination, in a new, enjoyable and enriching way.

As part of the implementation of the activities under Lot 1 of the public procurement, festivals have been identified in the Danube countries, which are rated as emblematic and demonstrating/contributing to the Danube identity.

An additional selection aimed at broader territorial coverage and thematic diversity highlights the following festivals as indicative options for inclusion in the offering of cruise programs:

Table 36 Festivals with potential for integration in cruise programs

Country	Festival	City
Austria	Classic on Danube	Vienna
Austria	Danube Island Festival	Vienna
Bulgaria	International folklore festival	Видин
Croatia	Vukovar Film Festival - Danube Region Film Festival	Vukovar
Croatia	DunavArt Festival / Vukovar, Baranja, Erdut	Vukovar, Baranja, Erdut
Germany	Beim Bürgerfest	Ingolstadt
Germany	International Danube Festival	Ulm
Hungary	Nagymarosi Csípős Fesztivál	Nagymaros
Romania	"Festivalul Medieval al Cetății Severinului"	Turnu Severin
Romania	International folklore festival "Love songs along the Danube"	Braila
Serbia	Bodrog Fest	Bački Monostor
Serbia	EXIT	Novi Sad
Slovakia	Bratislavský majáles	Bratislava

11. WATER TRANSPORT LINKS WITH OTHER MODES OF TRANSPORT

The analysis of the possibilities of the links between water transport and other modes of transport aims to determine the status of the last mile infrastructure and overall transport accessibility to/from the cruise voyage starting and ending points.

The synthesized results from the individual port review (Annex 9) show the following:

Access by road

Of the 71 ports included in the cruise programs, only 3 do not have direct or close access to a motorway or a class I or II road - these are the Romanian Sulina and Sfantu Gheorghe, and the Ukrainian Vylkove, which are located in the heart of the Danube Delta.

Motorways reach the locations of 19 of the ports (nearly 27%), while first-class roads provide access to 34 ports (48%), i.e. 3/4 of all ports have fast access by motor vehicles.

Access by railway

The railway network reaches 49 of the ports, or nearly 70% of all. Mainly small ports in Upper Austria - 6, Croatia - 3, Danube Delta - 3 and single ports in other sections of the river are without rail access.

The ports of Nikopol and Tutrakan are without railway access in Bulgaria.

International airports

The whole region is served by a total of 16 international airports. Out of these 7 airports are located directly in towns with ports - Linz, Vienna, Bratislava, Budapest, Osijek, Belgrade and Constanta, while the other 33 ports are located within 100 km distance from an international airport, i.e. just over half of the ports can be served directly from international airports. In this respect, Austria, Slovakia and Croatia have the best indicators, where all ports are within this 100 km⁴⁸ range, and the lowest indicators are in Moldova and Ukraine - none, and Bulgaria only 1, if Ruse port is served by the Bucharest airport.

Overall, the accessibility of ports can be assessed as good, especially from the road network point of view. This is important in view of the fact that it is the most widespread mode of transport, especially with regard to the possibility of providing additional services on the shore, as far as the majority of them are realised by buses.

⁴⁸ Osijek airport is with seasonal service for international flights

With regard to Bulgarian ports, improvement should be sought to Nikopol, Svishtov, Tutrakan and Silistra, insofar as the road network they are linked with is lower class than desired. This would affect not so much the access to specific sites, but the time for their visits, respectively the time efficiency of the berthing of the ship.

The coverage of the railway network has its role for the access to/from the start and end ports of the cruises. Taking into account the differences in the established travel patterns in different countries along the Danube, it can be assumed that the coverage of the railway network provides favourable conditions for the development of cruise tourism: in the countries of the Upper Danube - Germany, Austria, Slovakia, where rail transport is a popular means of transportation, it provides access to most ports; in the Middle and Lower Danube, where there are more "white spots", but also the level of use of railway transport is lower, the coverage of the railway network is at a satisfactory level without having a significant positive or negative impact on the development of cruise tourism.

From the point of view of cruise tourism, the most important is the link with air transport, taking into consideration the main markets - USA, Germany, Great Britain, France, Australia - air transport is the main means of getting tourists to/from the cruise destination. From this point of view, and based on the survey results it comes out that cruises start and or end at ports served by nearby international airports. This is the case for Regensburg (Munich Airport, 114 km); Passau (3 airports in the 80-170 km range); Vienna (Vienna Airport), Budapest (Budapest Airport), Belgrade (Belgrade Airport), Oltenita (Bucharest Airport, 64 km), Giurgiu (Bucharest Airport, 78 km).

Against this background, Bulgaria is at a disadvantage, as the closest international airports - Varna and Sofia are at a considerable distance from the Danube ports. From this point of view, and in the event that Bulgarian ports seek to develop as places of origin/end of cruise programs, progress should be sought in several directions:

- Extended cruise programs, i.e. those that include at least one night before/after the cruise. This would allow for an additional program in Sofia or Varna, respectively, making the connection port - airport;
- Use of the proximity of the port of Ruse to the airport of Bucharest;
- Resumption of scheduled flights to/from Ruse airports, which would significantly change the situation for all ports in this part of the Danube - Ruse, Svishtov, Tutrakan, Silistra;

12. SUMMARY AND CONCLUSION

Globally, cruise tourism is booming. All major markets are growing, with the expansion of the cruise tourism audience ensuring sustainability for its upward trend.

Against this background, river cruise tourism on the Danube is in a strong competitive position - the Danube River is the world's leading river cruise destination, attracts the largest number of tourists and has a constantly expanding modern fleet.

However, the current development is marked by a serious imbalance - the Upper Danube concentrates the major part of the infrastructure (ports and berths) and attracts the main portion of the operators' interest (by number of programs), respectively, attracting over 80% of the main portion of the tourists. This concentration already has its negative effects in the form of congestion at certain destinations and routes.

At the same time, in view of both the common policy for the development of the Danube Region as a single tourist destination, as well as in terms of the potential for the development of cruise tourism, raising its intensity and expanding its "map", the accelerated development of cruise tourism in the Middle and Lower Danube is the main perspective for its future in territorial terms.

Given the poor starting position of these sections of the river, a number of measures are required concerning all elements of the cruise tourism product, and the main recommendations include:

- Compensating for port density slow development by integrating new ports, and through implementation of partnership models with cruise companies;
- Better port planning in terms of passenger mobility (terminals, parking, bus/coach entry and exit, routes etc.);
- Better planning by urban authorities for the mobility for all types of tourism and from all sources (stations, bus routes, public parking lots)
- Better urban infrastructure, but also links to major entry points (including airport - port, etc.).
- Encouraging the tourists to the Middle and Lower Danube by diversifying the programs:
 - separate programs in this section of the river (e.g. Belgrade - Delta; Vidin - Delta; Giurgiu / Fetesti - Belgrade).
 - extended programs - cruise + on shore program before/after the cruise
- Expanding the offering of additional excursions, especially for those with eco-orientation and active recreation
- Modernisation of existing services by introducing innovative forms of offering;

- Development of thematic excursions in different areas and for different market segments;

Beyond territorial considerations, cruise tourism in the region needs a much more synchronised and targeted framework for its development, including:

- Strategic planning at EU level similar to that for maritime and coastal areas;
- Establishing a reliable model for monitoring tourism development, by introducing effective statistical monitoring procedures and periodic surveys of cruise tourist traffic;
- Synchronisation of cruise tourism legislation between countries;
- Improving the partnership between business and administration, especially at national and macro regional level;
- Promoting synergy between cruise operators, local businesses and city/port authorities;
- Encouraging regional cooperation between cities/ports in order to create a route/program in one diverse destination instead of individual ones;
- Joint marketing activities for the promotion of the region in accordance with the main markets and tourist profiles;
- Raising the awareness of the economic benefits of cruise tourism, but also of the possibilities for their distribution.