CRUISE TOURISM IN THE CONTEXT OF GLOBAL TRANSFORMATIONS AND CHALLENGES: THE UAE EXPERIENCE

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1. Specificity and Classification of Cruise Tourism

Cruise tourism is a specific form of travel that involves recreation aboard a cruise vessel under the "all-inclusive" system for a duration of at least 24 hours along a defined itinerary, featuring calls at several sea or river ports and cities. This type of tourism is characterized by a high concentration of a large number of travelers simultaneously visiting the same destinations. On the one hand, cruise tourism represents one of the most dynamic sectors of the global hospitality industry; on the other hand, it generates a significant anthropogenic footprint on the natural environment and often yields limited economic benefits for host destinations.

Waterway transportation has been known since ancient times; however, maritime and river travel reached a significant peak during Antiquity and the Middle Ages. The first large-scale expansion of seafaring occurred thanks to the Phoenicians and ancient Greeks. Among the earliest navigators of that period were Irish monks. In particular, Saint Brendan (6th century), who is considered a patron saint of Ireland, was one of the first Europeans to forge a westward sea route, as reflected in medieval sagas. A vital contribution to the development of maritime navigation was also made by Scandinavian peoples (Norsemen), who built reliable "river-sea" vessels up to 30 meters in length and 4 meters in width (Antonenko, 2016).

The Age of Discovery and the formation of new trade routes contributed to the emergence of leading maritime powers—Spain, Portugal, and the Netherlands. The next stage in the development of water transport was the invention of the steamboat by Robert Fulton in 1807, which provided a powerful impetus for the growth of passenger and cargo transportation (Durovich, 2003).

Furthermore, maritime transport market participants provide international, intercity, and cabotage services. International maritime transport encompasses cross-border movements of passengers and cargo; cabotage operations are conducted between ports of a single country along its coastline, while inland waterway transport (by barges and river vessels) is carried out via rivers, lakes, reservoirs, and canals.

By the late 20th century, the cruise industry had transformed into the most dynamic sector of global tourism. Its specificity lies in the comprehensive integration of recreational, sports, health, and educational components within a capital- and labor-intensive tourism product.

In essence, a sea cruise is a journey (typically along a circular itinerary) that begins and terminates at a designated port (Shcherbyna, 2009, pp. 56–59).

More than 80 cruise companies operate in the global market, including American, Greek, Italian, Spanish, Danish, Norwegian, and others. Industry leaders include operators such as Royal Caribbean International, Princess Cruises, Costa Cruises, Norwegian Cruise Line, among others. The growth dynamics of the cruise market are corroborated by statistical data: while in 1980 the number of cruise passengers stood at 1.5 million, by 1993 it rose to 4.5 million, reaching 6.5 million in 1996, 9 million in 2003, and hitting 12 million in 2006. The global cruise fleet expanded accordingly: from 120 units in 1985 to 387 in 2006, with 350 active large ocean cruise ships in 2026. Following a temporary downturn caused by the global pandemic, the industry demonstrated record rates of recovery: according to the Cruise Lines International Association (CLIA), ocean passenger volume reached 34.6 million in 2024, set a new historical record of 37.2 million in 2025, and is expected to grow to over 38 million travelers in 2026, with an overall total of more than 320 operating ocean liners (Cruise Lines International Association, 2025).

The development of the cruise fleet is characterized not only by quantitative but also by qualitative expansion. Similar to the hotel industry, cruise ships are classified based on their level of comfort, service quality, cabin amenities, infrastructure, dining options, and entertainment programs:

- Standard (2*–4*);
- Premium (5*–5*+);
- Luxury / De-luxe (6*).

Ocean cruise ships are also classified by tonnage (the internal volume of the vessel, where 1 gross ton equals 100 cubic feet):

- Large (over 60,000 gross tons);
- Medium-sized (up to 60,000 gross tons);
- Small / Low-tonnage (up to 25,000 gross tons).

A major trend of the 21st century has been the construction of megaliners. A prime example is the *Queen Mary 2*, launched in 2003 (displacement: 150,000 tons; height above the waterline: 70 meters; passenger capacity: 2,620 passengers).

The classification of cruise itineraries by duration divides them into:

- Short-term (from a few hours to several days);
- Medium-term (from 5 to 13 days);
- Long-term (from two weeks to two months or more) (DP World, 2023).

Cabins on cruise liners vary significantly in area, amenities, and level of comfort, which determines the pricing structure. The main categories are:

- Economy (interior/inside cabins without windows, with artificial lighting);
- Standard (oceanview/outside cabins with a window or porthole);
- Premium / Luxury (cabins with a balcony or multi-room suites).

Leisure organization holds a special place in the cruise product: clubs, concert halls, casinos, and sports complexes operate on board. A significant advantage for passengers is also the simplified visa regime: in many countries (including the UAE), cruise tourists can remain in port and go on excursions for 48–72 hours without obtaining transit visas (DP World, 2023).

The legal regulation of maritime tourist transport is carried out on the basis of national legislation and international legal acts, among which the key ones are:

- The Athens Convention relating to the Carriage of Passengers and their Luggage by Sea;
- The International Convention for the Safety of Life at Sea (SOLAS);
- The International Convention for the Unification of Certain Rules Relating to the Carriage of Passengers by Sea (Durovich, 2003).

The specificity of cruise tourism lies in the fact that the vessel serves not only as a means of transportation, but also as a floating hotel, entertainment center, dining venue, and recreational facility. Based on the operating environment, cruise tourism is divided into maritime (ocean) and river cruise tourism (Fig. 1).



Fig. 1. Types of cruise tourism (Boyko, 2002, pp. 108–113)

When designing a tourism product, tour operators must consider the recreational and resource potential of aquatic areas. To ensure competitiveness, vessels must meet modern consumer demands (Durovich, 2003). Scholarly works by V. I. Nikiforov, H. Y. Rohlev, and other researchers highlight key approaches to the systematization of the passenger fleet (Table 1).

Table 1. Types of Passenger Water Transport Facilities (Slobodeniuk, 2004)

Types of Passenger Water Transport Facilities	**Characteristics**
Regular liner passenger ships	Transportation within a state's coastal territorial waters.
International regular line passenger ships	International voyages between ports of different states or between ports of the same state, but with a call at a port of a foreign state.
Cruise ships	5-to-15-day and longer voyages with calls at several ports of different states and short-term (1–2

Types of Passenger Water Transport Facilities	Characteristics
	days) stops.
High-speed and other specialized vessels	Passenger ferry services — hovercraft, catamarans, hydrofoils; sailing vessels, including training and excursion vessels.

According to the classification of the Cruise Lines International Association (CLIA), five main types of cruises are distinguished by service level and price category (Table 2).

Table 2. Types of Cruises According to the CLIA Classification (DP World, 2023)

Cruise Type	Characteristics
Contemporary (Classic) Cruises	Dominate the international market. Vessels are new or refurbished, fully meeting modern requirements for design, comfort, and service: featuring spacious cabins, large open decks, swimming pools, solariums, sports grounds and halls, beauty salons, shops, nightclubs, and casinos.
Premium Cruises	Tailored to discerning clients with heightened demands for service and comfort. Personalized service is offered to tourists.
Luxury Cruises	Designed for affluent tourists holding high social status. These operate essentially as private, exclusive clubs.
Exclusive Cruises	The highest quality is evident in everything: ultra all-inclusive service, a staff-to-passenger ratio of 1:1, spacious cabins, interiors designed by leading designers, collections of fine art, and personalized care for every passenger. The geography of this category tends toward exotic destinations. Vacations on luxury cruise liners are valued higher than stays in any fashionable hotel.
Special (Thematic) Cruises	Centered around a specific theme; thematic cruises are tailored to customer preferences.

By shore excursion organization, two main systems are distinguished:

- European system: Focused on an extensive excursion program at ports of call (covering up to 60% of the global cruise market).
- American system: Prioritizes beach and recreational leisure at ports of call (Arion, 2008).

Thus, a sea cruise is a comprehensive tourism product that combines transportation on a specialized passenger vessel, accommodation, dining, entertainment, and excursion programs (Regional Economic Systems, 2007).

Specifics of Classification and Analysis of Cruise Tourism

Analyzing cruise tourism as an integrated market segment requires examining both the specifics of consumer behavior and the internal infrastructure of cruise ships.

In essence, a modern cruise liner is a "floating hotel" of a high comfort category, the infrastructure of which ensures the full lifecycle and leisure needs of passengers (Datsko, 2004).

Sociological and marketing studies of consumer motivations indicate that the primary factors in choosing a cruise tour are the recreational and health-improving effects of being at sea, psychological relaxation, and the opportunity to combine leisure with an intensive cultural and educational program (visiting new cities, historical and cultural landmarks, museums, etc.). According to the World Tourism Organization (UNWTO) and CLIA, the demographic profile of the cruise tourist is undergoing a gradual transformation toward a younger demographic: while the average passenger age previously exceeded 50 years, it currently stands at approximately 45 years. In terms of duration, itineraries ranging from 7 to 14 days are the most popular, although the range varies from short 3–5-day tours to round-the-world voyages (exceeding 30–90 days). The income level of ocean cruise passengers is classified as high and ultra-high, whereas the river cruise market is predominantly oriented toward the middle class.

A comprehensive analysis of cruise tourism operations should ideally be conducted across key areas that encompass both onboard activities and the external market environment (Table 3).

Table 3. Areas of Systemic Analysis of Cruise Tourism Functioning (State Statistics Service of Ukraine, 2003; Chernyshenko, 2007)

Area of Analysis	Main Components and Indicators
Cruise Product Realization (Sales)	Cruise market analysis, activities of tour operators and travel agents, distribution networks, marketing strategies, loyalty programs.
Onboard Service Organization	Hotel Department management, division of responsibilities, corporate culture, staff recruitment and adaptation.

Area of Analysis	Main Components and Indicators
Passenger Service	Compliance with international quality standards, cabin service quality, restaurant service, "all-inclusive" concept.
Supply Chain Management	Logistics of food supplies and material-technical resources, quality control, operation of supply services in ports.
Safety, Healthcare, and Ecology	Ensuring navigational safety, medical and wellness programs, risk assessment, compliance with MARPOL environmental regulations.

The industry-specific nature of cruise tourism lies in the fact that the vehicle simultaneously serves as an accommodation, dining, and entertainment establishment. The key features that fundamentally distinguish the cruise product from other types of tourism leisure include (Shelemetieva, 2008; Hwiler, 2009):

- Multifunctionality of the vessel: the liner acts as a means of transportation and a 4*–5*+ category hotel, where cabins correspond to rooms in high-end hotels;
- "All-Inclusive" concept: the base tour price includes accommodation, meals (including 24-hour buffet restaurants), and most entertainment activities;
- High density of leisure options: a wide range of onboard infrastructure facilities is offered (theaters, concert halls, SPA salons, fitness centers, swimming pools, casinos, kids' clubs);
- Optimized route geography: overnight transits between ports allow tourists to explore new destinations daily without wasting time on daytime transfers;
- Comprehensive shore-side services: organization of excursion programs, provision of guide-interpreter services, vehicle rental options, etc.

From a structural perspective, the cruise product as a system-forming complex of services is divided into three key subsystems (Arion, 2008):

Onboard services: accommodation, restaurant dining, sports and wellness, entertainment, and retail services (specifically Duty-Free shops).

Port of call services: shore excursions, transfers, and visits to recreational and cultural attractions.

Promotion and support services: agency booking services, visa support, medical insurance, flight bookings, and pre-cruise hotel accommodations.

Modern ocean liners are equipped with innovative technical motion-damping systems (active stabilizers and roll damping systems), which minimize discomfort during storms (Sosnin, 2011).

The cruise fleet features a clear classification of passenger cabins:

- Inside cabins: rooms without natural lighting (the most budget-friendly category);

- Oceanview cabins: rooms with a window or porthole offering an ocean view without balcony access;
- Balcony cabins: rooms with a private open-air veranda;
- Suites: multi-room or expanded high-comfort accommodations featuring panoramic glazing and personalized service (butler services).

The cost structure of a cruise package includes: port fees and taxes; accommodation in the selected cabin category; dining in main restaurants and buffet venues; access to swimming pools, jacuzzis, sports facilities, and fitness centers; attendance at evening shows, theatrical performances, and discotheques; as well as youth program services in age-specific clubs (Ukrainian Tourism Portal).

Additional charges apply for: alcoholic and select non-alcoholic beverages (unless an expanded drink package is purchased); dining at specialty restaurants (cover charge); SPA and salon services; shore excursions; onboard Internet access (Wi-Fi); service charges (crew gratuities); personal purchases in Duty-Free shops; and casino gambling chips.

The crew structure of a cruise liner is divided into two primary divisions: the marine crew (Deck & Engine Department — captain, navigation officers, engineers), responsible for navigational safety, and the hotel staff (Hotel Department), which provides passenger services (Bozhydarnik, 2011). The staff-to-passenger ratio serves as an important indicator of a vessel's class: on standard-class liners, it is approximately 1:3 or 1:2, whereas on luxury-class ships, it approaches 1:1.

An important legal and organizational advantage of sea cruise tourism is the simplified transit stay procedure for passengers at ports of call. In accordance with international maritime law (Convention on Facilitation of International Maritime Traffic — FAL), cruise tourists who reside onboard and return to the vessel prior to its departure are entitled to visa-free shore leave for 24 to 72 hours based on a general passenger manifest (Fedorchenko, 2000).

Thus, modern cruise tourism is a high-tech, capital-intensive, and customer-oriented sector of international tourism that integrates transportation, hospitality, and entertainment technologies into a single comprehensive tourism product.

2. Specifics and Geography of Cruise Tourism in the UAE

The United Arab Emirates (UAE) is one of the key and most dynamic cruise hubs in the Middle East region and globally. A long-term infrastructure investment strategy, a drive toward economic diversification, and high hospitality standards have transformed the country into a leading maritime tourism center. Owing to its advantageous geographical location and modern deep-water ports, the UAE serves as a primary home port and transit hub for international cruise lines.

At the same time, the current stage of cruise tourism development in the region is accompanied by new challenges. Escalate geopolitical tensions in the Middle East and security risks around key maritime arteries (in particular, the Strait of Hormuz) create additional logistical barriers, forcing cruise companies to adapt itineraries, revise ship redeployment schedules, and enhance safety measures. Nevertheless, despite temporary fluctuations and risks, the UAE's potential as a powerful

infrastructure hub remains robust due to the tourism sector's resilience, a high level of domestic security, and strong state support for the industry.

In the regional dimension, cruise itineraries originating from base ports in the UAE are categorized into the following main types:

- *Persian (Arabian) Gulf Cruises*: the most popular regional destination, involving port calls in the UAE (Dubai, Abu Dhabi, Sir Bani Yas), Qatar (Doha), Bahrain (Manama), and Oman (Khasab, Muscat).
- *Gulf of Oman and Arabian Sea Cruises*: itineraries designed to explore the Omani coast (Muscat, Sur, Salalah) and incorporate the eastern coast of the UAE (Fujairah).
- *Repositioning and Transcontinental Cruises (Red Sea and Indian Ocean*): long-distance itineraries connecting the Emirates with ports in Egypt, Jordan, and Saudi Arabia (via the Red Sea and the Suez Canal to the Mediterranean) or with countries in South and Southeast Asia and the Indian Ocean region (India, Sri Lanka, the Maldives, the Seychelles).
- *Local Excursion and Sightseeing Aquatorial Cruises*: short-duration boat trips and coastal routes along the coastline of the emirates (including Dubai's internal man-made waterways — Dubai Creek, Dubai Water Canal, and Dubai Marina).

The duration of cruise tours varies from short programs (3–5 days) to full-scale regional itineraries (7–14 days) and transcontinental repositioning voyages (exceeding 21 days).

Table 4. Classification and Typology of Cruise Tourism in the UAE

Type of Cruise Tourism	**Geography and Typical Itineraries**
Regional Maritime Cruises (Persian Gulf)	Dubai – Abu Dhabi – Sir Bani Yas Island – Doha (Qatar) – Muscat (Oman) – Dubai
Coastal and Sightseeing Cruises	Marine and canal cruises: Dubai Marina – Palm Jumeirah – Dubai Water Canal
Transit Cruises via the Indian Ocean	Dubai – Muscat – Mumbai (India) – Colombo (Sri Lanka) – Malé (Maldives)
Thematic and Shopping Cruises	Specialized tours focusing on festivals, shopping, and cultural events (Dubai – Abu Dhabi – Muscat)
Expedition and Coastal (Cabotage) Cruises	Routes visiting nature conservation areas and the eastern coast: Dubai – Khasab – Fujairah

The development characteristics of cruise tourism in the UAE are directly determined by its physical-geographical and geo-economic position. The country is situated in the southeastern region of the Arabian Peninsula (Southwestern Asia) and

comprises seven emirates: Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al Quwain, Ras Al Khaimah, and Fujairah. To the west and south, the UAE borders Saudi Arabia, and to the east, it borders Oman. The country's northern coast is washed by the waters of the Persian Gulf, while its eastern coast faces the Gulf of Oman (Indian Ocean).

Located at the crossroads of the most vital maritime trade and passenger routes connecting Europe, Asia, and Africa, the UAE serves as a strategic transportation and logistics hub.

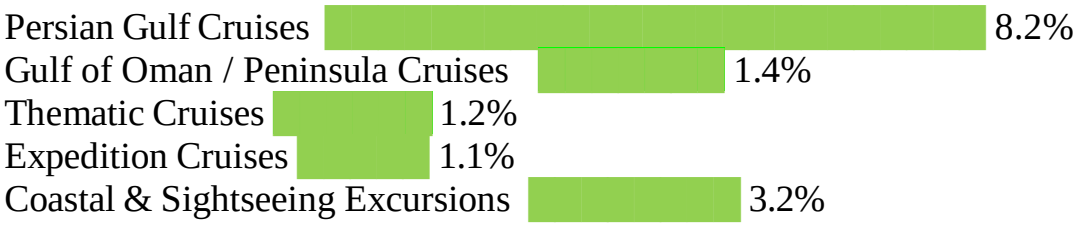


Fig. 2. Share of Tourist Flow in the UAE by Major Cruise Itineraries and Program Types, % (The Largest Port in the Middle East)

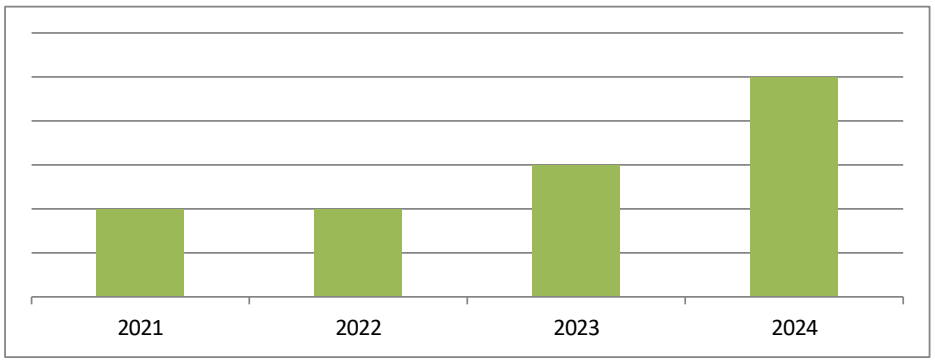


Fig. 3. Dynamics of Recovery and Growth of Tourist Flow in the UAE in 2021–2024 (compiled based on Ostakh, 2009; updated using UN Tourism reports)

UAE Port Infrastructure as the Foundation of Cruise Tourism Development

The maritime port infrastructure of the Emirates is among the most advanced in the world. To ensure the reception of cruise vessels of various classes and to optimize passenger flows, the country operates a network of specialized terminals (Table 5).

Table 5. Comparative Infrastructure Characteristics of Leading UAE Cruise Ports (Systematized based on data from port authorities DP World, AD Ports Group, and DET Dubai)

Port Name / Emirate	Capacity (Simultaneous)	Port Category in Itineraries	Specialization and Key Features
Mina	5–6 liners	Homeport /	Primary regional

Port Name / Emirate	Capacity (Simultaneous)	Port Category in Itineraries	Specialization and Key Features
Rashid (Dubai)		Transit	distribution hub, multimodal transportation node, one of the largest cruise terminals in the world
Dubai Harbour (Dubai)	2 Mega-class liners	Homeport / Transit	Modern hub for LNG-powered vessels, focused on the luxury segment and tourists from Dubai Marina
Zayed Port (Abu Dhabi)	3 liners	Homeport / Transit	Capital hub with seamless airline check-in services, direct access to the Saadiyat Cultural District
Sir Bani Yas (Abu Dhabi)	1–2 liners (tender disembarkation)	Stopover / Port of Call	The region's only island beach-and-eco cruise hub featuring a protected wildlife reserve area
Khor Fakkan (Sharjah)	1–2 liners	Port of Call	Indian Ocean itineraries, adventure tourism, bypassing the Strait of Hormuz

- *Mina Rashid and Dubai Harbour (Emirate of Dubai*): Dubai is the primary cruise hub in the Middle East. The Hamdan bin Mohammed Cruise Terminal at Mina Rashid is considered one of the world's most advanced facilities and is capable of simultaneously servicing up to seven large cruise liners. The port infrastructure is equipped with seamless transfer logistics, a duty-free retail network, dining complexes, and rapid connectivity to key city attractions (including the business district, Burj Khalifa, and Dubai Mall).
- *Mina Zayed (Emirate of Abu Dhabi*): The capital's port features a high-tech cruise terminal providing reception for international liners and servicing transit passengers. Abu Dhabi's port system also includes the region's only specialized stopover cruise island — Sir Bani Yas Cruise Beach, which combines beach leisure with a wildlife safari experience. Passengers are offered excursion programs to the Sheikh Zayed Grand Mosque, Louvre Abu Dhabi, and the Zayed National Museum.

- *Port of Fujairah (Emirate of Fujairah*): Situated on the eastern coast of the UAE along the waters of the Gulf of Oman. Owing to its direct outlet to the Indian Ocean (bypassing the Strait of Hormuz), the port holds significant geostrategic importance for repositioning and adventure cruises. It services both transit ocean liners and expedition cruises. Excursions are provided to historic sites, including Fujairah Fort and the country's oldest mosque, the Al Bidyah Mosque.
- *Port Saqr (Emirate of Ras Al Khaimah*): An emerging cruise hub in the northern part of the country, focused on the development of adventure, eco-, and heritage tourism (the Jebel Jais mountain range and archaeological sites).

Onboard modern cruise liners operating routes around the UAE (operated by companies such as Royal Caribbean Group, MSC Cruises, Costa Cruises, Celebrity Cruises, among others), passengers are provided with a full spectrum of hospitality, dining, and wellness-entertainment services across various comfort categories.

Factors Driving Tourism Industry Development in the UAE

The UAE's high competitiveness in the global tourism market is driven by a comprehensive set of factors (in accordance with The Travel & Tourism Development Index methodology):

State Policy and Regulatory Framework: The UAE government consistently pursues an economic diversification strategy aimed at reducing reliance on the oil and gas sector. The state provides a favorable investment climate, simplified visa regimes (including the introduction of multiple-entry cruise visas), and comprehensive support for infrastructure projects. Concurrently, the country maintains a well-defined legal system based on a combination of civil law and traditional norms, which requires foreign tourists to comply with public conduct regulations.

Safety and Sanitary-Epidemiological Resilience: According to personal safety indices, the UAE consistently ranks among the safest countries in the world. Low crime rates, the absence of internal political conflicts, and effective law enforcement are decisive factors in destination selection. Furthermore, the swift implementation of anti-epidemic standards during global crises enabled the country to become one of the first worldwide to recover its tourist flow.

Cultural-Historical Potential and Heritage: The Emirates' tourism product harmoniously combines authentic Arabian Eastern traditions with futuristic culture. Key sites include heritage villages (such as the Al Shindagha Historic District in Dubai), Al Fahidi Fort (Dubai Museum), the Sheikh Zayed Grand Mosque (Abu Dhabi), as well as numerous world-class galleries and museums.

Transportation System and External Connectivity: The central components of the transport system are internationally significant hubs — Dubai (DXB) and Abu Dhabi (AUH) airports — along with flagship carriers (Emirates, Etihad Airways) that ensure passenger flows from all continents. The domestic transport system is represented by a high-class road network, the driverless Dubai Metro, monorail systems, and an extensive taxi fleet.

Tourism, Hotel, and Catering Infrastructure: The UAE holds leading global positions in the quality of its hotel stock (ranging from business-class city hotels to

luxury resort complexes such as Burj Al Arab and Atlantis The Palm), the presence of Michelin-starred dining establishments, and high-tech amusement parks.

Development of Duty-Free Trade and Shopping Tourism: The presence of duty-free zones and the hosting of annual shopping festivals (e.g., the Dubai Shopping Festival) make the UAE a global hub for shopping tourism.

Innovations, Architecture, and Digital Technologies: The application of cutting-edge architectural technologies, the construction of iconic structures (ultratall skyscrapers, artificial islands), and comprehensive digitalization of tourism services (automated booking systems, contactless processing at ports and airports) shape the unique value proposition of the UAE's tourism product.

Natural Resource Potential of Cruise Tourism Development in the UAE and Ecological Challenges of Its Realization

The natural resource potential of the United Arab Emirates constitutes a fundamental prerequisite for the formation and development of cruise tourism in the region. It is determined by the country's geographical location, the characteristics of its marine waters, climatic conditions, and unique coastal and marine landscapes.

Core Components of Natural Resource Potential:

Physical-Geographical and Waters-Basin Position: The UAE possesses an extensive coastline exceeding 1,300 km, washed by the waters of two major marine basins — the Persian (Arabian) Gulf and the Gulf of Oman. Access to the Indian Ocean via the Gulf of Oman (the Emirate of Fujairah and the enclave of Khor Fakkan) provides strategic advantages for organizing ocean and repositioning cruises without the necessity of transiting the Strait of Hormuz.

Climatic Factor and Seasonality: The UAE's climate is tropical desert. Climatic conditions serve as the primary regulator of cruise tourism seasonality. The summer period (May – September) is characterized by extremely high air temperatures (reaching +45…+50 °C) and elevated humidity, which renders comfortable excursion services unfeasible and leads to the suspension of cruise navigation. Conversely, the "golden season" runs from October through April, when the average air temperature ranges from +22…+28 °C and water temperature ranges from +21…+25 °C. This creates ideal conditions for recreation and positions the UAE as one of the world's leading winter cruise destinations.

Island and Recreational-Coastal Resources: The natural-aquatorial potential is significantly expanded through natural and artificially created islands. Of particular importance is the natural island of Sir Bani Yas (Emirate of Abu Dhabi), which houses the Arabian Wildlife Park. It serves as the region's only specialized protected island-stopover (Cruise Beach Stopover), enabling the integration of maritime cruising with ecological tourism and safari experiences.

Anthropogenic-Landscape Attractions of the Coastal Strip: The visual framework of cruise itineraries during port approaches is formed by a combination of unique natural landscapes (marine waters, the Hajar mountain range in Ras Al Khaimah and Fujairah) and futuristic architecture (the Palm Jumeirah archipelago, the Burj Al Arab hotel, the Burj Khalifa tower, the Louvre Abu Dhabi museum). An additional point of interest for tourists is the berth of the historical museum-liner Queen Elizabeth 2 at Mina Rashid (Dubai).

Ecological Challenges and Sustainable Cruise Tourism Development: The intensification of cruise shipping in the UAE's waters is accompanied by significant anthropogenic pressure on the sensitive marine and coastal ecosystems of the Persian Gulf and the Gulf of Oman.

Key environmental risks include:

- *Air Pollution*: emissions of toxic substances resulting from the combustion of heavy marine fuel (marine gas oil / bunker fuel) are accompanied by large amounts of sulfur oxides, nitrogen oxides, and soot (black carbon), which pollute the atmosphere and impact the climate.
- *Impact on the Marine Environment*: risks associated with the discharge of ballast water and greywater, as well as acoustic pollution, which negatively affects marine fauna (particularly dugong populations, sea turtles, and coral reefs).

To mitigate negative environmental impacts, UAE government structures and port authorities (DP World, AD Ports Group) are implementing a "green cruising" strategy:

Transition to Alternative Fuels: the commissioning of the Dubai Harbour cruise terminal, specialized in servicing next-generation vessels powered by liquefied natural gas (LNG).

Shore Power Implementation (Cold Ironing): the deployment of technologies enabling ships to connect to shore-side electrical grids while docked in port, thereby allowing vessel engines to be completely shut down and reducing atmospheric emissions to zero.

Strict Environmental Control: compliance with International Maritime Organization (IMO) requirements regarding the limitation of sulfur content in marine fuels and the management of onboard waste disposal.

Competitive Environment, Environmental Risks, and Socio-Economic Effects of Cruise Tourism Development in the UAE

The regional market for cruise tourism in the Middle East is characterized by growing intra-regional competition. In addition to the United Arab Emirates, neighboring countries of the Persian Gulf and the Gulf of Oman — the Sultanate of Oman, Qatar, Bahrain, Saudi Arabia, and Kuwait — are actively developing their own cruise programs and infrastructure.

At the same time, governmental bodies across the region frequently employ a strategic cooperation model (particularly under the unified tourism brand Cruise Arabia). This enables the coordination of port call schedules and the creation of polycentric, integrated 7–10-day itineraries throughout the Persian Gulf and the Gulf of Oman, incorporating ports in Oman (Muscat, Khasab) and Qatar (Doha).

Socio-Economic Consequences of Industry Development

The development of cruise infrastructure exerts a comprehensive multiplier effect on the national economy of the UAE:

Positive Economic Effects:

Direct Revenues: According to the Dubai Department of Economy and Tourism (DET), regional ports serviced over 800,000 cruise passengers during the 2022/2023 season, generating a tangible inflow of foreign currency into the service sector.

Job Creation: The expansion of port terminals and service networks stimulates employment in port logistics, transport services, guiding services, and retail trade (duty-free).

Structural Risks and Limitations for the Local Economy:

Reduction in Length of Stay: Cruise passengers remain in port for an average of 8 to 24 hours, which is significantly shorter compared to traditional land-based tourists.

Redistribution of Consumer Spending: A substantial share of revenue from accommodation, dining, and entertainment remains in the hands of cruise operators onboard the vessel, thereby reducing potential profits for the local hospitality industry (HoReCa).

Environmental Responsibility and Regulatory Framework

The specifics of the Persian Gulf's coastal ecosystems — their relative shallow depth, limited water exchange, and the presence of sensitive natural sites (coral reefs, mangrove forests, and dugong habitats) — demand strict environmental control over shipping.

To reduce anthropogenic pressure, UAE government entities are implementing a comprehensive suite of preventive measures:

Stringent Shipping Standards: Mandatory requirements have been established regarding vessel compliance with International Maritime Organization (IMO) standards for wastewater treatment and ballast water management.

Adoption of Eco-Friendly Marine Fuel: The Persian Gulf destination was among the first where cruise lines began deploying next-generation vessels. Specifically, the cruise line MSC Cruises commissioned the *MSC World Europa*, a liner powered by liquefied natural gas (LNG). The use of LNG enables a reduction in carbon dioxide emissions of up to 25%, nitrogen oxide emissions by 85%, and the complete elimination of sulfur oxide and particulate matter (soot) emissions.

Price Segment Differentiation in Cruise Tourism

Pricing for cruise tours homeported in the UAE depends on the vessel class, itinerary duration, and the package of included services:

Standard / Mid-Range Segment (Mass / Premium Class): The cost of a 7–10-day cruise averages between $1,000 and $3,000 per person (including stateroom accommodation, meals, and the basic onboard entertainment program).

Luxury Segment (Luxury / Upper Luxury Class): The cost of specialized expedition or high-end luxury cruises ranges from $5,000 to over $10,000 per person, which encompasses personalized service, inclusive excursion packages, and premium amenities.

3. Efficiency Analysis of Cruise Tourism in the UAE

An economic efficiency analysis of cruise tourism in the United Arab Emirates demonstrates its high profitability and significant contribution to the national economy through the attraction of substantial tourist flows and the generation of ancillary revenues. At the same time, ensuring the sustainable development of this segment requires the mitigation of environmental risks, notably the minimization of marine ecosystem pollution and the preservation of natural resources. A distinct

strategic task is achieving a harmonious balance between the intensification of cruise tourism and the support of other tourism activities in the country.

The dynamic growth of the cruise segment is corroborated by the consistent measures undertaken by the leadership of the Emirates of Abu Dhabi, Dubai, and Sharjah to attract leading international cruise operators. The outcome of this policy is reflected in large-scale investments in the expansion of port and service infrastructure:

- In Abu Dhabi, a state-of-the-art cruise terminal has been commissioned in the Mina Zayed area;
- In Dubai, large-scale reconstruction and modernization of Mina Rashid are underway;
- In Sharjah, particular emphasis is placed on the development of port infrastructure in Khor Fakkan.

These infrastructure solutions are designed to accommodate over 700,000 cruise tourists during a single season, representing one of the highest figures in the Persian Gulf region.

An analysis of financial and economic indicators confirms the significant role of the cruise industry in ensuring the financial stability and economic diversification of the Emirate of Dubai. According to the Dubai Department of Economy and Tourism (DET), passenger traffic dynamics demonstrate steady growth: by 2024, the number of cruise tourists reached 625,000, exceeding 2020 figures by nearly 60%. This has driven significant activation across related economic sectors — the hotel industry, retail trade, transport, and the service sector.

According to statistical data from specialized agencies, direct revenue from cruise tourism in 2024 amounted to AED 338 million, with projected growth to AED 1.433 billion by 2025. In the long term, the cumulative financial effect of developing the cruise industrial cluster for Dubai's budget is estimated at up to AED 47 billion, underscoring the strategic importance of this sector for the implementation of large-scale regional economic programs.

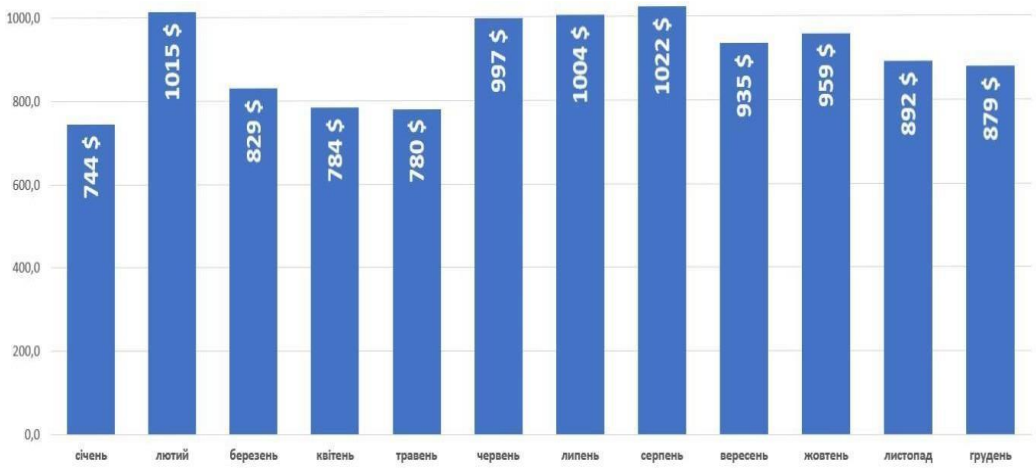


Fig. 3. Monthly dynamics of the average cost of tourist services in Dubai, United Arab Emirates (Dubai, United Arab Emirates)

An analysis of seasonal fluctuations in the cost of tourist services in the UAE demonstrates diverse trends throughout the year (Figure 3). While the general package tourism and hotel services market experiences price fluctuations under the influence of climatic factors (specifically, a decrease in demand and, consequently, prices during the spring-summer period due to high temperature readings), the cruise segment operates on an opposing cycle. The bulk of cruise calls and peak passenger traffic occur during the cooler months (from November to March), which balances the overall seasonality of the emirate's tourism industry and sustains high economic activity during the shoulder season.

The 2023–2024 period demonstrated a rapid recovery and growth of the industry, definitively cementing the United Arab Emirates' status as the leading maritime and cruise hub in the Middle East. A key catalyst for this success was the establishment of the Cruise Arabia regional alliance among the leading emirates (Dubai, Abu Dhabi) and neighboring Persian Gulf countries (Oman, Bahrain, Qatar, and Saudi Arabia) (Abu Dhabi Receives More Than 700,000 Cruise Visitors).

The functioning of the Cruise Arabia alliance and the introduction of visa facilitation initiatives (in particular, the concept of a single tourist space among the GCC countries) are opening new strategic horizons for the region. It is expected that through joint promotion and the optimization of the route network, passenger traffic in the Persian Gulf basin will demonstrate steady annual growth, and the duration of stay of cruise tourists in UAE ports will increase. In the medium term, this will ensure the reinforcement of the synergistic effect between maritime transport, air travel, and the emirates' ancillary tourism infrastructure.

A key factor in the resilience of the cruise sector is the high operational efficiency of its infrastructure. Dubai retains its status as the primary cruise hub of the Persian Gulf region thanks to the synergy and capacity of its two core marine terminals — Mina Rashid and Dubai Harbour.

An analysis of operational load indicators for 2024 demonstrates a large-scale handling of passenger traffic:

- The city's cruise sector facilitated the arrival and servicing of over 280,000 passengers;
- The high intensity of logistics processes is corroborated by data from Dubai Customs, which processed more than 1.23 million pieces of passenger baggage in the first 11 months of 2024 alone (Abu Dhabi, Dubai, regional maritime tourism authorities).

An assessment of operational volumes for 2024 confirms the high throughput capacity and technological readiness of the UAE's customs and port services for the further growth of the cruise market. The experience of handling such volumes of passenger traffic forms a solid foundation for achieving the long-term goals of the Dubai Economic Agenda D33 strategy, aimed at the further integration of the emirate's maritime and aviation transport hubs.

An important indicator of the destination's appeal is the number of ship calls. During the season, Dubai's port infrastructure was chosen for berthing by 187 large cruise liners, which confirms the high attractiveness of the location for leading global shipowners.

Traditionally, the winter cruise season in the UAE has a clearly defined starting point and high intensity. For instance, the official launch of the 2023–2024 winter season was solemnly inaugurated on October 28, 2023, with the arrival of the luxury liner Mein Schiff 2 at the port. During this winter period alone, about 150 regular calls by major international cruise operators were expected.

This momentum was greatly facilitated by active international promotion of the region, in particular the hosting of prestigious industry events (such as the launch of Connections Cruise Arabia initiatives in Dubai), which demonstrate to global players the broad opportunities for expanding cruise business in the Persian Gulf waters and strengthening B2B partner networks (Dubai marks start of 2023-2024 cruise season with first luxury liner docking at Mina Rashid).

Table 6. Typical Itinerary for a Winter Persian Gulf Cruise Homeported in UAE Ports

(systematized and developed by the author based on MSC Cruises and Costa Cruises schedules)

Day	**Port / Location (Emirate / Country)**	**Port Status**	**Itinerary & Key Attractions**
Day 1	Dubai (Mina Rashid / Dubai Harbour)	Port of Origin / Homeport	Boarding the liner, check-in, stateroom settlement. Evening panoramic view of Dubai, vessel departure.
Day 2	Abu Dhabi (Zayed Port)	Port of Call	Excursion program: Sheikh Zayed Grand Mosque, Saadiyat Cultural District (Louvre Abu Dhabi), capital sightseeing tour.
Day 3	Sir Bani Yas Island (Abu Dhabi, UAE)	Beach Stopover / Tender	Beach relaxation at a specialized cruise beach, jeep safari in the Arabian Wildlife Park.
Day 4	At Sea (Persian Gulf)	At Sea	Day at sea. Utilization of onboard recreational and entertainment infrastructure (SPA, swimming pools, sports grounds, show programs).
Day 5	Muscat (Oman)	International Port of Call	International visit: Sultan Qaboos Grand Mosque, Mutrah Souq, historical forts, introduction to Omani culture.
Day 6	Fujairah / Khor Fakkan (UAE)	Port of Call	Call at an east coast port (Indian Ocean): visits to historical forts, Al

Day	Port / Location (Emirate / Country)	Port Status	Itinerary & Key Attractions
			Bidyah Mosque, excursions to the Hajar Mountains.
Day 7	Dubai (UAE)	Transit / Overnight	Return to Dubai. Excursions to Burj Khalifa, Dubai Mall, Al Fahidi Historical Neighborhood. Overnight stay onboard the vessel in port.
Day 8	Dubai (UAE)	Disembarkation	Disembarkation from the vessel, transfer to the international airport (DXB/DWC), departure flight.

Key Success Factors of the Cruise Season:

An analysis of market performance allows for the identification of three main factors that have ensured the high competitiveness of the UAE in this industry:

High Level of Safety and Favorable Brand Image: According to international analytical reports from early 2025, Dubai and Abu Dhabi officially secured their status as among the safest cruise destinations globally. This proved to be a decisive factor in restoring and driving demand among the highest-spending categories of travelers from Western Europe and North America.

Infrastructure Convergence and Seamless Logistics: A substantial infrastructural advantage lies in the maximum integration of maritime and aviation transport. Specifically, the introduction of flight check-in services for Etihad Airways directly within the Abu Dhabi cruise terminal significantly simplified transit logistics under the Fly-Cruise scheme, reducing both time and procedural burdens for passengers.

Environmental Transformation and Decarbonization: In line with global sustainable development trends, the emirates have initiated the active implementation of green technologies within the port sector. Equipping cruise terminals with Shore Power connectivity allows vessels to minimize engine usage while birthed in port, substantially reducing greenhouse gas and pollutant emissions in coastal zones (Abu Dhabi Welcomes First Cruise Liner Commencing 2023-2024 Cruise Season).

Thus, the combination of a safe environment, a high level of infrastructure service, and environmental responsibility enables the UAE not only to maintain its leadership in the Persian Gulf region but also to serve as a benchmark for the development of modern, world-class maritime cruise clusters.

Special attention should be paid to the strategic decisions and well-thought-out tourism policy of the leadership of the Emirate of Sharjah — the third largest emirate in the UAE. Sharjah possesses unique geospatial advantages for servicing premium

ocean liners owing to its access to both the Persian Gulf and the Gulf of Oman, as well as its rich natural, cultural, and historical potential (Selivanov, 2009).

In accordance with current infrastructure plans and the established schedule of ship calls, the emirate is preparing to welcome over 67,000 cruise passengers aboard leading global liners during the season. The emirate's key asset in maritime tourism is the deep-water port of Khor Fakkan, located on the eastern coast of the UAE. Its advantageous geographical position enables cruise operators to optimize routes within the Gulf of Oman while bypassing the Strait of Hormuz. In contrast to Dubai, which focuses primarily on entertainment and shopping, Sharjah positions itself as the region's cultural capital, offering cruise tourists exclusive itineraries to cultural and historical sites, museums, and authentic nature reserves.

The systematic development of Sharjah's cruise capacities not only optimizes the UAE's national tourism product, but also ensures a balanced distribution of anthropogenic and logistical pressure across the country's seaports, significantly enhancing the cumulative synergistic effect of the Cruise Arabia regional alliance.

It is worth noting that the global cruise industry is demonstrating high recovery rates: while during the initial exit from the crisis the annual volume of global passenger transport stood at approximately 15 million people, in subsequent periods this figure reached 19 million guests. By investing in the development of modern marine terminals, the UAE leadership is executing a clear strategy to capture a significant share of this high-yield global market.

A study of port infrastructure utilization dynamics confirms the steady growth of interest among international operators in the Emirates. Specifically, in 2018, the Port of Dubai serviced over 800,000 cruise tourists, the Port of Abu Dhabi handled more than 300,000, and the Port of Fujairah processed over 200,000 individuals. In 2022, the UAE collectively welcomed about 800,000 cruise travelers, marking a crucial stage in market recovery. By 2023, these indicators had grown significantly: the Port of Dubai surpassed the 900,000 passenger mark, the Port of Abu Dhabi received over 500,000, and the Port of Fujairah maintained a stable volume of more than 200,000 individuals.

Sustaining this positive momentum, the UAE continues to systematically enhance its infrastructure to accommodate mega-liners and elevate safety standards. This has established a solid foundation for expanding the presence of leading cruise companies, which, starting from 2025, are deploying new exclusive itineraries and service offerings for international tourists in the region.

An analysis of the global context based on research data from the international marketing agency TMI Consultancy indicates that between 2020 and 2024, global cruise passenger traffic grew at an outstripping rate compared to the general indicators of the tourism industry. According to analytical estimates, cruise passenger volume increased from 24 million to 30.3 million individuals. By comparison, total international tourist arrivals (predominantly driven by land-based tourism) grew by 57% over the same period, reaching 1.087 billion tourists in 2024.

In the geographical structure of tourist flow generation, North America maintains leading positions: since 2020, passenger volume from this region has increased by 44%, securing a market share of 55.5% in 2023. Concurrently, a

significant intensification of the European market is observed, with its share rising from 22.5% in 2020 to 30.0% in 2023, while the aggregate share of other world regions over the past decade increased from 9.0% to 14.5%.

The dynamics of passenger flow segmentation indicate that during 2020–2024, outbound cruise tourism from Europe expanded by 65%, and from the rest of the world — by 43%. Over the subsequent three-year period, growth rates in the European segment stabilized at 43%, whereas the aggregate figure for the rest of the world demonstrated a surge of 101%, confirming the geographic diversification of global demand.

Indicators of aggregate capacity and cruise fleet berth capacity, calculated in passenger-nights (bed-days), have also demonstrated rapid positive dynamics. The total number of serviced passenger-nights grew by 84.2% — from 73 million in 2019 to 134.5 million in 2024. Within the European region, this indicator demonstrated a 172% growth over a decade (from 18.2 million to 49.6 million passenger-nights), with the expansion dynamics of the Northern European cruise basin significantly outstripping similar metrics for the Mediterranean region.

A comparison of these global trends with the dynamics of the United Arab Emirates market confirms that the UAE has successfully integrated into the global growth trend of cruise tourism. Through the reorientation of European and North American passenger flows during the winter period, the Persian Gulf has secured its status as a key alternative to traditional summer European routes.

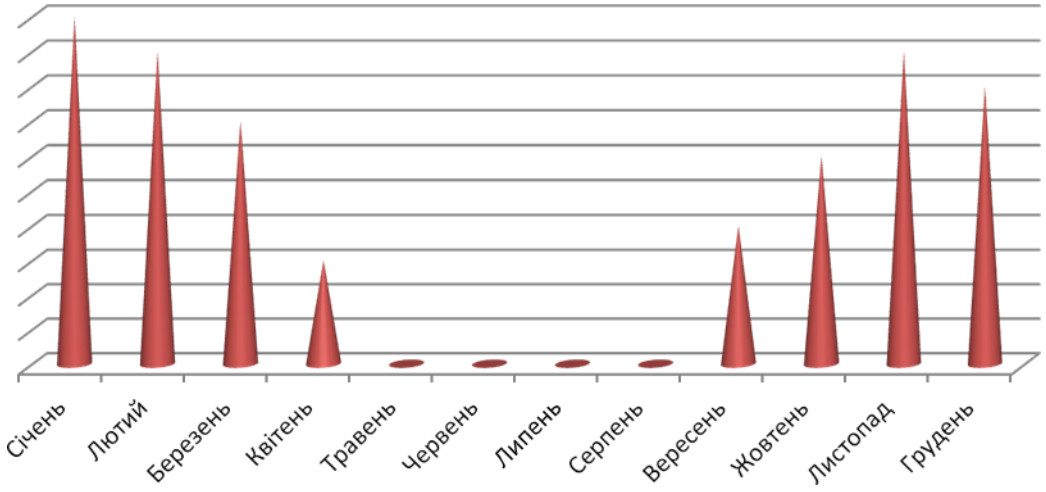


Fig. 4. Monthly cruise tourism attendance indicators in the UAE, 2023–2024 (Abu Dhabi Welcomes First Cruise Liner Commencing 2023-2024 Cruise Season)

A vivid confirmation of the operational specifics of the maritime cruise market in the United Arab Emirates is the monthly distribution of cruise ship call intensity (Fig. 4).

Unlike land-based tourism, the UAE cruise sector is characterized by a pronounced autumn-to-spring seasonality. Peak attendance indicators fall during the winter months — from November to March — with maximum operational load recorded in January and December. During this period, climatic conditions in the

Persian Gulf region are most favorable for sightseeing and recreational activities (Boiko, 2002).

With the onset of the spring-summer period (May–August), cruise activity in the ports of Dubai, Abu Dhabi, and Sharjah practically ceases, driven by high ambient air temperatures and the relocation of cruise liners by international operators to the Mediterranean and Northern Sea basins. From September–October, a gradual recovery of ship calls is observed, marking the beginning of a new cruise season.

Thus, the presented dynamics prove the necessity of accounting for the seasonal factor when developing port infrastructure management strategies and diversifying the UAE's tourism product.

Overall, the Caribbean and European regions currently account for over 70% of global cruise destinations. Alongside North America, the aggregate market of other regions demonstrates impressive dynamics, having grown by approximately 300% compared to 2018. This secured these regions about 16% of the global cruise passenger accommodation volume in 2023, accompanied by outbound growth in the Australian and Asian basins.

The efficiency of functioning and further expansion of the cruise industry require the formulation of a flexible marketing policy built on promoting the high qualitative value of the cruise product. Modern sales promotion concepts involve the active implementation of innovative B2B interaction tools. In particular, high efficiency is demonstrated by the application of specialized digital systems and intelligent agent bots that provide detailed viewing and personalization of recommended tours. In the process of partnership interaction with travel agencies, the key emphasis is placed on demonstrating the technological simplicity of sales processing and the competitive advantages of cruise vacations.

Under these conditions, institutional and infrastructural transformations in the emirates of Dubai, Abu Dhabi, and Sharjah, as well as the operation of the Cruise Arabia regional alliance, become an important driver for the integration of the Persian Gulf region into the global cruise system, transforming it into one of the most dynamic cruise clusters of global significance.

A key element of cruise product sales policy and the securing of high sales volumes in the cruise segment is reliability and long-term partnership cooperation between tourism agency market actors and end consumers. The continuous expansion and modernization of the global cruise fleet, the refinement of passenger vessel engineering and design solutions, the enhancement of comfort levels, and the design of new diversified itineraries serve as leading drivers of global demand stimulation. Modern superliners and next-generation vessels are capable of simultaneously servicing over 6,000 passengers, confirming the general trend toward increased passenger capacity and operational cost optimization for cruise operators. Overall, the 21st-century cruise industry is characterized by sustained positive growth and a high degree of market offer diversification (Boiko, 2002).

Modern cruise liners represent multifunctional floating resort and recreational complexes that provide tourists with high standards of accommodation, fine dining service, and organized leisure. The infrastructure of state-of-the-art vessels encompasses outdoor and indoor swimming pool complexes, sports grounds, golf

courses, concept restaurants, cinema and concert halls, helipads, as well as a wide array of entertainment and wellness facilities. Due to a high level of service and personalization, most leading cruise corporations record high customer loyalty metrics: the proportion of tourists opting for repeat cruise trips (repeat cruisers) consistently exceeds 80%, making this segment one of the most stable in the global hospitality industry.

Table 7 — Dynamics of Operational Indicators and Routing of Cruise Tourism in the UAE (2022–2024) (Connections Cruise Arabia launches in Dubai - showcasing major opportunities for cruise tourism expansion)

Year	Number of Cruises	Number of Passengers	Popular Routes	Average Cruise Duration
2022	30	60,000	Dubai — Muscat	7 days
2023	60	90,000	Dubai — Abu Dhabi	5 days
2024	30	100,000	Dubai — Bahrain	4 da

An analysis of the data in Table 7 demonstrates a pronounced transformation in the qualitative and quantitative characteristics of cruise tourism in the UAE waters between 2022 and 2024:

Growth in Passenger Capacity and Load Factor Efficiency: Despite the adjustment in the number of ship calls in 2024 back to 2022 levels (30 cruises each), total passenger traffic grew continuously — from 60,000 individuals in 2022 to 100,000 passengers in 2024. This indicates the deployment of higher-capacity vessels (next-generation liners) by cruise operators and an increase in average ship load factors.

Trends Toward Shorter Trip Durations: A clear trend is observed toward a decrease in the average duration of cruise tours — from 7 days in 2022 to 4 days in 2024. This aligns with the global trend of growing demand for short recreational trips (short breaks/micro-vacations), enabling tourists to more effectively combine maritime leisure with extended stays in the UAE metropolises (Fly-Cruise).

Geographical Diversification and Route Network Expansion: The dynamics of the most popular destinations demonstrate the expansion of cruise geography from cross-border lines with neighboring Oman (Dubai — Muscat in 2022) and cabotage inter-emirate routes (Dubai — Abu Dhabi in 2023) to the enhanced involvement of other Persian Gulf countries (Dubai — Bahrain in 2024), which is a result of regional integration development within the Cruise Arabia initiative.

The geographical structure of tourist flows in the UAE cruise sector is characterized by a high degree of diversification. The primary generator markets for passenger traffic are the countries of Western Europe, North America (primarily the

USA), and the Asia-Pacific region. At the same time, the intraregional market of Middle Eastern countries (specifically Saudi Arabia and Qatar) plays an increasingly prominent role, driven by the intensification of cabotage and short-term cross-border routes within the Persian Gulf. In terms of age demographics, cruise tourism in the UAE encompasses a broad spectrum. Despite the presence of both youth segments and senior tourists, the core target audience comprises consumers in the middle-aged group with high and upper-middle income levels, for whom comfort, leisure multimodality, and rich sightseeing programs are key priorities (Modern Types of Tourism, 2011).

The dynamics and structure of demand for the UAE cruise product among foreign tourists by major origin markets in 2021–2024 are systematized in Table 8.

Table 8 — Dynamics of Demand for Cruise Tourism in the UAE Among International Tourists by Country of Origin (2021–2024)
(The indicators reflect the estimated demand index according to TMI Consultancy data)

Country of Origin	**2021**	**2022**	**2023**	**2024**
United States	4.3	4.4	4.5	5.0
United Kingdom	2.8	3.0	3.5	4.3
France	1.8	2.0	2.4	2.5

A study of current trends in the operation of the global and regional cruise markets allows for the identification of strategically promising directions for its further development:

Focus on MICE Tourism and the Corporate Segment: Under current economic conditions, scaling MICE services (Meetings, Incentives, Conferences, Exhibitions) represents a major growth vector. Despite the tendency toward corporate budget optimization, cruise liners demonstrate high cost-effectiveness as venues for off-site seminars, conferences, and incentive trips due to the all-inclusive concept, which significantly minimizes ancillary costs associated with conference hall rentals, catering organization, and logistics.

Technologization and Distribution Innovation: In the digital age, a key requirement for tour operating entities is the implementation of high-tech solutions — ranging from innovative B2B/B2C online booking systems and multifunctional agent portals to mobile applications and technological service elements. A vital role is also played by the professional training of front-office personnel (Front-office sales), the reliability of dealership networks, and the continuous professional development of sales specialists (Boiko, 2002).

Ensuring Financial Sustainability and Business Planning: Notwithstanding the importance of human capital and creative marketing strategies, the fundamental

prerequisite for the long-term viability of tourism enterprises remains financial stability, rational planning, and cash flow optimization.

Overall, cruise tourism functions as a high-yield, self-sustaining, and highly adaptable sector of the global economy. The annual global turnover of the sector exceeds USD 15 billion, generating over 100,000 jobs aboard maritime vessels and 15,000 within onshore infrastructure, which confirms the industry's high degree of autonomy and its resilience to external economic fluctuations.

The outlined statistics for 2022–2024 clearly illustrate a qualitative transition of the UAE cruise industry from a phase of post-crisis recovery to one of large-scale strategic expansion. The baseline infrastructure established during this period laid the groundwork for the modern stage of the industry's development in 2025–2030, which is characterized by the following key trends:

- *Achievement of Strategic Targets under D33 and UAE Tourism Strategy 2031*: Starting in 2025, the cruise sector has become a major driver of non-oil GDP diversification, with the total economic impact of cruise tourism exceeding the projected mark of AED 1.433 billion.
- *Scaling of the Cruise Arabia Alliance*: The introduction of the unified GCC tourist visa in 2025–2026 has significantly reduced logistical barriers, transforming the Persian Gulf region into a single, seamless cruise space analogous to the Schengen Area.
- *Transition to Decarbonization Standards*: The implementation of shore power supply infrastructure at Mina Rashid, Dubai Harbour, and Zayed Port, alongside the reorientation toward accommodating liquefied natural gas (LNG)-fueled vessels, has solidified the UAE's status as a regional leader in sustainable (green) maritime tourism.

Therefore, a chronological analysis of indicators for 2022–2024, combined with the current achievements of 2025–2026, confirms that the United Arab Emirates has successfully transformed from a seasonal destination into one of the world's leading homeport and transit cruise hubs amid ongoing global transformations and challenges.

REFERENCES

Antonenko, I. Ya., & Melnyk, I. L. (2016). *Formuvannia innovatsiinoho produktu kruiznoho turyzmu*. Kyiv.

Durovych, A. P. (2003). *Marketynh u turyzmi*. Novoe Znanie.

Shcherbina, T. V. (2009). Vtecha z sushii. *Voyazh ta Vidpochynok*, 6, 56–59.

Burkynskyi, B. V. (Ed.). (2007). *Rehionalni ekonomichni systemy v ekonomichnomu, sotsialnomu ta ekolohichnomu prostori.* Institute of Market Problems and Economic-Ecological Research of the National Academy of Sciences of Ukraine.

Datsko, S. K. (2004). Rynok pasazhyrskykh perevezen: prohnozy ta tendentsii. *Sudnoplavstvo*, 7–8, 20.

Prymachev, N. T., et al. (2004). *Ekonomichni osnovy funktsionuvannia morskoho rynku transportnykh posluh*. Autograph.

Boiko, M. H. (2002). Sut i zavdannia stratehii rozvytku turystychnykh pidpryiemstv v umovakh transformatsiinoi ekonomiky. *Visnyk DITB*, 6, 108–113.

Arion, O. V. (2008). *Orhanizatsia transportnoho obsluhovuvannia turystiv*. Alterpress.

Sosnin, A. V. (2011). Kruyiz po Dnipru — tse poiednannia richky ta moria. *Flot ta Kruyizy*, 9.

Lohunova, N. A. (2013). Svitovyi rynok kruiznoi industrii: osoblyvosti formuvannia ta perspektyvy rozvytku. *Visnyk Berdianskoho Universytetu Menedzhmentu ta Biznesu*, 2(22), 29–34.

Chernyshenko, A. (2007). Formuvannia stratehii staloho rozvytku turyzmu i kurortiv. *Kruhlyi Stil*, 12, 20.

Bozhydarnik, T. V. (2001). *Mizhnarodnyi turyzmu*. LNTU Editorial and Publishing Department.

Kliap, V. P., & Shandor, F. F. (2011). *Suchasni rinovydy turyzmu*. Znannia.

Selivanov, V. (2009). Pro deiaki natsionalni osoblyvosti perspektyvnoho rozvytku mizhnarodnoho kruiznoho sudnoplavstva. *Morskyi Biznes Novyny Ukrayiny*, 12, 24.

Slobodeniuk, E. V. (2004). *Ukraina u svitovomu turystychnomu prostori: priorytety mizhnarodnykh zviazkiv*. KUTEP.

Ostakh, V. M. (2009). Populiarni rehiony kruiznoho turyzmu. *Navkolo Svitu*, 19, 15–19.

Khviler, Ya. (2009). Kruuizy zavzhdy v modi. *Turbiznes*, 13, 24–26.

Fedorchenko, V. K., & Minich, I. M. (2000). *Slovnyk-dovidnyk turystskykh terminiv*. Dnipro.

Tsypko V. V. (2025). Study of natural disasters as an obstacle to tourism development: a historical discourse. *Bulletin of KNLU. Series "History. Economics. Philosophy"*. 30, 180–192.

Abu Dhabi Department of Culture and Tourism. (2024). *Abu Dhabi tourism strategy 2030: Driving sustainable growth and economic diversification*. Government of Abu Dhabi.

Abu Dhabi Media Office. (2023). *Abu Dhabi welcomes first cruise liner commencing 2023-2024 cruise season*. https://www.adportsgroup.com/en/news-and-media/2023/11/01/abu-dhabi-welcomes-first-cruise-liner-commencing-2023-2024-cruise-season

Cruise Lines International Association (CLIA). (2025). *2025 State of the cruise industry report*. https://cruising.org/en/about-the-industry/research

DP World. (2023). *Mina Rashid: The largest cruise port in the Middle East*. https://www.dpworld.com

Dubai Media Office. (2023). *Dubai marks start of 2023-2024 cruise season with first luxury liner docking at Mina Rashid*. https://www.mediaoffice.ae/en/news/2023/november/02-11/dubai-marks-start-of-2023-2024-cruise-season-with-first-luxury

Gulf News. (2012). *Abu Dhabi, Dubai, regional maritime tourism authorities form 'Cruise Arabia' alliance to promote cruise tourism.* https://gulfnews.com/business/tourism/abu-dhabi-dubai-regional-maritime-tourism-authorities-form-cruise-arabia-alliance-to-promote-cruise-tourism-1.101504739

Ministry of Economy, UAE. (2022). *UAE tourism strategy 2031*. United Arab Emirates Government Portal. https://u.ae/en/about-the-uae/strategies-initiatives-and-awards/federal-governments-strategies-and-plans/uae-tourism-strategy-2031

Travel & Tourism News Middle East. (2024, March 10). Exploring the UAE's dynamic cruise market: Trends, sustainability, and regional expansion. *TTN Worldwide*, 46(3), 18–21.

Vaggelas, G. K., & Lagoudis, I. N. (n.d.). *Analysing the Supply Chain Strategy of the Cruise Industry: The case of a Small Cruise Company*. www.porteconomics.eu

Zawya. (2023). *Connections Cruise Arabia launches in Dubai - showcasing major opportunities for cruise tourism expansion*. https://www.zawya.com/en/press-release/events-conferences/connections-cruise-arabia-launches-in-dubai-showcasing-major-opportunities-for-cruise-tourism-expansion-508817

ABSTRACTS

Section 1. Historical aspects, evolution, and modern transformations of key destinations

***Vadym Orekhovskyi*. Tourism in the Ancient World: Features of Development in Ancient Greece and Rome**. The aim of the study is a comprehensive analysis of the development of travel and early forms of tourism in Ancient Greece and the Roman Empire. It reveals the main conditions of travel in the ancient world: the condition of roads, means of transport, the features of sea travel, as well as the risks associated with robbery and piracy. Considerable attention is paid to the social aspects of travel, in particular the institutios of hospitality and the formation of the first elements of tourism infrastructure. The author examines in detail different types of travel: religious, sports, health, educational, trade. It is shown that such travel was an important component of the cultural, economic and religious life of ancient societies. The emergence of elements of tourist culture - souvenirs, graffiti, guide services and the emergence of specialized travel routes - is highlighted. In general, the study demonstrates that in the ancient world there were already numerous features inherent in modern tourism.

***Vasylchuk Volodymyr*. Historical aspects of the evolution of tourism in Germany.** The section explores the genesis, evolution, and current state of the tourism sector and the hotel industry in Germany in the context of world civilization development and globalization processes. The transition from spontaneous travel to organized tourism under the influence of industrialization and the expansion of railway and shipping transport is examined. The evolution of theoretical approaches to tourism studies (ranging from early German-language concepts of Fremdenverkehr to modern interdisciplinary research) is analyzed. Special attention is paid to the philosophical and anthropological aspects of travel through the concept of Homo viator, as well as the role of sacred texts and pilgrimage in the historical development of journeys.
The stages of the formation of the hospitality industry are highlighted—from ancient and medieval roadside taverns and monastic shelters to luxury grand hotels and modern hotel chains. The regional specifics of tourism development in the federal states of Germany are investigated, focusing on the role of the exhibition business, gastronomic and wine tourism (features of German winemaking and traditional festivals such as Oktoberfest), as well as health, wellness, and sanatorium-resort potential. A statistical and economic analysis of the relationship between regional GDP and tourism development indicators is carried out. The activities of leading

industry associations and the state policy supporting and regulating the tourism sector at the present stage are characterized.

***Tsypko Victoria*. Cruise Tourism in the Context of Global Transformations and Challenges: The UAE Experience**. This section of the monograph highlights the theoretical and methodological foundations and current development trends of cruise tourism as a highly dynamic element of the global hospitality industry. The evolution of water journeys, the specifics of cruise product classification, as well as key organizational, legal, and marketing aspects of marine and river tourism operations are examined. Special attention is focused on analyzing the infrastructure potential, route geography, and consumer behavior patterns on a global scale.

Using the United Arab Emirates as a case study, the prospects of transforming the region into a leading global cruise hub are comprehensively analyzed. The role of key port terminals (Dubai, Abu Dhabi, and Sharjah) and the Cruise Arabia regional alliance in developing multimodal logistics and the «Fly-Cruise» system is determined. The socio-economic impact of the industry, the influence of seasonality, and environmental safety challenges are assessed, alongside outlining strategic directions for the sustainable development of cruise tourism taking into account modern trends in decarbonization and digitalization.

***Borysova Oksana.* Sightseeing Objects in the Area Studies of France**. The monograph examines the theoretical and practical aspects of studying France's excursion sites within the context of country studies and the development of excursion tourism. Particular attention is devoted to the historical-cultural, sacred, and memorial dimensions of the country’s tourism space, which allows for revealing the multifaceted nature of its national heritage, the specifics of cultural memory formation, and the significance of material and immaterial values in preserving historical identity. Within the framework of the research, necropolis excursion sites are considered as sources of historical information and components of the cultural landscape, along with France's sacred natural and cultural heritage as an important resource for educational tourism.

A special place is occupied by the study of memorial locations associated with the life and activities of prominent representatives of Ukraine, which contributes to deepening the understanding of Ukrainian-French cultural interrelations and actualizes the potential of such sites in the development of thematic excursion routes aimed at fostering international cultural dialogue.

Section 2. Economic impact, specialized types, and regional specificities

Shcherbakova Nadiia. **The Impact of International and Domestic Tourism on the US Economy**. This work examines the impact of international and domestic tourism on the economy of the United States of America. It analyses trends in tourist flows, expenditure, value added and employment, and identifies the role of tourism in the development of transport infrastructure, the hotel and restaurant sector, the retail trade and the entertainment industry. The paper examines the characteristics of the recovery of tourism following the COVID-19 pandemic, current trends in international and domestic tourism demand, as well as the main challenges and prospects for the development of the US tourism industry. It substantiates the cross-sectoral nature of tourism and its significance for economic growth, job creation and regional development.

Lavrynovych Olena. **Theoretical Foundations and Dimensions of Inclusive Tourism Implementation: The Spanish Experience**. The study provides a comprehensive theoretical and methodological examination of inclusive tourism as an integral component of the contemporary socially oriented development of the tourism sector. It analyzes the evolution of conceptual foundations of accessibility in tourism—ranging from socio-compensatory models and the «tourism for all» concept to modern universal approaches and the barrier-free paradigm, which is of particular relevance to Ukraine in the context of postwar recovery. The multifunctional nature of inclusive tourism is revealed, combining recreational, rehabilitation, and sociocultural functions, while ensuring the integration of universal design principles across all stages of tourism product creation. The core dimensions of inclusive tourism implementation—state-regulatory, infrastructural, organizational-managerial, sociocultural, and personal—are identified and characterized, forming a holistic analytical model for ensuring an accessible and barrier-free environment. Based on the generalization of international experience (specifically Spanish practices) and domestic realities, the study substantiates pathways for developing an inclusive tourism ecosystem that harmonizes public policy, digital technologies, transport infrastructure, and professional ethics to guarantee equal opportunities, mobility, and respect for human dignity.

Gedin Maksim. **Features of the Development of Cultural and Educational Tourism in China and Ukraine**. This paper examines the distinctive nature and uniqueness of the development of cultural and educational tourism in China and Ukraine. It analyses its key destinations and main trends, which characterise the significance and essence of this category. It has been established that, in addition to

its informational nature, this type of tourism is also cognitive, educational and elitist in character, promoting and explaining cultural ideas aimed at satisfying consumer needs through the use of tourism products. It has been established that both countries possess exceptionally rich resources; however, their tourism potential, infrastructure and management strategies differ significantly. The key factors for the successful development of cultural and educational tourism in China have been analysed, in particular government policy, strategic planning, infrastructure projects and the active digitalisation of the cultural sector. A comparative analysis has been carried out between the Chinese experience and the opportunities for Ukraine, where historical, cultural and religious tourism holds significant potential. The prospects for implementing China's best practices to develop Ukrainian cultural and educational tourism have been identified. Historical parallels and opportunities for the development of religious tourism in China and Ukraine have been established, using the example of the potential for organising pilgrimage tours within the framework of Buddhism, Taoism and the educational and cultural practices of Confucianism.

Ivasyshyna Nataliia. **Current State and Prospects for Tourism Development in Brazil**. The study examines the current state and development prospects of tourism in Brazil in the context of international tourism and the global services market. It considers the economic, social, and integration functions of international tourism and identifies the key factors influencing its development, including economic conditions, infrastructure, political stability, and security. Particular attention is paid to Brazil's significant tourism potential, based on its natural resources, cultural heritage, and opportunities for developing various types of tourism, including beach, ecotourism, cultural, educational, and event tourism. The study identifies the main challenges facing Brazil's tourism industry, such as security concerns, uneven infrastructure development, socioeconomic disparities, and environmental issues. A comparative analysis of Brazil, Mexico, and Spain highlights Brazil's relative disadvantages in tourism infrastructure and the scale of international tourist flows, while also demonstrating its considerable potential for future growth. The results of PEST and SWOT analyses confirm that effective government policies and investment support can contribute to strengthening Brazil's position in the global tourism market. The study concludes that international tourism is an important driver of economic development and that Brazil has favourable conditions for further tourism industry expansion.

Section 3. Innovation, sustainable development, and historical and cultural potential of markets

***Bondarenko Vladislava*. Innovative Mechanisms for the Development of Canada's Hotel Business in the Context of Digitalization, Sustainable Tourism, and Transformation of Consumer Demand**. This research examines the mechanisms and strategic approaches underpinning the innovative development of Canada's hotel industry amid the ongoing digital transformation of the economy, the advancement of sustainable tourism, and the evolution of consumer demand. It provides a comprehensive analysis of the principal determinants of structural and operational change within the sector, including technological progress, shifting tourist preferences, the recovery of the tourism industry following the global pandemic, and the distinctive regional and natural tourism assets of Canada. Particular emphasis is placed on the implementation and integration of digital technologies into hotel management and service delivery, encompassing online reservation platforms, property management systems, artificial intelligence, process automation, and personalized guest services. Furthermore, the research examines the growing role of environmental responsibility, efficient resource utilization, and sustainable business practices in enhancing the operational effectiveness and competitive position of Canadian hotels.

The research establishes strategic priorities for the modernization of the hotel industry through the systematic integration of digital innovation, sustainability principles, customer-oriented management approaches, and human capital development. It identifies the principal opportunities and constraints associated with technological transformation, including capital investment requirements, cybersecurity threats, data protection challenges, workforce competencies, and organizational adaptation. The proposed conceptual framework underscores the importance of aligning technological innovation, environmental sustainability, and service quality to strengthen the long-term resilience, adaptability, and competitiveness of Canada's hotel sector. The theoretical and practical implications of the research may be relevant to scholars, academic professionals, students, tourism and hospitality practitioners, and policymakers engaged in advancing sustainable and innovation-oriented development within the hospitality industry.

***Ivanchuk Svitlana*. The Uniqueness of Active Tourism in Australia**. The development of active tourism in Australia is examined in the context of the country's unique natural and recreational resources, tourism infrastructure, and current trends in the global tourism industry. It explores theoretical approaches to defining active and adventure tourism and their relationship with the sustainable

development of tourist destinations, the protection of natural heritage, and the preservation of cultural values. The book characterizes Australia's key resources for active recreation, including ocean coastlines, coral reefs, mountain ranges, desert landscapes, tropical rainforests, national parks, and protected natural areas. Particular attention is paid to such tourism activities as trekking, hiking, surfing, diving, cycling, camping, kayaking, rock climbing, and adventure travel.
The book highlights the socioeconomic significance of active tourism for regional development in Australia, support for local communities and small and medium-sized tourism businesses, and enhancement of the country's international tourism appeal. It examines current challenges facing this sector, including tourist safety, the conservation of vulnerable ecosystems, the management of tourist flows, adaptation of infrastructure to climate change, and compliance with environmental responsibility principles. The importance of an integrated approach to tourism product development is substantiated, emphasizing the combination of natural resources, physical activity, cultural experiences, quality services, and the responsible use of tourist destinations. The book may be of interest to researchers, educators, students, tourism professionals, and anyone interested in the development of active tourism and the sustainable management of tourist destinations.

***Podpisnov Denys*. Military-historical heritage as a factor in the development of international tourism in Poland and the Baltic states**. This chapter examines military-historical heritage as a driver of international tourism development in Poland and the Baltic states. Drawing on the concept of dissonant heritage (Tunbridge & Ashworth), it uses systemic, comparative and structural-functional approaches to identify the shared mechanisms and the regional differences in how a militarised past is turned into a tourism product. The Polish model is multilayered. It combines the adaptive reuse and museumisation of fortifications and castles (Malbork, Zamość, Toruń, Modlin, Przemyśl), the conversion of former Soviet garrison towns (Bornesulinowo), the development of dispersed battlefield landscapes (the Battle of Łódź), the modernisation of interpretive museums (the Warsaw Rising Museum), and the ethically regulated memorialisation of Nazi camps (Auschwitz-Birkenau, Majdanek, Sobibór). The Baltic model is built mainly on twentieth-century "difficult" heritage: occupations, the Cold War and the restoration of independence. It rests on the "brown" and "green" heritage of the former Soviet coastal zone and on cross-border cooperation through the Military Heritage project. The revitalisation cases of Lennusadam in Tallinn, Karosta in Latvia and the Cold War Museum near Plungė in Lithuania show different ways of balancing commercialisation with memorial ethics. The author concludes that military heritage becomes a competitive international tourism resource only with effective institutional management, diversified funding

(including EU funds), modern interpretation, adequate infrastructure and the involvement of local communities. In both regions, military-historical tourism has moved beyond a niche segment. It now serves as a multifunctional instrument of regional development, cultural diplomacy, historical education and territorial branding.

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