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Economic potential of natural healing assets: International market trends, business models, and prospects for Ukraine

■ **Abstract.** The economic recovery of nations following extensive conflict requires the strategic capitalisation of high-value, domestic assets capable of generating robust revenue and restoring depleted human capital. Ukraine's globally significant Natural Healing Assets (NHA) represent such a strategic priority. The study aimed to conduct a comprehensive analysis of international business experience in using NHA to develop practical recommendations for their effective use in Ukraine. The methodology involved systematic analysis, generalisation, and synthesis of data from numerous international reports and academic articles, utilising comparative analysis to assess global market criteria and business models. The concept of NHA was defined as resources recorded in state registers and utilised for profit or social benefit. A detailed analysis of global entrepreneurial markets utilising NHA was conducted. It was identified that the largest markets by volume by 2028 will be wellness tourism (1,359.3 billion USD), bottled water production (438.5 billion USD), and ecotourism (422.3 billion USD). Key criteria (stability, investment attractiveness, sustainability) for nine market segments were systematised, confirming that the growth rates of all NHA markets exceed the CAGR of World GDP. The three main international models for NHA integration (Public, Private, and Public-Private Partnership) were analysed, establishing that the optimal model depends on the specific asset and strategic goals. Comprehensive practical recommendations for Ukraine were developed, identifying medical rehabilitation as a key priority. The research findings provide entrepreneurs, investors, and government authorities in Ukraine with an evidence-based framework for selecting optimal business models and priority investment directions for NHA use

■ **Keywords:** resort economy; investments; tourism; rehabilitation; wellness; recreation; public-private partnership

■ INTRODUCTION

The economic recovery of nations following extensive conflict requires the strategic capitalisation of high-value domestic assets capable of generating robust revenues and restoring depleted human capital. Ukraine possesses globally significant Natural Healing Assets (NHA) that represent a powerful, nature-based foundation for national economic revitalisation. The primary challenge lies in the effective transition of the historically state-centric sanatorium and resort infrastructure into competitive, market-driven business models capable of attracting substantial international investment and integrating into high-margin global value chains. Failure to modernise this resource potential would represent a substantial lost opportunity for

economic growth, foreign-exchange earnings and, importantly, for addressing the pervasive national crisis of health, disability and population recovery resulting from military operations. Therefore, defining viable, resilient commercial frameworks for NHA utilisation is a strategic economic priority.

The academic literature has confirmed the strategic importance of this sector while delineating significant systemic barriers to its economic realisation. N. Horozhankina *et al.* (2025) identified key economic issues, specifically reduced state funding due to political instability and the widespread deterioration of facilities built in the 1980s and 1990s. They concluded that sustainable restoration

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fundamentally depends on external investment, modernisation, adaptation to strict European medical tourism standards and active integration into the global market. Similarly, V. Yavorska *et al.* (2022) highlighted resort recreation as a priority area capable of generating significant foreign-exchange earnings and creating jobs. However, their work identified the main obstacle as the lack of a comprehensive state and regional strategy designed to actively influence the sector's investment attractiveness.

W. Zhang *et al.* (2022) focused on the economic benefits of the medical tourism industry and proposed an improved Markov chain method to analyse and predict market scale and development trends. They concluded that healthcare tourism is a new, high-potential product capable of generating significant economic and social benefits, with its value growing at twice the rate of traditional tourism. N. Khumarova & K. Kostetska (2025) analysed the financial sustainability of the Ukrainian sanatorium and resort sector, demonstrating uneven regional development (growth in western regions vs. losses in central and southern areas). Crucially, their study demonstrated a direct interrelation between profitability and the extraction and sale of natural therapeutic resources, identifying mineral water and non-alcoholic beverage producers as having the best financial results. This research underscores that resource capitalisation, rather than solely medical services, is the key driver of financial resilience in the sector. Further defining the sector, A. Shashero *et al.* (2025) examined the modern resort business of Ukraine as a complex socio-economic system, emphasising that isolated improvements are insufficient and that systemic economic and structural reforms are necessary to leverage therapeutic natural resources effectively. I. Kudinova & O. Grishchenko (2021) reinforced the economic potential, noting that medical tourism in Ukraine attracts foreign investment due to competitive price parameters, yet they explicitly identified underdeveloped infrastructure and low levels of certification in medical institutions as key barriers to achieving global competitiveness.

Beyond the direct resort business, analysis of related international markets demonstrates substantial economic opportunity. C. Brancu & O. Turcu (2025), in a study of the cosmetics industry, reported robust global growth driven by premiumisation and demand for high-quality, sustainable products. This confirms the strong economic viability of utilising NHA components (such as therapeutic muds or mineral compounds) as high-value inputs for natural cosmetics and specialised APIs. Concurrently, international research using financial clustering for the SPA sector (Vašaničová *et al.*, 2025) identified management models characterised by high profitability and resilient financial structures. This demonstrates that successful NHA enterprises can be segmented based on distinct, successful financial performance criteria, providing a framework for benchmarking resilience. B. Mayor *et al.* (2021) concluded that financing Nature-Based Solutions (NBS) business models is problematic due to the multiple stakeholders and diverse benefits involved. This complexity hinders a clear, single argument for both public and private investment, underscoring the necessity of innovative financing structures capable of monetising diverse value streams.

Despite the consensus on Ukraine's high NHA potential and the identified constraints (e.g., suboptimal

planning and infrastructure decay), the existing economic literature lacks an integrated strategic analysis. Previous studies have not provided a comprehensive comparative techno-economic analysis of the three primary international business models (Public, Private, and Public-Private Partnership) across the full spectrum of NHA-utilising industries (SPA, natural cosmetics, specialised APIs, and bottled water). This deficit leaves policymakers and investors without a data-driven framework to select optimal governance and financial structures. Furthermore, while financing complex natural solutions is acknowledged internationally, the specific mechanisms required to translate the socio-economic benefits of Ukrainian NHA (particularly mass medical rehabilitation) into bankable and commercially viable post-war investment projects remain inadequately explored, limiting rapid economic restoration. The aim of the study was to conduct a comprehensive analysis of international business experience in the utilisation of natural healing assets and to develop practical recommendations for their effective use in Ukraine.

■ MATERIALS AND METHODS

A comprehensive approach combining theoretical and empirical methods was used in this study. The research was based on the systematic analysis, generalisation and systematisation of data obtained from numerous global economic reports, the business press and online media, and scientific articles. In particular, global reports covered the market sizes of activities using NHA across five regions: North America (U.S., Canada, Mexico); Europe (Germany, UK, France, Italy, Spain, Switzerland, Netherlands, Belgium, Sweden, Austria); Asia Pacific (China, Japan, India, Australia and New Zealand, South Korea, Thailand, Indonesia, Malaysia, Vietnam, Singapore); Latin America (Brazil, Mexico, Argentina, Chile, Colombia); Middle East and Africa (Gulf Cooperation Council (GCC) countries, Israel, Turkey, South Africa, Egypt, Nigeria). Comparative analysis of global market criteria and international models of entrepreneurial activity in the field of NHA utilisation was the key method. This enabled the identification of their advantages, disadvantages and development trends. Based on the results obtained, and by applying induction and logical generalisation, practical recommendations for Ukraine were formulated.

Where numerical values of key indicators were absent from the available sources, the respective indicators were calculated during the research when the necessary initial data were provided. For example, the growth rates of the analysed activity markets were characterised using the compound annual growth rate (CAGR). The CAGR was calculated according to formula (1), with results expressed as a percentage (Ahmed, 2023; Fernando, 2025):

$$CAGR = \left(\left(\frac{EV}{BV} \right)^{\frac{1}{n}} - 1 \right) \times 100, \quad (1)$$

where CAGR – the Compound Annual Growth Rate, (%); EV – ending value, (USD); BV – beginning value, (USD); n – the number of years between the beginning and ending values, (years). The transformed formula (1) was used to determine the monetary equivalent based on the CAGR of the relevant year in the period for which the average annual growth rate was calculated, namely:

$$FV_k = BV \times (1 + CAGR)^n, \quad (2)$$

where FV_k – the future or intermediate value in year k ; BV – beginning value, (USD); $CAGR$ – the Compound Annual Growth Rate, expressed in decimal format; n – the number of years that have passed from the beginning of the period to year k , (years). To evaluate the intensity of the projected growth of global markets for entrepreneurial activities utilising NHA, comparative analysis of market data against world gross domestic product (GDP) figures was performed. The initial data for world GDP dynamics were sourced from the statistical records of the International Monetary Fund (IMF) (2025) for the 2023–2030 period. For enhanced clarity and precise communication of complex market data, all foundational quantitative evidence (Market Size and CAGR) and analytical results were synthesised and presented using tables and figures (charts).

■ RESULTS

Definition of general concepts regarding natural healing assets

Research into the economic essence of natural healing assets required a clear delineation of basic terms. First, it was necessary to define the initial concept of natural healing resources (NHR), which is enshrined at the legislative level. Based on the Law of Ukraine No. 2026-III (2000), natural healing resources are defined as elements of the natural environment that had demonstrated medicinal properties, as established through medical-biological assessment of the quality and value of the NHR, and that were used for the prevention and treatment of diseases and for medical rehabilitation. The main types of natural healing resources include:

1. Mineral and thermal waters are underground waters with an increased content of certain chemical elements, gases, salts, or specific physical properties (temperature), which are used for drinking therapy, baths, irrigation pools, and other procedures.

2. Healing muds (peloids) and ozokerite are natural formations consisting of organic and mineral substances that have high heat capacity and thermal conductivity, as well as chemical activity. They are generally used in the form of applications and baths.

3. Brine from estuaries and lakes, and seawater, are concentrated salt solutions of natural origin that have a therapeutic effect due to their chemical composition and physical properties.

4. Natural objects and complexes with favourable climatic conditions, such as mountainous areas, forested areas, and sea coasts, create a special microclimate that promotes health (aerotherapy, heliotherapy, thalassotherapy) (Law of Ukraine No. 2026-III, 2000; Babov *et al.*, 2021).

There is no clear definition of the concept of “natural healing assets” at the legislative level in Ukraine. The transition from NHR to NHA was considered to occur on the basis of the implementation of Article 16 of the Law of Ukraine No. 2026-III (2000), namely, the key point of this transition was the inclusion of NHR in the State Fund of Mineral Deposits of Ukraine and the State Cadastre of Natural Healing Resources of Ukraine. Following the inclusion of NHR in state registers, the “resource” acquired the status of an “asset” and fell under legal regulation regarding its further use by legal entities and individuals for the

purposes of treatment, medical rehabilitation and disease prevention, as well as for industrial use (bottling mineral water, packaging healing mud, manufacturing cosmetic and pre-formed products based on mud, etc.). Thus, the definition of the concept of NHA (tangible assets) was formulated as follows. NHA are natural healing resources that have been identified through comprehensive medical-biological, climatological, geological-hydrological, balneological and other research, have a proven medical-biological assessment of the quality and value of the NHR, are recorded in the State Fund of Mineral Deposits of Ukraine and the State Cadastre of Natural Healing Resources of Ukraine, and are used or will be used by legal entities and individuals for treatment, medical rehabilitation and disease prevention, as well as for industrial use, for the purpose of obtaining profit or generating societal benefit through maintaining, restoring and improving population health.

The main properties of NHA include their natural origin and therapeutic use in a virtually unchanged natural state, mainly in resort settings, as well as the ability to act as a “resort-forming factor” (Law of Ukraine No. 2026-III, 2000; General characteristics of natural healing resources, 2025). The capacity of NHA to function as a “resort-forming factor” indicated that these assets were not merely resources for extraction, but fundamental elements around which entire economic “ecosystems”, such as resorts and related services, could be developed. This feature emphasised their catalytic role in regional development: NHA were positioned as the core of an economic growth pole, capable of attracting investment, supporting the creation of comprehensive infrastructure and jobs, and contributing to the development of local communities. This indicated that their value extended beyond direct therapeutic use, positioning them as a driver of broader socio-economic growth.

Characteristics of the main types of entrepreneurial activities using NHA

The effective utilisation of NHA fundamentally relied on establishing viable entrepreneurial structures capable of translating natural potential into economic value. According to Article 1 of the Law of Ukraine No. 698-XII (1991), entrepreneurship is “a direct independent, systematic, at one’s own risk activity in the production of products, performance of work, provision of services for the purpose of making a profit, which is carried out by individuals and legal entities registered as business entities in accordance with the procedure established by law”. Also, based on Article 2 of the Law of Ukraine No. 4196-IX (2025): “economic activity is the activity in the area of social production, aimed at manufacture and sale of products, execution of works or providing services of value nature that have price distinction. If this activity is carried out for the purpose of generating a profit, then it is entrepreneurship”. Entrepreneurial activity in the field of using natural healing assets was multifaceted, encompassing both traditional medical services and modern wellness- and eco-oriented areas. The most common types of entrepreneurial activities that effectively used natural healing assets were considered below.

1. Sanatorium-resort treatment was understood as traditional medical treatment and rehabilitation provided in sanatorium-resort facilities, which utilised natu-

ral healing resources within resort territories or medical and health resort areas (Sanatorium and resort treatment..., 2018; Law of Ukraine No. 2026-III, 2000). The primary focus was on the treatment of specific diseases and medical rehabilitation.

2. Wellness centres and SPA services. These facilities primarily focused on holistic health, prevention, relaxation, anti-ageing therapies and stress reduction for mostly healthy people (Kirkland, 2014; Marchenko & Ditrakh, 2020). They were often integrated into hotel complexes and offered a wide range of services, including mineral baths, mud wraps and thalassotherapy (the use of seawater and marine muds), alongside other services based on natural healing assets, as well as massages, cosmetic treatments, saunas and swimming pools.

3. Production of bottled mineral water. Enterprises were involved in the extraction and bottling (or source collection, where applicable) and sale of table, therapeutic-table and medicinal mineral waters. These waters were used both for daily consumption and for the treatment of specific diseases under a doctor's prescription. This business was characterised by consistently growing demand and a lack of seasonality (Analysis of the water market in Ukraine, 2024).

4. Mud therapy involved the therapeutic application of various types of medicinal muds used for treating skin conditions, musculoskeletal problems and other pathologies (Babov *et al.*, 2021). Mud hospitals and pelotherapy centres could operate either as independent enterprises or as part of large sanatorium complexes or hotels.

5. Climatotherapy involved the use of specific climatic conditions (such as mountain, marine or forest air, and solar radiation) to improve health (Protas, 2022). It was typically offered in sanatoriums or hotel complexes with medical centres.

6. Production of medical cosmetics and pharmaceutical preparations based on NHA involved the development and manufacture of products utilising minerals (salts), muds or other extracts derived from NHA. In particular, this included creams, masks, balms, shampoos, ointments, nutritional supplements and other products containing extracts of healing muds, mineral salts and plant components with proven therapeutic or beneficial properties.

7. Recreational tourism with an emphasis on natural wellness included health, educational (cognitive), ecological and sports tourism, as well as their combinations. The main goal of recreational tourism was the restoration of physical and mental well-being, namely rest and rejuvenation (Recreational tourism, 2025). This type of tourism mainly encompassed activities related to organising tours and active recreation, including visiting natural springs, bathing in thermal waters and natural mud bathing (in compliance with environmental standards), as well as hiking in ecologically pristine areas for climatotherapy. These were usually not classic medical institutions, but rather recreational facilities with a wellness focus.

8. Operation and management of NHA deposits ensured direct access to the natural healing assets themselves and involved geological exploration, reserve assessment, obtaining special subsoil-use permits, extraction (drilling wells for mineral waters, developing mud deposits) and supplying NHA for further use in medical facilities or for

packaging and bottling into appropriate consumer containers (sealed vessels).

In addition to the aforementioned types of entrepreneurial activity in the field of NHA use, research and development (R&D) activities were also considered. This type of activity was not directly entrepreneurial in the sense of providing services to the end consumer; however, it served as a crucial catalyst for further entrepreneurial development in the NHA sector. Thus, the types of entrepreneurial activity effectively utilising NHA reflected the classical directions of this activity (Nebava *et al.*, 2011). In particular, manufacturing (production) entrepreneurship was distinguished, within which the business-process structure typically included production resources, production, finished products (works/services), goods, sales, gross income and the financial result. By contrast, commercial entrepreneurial activity was identified when the business process did not involve the production of goods. The diversification of entrepreneurial activities using NHA extended beyond traditional sanatoriums and included areas such as wellness, SPA, cosmetics, pharmaceuticals and various forms of recreational tourism. This trend reflected the evolution of consumer demand from purely treatment-oriented services towards disease prevention and a broader "healthy" lifestyle orientation. Future business success was considered to depend on identifying and meeting these broader, evolving trends in societal health and well-being. Key factors for this success included the scientific substantiation of the therapeutic properties of NHA, the application of modern technologies for NHA extraction, processing, stabilisation and use, ensuring high quality of goods and services, effective marketing, and the establishment of sustainable policies for NHA use.

International market analysis of NHA-based entrepreneurial activities

A detailed analysis of international experience for each of the aforementioned entrepreneurial activities utilising NHA was conducted using key metrics such as market size, growth rates, stability, investment attractiveness, profit margin and market sustainability. Each of these indicators played an important role in the comprehensive analysis and, collectively, provided a more complete picture of the economic feasibility, risks and potential associated with each of the above activities. For the purposes of detailed international comparison, sanatorium-resort treatment was integrated into medical tourism at this stage of the research. This approach was justified because sanatorium-resort treatment, in essence being travel undertaken for therapeutic purposes related to the treatment and prevention of diseases, was considered a medical service and operated as a sub-segment within the broader medical tourism economic segment, sharing common resources and a client base. It should be noted, however, that medical tourism is a broader concept encompassing any travel undertaken for the purpose of treatment (Medical tourism market size..., 2025), including trips to specialised clinics for surgical operations, dental procedures and similar services. A detailed description of all individual indicators would have occupied a substantial portion of this manuscript. Therefore, the information obtained was condensed and systematised by the types of entrepreneurial activity

under study. Within the framework of this manuscript, systematised information on market sizes and their growth

rates is presented in Table 1, together with the rationale for the underlying estimates.

Table 1. Quantitative assessments of global markets for entrepreneurial activities using NHA

Type of entrepreneurial activity	Total global market size in 2023-2025, (USD billion)	Market growth rate (CAGR), (%)	CAGR calculation period, (years)	Data justification
Medical tourism	31.23-41.79 (2024)*	23.0 16.12-17.8	2025-2032 2025-2034	(Medical tourism market size..., 2025; Medical tourism market performance..., 2025; Medical tourism market (2025-2030), 2025)
Wellness tourism	830 (2023)* 945.5 (2024)*	10.2 8.9	2023-2028 2025-2033	(Global wellness economy monitor, 2024; Bora, 2025)
SPA	136.8 (2023)* 13.43-99.79 (2024)*	6.1 5.81-12.72	2023-2028 2025-2032	(Global wellness economy monitor, 2024; Ecotourism market size, share & industry analysis..., 2025; Spa market: global industry analysis..., 2025; Spa market size & share analysis..., 2025)
Production of bottled (mineral) waters	348.64 (2024)* 309.21 (2025)*	6.4 4.6 6.7	2025-2030 2025-2032 2025-2034	(Bottled water market, 2025; Premium bottled water market, 2025; Suryawanshi, 2025)
Production of mud masks	8.3 (2023)*	14.3	2024-2031	(Global mud mask market size..., 2025)
Production of natural cosmetics	41.74-55.43 (2024)*	9.5 4.8**	2025-2034 2024-2029	(Natural cosmetics market report 2025, 2025; Singh, 2025)
Production of pharmaceutical products based on APIs	30.0 (2023)* 34.6 (2025)*	6.1	2023-2034	(Natural APIs market..., 2025; Plant-based API market..., 2024)
Nature/ecotourism	216.49 (2023)*	14.3	2024-2032	(Ecotourism market size, share & industry analysis..., 2025)
Thermal and mineral springs sector / tourism to this sector	62.7 / 50.19 (2023)*	9.2 / 14.8	2023-2028 / 2024-2030	(Global wellness economy monitor, 2024; Thermal springs tourism market (2025-2030), 2024)

Note: (*) – the year for which the data is provided; (**) – calculated CAGR value according to formula (1) based on data (Natural cosmetics market report 2025, 2025)

Source: formed by the author

The presence of multiple sources reporting different market size values for medical tourism and wellness tourism indicated the absence of a universally standardised definition and market-sizing methodology in market research. This disparity was likely to arise from the inherent overlap between medical and wellness travel, as trips frequently combined elements of both. For example, an individual may have sought medical treatment while also using SPA services or participating in recreational activities. This overlap could have led investors to conclude that a holistic view encompassing both medical and wellness dimensions of travel was essential. Companies that were able to offer integrated services (e.g., medical procedures combined with wellness retreats or post-operative recovery in a resort environment) were therefore likely to capture a larger share of this combined market, reducing the risks associated with narrowly defined segments. The scale of wellness tourism – nearly USD 1 trillion by 2024 (Spa market size & share analysis..., 2025) – suggested that medical tourism utilising NHA often fell within this broader, more comprehensive category, offering greater market potential.

Market trends and investment potential in medical and wellness tourism

Overall, medical and wellness tourism was showing exceptionally high growth rates after the pandemic. The pandemic had increased global public awareness of health

and had highlighted the importance of preventive care and holistic well-being. This had led to a surge in demand for health-focused travel, especially for trips perceived as restorative or as offering specialised care that was not readily available or affordable in one's own country. This indicated strong market stability driven by fundamental changes in consumer behaviour, rather than temporary trends. This market could be regarded as resilient, with demand for medical services and wellness experiences remaining a constant driver. Investments in infrastructure and services that responded to this increased health awareness were likely to be sustainable and profitable in the long term.

Given strong growth forecasts for the medical and wellness tourism market and growing consumer demand for quality, affordable or specialised medical and health-care services abroad, investment attractiveness was high. Government initiatives, such as the "Heal in India" campaign (Medical tourism market performance..., 2025), and strategic partnerships (Medical tourism market (2025-2030), 2025) were fostering growth and investment. Significant investments were observed in the US medical tourism market (from 6.2 billion USD in 2024 to 41.0 billion USD by 2034, with a CAGR forecast of 20.8%) (US medical tourism market..., 2025). Mergers and acquisitions (M&A) and venture capital (VC) activity in medical technology (a related sector) was showing positive momentum, with larger, more selective investments in companies with high growth

potential (Gomez & Katz, 2025). The global medical tourism market was highly lucrative, demonstrating healthy profit margins. This conclusion was supported by rapid market growth and the high costs of medical care in developed countries (US medical tourism market..., 2025), which together indicated significant profit potential, especially for private service providers (Medical tourism market (2025-2030), 2025). Consequently, the desire among travel destinations to capitalise on this potential further underscored the profitability of this segment (Haigh, 2025).

The medical tourism market was driven by growing health awareness and the adoption of preventive medicine (Anderson, n.d.). The sustainable development of medical tourism was framed around three pillars: economic progress, social justice and environmental conservation (Castro, n.d.). Integrating sustainable development practices was expected to attract a wider audience and boost market growth (Bora, 2025). A major challenge to the growth of the medical tourism market involved limitations in routine post-treatment follow-up and post-operative care. For instance, complications could arise following medical procedures or surgeries, and subsequent medical monitoring or care could be costly (Medical tourism market size..., 2025). The overall global SPA market was demonstrating robust growth (Global spa market size..., 2025), with the medical/medi-SPA segment identified as the fastest-growing, and the expansion of medical spa centres representing the fastest-growing facility type (Spa market size & share analysis..., 2025). This reflected a shift from traditional relaxation services to more results-oriented, clinically proven services. According to experts (Spa market size & share analysis..., 2025), this trend was driven by an ageing population seeking anti-ageing and regenerative treatments, increased consumer awareness of advanced aesthetic procedures and a desire to achieve measurable health results in addition to relaxation. Consequently, investment in SPAs was increasingly expected to focus on the integration of healthcare services, advanced technologies and skilled healthcare professionals. This hybrid model offered higher revenue potential and targeted a more demanding, health-oriented clientele, thereby increasing market stability and profitability.

Investment attractiveness was substantial, driven by increasing public health awareness and the overall growth of the global SPA market. Technologically advanced SPA facilities were increasingly attracting patrons, and corporate wellness programmes were integrating SPA visits to reduce staff burnout and enhance employee retention (Spa market size & share analysis..., 2025). The key challenges for the SPA industry included high initial and operational costs, stringent licensing and regulatory requirements, and the recruitment and retention of qualified personnel. Profit margins for well-run SPAs were reported to range from 10% to 25%. The average day SPA in the United States was reported to earn between 500,000 USD and 1 million USD annually. The SPA services market was driven by rising household incomes and demand for professional massage therapy (Spa market size & share analysis..., 2025). Emphasis on consistent service quality and adaptation to emerging trends was paramount, while the integration of sustainable practices was expected to attract a broader consumer base and accelerate market growth.

Global bottled water market:

Trends, investment potential, and sustainability

The Asia-Pacific region (China, Japan, India, Australia and New Zealand, South Korea, Thailand, Indonesia, Malaysia, Vietnam, and Singapore) constituted the largest bottled water market in 2024 (Bottled water market, 2025). This region contended with persistent water-quality and infrastructure challenges, resulting in high demand for bottled water as a reliable source of hydration. Europe was projected to lead the global mineral water market in 2025, commanding a 44.6% share (Suryawanshi, 2025). This outcome was attributed to rising preferences for premium bottled water, a robust tourism sector, and the presence of prominent global mineral water brands, notably Evian and San Pellegrino bottled water consumption in the United States reached 15.94 billion gallons (60.34 billion litres) in 2023, which consolidated its position as the most consumed packaged beverage and significantly exceeded carbonated soft drinks (11.84 billion gallons (44.82 billion litres)). This pattern was not merely a matter of convenience; it reflected a direct consumer preference for healthier hydration options. It was also associated with increasing public health awareness, concerns regarding obesity and lifestyle-related diseases, and deliberate consumer efforts to reduce sugar intake. Bottled water, particularly mineral water, was perceived as a “clean and health-conscious alternative” (Bottled water market, 2025). Consequently, the bottled mineral water industry was benefiting from a sustained shift in consumer behaviour towards healthier lifestyles. This established it as a highly stable market with relatively predictable demand, less susceptible to short-term fluctuations, and appealing for long-term investment, particularly in premium and functional segments (e.g., vitamin- and mineral-enriched water) that offered additional perceived health benefits (Suryawanshi, 2025).

The investment attractiveness of the bottled water market was assessed as moderate to high. Stable demand, consistent market growth and premiumisation trends contributed to market appeal (Bottled water market, 2025). However, despite substantial growth potential, the market was constrained by considerable risks associated with intense competition, stringent environmental regulation (e.g., taxes on plastic packaging or outright bans), and macroeconomic volatility (e.g., energy, packaging and transport price fluctuations directly affected costs and profitability), which collectively could position overall investment attractiveness closer to moderate. Investments were notably directed towards branding, marketing, distribution systems and infrastructure (Premium bottled water market, 2025). To bolster demand in the bottled water market, an imperative to utilise sustainable packaging (e.g., rPET, glass containers or aluminium cans) was identified, driven by prevailing consumer environmental concerns (Bottled water market, 2025). Average profit margins in water bottling were reported to range from 10% to 15% (Sheykin, 2025a). Revenue for small and medium-sized enterprises was reported to range from 500,000 USD to several million USD annually, while large facilities could exceed tens of millions of dollars. Overall profitability was supported by premium pricing for high-quality mineral water.

Market sustainability was supported by an increased focus on environmental sustainability, including responsible water sourcing, reduced packaging weight (PET bottle weight was reported to have been reduced by 51% from 2000 to 2014), and enhanced recycling efforts (International Bottled Water Association, n.d.). Bottled water production was reported to use less water and energy than the manufacture of other packaged beverages. The utilisation of recycled PET was increasing, with many companies offering bottles containing 50% to 100% rPET content. Nevertheless, the bottled water market continued to face negative societal perceptions associated with plastic waste, although industry experts argued that its environmental footprint was smaller than that of alternatives (e.g., glass and aluminium cans).

The thermal and mineral springs industry was intrinsically linked to the development and stewardship of natural healing resources. This segment was demonstrating revitalisation and was attracting substantial investment from both private entities and governments, with funds allocated to the refurbishment of ageing facilities and the enhancement of service standards. Investment momentum was associated with recognition of hydrotherapy's centuries-long history in regions such as Asia-Pacific and Europe, alongside growing consumer interest in nature-based experiences, cultural heritage and complementary therapeutic modalities (Thermal/mineral springs, n.d.). Governments were proactively promoting these sites as key components of wellness tourism. This sector of the wellness economy therefore represented a stable and expanding investment opportunity, particularly in regions with established traditions. The combination of historic practices with contemporary wellness services and infrastructure upgrades strengthened the investment rationale, while government involvement signalled long-term strategic support and regulatory de-risking, thereby enhancing market stability.

Consequently, the investment attractiveness of the thermal and mineral springs market was assessed as high owing to stable growth, governmental backing and expanding consumer interest in natural therapy and cultural experiences. This was supported by data indicating that over 350 new thermal and mineral springs development projects were launched globally between 2020 and 2024, with over 230 additional projects in preparation and development. The market presented investment opportunities, particularly in luxury service provision and the integration of advanced technologies (Exploring opportunities in Hot Springs Resort sector, 2025). Thermal and mineral springs establishments that incorporated SPA services generated over two-thirds of total industry revenue and exhibited higher revenue growth rates, which underscored the profitability of this segment when integrated with value-added SPA services. The sustainability of the thermal and mineral springs market was contingent upon a range of factors, including reliance on natural resources – particularly the quality and accessibility of the water source. At the same time, active governmental support, which promoted these sites as key wellness tourism offerings, signalled a focus on long-term viability (Thermal/mineral springs, n.d.). In addition, rising demand for unique, immersive cultural experiences supported sustainable development by reinforcing the value and preservation of local heritage.

Global mud-based and natural cosmetics market: Trends, investment potential, and sustainability

North America remained the leading market for Dead Sea mud cosmetics; however, the Asia-Pacific region was rapidly gaining momentum, particularly in the mud mask segment (Global mud mask market size..., 2025). The available data on mud therapy were primarily focused on mud masks and Dead Sea mud cosmetics, applications that largely belonged to the beauty and cosmetics sector. The robust growth of the mud cosmetics market was driven by consumer demand for natural and organic skincare products, perceived benefits for various dermatological conditions (e.g., detoxification, exfoliation and nourishment), and the rising influence of self-care practices. Therapeutic benefits (e.g., pain relief, improved circulation and stress reduction) were frequently cited as key drivers of adoption. While direct data on the size of the mud therapy market as a medical procedure (e.g., balneotherapy utilising mud applications) were scarce, the consistent growth of the mud-based cosmetics market demonstrated strong consumer acceptance and belief in mud's healing properties. This suggested an opportunity to expand into more formalised therapeutic applications by leveraging consumer trust in natural ingredients established within the cosmetics market. The primary challenge lay in quantifying the therapeutic segment and in scientifically validating and justifying the extension of medicinal applications within this domain.

Investment attractiveness, particularly within the cosmetics segment, was substantial. This was driven by rising incomes and the robust development of e-commerce (Global mud mask market size..., 2025). Considerable demand for natural and organic cosmetics was reported, and significant growth opportunities existed within premium formulations and influencer-promoted product segments. The primary challenges encompassed consumer health risks (notably skin sensitivities and allergic reactions), as well as regulatory hurdles, particularly with respect to the safety and labelling of cosmetic products. At the time of analysis, specific data on profit margins for the global mud mask market and, more broadly, for the mud therapy industry were not available in international analytical reports or other information sources. However, given the premium positioning of Dead Sea mud products, margins were expected to be robust. The global mud mask market was primarily driven by consumer preference for products based on natural ingredients; however, market stability was assessed as moderate due to intense competition, the volatility of consumer trends requiring continuous product-range updates, and susceptibility to global economic and logistical risks. Although these factors were documented and analysed in international sources, they limited market stability and exposed performance to fluctuations in demand, pricing, sales volumes and profitability.

The global natural cosmetics market was characterised by stable and continuous growth, largely driven by increasing consumer preference for natural, organic and eco-friendly products (Singh, 2025). A strong and consistent trend was observed across the natural cosmetics and pharmaceutical sectors: consumers were increasingly opting for "clean label" products, thereby avoiding synthetic chemicals and artificial ingredients. This shift was driven by concerns regarding potential health risks and by the

desire for greater transparency and sustainability in the sourcing and production of natural products. The trend reflected a broader convergence of health and beauty, with consumers increasingly regarding what is applied to the body as comparable in importance to what is consumed. Within pharmaceuticals, the preference for “natural” translated into demand for herbal formulations that were perceived to be associated with fewer side effects (Natural APIs market..., 2025). Companies in these sectors were therefore expected to prioritise ingredient transparency, ethical sourcing practices and environmentally sustainable packaging. Investment opportunities were particularly strong for brands able to demonstrate these qualities credibly, as well as for research and development into advanced extraction technologies and green chemistry for natural active pharmaceutical ingredients (APIs). Additional competitive advantage was associated with the ability to secure organic or cruelty-free certifications (Kesharwani, 2025).

The investment attractiveness of the natural cosmetics and pharmaceuticals market was substantial, driven by robust consumer demand, rising incomes and technological advances in natural raw-material extraction. M&A activity was concentrated in high-margin clinical and sustainability-focused brands. Market challenges encompassed high costs associated with premium products, short product shelf life and regulatory complexities related to product certification (Natural and organic personal care products..., 2025). The natural API market was characterised by high profitability in biological APIs and rapidly increasing demand for herbal ingredients in medicinal products (Natural APIs market..., 2025). Sustainability factors in the natural cosmetics and pharmaceuticals market centred on sustainability principles, eco-friendly packaging and cruelty-free practices, while concurrently being driven by consumer demand for ethical consumption. Regulatory support for natural therapies and environmentally conscious pharmaceutical production also functioned as an enabling factor. Challenges included limited sourcing availability, specifically the restricted number of organic ingredient suppliers, and lower product stability observed in some natural formulations (Organic skin care products market..., 2025).

Nature-based and ecotourism: Market trends, investment potential, and sustainability

Nature-based tourism was positioned as “more than just a source of revenue – it is a strategic tool that... drives conservation, improves livelihoods, and supports local economies”. It generated funding for biodiversity conservation through tourism concessions and visitor fees, particularly for protected areas and reserves (Nature-based tourism, 2024). This relationship suggested a direct linkage between environmental conservation and economic viability. By protecting natural assets, ecotourism enterprises not only attracted environmentally conscious travellers who were often willing to pay a premium (Castro, n.d.), but also secured government support and access to conservation-focused investment capital (Unlocking the potential of nature-based tourism..., n.d.). This premium typically reflected a surcharge for a unique experience and a direct contribution to environmental conservation. Investment

in recreational tourism leveraging NHA was therefore expected to prioritise projects with strong conservation and community-engagement components. Such an impact-investing approach not only aligned with evolving consumer values, but also created a more sustainable and commercially viable business model, potentially unlocking additional financing sources, such as sovereign debt refinancing for conservation (e.g., blue bonds or nature bonds) (NatureVest is TNC’s impact..., n.d.).

The investment attractiveness of the nature-based tourism market was substantial, owing to robust growth, escalating demand for sustainable tourism and its positive economic impact on local communities (Ecotourism market size, share & industry analysis..., 2025). Investors had opportunities for capital deployment within the sustainable tourism sector. Promising areas included eco-lodges, which offered accommodation designed to operate in harmony with nature, and sustainable transport solutions that reduced environmental impacts. NatureVest (an initiative of TNC – The Nature Conservancy) supported conservation-focused tourism investments (NatureVest is TNC’s impact..., n.d.). Market challenges encompassed regulatory hurdles, market volatility and the need to balance conservation objectives with profitability.

Revenues from guided tours were reported to generate profit margins of 10% to 15%, while eco-lodge profit margins were reported to range from 15% to 20% (Sheykin, 2025b). Ecotourism revenues could be substantial and were reported to contribute to a 20-30% increase in household incomes in certain regions. The long-term viability of the nature-based and ecotourism market was underpinned by its foundational principles: environmental preservation and the sustainable use of natural resources (Ecotourism market size, share & industry analysis..., 2025). The sector contributed to biodiversity conservation and the creation of employment opportunities in rural communities (Nature-based tourism, 2024). Demand for ecotourism was increasing as consumers increasingly favoured sustainable travel options. The sustainability of the market also depended on the active participation of local communities (Ecotourism investments..., n.d.).

Climatotherapy in health tourism:

Market potential, investment, and sustainability

Climatotherapy was regarded as a “health tourism product” and a “non-biomedical natural resource” used for therapeutic purposes and health promotion (Droli *et al.*, 2022). International sources did not provide sufficiently clear data to assess the size of the global climatotherapy market as a distinct sector within the health and treatment domain. However, available sources reported financial metrics characterising the costs associated with managing specific diseases that were frequently treated with climatotherapy. For instance, the annual cost of managing psoriasis per patient was reported to range from 2,077 USD to 13,132 USD. Specifically, the direct cost of Dead Sea climatotherapy, which covered European patients’ flights, transfers, four-week accommodation and medical supervision, was reported to be 5,800 USD per patient (2020 data) (Emmanuel *et al.*, 2020). These estimates underscored the substantial financial resources required to address chronic health challenges of this nature.

The absence of explicit market data indicated that climatotherapy was often integrated into broader health tourism packages or medical procedures rather than operating as a distinct, readily quantifiable market. Its economic viability was therefore likely to be linked to the value added to larger offerings (e.g., mitigation of long-term healthcare expenditure for chronic conditions) (Harari, 2020). While direct capital investment in climatotherapy centres was difficult to quantify, opportunities existed for investment in health and wellness tourism destinations that leveraged unique climatic conditions as “health devices” (Droli *et al.*, 2022). This required the development of evidence-based marketing strategies capable of quantifying climatotherapy effects and integrating them into comprehensive therapeutic and wellness offerings. Such an approach could have attracted patients seeking nature-based options for chronic conditions. Consequently, the economic viability of climatotherapy was more appropriately assessed not as a separate market, but in terms of patient-level cost-effectiveness and the added value generated for health tourism providers.

The investment attractiveness of climatotherapy as an independent sector within the wellness or medical industry was assessed as low to moderate. This assessment reflected the lack of clear market data, alongside the need for scientific validation and integration into broader health tourism offerings. Conversely, investment appeal could increase to moderate or high where climatotherapy services were integrated into established health tourism or medical treatment programmes that capitalised on NHA (Pessot *et al.*, 2021). Investment in research aimed at quantifying climatotherapy benefits, together with the development of evidence-based marketing strategies,

could have supported its longer-term potential as a more distinct segment of the wellness economy. More broadly, climatotherapy was contingent upon the preservation of natural resources, including air quality, therapeutic environmental factors and specific microclimates. Given that sustainable development in health tourism emphasised the judicious use of natural resources (Castro, n.d.), this dependency presented inherent constraints. The core challenges facing climatotherapy included inadequate scientific substantiation of climatic effects on patients and the limited availability of robust research evidence, which hindered broader recognition and adoption.

Consolidated analysis of global markets using natural healing assets

The general results were presented on the basis of the data and conclusions derived from the detailed analysis of global markets for specific activities using NHA, in order to facilitate interpretation of the above information. The estimated forecast volumes of the above markets for activities using NHA, calculated according to formula (2), were presented in Figure 1.

The calculated projected volumes for the aforementioned activity markets using NHA characterised the aggregated value distribution across these markets up to 2028. To ensure robust calculation results, 2028 was set as the boundary condition, as this timeframe encompassed the limits of all reported CAGRs (Table 1). Figure 1 demonstrated that, by 2028, the three leading market sectors were projected to be wellness tourism, bottled and mineral water production, and nature and ecotourism. In turn, the projected market growth rates for activities using NHA through 2028 exhibited a distinct trend (Fig. 2).

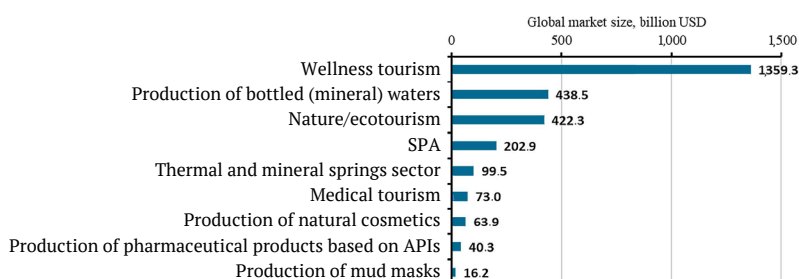


Figure 1. Distribution of the forecasted of the global market size for activities using NHA by 2028

Source: compiled by the author

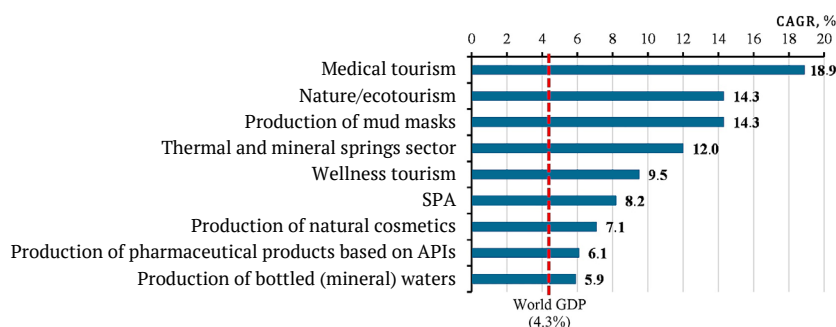


Figure 2. Compound annual growth rates (CAGRs) of the global markets size for activities using NHA in the period 2023-2028

Note: red dashed line indicates the calculated CAGR of World GDP

Source: compiled by the author

The medical tourism market was projected to exhibit the fastest growth, followed by nature and ecotourism development and mud mask production, which shared the same growth level. The thermal and mineral springs sector completed the top three. The growth rate of wellness tourism, the highest-value market in the analysis, ranked only fourth. It should be highlighted that the CAGR values of the global markets for the aforementioned activity areas using NHA exceeded that of world GDP. This indicated high potential and dynamic development within these markets, implying that they were expected to expand significantly faster than the global economy overall. Such a trajectory positioned the aforementioned markets as attractive investment prospects given their promise of high profitability. Investors seeking capital appreciation opportunities could therefore have favoured these economic sectors. These projected growth rates for activities using NHA also suggested greater resilience to potential economic downturns, as individuals often prioritised health-related expenditures during periods of economic hardship, which, in turn, enhanced market stability. The summarised results were also presented in summary Table 2 to support clearer interpretation of the above information.

Table 2 presented a quantitative and qualitative assessment of global markets for activities using NHA according to the following criteria: market stability, investment attractiveness, profit margin and market sustainability. Although these assessments were formed on the basis of the generalised detailed information presented above, additional justification for certain assessment features was provided. This primarily applied to the profit margin criterion, specifically the assessments “High (implicit)”,

“Implicit”, and “High (with services)”. For example, a high (implicit) profit margin in the medical or wellness tourism market indicated that profits captured by medical and healthcare institutions and intermediaries were substantial, but not always evident at first glance. This assessment reflected several features. First, medical tourism services were typically expensive, as they included not only medical and wellness procedures, but also logistics (flights, accommodation, interpreters, etc.), thereby creating wide scope for generating significant profits. Second, margins could be implicit because profitability was not derived solely from direct revenues from medical and wellness services. A substantial share of income could be generated through related services, such as intermediary services (medical and wellness tourism agencies received commissions for attracting patients, which could be significant), comprehensive packages (patients were offered “all-inclusive” packages rather than individual services, potentially including rehabilitation, spa treatments and excursions, thereby increasing overall pricing and profit), and price differentials (pricing often varied substantially between local residents and international patients, with the latter typically paying higher prices for procedures). In addition, given the extensive service ecosystem (consultations, procedures, accommodation and transfers), it was not always straightforward to determine the precise contribution of each component to profitability, thereby reinforcing the implicit nature of the margin. Thus, a high (implicit) margin indicated that participants in the medical and health tourism market (clinics, sanatoriums and agencies) generated significant profits that could be obscured by complex pricing structures and by revenue from complementary services.

Table 2. Assessment of criteria for global markets for activities using NHA

Type of entrepreneurial activity	Market stability	Investment attractiveness	Profit margin	Market sustainability	Key rationale / notes
Medical tourism	High	High	High (implicit)	High	Strong post-pandemic recovery, growing demand for quality/affordable healthcare, government support. Growing health awareness, medicalisation of wellness.
Wellness tourism	High	High	High (implicit)	High	
SPA	High	High	10% – 25%	High	
Production of bottled (mineral) waters	High	Moderate – High	10% – 15%	High	Stable market, driven by the transition to a healthy lifestyle, emphasis on environmental friendliness.
Production of mud masks	Moderate – High	High	High (implicit)	Moderate	Strong demand for natural cosmetics, perceived therapeutic benefits, growth of e-commerce. Demand for clean labels, natural ingredients, ethical consumption, investment in research and development (R&D).
Production of natural cosmetics	High	High	High (implicit)	High	
Production of pharmaceutical products based on APIs	High	High	High (implicit)	High	
Nature/ecotourism	High	High	10% – 20%	High	Growing demand for sustainable tourism, connection with nature, positive economic impact on communities.
Climatotherapy	Moderate	Low – Moderate	Implicit	Moderate	Integrated into medical/wellness tourism, requires scientific validation, depends on the preservation of natural conditions.
Thermal and mineral springs sector / tourism to this sector	High	High	High (with services)	Moderate-High	State and private support, growing interest in traditional healing, cultural aspects.

Source: compiled by the author

The stability of the mud mask market was assessed as moderate to high due to growing consumer demand for natural products and innovations that attracted new customers. However, market sustainability remained moderate, as the segment was exposed to changing trends, intense competition and external economic factors that could cause fluctuations in demand and profitability. These factors could generate unpredictability despite generally positive market dynamics. Overall, the market was developing, but not without material risks. General justifications for the qualitative assessments established for climato-therapy activities were also provided, despite the detailed discussion of this activity above. Given the characteristics of the climato-therapy segment, namely its integration with other wellness markets, its stability was assessed as moderate. As part of the broader medical and wellness tourism sector, it remained dependent on economic cycles and consumer demand, which could fluctuate. Its profit margin was assessed as implicit, as income was generated less from the therapy itself than from comprehensive service packages that included accommodation, meals and other related procedures. Investment attractiveness was assessed as low to moderate due to the lack of explicit market data and the need for substantial investment in scientific substantiation of effectiveness. Finally, market sustainability was assessed as moderate because it depended on the preservation of unique natural resources and on further research confirming medicinal value.

The profit margin of the thermal and mineral springs market was assessed as high (with services), as substantial revenues were generated not only from the springs themselves, but also through integration with highly profitable SPA services and luxury offerings. High growth rates were observed in this segment in association with such integration. Market sustainability was assessed as moderate–high because, although the sector depended on natural resources, its long-term viability was supported by growing demand for wellness tourism, active government support and investments aimed at preserving and modernising infrastructure. This indicated an ability to adapt and develop despite resource-related constraints. Thus, the consolidated analysis results were important for assessing markets using NHA, as they provided a comprehensive and comparative overview that was interpretable for stakeholders at different levels. The analysis enabled rapid identification of the scale and dynamic growth of this segment of the global economy. The results obtained could also serve as a basis for more in-depth examination of individual sectors by indicating areas of strength in development trajectories and in the utilisation of NHA.

International models of NHA integration into economic systems

International experience in the use of NHA in entrepreneurial activities demonstrated a variety of models that reflected national priorities, regulatory approaches and the investment climate. At the international level, three main models of integrating NHA into economic systems were most common: a state regulation model characterised by significant government involvement in the regulation, development and, often, operation of resorts and health facilities, with the aim of ensuring quality, accessibility and

public health benefits; a private initiative model driven predominantly by private enterprises focused on market demand, innovation and profitability, which often resulted in a wide range of luxury service offerings and establishments; and a public-private partnership (PPP) model characterised by shared regulatory and management approaches in which the government and the private sector shared risks, responsibilities and benefits. PPP models covered a wide spectrum of arrangements, ranging from direct provision of services by the state to full privatisation. They were characterised by risk sharing and by the pursuit of common economic and socially significant objectives on mutually beneficial terms (Turchenko, 2024). This understanding was consistent with definitions provided by the United Nations Economic Commission for Europe (UNECE) (2017) and the Green Paper on Public-Private Partnerships and Community Law on Public Contracts and Concessions (2004).

The rationale for public ownership and management of NHA was based on the principle that certain resources, especially those that were limited and unique, were best classified as “public goods”. This economic concept defined a good that was both non-excludable (it was difficult to prevent people from benefiting) and non-rival (use by one person did not reduce the possibility of use by another). For example, protecting a thermal spring or a rare ecosystem ensured its preservation for future generations, a benefit that was difficult for a private enterprise to monetise (Sryberko & Stepanova, 2025). Thus, the role of the state was that of a long-term manager acting in the interests of the general public rather than for private profit. The state model offered several key advantages. It could ensure social equality and broad accessibility by preventing the formation of private monopolies that could under-supply a resource or charge fees that excluded large parts of the population. Furthermore, unlike the private sector, which was driven primarily by profit incentives, the public sector was oriented towards long-term sustainability and protection of NHA (Aggestam Pontoppidan *et al.*, 2024). This was particularly important for vulnerable assets such as hydrothermal aquifers, which could be threatened by over-pumping for agricultural or urban use (Global Wellness Institute, 2024). Finally, public management of these assets could generate revenue that flowed back to local communities, supporting public services and infrastructure that benefited both residents and tourists (Lee, 2024). At the same time, the public sector model also had significant drawbacks. The most common criticism concerned the lack of a direct profit motive, which could lead to operational inefficiencies and slow responses to market demand. State-owned enterprises could also be susceptible to political influence and bureaucratic obstacles that undermined management effectiveness. In addition, such entities could experience difficulties in raising the capital and securing the technical expertise required to develop and implement innovations at a pace that remained competitive in rapidly evolving markets.

International examples highlighted a spectrum of state involvement in the management of these assets. Hot Springs National Park in the United States provided an example of public administration. The National Park Service (NPS) had broad authority to regulate the use of hot spring water, distributing it to public fountains and to private

businesses such as bathhouses and hotels (Hot Springs National Park..., 2024). The NPS acted as steward and regulator, ensuring sustainable water use while allowing private businesses to operate within a clear regulatory framework. This model demonstrated a public-oriented approach in which ownership of the underlying asset was retained by the state while use was leased to the private sector. In contrast, Oita Prefecture in Japan illustrated a more proactive public role in economic development. The regional government acted not only as regulator but also as a strategic planner that actively promoted “ONSEN culture”. It explored new opportunities for thermal springs, including their use in tourism development, as a resource in medicine, healthcare and cosmetology, and as a sustainable energy source (Case studies in hot spring use for sustainable energy, 2019). These examples indicated that public administration could range from predominantly regulatory functions to active market development of NHA-based activities, depending on government strategy.

The private sector was a dominant force in many markets using NHA, including medical and wellness tourism and SPA services. The main principle driving this model was the profit motive, which incentivised companies to pursue efficiency and allocate resources to the most productive and profitable projects. As a result, profit incentives shaped both service quality and investment direction. The strengths of the private model were closely linked to this core principle. Competition motivated businesses to deliver high-quality or luxury, personalised and innovative services, which was crucial for attracting and retaining customers. For example, luxury SPAs such as the Four Seasons Hotel Toronto offered differentiated services, including “biohacking” and “holistic” treatments, which positioned them distinctly within the market (Toronto luxury spa & wellness, n.d.; Four seasons Toronto spa launches biohacking treatments, 2023). This focus on differentiated offerings and exceptional customer service created memorable experiences that encouraged repeat visits and favourable reviews. In addition, private enterprises could mobilise capital quickly and adapt to changing consumer needs. This capability was important in fast-evolving markets in which being first to market with emerging trends, such as sleep tourism (travel with an emphasis on improving sleep quality) or digital detox retreats (travel intended to reduce technology exposure and support mental well-being), could represent a major competitive advantage (2025 wellness tourism report, 2025). The profit motive also supported a sustained focus on operational efficiency. The case of Castle Hot Springs (n.d.), a private resort, illustrated this: by implementing a new software system, the resort was able to maximise the number of treatments per day and fill gaps in its event schedule, which directly increased revenue and improved financial reporting.

It should be noted that the strengths of the private model could also function as weaknesses. The pursuit of luxury services with high margins often led to high costs, which limited accessibility for wider audiences, as premium pricing and luxury amenities were primarily targeted at affluent travellers (service consumers) (Bora, 2025). Moreover, an exclusive focus on profit could generate adverse social and environmental consequences. For example, private development of medical tourism had been criticised for

encouraging a parallel (private) healthcare system that was insufficiently responsive to local population needs. This could create a two-tier system in which private resources and expertise were siphoned from the public healthcare system to serve only the “marketable” segment of society (Ormond *et al.*, 2014). This contrasted with forms of health tourism which, when integrated with local communities and environmentally responsible practices, could stimulate regional development, create employment opportunities and improve local population health by promoting preventive care and reducing pressures on local health systems. The divergence in social outcomes between these trajectories indicated that the type of tourism and the governance model could produce fundamentally different consequences for community well-being. The private sector’s capacity to monetise and revitalise NHA was illustrated by Castle Hot Springs (n.d.) in Arizona. This privately owned hotel used its mineral thermal waters to operate as a luxury all-inclusive wellness resort. The case highlighted how private capital restored a historic, fire-damaged asset that had not been used for over 40 years after 1976 and converted it into a profitable enterprise from 2019. In Australia, case studies in North-West New South Wales showed how private landowners could work with public services to manage and restore natural assets on private land. This model demonstrated that private property arrangements could be aligned with public-good outcomes, often with support from public services.

PPP represented a hybrid model in which public and private organisations entered into long-term contracts to finance, design, build and operate infrastructure or services (New WHO report..., 2023). This approach was gaining prominence as a strategic tool for governments seeking to address funding gaps and budget constraints, particularly for large-scale projects related to NHA-based infrastructure, such as modernising balneological clinics or expanding resort complexes. PPPs were described as a mechanism for “expanding access to the highest quality health services by attracting capital, management capacity and know-how from the private sector”, which was relevant for elevating medical and wellness tourism built around unique NHA. One of the main advantages of PPPs was the capacity to share risks and financial burdens between the public and private sectors. For instance, private companies were incentivised to manage risks such as construction delays or cost overruns during the development of a thermal resort or specialised medical facility, as profitability often depended on project performance (The advantages and disadvantages of public-private partnerships, 2024). This risk-sharing approach supported more reliable implementation of NHA-related projects. In addition, PPPs provided the public sector with access to innovation and specialised private-sector expertise that might not have been available internally. The private sector could introduce advanced technologies, including modern water conservation methods for hydrothermal aquifers, streamlined operational processes and efficient management practices that accelerated NHA development and improved outcomes. By leveraging private capital, governments could implement NHA-related infrastructure projects – such as a multi-specialty medical facility near a mineral spring – that would otherwise have been financially unfeasible (Stucke & Humphreys, 2019).

Despite these advantages, PPPs also had significant disadvantages, particularly concerning the long-term management of public resources such as NHA. While PPPs could appear to provide short-term “relief for state budgets”, contracts signed in the present could “significantly burden state budgets tomorrow” once assets became operational and payment obligations matured. Financial benefits were not guaranteed and were realised only when PPPs represented the “most cost-effective solution” compared with alternative financing and implementation options for NHA projects (New WHO report..., 2023). A core problem with PPPs was the potential blurring of boundaries between public objectives (sustainable use and accessibility of NHA) and private profit motives (Understanding public-private partnerships..., 2025). These long-term contracts (typically 20-30 years) could be politically and legally complex and difficult to monitor, which created risks of reporting gaps and opportunities for corruption, particularly in determining fair use and pricing of natural resources (The advantages and disadvantages of public-private partnerships, 2024). The private partner could be insulated from liability for poor-quality services and, in cases of geographic or legal monopoly (e.g., sole access to a unique spring), could increase fees for customers who could not switch providers. The World Health Organization (WHO) recommended that, for PPPs to be effective in the health sector, governments should first build internal capacity to design, plan and monitor these complex arrangements, as this was a core governmental function that could not be outsourced to external agencies (New WHO report..., 2023). Overall, many countries had used PPPs to accelerate development in healthcare and tourism. The World Bank and WHO had advocated PPPs as a means of expanding access to high-quality health services, while emphasising the need for sufficient institutional capacity to manage them effectively. Countries such as Malaysia, Thailand and the UAE had used government strategies and PPPs to position themselves as global medical tourism hubs (Government support and policy reforms..., 2025). This included joint initiatives to develop state-of-the-art healthcare clusters and to market services to international patients (Government support in medical tourism promotion..., 2025). These examples indicated that PPPs could be instrumental in developing medical tourism industries by combining private-sector investment with public policy and promotion.

Thus, the prevalence of different models (public, private and PPP) indicated the absence of a single best approach. The optimal model depended on context, national priorities (e.g., public health versus tourism revenues) and the specific characteristics of the NHA. PPPs, in particular, offered a flexible framework for leveraging private capital and efficiency while maintaining public oversight and pursuing social objectives. This indicated that the most effective model for integrating NHA into economic systems was situational and required strategic alignment between national health priorities, economic development goals and the specific attributes of NHA.

Comparative sectoral analysis of models

To better understand which models of integrating NHA into economic systems were the most effective, their application across different sectors of the health economy was

analysed. Based on the industry report Medical tourism market (2025-2030) (2025), the private model dominated the medical tourism sector in 2024, as indicated by the private segment's revenue share of 54.47%. Private hospital chains and healthcare institutions, including Apollo Hospitals and Bumrungrad International Hospital, were key players in the market, driving innovation and attracting international patients. The role of the public sector in this market was primarily supportive and regulatory, creating an “enabling environment” through strategic policies such as visa facilitation, tax incentives and the promotion of international accreditation standards. The PPP model was particularly valuable for large-scale, capital-intensive projects, such as the development of specialised “healthcare clusters” that brought together service providers and research institutions in one location to offer patients a full range of services (Government support in medical tourism promotion..., 2025).

The wellness tourism and SPA markets were almost entirely driven by the private sector. Large international hotel chains such as Hilton, Hyatt and Four Seasons were key players, leveraging their brands and capital to offer differentiated luxury wellness services (Ecotourism market size, share & industry analysis..., 2025). The private sector's ability to innovate rapidly and create luxurious, personalised experiences represented its core competitive advantage. Although the market was profit-driven, the public sector could still play a crucial role by investing in public infrastructure such as parks, trails and pedestrian areas that benefited both local residents and tourists and supported a holistic wellness ecosystem (2025 wellness tourism report, 2025). Collaborative efforts, such as partnerships between private enterprises and local governments, could also function as a tool to promote destinations and ensure the quality of visitor experiences.

The management of unique NHA created a distinct set of challenges. The legal and economic arguments for state ownership of scarce resources such as aquifers and thermal springs were strong, as this was regarded as the most reliable way to ensure long-term conservation and prevent market failure. Private companies were likely to face the free-rider problem (Sryberko & Stepanova, 2025) and were therefore unlikely to deliver the full public value of the resource. The Hot Springs National Park model demonstrated a viable framework in which public ownership of an asset was combined with private use. The government retained custody of the underlying resource, while private companies operated facilities and services that used it, thereby supporting both conservation and commercial viability. This hybrid approach offered a practical solution for balancing NHA conservation with economic development.

The production of mud masks and natural cosmetics was almost entirely controlled by the private sector. This highly globalised market was shaped by consumer demand and commercial innovation. Its main driving forces were growth in disposable incomes, the rapid development of e-commerce and increased interest in specialised skincare products. Key players in this market included international companies such as Israeli AHAVA and Aroma Dead Sea, American Asutra and AVANI Supreme, and the British clinic HB Health, which specialised in natural products

and advanced wellness services based on NHA. Within this market, natural medicinal ingredients were directly linked to commercial success, with production, sales and profits dependent on capital flows and market trends. To visualise

the effectiveness of each model, a comparative matrix was developed based on key criteria such as innovation, capital mobilisation, operational efficiency, social equality, risk profile, sustainability and reporting (Table 3).

Table 3. Comparative matrix of business models

Criteria	Public sector model	Private sector model	Public-Private Partnership (PPP) Model
Innovations	Low (often slow adaptation due to bureaucracy)	High (profit motive drives continuous innovation and new service offerings)	Medium-high (uses private sector innovation within a defined framework)
Capital mobilisation	Low (depends on state budgets and tax revenues)	High (can quickly raise capital from investors and financial markets)	High (uses private capital to bridge gaps in public funding)
Operational efficiency	Low (lack of profit motive can lead to inefficiency and slow decision-making)	High (profit motive drives streamlined operations and productivity)	High (private sector experience and incentives drive operational efficiency)
Social equality and accessibility	High (main goal is to ensure broad public access and benefit)	Low (high costs often limit services to affluent consumers)	Variable (could be designed to facilitate public access, but there are risks of high fees and limited accountability to users)
Risk profile	High (bears all financial and operational risks)	Low for public (transfers risk to private sector); High for private (market, financial, operational risks)	Shared (risks are shared between public and private partners, often based on their ability to manage them)
Sustainability and conservation	High (long-term management is the main rationale)	Variable (possibility of short-term focus on profit over sustainability)	Variable (depends on contract terms and regulatory oversight, but can promote sustainable practices)
Reporting	High (directly accountable to citizens and public oversight)	High (accountable to shareholders and customers, including through feedback, competition)	Low (boundaries can be blurred and private partners can be shielded from reporting)

Source: developed by the author

The comparative sectoral analysis demonstrated that the choice of business model significantly influenced the effective use of NHA and the achievement of both economic and social objectives. The analysis differentiated spheres of influence: the private sector dominated medical tourism, wellness services and cosmetics production, while public ownership was most justified in the management of unique natural assets such as thermal springs in order to prevent market failures and ensure long-term resource conservation. The study also emphasised the importance of PPPs as a hybrid solution that combined the innovative potential and capital of private business with public oversight of resource preservation and the delivery of public benefits. This comparative analysis was relevant for policy development, investment strategies and NHA management, as it provided a basis for informed decisions regarding the optimal model for a specific NHA type and economic context.

Comprehensive practical recommendations for the use of NHA in Ukraine (considering international experience)

Based on a comprehensive analysis of international experience in the use of NHA, well-founded and practical recommendations were formulated for Ukraine. These recommendations, derived from global best practices, were intended to support Ukrainian entrepreneurs, investors

and government authorities in making informed management decisions. For entrepreneurs, diversification of offerings beyond traditional sanatoriums was required, including development of wellness and SPA services, ecotourism, and products based on natural raw materials, particularly NHA. This diversification was expected to respond to growing consumer demand for preventive health solutions and holistic wellness experiences. A focus on niche markets was also recommended, using unique Ukrainian NHA (e.g., specific mineral waters, healing muds and distinctive climatic zones) to develop specialised services; the example of Israeli Dead Sea mud therapy illustrated how a unique natural resource could be converted into a recognisable, high-value offering. Investment in service quality and personalisation, together with the adoption of modern technologies, was expected to strengthen competitiveness. The integration of sustainable practices was also emphasised, as this was required to ensure long-term resource availability and to enhance appeal to environmentally conscious customers.

For investors, conducting thorough due diligence was identified as essential and was expected to include assessment of NHA characteristics, the local regulatory environment and market demand. Consideration of PPP models for large infrastructure projects was recommended, as this approach could reduce risks and leverage government support. A long-term investment horizon was required

because many projects were capital intensive and associated with extended payback periods; therefore, emphasis on sustainable income generation was recommended. Portfolio diversification was also identified as beneficial, including investment across different NHA-based business types such as mineral water production and wellness resorts in order to spread risk. For government authorities, the development of a comprehensive national strategy for NHA development was recommended, integrating public health objectives, economic development priorities and environmental sustainability requirements. Regulatory optimisation was also identified as critical, including simplification of licensing procedures and establishment of transparent quality standards to attract investment. Investment in basic infrastructure – transport, utilities and digital connectivity – in potential resort areas was prioritised. Active promotion of PPP mechanisms for large-scale projects was also identified as an important element. In addition, human capital development was expected to be supported through vocational training programmes in order to address potential shortages of qualified personnel. Development of a national brand and marketing strategy to promote Ukraine's unique NHA internationally was also emphasised as a critical requirement.

Adaptation of international experience required strategic localisation that accounted for Ukraine's specific conditions. Priority was placed on leveraging existing natural assets, including mineral water reserves in Zakarpatska, Lvivska, Poltavska and Dnipropetrovska oblasts, as well as healing muds, estuary brine, the Black Sea and Azov Sea coasts, and other favourable climatic zones. Medical rehabilitation was identified as a priority in view of martial law in Ukraine. For this purpose, elements from Germany (state support for wellness programmes) and Israel (strict state supervision in medical tourism) were identified as potentially adaptable. It was also recommended that sustainability risks should be addressed proactively through environmental protection measures in order to avoid challenges observed in other contexts, including excessive-tourism pressures reported in Japan. Investment in digitalisation was also recommended, including online booking tools and customer relationship management (CRM) systems that had been implemented successfully in other countries. The development of vocational training programmes was also recommended to address labour market constraints, taking into account experiences reported in the Czech Republic.

Determination of priority areas for entrepreneurship development in the NHA domain in Ukraine was based on global trends, national needs and existing competitive advantages. Priority directions included medical rehabilitation and wellness tourism, ecotourism and recreational complexes, production of natural cosmetics and pharmaceuticals, bottled mineral water production, and specialised niche therapies. Economic development via NHA integration into entrepreneurial activity was assessed as dependent on the creation of an enabling ecosystem in which policy measures, investment flows and business initiatives were mutually supportive and coordinated. Optimal NHA development therefore required stakeholder synergy (government, entrepreneurs and investors) to balance economic growth, social accessibility and resource sustain-

ability. The recommendations outlined a three-pillar approach to NHA integration in Ukraine, emphasising diversification of entrepreneurial models, targeted investment, and implementation of a comprehensive national strategy. The analysis indicated that an optimal NHA development model required coordinated action between government, investors and entrepreneurs to balance economic growth, social accessibility and resource sustainability.

However, movement from strategic guidelines to effective implementation required further detailed research. In particular, detailed study of international permitting and licensing systems for NHA-related activities was required. This would enable optimisation of Ukraine's regulatory framework, simplification of procedures for investors and entrepreneurs, and establishment of transparent quality and environmental safety standards. Without such focused research, recommendations for regulatory optimisation were expected to lack the specificity required for effective implementation, which could hinder the formation of clear and transparent rules needed to attract significant investment and realise the full potential of Ukraine's NHA.

■ DISCUSSION

The study, encompassing a comprehensive analysis of international experience in the utilisation of NHA, empirically confirmed the fundamental role of this sector in strategic economic recovery, especially in the context of post-war development. Analysis of global market dynamics highlighted the exceptional investment attractiveness of NHA-based segments. A key finding was that the CAGR of all nine analysed markets consistently exceeded the CAGR of World GDP. This positioned these sectors as highly profitable and resilient to macroeconomic shocks, which was important for prioritising investment in Ukraine. The results indicated that medical tourism demonstrated the highest projected annual growth rate (23.0% CAGR). This indicator was substantially higher than that of the largest segment by volume, wellness tourism (10.2% CAGR) (Medical tourism market (2025-2030), 2025). This pattern signalled a shift in global investment and consumer focus from general recreational activities to specialised, results-oriented medical and preventive services. Consequently, market demand for services utilising NHA was becoming increasingly selective, requiring not only relaxation but also clinically substantiated outcomes.

This trend towards the medicalisation of wellness aligned with conclusions reported in international academic research. D. Dryglas & M. Smith (2023), who analysed how Central European SPA resorts created complex "experiencescapes" for health tourism, supported the shift towards hybrid, scientifically validated wellness models as a necessary condition for achieving high profitability. Therefore, for Ukraine, strategic success was linked to integrating traditional sanatorium and resort treatment with high-technology medical procedures. Despite medical tourism's leadership in growth rates, wellness tourism, reaching nearly 1 trillion USD, ensured high stability for the sector. This substantial market volume provided demand resilience, which was supported by S.-H. Lee (2024), who emphasised that wellness tourism development, beyond direct economic benefits, generated significant positive socio-economic effects for local communities.

This substantiated the need for a national strategy that balanced rapid capitalisation of the most dynamic medical segments with the formation of a broad, stable base of wellness services.

The choice of CAGR as the principal tool for comparing market dynamics was scientifically justified. The use of formula (1) for calculating growth rates represented a standard methodology in international economic forecasting, as confirmed, *inter alia*, by A. Ahmed (2023) and H. Kaya (2025) in analyses of product export dynamics and market-size trend forecasting. Analysis of NHA-utilising sectors identified key barriers to commercialisation of traditional yet scientifically non-standardised resources. For Ukraine, which possessed unique natural assets (medicinal muds, distinctive climatic zones, etc.), overcoming these barriers was of strategic importance for full monetisation of these assets. The study indicated that traditional NHA-oriented segments such as climatotherapy had only moderate investment attractiveness and implicit profit margins. This limitation was associated with the absence of standardised market data and a deficit of scientific validation, which complicated positioning as an independent commercial product. At present, the economic value of climatotherapy was largely embedded within broader, complex wellness service packages. This situation created an investment opportunity. Despite low market transparency, the scientific community supported the therapeutic value of these procedures. A systematic review by J. Clark-Kennedy *et al.* (2021), which evaluated the impact of balneotherapy on mental health outcomes, reported a positive, though often undervalued, effect. To bridge the gap between scientifically supported efficacy and low market valuation, M. Droli *et al.* (2022) emphasised the need to develop evidence-based marketing approaches for formally positioning climate therapy as a distinct wellness tourism product.

The economic rationale for investment in scientific validation of climatotherapy was strengthened by its potential role in long-term management of chronic diseases. Research data indicated high costs of treating chronic conditions, reaching, for instance, up to 13,132 USD per year per patient with psoriasis. In this context, specialised climatic procedures, such as a four-week Dead Sea climatotherapy costing 5,800 USD, demonstrated economic feasibility. T. Emmanuel *et al.* (2020) and M. Harari (2020), analysing the efficacy of climatotherapy for dermatological patients, reported a favourable cost-benefit relationship in treating specialised diseases. Therefore, the economic value of these traditional NHA needed to be evaluated through the lens of long-term cost-effectiveness for the healthcare system as a whole, rather than solely through direct profit from tourism services.

In contrast to traditional therapeutic sectors, the production of natural cosmetics and APIs based on NHA demonstrated high investment attractiveness, stability and strong profitability. This segment was driven by growing demand for natural, organic and eco-friendly products, together with technological advances in natural raw-material extraction. Strategic diversification in this direction enabled export-oriented, high value added goods to be developed using reserves of minerals, healing muds and plant extracts. The transition from resource to finished product was essential for rapid monetisation. Scientific evidence

supported this expediency, indicating that approximately 25% of modern medicines were derived from natural plant sources (Adetunji *et al.*, 2024; Sameen & Sultan, 2025). This provided a robust scientific and technical basis for utilising Ukrainian NHA in highly profitable pharmaceutical and cosmetology sectors, mirroring the success of global niche brands.

High profitability in natural product manufacturing could function as an important financial mechanism: capital accumulated by the private sector in commercially effective areas could be reinvested in, or attracted to, projects in less profitable but socially critical sectors such as medical rehabilitation. Diversification into commodity production (water, cosmetics and APIs) provided flexibility and reduced financial dependence on long-term investments exclusively in large infrastructure. Analysis of three main international models for NHA integration (public, private and PPP) showed that the optimal model was situational and needed to be determined by the specific asset and strategic objectives. The analysis confirmed that the public management model was most justified for unique, limited resources such as thermal springs or water-bearing horizons that could be classified as “public goods”. The state’s core function in this context was that of a long-term steward acting in the interests of the general public rather than for private profit. The need for state control over the natural assets themselves, which was important for preventing market failure and over-exploitation, was supported by A. Sryberko & Y. Stepanova (2025). The authors examined the definition of interests in natural-asset use in the context of “blue growth” and emphasised that state stewardship was required to ensure long-term sustainability and prevent over-exploitation driven by short-term private interests. Thus, state ownership of NHA extraction licences was required, while private-sector investment was expected to be concentrated in the service infrastructure that utilised these resources. Furthermore, E. Pessot *et al.* (2021), in a systematic review, emphasised that wellness tourism sustainability depended directly on preservation of unique natural resources and microclimates, a function that could rarely be fully ensured by the private sector alone.

The PPP model was identified as a key mechanism for large-scale and capital-intensive projects utilising NHA, as it enabled financial risk sharing and leveraged private-sector innovation. The emphasis on PPP as a tool for infrastructure modernisation paralleled evidence from critical infrastructure sectors. I. Turchenko (2024) highlighted PPP as a modern model for developing transport infrastructure, which could be extrapolated to the development of resort clusters and specialised medical facilities. This indicated that PPP represented not only a financing mechanism but also a management solution for accelerating NHA-sector development. However, the analysis also indicated that financial benefits from PPP were not guaranteed and were justified only when agreements represented the most cost-effective solution. Contract complexity (typically 20-30 years) and the potential blurring of responsibility between public goals (resource accessibility) and private profit required prioritisation of internal institutional capacity for planning, designing and monitoring these arrangements. The principal social risk of the private model was low social equity, as a focus on

high margins constrained access to high-quality NHA services for the general population. This risk was particularly significant in Ukraine, where medical rehabilitation was a key state priority. Research by A. Asa & J. Nautwima (2025) suggested that medical tourism could deepen inequalities in access to health services by diverting resources and qualified personnel from local populations to wealthy international patients. Preventing a two-tier healthcare system was therefore critical. To reconcile private-sector efficiency with fulfilment of social functions, PPP arrangements aimed at utilising NHA needed to be designed with mandatory social obligations. This could include reserving a portion of modernised rehabilitation capacity for military personnel and affected populations funded by the state. Such an approach ensured that private capital investment in NHA infrastructure simultaneously supported state policy objectives for restoring human capital. The identified global trends indicated that Ukraine's NHA strategy needed to be two-pronged: financial capitalisation (through export of products and high-margin medical tourism) and social capitalisation (through mass medical rehabilitation). National prioritisation of medical rehabilitation and wellness tourism was justified, as it aligned with the highest observed global market dynamics (23.0% CAGR) and with immediate post-war population needs. Investment in rehabilitation based on natural resources (mineral waters, muds and climate) represented not only a social expenditure but also a critical investment in restoring work capacity and population health, which underpinned long-term economic growth (Medical tourism market (2025-2030), 2025). To translate high investment attractiveness into realised investment, institutional barriers needed to be removed. The analysis indicated that a primary source of uncertainty was the absence of detailed analysis of international experience in permitting and licensing systems for NHA-oriented activities. Foreign investors required a transparent and effective regulatory environment, and licensing transparency was no less important than project-level financial attractiveness. Optimising permitting procedures in line with international best practices therefore represented a necessary step to reduce investment risks and attract substantial private capital.

Overall, the analysis demonstrated that the NHA sector represented one of the most resilient and dynamic segments of the global economy, confirming the strategic expediency of its development in Ukraine. Growth of segments focused on medical and specialised wellness services indicated the need to modernise infrastructure and invest in scientific validation of traditional therapies. Optimal integration of NHA into Ukraine's economic system required a combined approach: retention of state control over natural resources themselves (to ensure sustainability and prevent market failure) alongside active use of PPP mechanisms for infrastructure modernisation and service provision. PPP agreements needed to include clear social obligations ensuring priority access to medical rehabilitation for affected populations. To move from strategic recommendations to operational implementation, the key direction for future research was a detailed institutional analysis of international licensing and permitting systems. Only the establishment of a transparent and effective regulatory environment would enable full realisation

of the significant economic potential of Ukraine's natural healing assets.

■ CONCLUSIONS

The comprehensive study of international entrepreneurial activity in the use of NHA empirically confirmed their significant economic and social importance, which was critical for Ukraine's strategic recovery in the post-war period. The systematised quantitative analysis of global markets utilising NHA demonstrated their substantial scale and high investment attractiveness. By 2028, the three largest markets by volume were projected to be wellness tourism, valued at 1,359.3 billion USD, bottled (mineral) water production at 438.5 billion USD, and nature/ecotourism at 422.3 billion USD. It was established that the CAGR of all nine analysed global NHA markets exceeded the 4.3% CAGR of World GDP. Medical tourism exhibited the fastest growth at 18.9% CAGR, followed by nature/ecotourism and mud mask production, both at 14.3% CAGR. These results indicated high dynamism and resilience of these sectors to macroeconomic fluctuations. The comparative analysis, grounded in these quantitative indicators, revealed differentiated investment appeal across segments. For example, the medical tourism market was rated as high in stability, attractiveness and profitability, consistent with its leading CAGR. This substantiated the need for Ukraine to integrate traditional sanatorium and resort treatment with high-technology medical services. In contrast, the climatotherapy market was assessed as moderate-low in investment attractiveness, primarily due to limited market transparency associated with insufficient market data and scientific validation. Nevertheless, its potential economic value was supported by the high costs of managing chronic diseases (up to 13,132 USD per year for a patient with psoriasis), which indicated its prospective role as a cost-effective intervention within a long-term healthcare system perspective.

To achieve success, diversification beyond traditional sanatorium and resort treatment was required, encompassing wellness and SPA services, cosmetics production and recreational tourism. This aligned with the global shift in consumer priorities towards preventive and results-oriented health solutions. The analysis indicated that the PPP model represented an optimal mechanism for integrating NHA into the economic system, particularly for socially significant projects such as medical rehabilitation. This model combined private-sector innovation and financial capacity with public oversight of resources to support sustainability. At the same time, PPP implementation required rigorous institutional capacity for planning, contracting and monitoring. The strategic necessity of developing NHA in Ukraine, particularly with an emphasis on medical rehabilitation corresponding to the highest market dynamics and immediate national needs, was justified. The success of this process depended on a comprehensive approach and coordinated co-operation between the state, investors and entrepreneurs. To translate strategic recommendations into operational implementation and ensure sustainable economic development, institutional barriers needed to be removed. Therefore, future research perspectives should be directed towards detailed institutional analysis of interna-

tional experience in permitting and licensing systems for NHA-related activities. This would support the formation of transparent and effective rules, which would provide a foundation for attracting significant investment and for realising the substantial potential of Ukraine's natural healing assets.

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■ REFERENCES

- [1] 2025 wellness tourism report. (2025). Retrieved from <https://www.copperwellretreat.com/2025-wellness-tourism-report>.
- [2] Adetunji, T.L., Olisah, C., Acho, M.A., Oyetunde-Joshua, F., & Amoo, S.O. (2024). Global research trends and recent advances in medicinal plant-synthesized nanoparticles for cancer treatment. *Plants*, 13(20), article number 2836. doi: 10.3390/plants13202836.
- [3] Aggestam Pontoppidan, C., Bisogno, M., Caruana, J., & Dabbicco, G. (2024). Safeguarding our roots: Natural resources accounting and reporting in the public sector. *Meditari Accountancy Research*, 32(7), 147-170. doi: 10.1108/medar-07-2023-2106.
- [4] Ahmed, A. (2023). Measuring and analyzing the value exports of Saudi dates to Indonesia. *The Arab Journal of Scientific Research*, 7(7), 25-40. doi: 10.21608/ajsr.2023.296406.
- [5] Analysis of the water market in Ukraine. (2024). Retrieved from <https://pro-consulting.ua/ua/issledovanie-rynka/analiz-rynka-vody-v-ukraine-2024-god>.
- [6] Anderson, D. (n.d.). *Top digital health cities for preventive medicine abroad*. Retrieved from <https://www.magazine.medicaltourism.com/article/top-digital-health-cities-for-preventive-medicine-abroad>.
- [7] Asa, A.R., & Nautwima, J.P. (2025). Health tourism in the Global South: Towards effective policy responses to emerging opportunities and challenges. *International Journal of Innovation and Economic Development*, 2(11), 7-22. doi: 10.18775/ijied.1849-7551-7020.2015.112.2001.
- [8] Babov, K.D., Bezverkhiuk, T.M., & Kysilevska, A.Yu. (Eds). (2021). *Natural medicinal resources: User's alphabet*. Odesa: Polihraf.
- [9] Bora, D. (2025). *Wellness tourism market size & outlook, 2025-2033*. Retrieved from <https://straitresearch.com/report/wellness-tourism-market>.
- [10] Bottled water market. (2025). Retrieved from <https://www.grandviewresearch.com/industry-analysis/bottled-water-market>.
- [11] Brancu, C., & Turcu, O. (2025). Exploring the economic performance and market trends in the cosmetics industry: Insights and analysis. *Business & Management Compass*, 69(3), 23-32. doi: 10.56065/e31nkk40.
- [12] Case studies in hot spring use for sustainable energy. (2019). Retrieved from <https://www.pref.oita.jp/uploaded/attachment/2049215.pdf>.
- [13] Castle hot springs. (n.d.). Retrieved from <https://book4time.com/castle-hot-springs-case-study/>.
- [14] Castro, L.A.T. (n.d.). *Medical tourism sustainable development*. Retrieved from <https://www.magazine.medicaltourism.com/article/medical-tourism-sustainable-development>.
- [15] Clark-Kennedy, J., Kennedy, G., Cohen, M., & Conduit, R. (2021). Mental health outcomes of balneotherapy: A systematic review. *International Journal of Spa and Wellness*, 4(1), 69-92. doi: 10.1080/24721735.2021.1913368.
- [16] Droli, M., Bašan, L., & Vassallo, F.G. (2022). Positioning climate therapy stays as a health tourism product: An evidence-based approach. *Emerging Science Journal*, 6(2), 256-272. doi: 10.28991/esj-2022-06-02-04.
- [17] Dryglas, D., & Smith, M.K. (2023). A critical analysis of how central European spas create health tourism experiencescapes. *Tourism Planning & Development*, 21(5), 570-593. doi: 10.1080/21568316.2023.2259357.
- [18] Ecotourism market size, share & industry analysis, by type, by traveler type, by booking mode, by age group, by passenger type and regional forecast, 2025-2032. (2025). Retrieved from <https://www.fortunebusinessinsights.com/infographics/ecotourism-market-108700>.
- [19] Emmanuel, T., Lybæk, D., Johansen, C., & Iversen, L. (2020). Effect of Dead Sea climatotherapy on psoriasis; A prospective cohort study. *Frontiers in Medicine*, 7, article number 83. doi: 10.3389/fmed.2020.00083.
- [20] Exploring opportunities in hot springs resort sector. (2025). Retrieved from <https://www.datainsightsmarket.com/reports/hot-springs-resort-535543>.
- [21] Fernando, J. (2025). *Compound annual growth rate (CAGR) formula and calculation*. Retrieved from <https://www.investopedia.com/terms/c/cagr.asp>.
- [22] Four seasons Toronto spa launches biohacking treatments. (2023). Retrieved from <https://spaexecutive.com/2023/03/22/four-seasons-toronto-spa-launches-biohacking-treatments/>.
- [23] General characteristics of natural healing resources. (2025). Retrieved from <https://kurort.gov.ua/zagalna-harakterystyka-pryrodnyh-likuvalnyh-resursiv/>.
- [24] Global mud mask market size by type of mud, by formulation, by application, by geographic scope and forecast. (2025). Retrieved from <https://www.verifiedmarketresearch.com/product/mud-mask-market/>.

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■ CONFLICT OF INTEREST

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- [25] Global spa market size, share, and trends analysis report – industry overview and forecast to 2032. (2025). Retrieved from <https://surl.li/hgtgjd>.
- [26] Global wellness economy monitor. (2024). Retrieved from <https://globalwellnessinstitute.org/industry-research/2024-global-wellness-economy-monitor/>.
- [27] Global Wellness Institute. (2024). [Hot springs & geothermal mineral waters](#). In C. Cavanah (Ed.), *Guide to hydrothermal spa & wellness development standards* (pp. 157-176). Miami: Global Wellness Institute.
- [28] Gomez, M., & Katz, M. (2025). *Medtech M&A and VC signal positive momentum entering 2025*. Retrieved from <https://www.goodwinlaw.com/en/insights/publications/2025/02/insights-practices-mdt-medtech-ma-vc-positive-momentum>.
- [29] Government support and policy reforms in health and medical tourism. (2025). Retrieved from <https://www.health-tourism-news.com/news/government-support-and-policy-reforms-in-health-and-medical-tourism>.
- [30] Government support in medical tourism promotion: Exploring policies and incentives. (2025). Retrieved from <https://www.magazine.medicaltourism.com/article/government-support-in-medical-tourism-promotion-exploring-policies-and-incentives>.
- [31] Green Paper on Public-Private Partnerships and Community Law on Public Contracts and Concessions. (2004, April). Retrieved from <https://op.europa.eu/en/publication-detail/-/publication/94a3f02f-ab6a-47ed-b6b2-7de60830625e/language-enl>.
- [32] Haigh, L. (2025). *Developing a desirable medical tourism destination*. Retrieved from <https://www.itij.com/latest/long-read/developing-desirable-medical-tourism-destination>.
- [33] Harari, M. (2020). Commentary: Effect of Dead Sea climatotherapy on psoriasis; A prospective cohort study. *Frontiers in Medicine*, 7, article number 586418. doi: 10.3389/fmed.2020.586418.
- [34] Horozhankina, N.A., Horb, K.M., Grytsenko, A.V., & Tarasenko, H.Y. (2025). Development tendencies of the sanatorium and resort economy of Ukraine. *Current Issues of Economic Sciences*. doi: 10.5281/zenodo.14841385.
- [35] Hot Springs National Park; Use of Thermal Water and Commercial Passenger-Carrying Vehicles. (2024). Retrieved from <https://www.federalregister.gov/documents/2024/11/27/2024-27571/hot-springs-national-park-use-of-thermal-water-and-commercial-passenger-carrying-vehicles>.
- [36] International Bottled Water Association. (n.d.). Retrieved from <https://bottledwater.org/learn-more-about-bottled-water/>.
- [37] International Monetary Fund. (2025). *Download WEO data: April 2025 edition*. Retrieved from <https://www.imf.org/en/Publications/WEO/weo-database/2025/april>.
- [38] Kaya, H. (2024). An analysis of market size trends forecasting and range prediction in electric vehicles using machine learning algorithms. *Turkish Journal of Forecasting*, 9(1), 7-16. doi: 10.34110/forecasting.1485136.
- [39] Kesharwani, P. (2025). *How to start your organic skincare brand in 2025*. Retrieved from <https://learncanyon.com/how-to-start-your-organic-skincare-brand-in-2025/>.
- [40] Khumarova, N., & Kostetska, K. (2025). Substantiation of resource support for the sanatorium and resort sector rehabilitation. *Economic Innovations*, 27(1(94)), 132-141. doi: 10.31520/ei.2025.27.1(94).132-141.
- [41] Kirkland, A. (2014). What is wellness now? *Journal of Health Politics, Policy and Law*, 39(5), 957-970. doi: 10.1215/03616878-2813647.
- [42] Kudinova, I., & Grishchenko, O. (2021). Medical tourism as a current trend of modern development in the field of Ukrainian tourism. *Economics and Business Management*, 12(3), 61-69. doi: 10.31548/bioeconomy2021.03-04.061.
- [43] Law of Ukraine No. 2026-III “On Resorts”. (2000, October). Retrieved from <https://zakon.rada.gov.ua/laws/show/en/2026-14?lang=en#Text>.
- [44] Law of Ukraine No. 4196-IX “On the Peculiarities of Regulating the Activities of Legal Entities of Certain Organizational and Legal Forms in the Transitional Period and Associations of Legal Entities”. (2025, January). Retrieved from <https://zakon.rada.gov.ua/laws/show/4196-20?lang=en#Text>.
- [45] Law of Ukraine No. 698-XII “On Entrepreneurship”. (1991, February). Retrieved from <https://zakon.rada.gov.ua/laws/show/698-12?lang=en#Text>.
- [46] Lee, S.-H. (2024). Advantages of the wellness tourism and its future implications. *The Journal of Industrial Distribution & Business*, 15(7), 11-18. doi: 10.13106/JIDB.2024.VOL15.NO7.11.
- [47] Marchenko, N.I., & Ditrikh, I.V. (2020). Prospects of wellness innivation in the hospitality industry. *Scientific Notes of Taurida National V.I. Vernadsky University*, 2(6), 65-69. doi: 10.32838/tnu-2663-5941/2020.6-2/12.
- [48] Mayor, B., et al. (2021). State of the art and latest advances in exploring business models for nature-based solutions. *Sustainability*, 13(13), article number 7413. doi: 10.3390/su13137413.
- [49] Medical tourism market (2025-2030). (2025). Retrieved from <https://www.grandviewresearch.com/industry-analysis/medical-tourism-market>.
- [50] Medical tourism market performance, trends and strategic recommendations. (2025). Retrieved from <https://www.towardshealthcare.com/insights/medical-tourism-market-sizing>.
- [51] Medical tourism market size, share & industry analysis, by healthcare services (medical treatment {cardiac procedures, oncology procedures, orthopedic & spine procedures, dental procedures, and others}, wellness treatment {cosmetic procedures, rejuvenation procedures, and others}, and alternative treatment), by service provider (public and private), and regional forecast, 2025-2032. (2025). Retrieved from <https://www.fortunebusinessinsights.com/industry-reports/medical-tourism-market-100681>.

- [52] Natural and organic personal care products market to grow by USD 12.37 billion (2025-2029), rising demand among female consumers, ai impact on trends – Technavio. (2025). Retrieved from <https://surl.li/krbdwm>.
- [53] Natural APIs market to reach US\$ 57.5 billion by 2034 with a 6.1% CAGR as demand for plant-based drug ingredients grows. (2025). Retrieved from <https://www.pharmiweb.com/press-release/2025-03-20/natural-apis-market-to-reach-us-575-billion-by-2034-with-a-61-cagr-as-demand-for-plant-based-drug-ingredients-grows-latest-report-by-tmr>.
- [54] Natural cosmetics market report 2025. (2025). Retrieved from <https://surl.li/bwwnsm>.
- [55] Nature-based tourism. (2024). Retrieved from <https://www.worldbank.org/en/topic/environment/brief/nature-based-tourism>.
- [56] NatureVest is TNC's impact investing and sustainable finance team. (n.d.). Retrieved from <https://www.nature.org/en-us/about-us/who-we-are/how-we-work/finance-investing/naturevest/>.
- [57] Nebava, M.I., Adler, O.O., & Lesko, O.Y. (2011). *Economics and organization of enterprise's production activities* (Vol. 1). Vinnytsia: VNTU.
- [58] New WHO report lays out concrete actions for governments to optimize public-private partnerships for health. (2023). Retrieved from <https://www.who.int/europe/news/item/26-01-2023-new-who-report-lays-out-concrete-actions-for-governments-to-optimize-public-private-partnerships-for-health>.
- [59] Organic skin care products market size & share analysis – growth trends and forecast (2025-2030). (2025). Retrieved from <https://www.mordorintelligence.com/industry-reports/organic-skin-care-market>.
- [60] Ormond, M., Mun, W.K., & Khoon, C.C. (2014). Medical tourism in Malaysia: How can we better identify and manage its advantages and disadvantages? *Global Health Action*, 7(1), article number 25201. doi: 10.3402/gha.v7.25201.
- [61] Pessot, E., Spoladore, D., Zangiacomi, A., & Sacco, M. (2021). Natural resources in health tourism: A systematic literature review. *Sustainability*, 13(5), article number 2661. doi: 10.3390/su13052661.
- [62] Plant-based API market by source (soy, pea, hemp, sunflower, rice), by form (liquid, powder, granules), by functionality, by distribution channel, by end user – global industry outlook, trends and forecast 2025-2034. (2024). Retrieved from <https://dimensionmarketresearch.com/report/plant-based-api-market/>.
- [63] Premium bottled water market. (2025). Retrieved from <https://www.gminsights.com/industry-analysis/premium-bottled-water-market>.
- [64] Protas, M.Yu. (2022). *Technological aspects of organizing balneological and health tourism*. In *Tourism and the hotel and restaurant industry: Materials of the scientific conference with international participation* (pp. 328-331). Zaporizhzhia: Zaporizhzhia Polytechnic National University.
- [65] Recreational tourism. (2025). Retrieved from <https://geohub.org.ua/node/2279>.
- [66] Sameen, S., & Sultan, M.A. (2025). The role of herbal extracts in modern integrative medicine: A comprehensive review. *Premier Journal of Biomedical Science*. doi: 10.70389/pjbs.100011.
- [67] Sanatorium and resort treatment as one of the factors of preserving the country's labor potential. (2018). Retrieved from <https://surl.li/rzqftu>.
- [68] Shashero, A., Molodetskiy, A., Nikolaieva, O., & Kudelina, S. (2025). Modern resort business of Ukraine as a socio-economic system. *Journal of Education, Health and Sport*, 77, article number 60641. doi: 10.12775/IEHS.2025.77.60641.
- [69] Sheykin, H. (2025a). *How much can ecotourism business owners earn?* Retrieved from <https://finmodelslab.com/blogs/how-much-makes/ecotourism-and-nature-conservation>.
- [70] Sheykin, H. (2025b). *How to boost profits in your mineral water bottling business?* Retrieved from <https://finmodelslab.com/blogs/profitability/mineral-water-bottling-plant>.
- [71] Singh, S. (2025). *Global natural cosmetics ingredients market*. Retrieved from <https://www.marketresearchfuture.com/reports/natural-cosmetics-ingredients-market-26357>.
- [72] Spa market size & share analysis-growth trends & forecasts (2025-2030). (2025). Retrieved from <https://www.mordorintelligence.com/industry-reports/spa-market>.
- [73] Spa market: Global industry analysis and forecast (2025-2032). (2025). Retrieved from <https://www.maximizemarketresearch.com/market-report/spa-market/115472/>.
- [74] Sryberko, A., & Stepanova, Y. (2025). Defining interests in the use of natural assets of the shoreline protection belt in the context of blue growth. *Economics: Time Realities*, 2(78), 136-149. doi: 10.15276/etr.02.2025.15.
- [75] Stucke, A., & Humphreys, D. (2019). *Public-private partnerships for emerging market health*. In *Global private health care: Materials of scientific conference with international participation*. Washington: International Finance Corporation.
- [76] Suryawanshi, S. (2025). *Mineral water market size and share analysis – growth trends and forecasts (2025-2032)*. Retrieved from <https://www.coherentmarketinsights.com/industry-reports/mineral-water-market>.
- [77] The advantages and disadvantages of public-private partnerships. (2024). Retrieved from <https://snatika.com/single-blog/the-advantages-and-disadvantages-of-public-private-partnerships>.
- [78] Thermal springs tourism market (2025-2030). (2024). Retrieved from <https://www.grandviewresearch.com/industry-analysis/thermal-springs-tourism-market-report>.
- [79] Thermal/mineral springs. (n.d.). Retrieved from <https://globalwellnessinstitute.org/what-is-wellness/thermal-mineral-springs/>.
- [80] Toronto luxury spa & wellness. (n.d.). Retrieved from <https://www.fourseasons.com/toronto/spa/>.
- [81] Turchenko, I.V. (2024). Modern models of public-private partnership in the development of domestic transport infrastructure. *South Ukrainian Law Journal*, 4, 57-65. doi: 10.32850/sulj.2024.4.11.

- [82] Understanding public-private partnerships: How they work and key examples. (2025). Retrieved from <https://www.investopedia.com/terms/p/public-private-partnerships.asp>.
- [83] United Nations Economic Commission for Europe. (2017). *Guidebook on promoting good governance in public-private partnerships*. Geneva: United Nations.
- [84] Unlocking the potential of nature-based tourism: A pathway to conservation and economic resilience. (n.d.). Retrieved from <https://enduringearth.org/unlocking-nature-based-tourism/>.
- [85] US medical tourism market by service provider (public and private), by service (medical treatment (orthopedic & spine procedures, oncology procedures, dental procedures, cardiac procedures, and others), wellness treatment (rejuvenation procedures, cosmetic procedures, and others), and alternative treatment), region and companies – industry segment outlook, market assessment, competition scenario, trends and forecast 2025-2034. (2025). Retrieved from <https://market.us/report/us-medical-tourism-market/>.
- [86] Vašaničová, P., Košíková, M., Jenčová, S., Miškuřová, M., & Korečko, J. (2025). Financial performance-based clustering of spa enterprises in Slovakia. *Journal of Risk and Financial Management*, 18(9), article number 482. doi: 10.3390/jrfm18090482.
- [87] Yavorska, V., Nikolaeva, M., & Grigoriev, O. (2022). Development of health tourism in Ukraine. *Journal of Education, Health and Sport*, 12(9), 998-1006. doi: 10.12775/JEHS.2022.12.09.112.
- [88] Zhang, W., Qin, Z., & Tang, J. (2022). Economic benefit analysis of medical tourism industry based on markov model. *Journal of Mathematics*, 2022, article number 6401796. doi: 10.1155/2022/6401796.

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Економічний потенціал природних лікувальних активів: тенденції світового ринку, бізнес-моделі та перспективи для України

■ **Анотація.** Економічне відновлення держав після масштабних конфліктів потребує стратегічної капіталізації високовартісних внутрішніх активів, здатних генерувати стійкі доходи та відновлювати виснажений людський капітал. Глобально значущі природні лікувальні активи України (ПЛА) становлять таку стратегічну пріоритетність. Метою дослідження було здійснення комплексного аналізу міжнародного бізнес-досвіду використання ПЛА для розроблення практичних рекомендацій щодо їх ефективного застосування в Україні. Методологія ґрунтувалася на системному аналізі, узагальненні та синтезі даних численних міжнародних звітів і наукових публікацій із застосуванням порівняльного аналізу для оцінювання критеріїв світових ринків і бізнес-моделей. Поняття ПЛА було визначено як природні лікувальні ресурси, зафіксовані у державних реєстрах і такі, що використовуються з метою отримання прибутку або суспільної вигоди. Проведено детальний аналіз світових підприємницьких ринків, що використовують ПЛА. Встановлено, що найбільшими за обсягом ринками станом на 2028 р. будуть оздоровчий туризм (1 359,3 млрд дол. США), виробництво бутильованої води (438,5 млрд дол. США) та екотуризм (422,3 млрд дол. США). Систематизовано ключові критерії (стабільність, інвестиційна привабливість, стійкість) для дев'яти ринкових сегментів, що підтвердило перевищення темпів зростання всіх ринків ПЛА над CAGR світового ВВП. Проаналізовано три основні міжнародні моделі інтеграції ПЛА (публічна, приватна та публічно-приватного партнерства), встановлено, що оптимальна модель визначається специфікою активу та стратегічними цілями. Розроблено комплексні практичні рекомендації для України, в яких медичну реабілітацію визначено ключовим пріоритетом. Отримані результати формують доказову основу для підприємців, інвесторів і органів державної влади України щодо вибору оптимальних бізнес-моделей та пріоритетних інвестиційних напрямів використання ПЛА

■ **Ключові слова:** курортна економіка; інвестиції; туризм; реабілітація; велнес; рекреація; публічно-приватне партнерство