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TOURISM, CREATIVITY AND ARTIFICIAL INTELLIGENCE: PATHWAYS FOR SMART AND SUSTAINABLE FUTURES.

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Abstract:

Tourism is undergoing a profound transformation driven by the convergence of creativity and artificial intelligence (AI). While creativity fosters innovative combinations of cultural, social, and economic resources, AI enhances decision-making through data analysis, predictive modeling, and smart management tools. This study examines how these forces can support sustainable, resilient, and inclusive tourism development, with particular attention to the Dakhla-Oued Eddahab region in southern Morocco. This research adopts a systematic literature review approach based on a sample of 45 scientific articles, international reports, and case studies published between 2010 and 2025. The selected literature addresses sustainable tourism, smart tourism technologies, AI applications, creativity-driven innovation, and circular economy practices.

The findings indicate that AI and creativity can contribute to tourism sustainability through visitor-flow management, predictive demand analysis, immersive experiences, renewable-energy integration, and participatory innovation initiatives. However, the review also highlights the risks associated with technologies that are insufficiently adapted to local contexts, which may increase dependency and weaken local empowerment.

The study concludes that AI alone cannot ensure sustainable tourism development. Its effectiveness depends on responsible governance, ethical commitments, community participation, and the integration of local knowledge. The Dakhla-Oued Eddahab region illustrates how technology, creativity, and local engagement can be combined to promote a sustainable and community-based tourism model. Ultimately, the future of tourism will depend not only on technological innovation but also on the values guiding its implementation.

Keywords: Artificial Intelligence; Smart Tourism; Creativity; Sustainable Tourism; Innovation; Community-Based Tourism; Dakhla-Oued Eddahab.

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Introduction

The tourist sector was exposed by COVID-19 for its many weaknesses, such as how volatile long-haul travel can be, the shortcomings of many of the traditional business models, and the environmental impacts from decades of accelerated growth in the traveler industry (UNWTO, 2022; OECD, 2023). However, at the same time, the tourist sector has shown that it can adapt to the current situation with increased digitization, new cooperative arrangements, and local experimentation. Hospitality is a complex ecosystem that is capable of evolving and adapting over time. It draws on creativity and artificial intelligence (AI), as well as institutions, policies, and cultural narratives. The relevance of this review lies in understanding how these innovations can contribute to responsible tourism. It is also important to understand how they can contribute to inclusive tourism. Furthermore, we need to consider how they can contribute to sustainable tourism. This is particularly important in emerging regions. The following research question is raised by this situation**: In what ways can tourism destinations, particularly those in emerging regions such as Dakhla in southern Morocco, adopt AI and innovative practices to promote inclusion, creativity, sustainability and resilience, while adapting to local contexts, governance and cultural practices**? In order to address this question, the objectives of this review are to:

- Adoption of AI should be steered towards inclusion and sustainability, with a value-based lens providing the framework for doing so.
- Convert that lens into a set of practical steps for different destinations and companies, including trial projects, ways to protect people's privacy, working with universities and places where people can make things, and ways to measure the value of the environment as well as money made.
- Highlight the role of the Global South in adapting technologies to local contexts, languages and governance cultures.
- Combine renewable energy ambitions, outdoor and water-based experiences, and community participation by using Dakhla as an illustrative case.

It is essential to create connections between the theoretical constructs examined in this review and real examples in the areas of innovation studies, destination management, and digital ethics to have an unbiased analysis free from theory restrictions. Connecting theory with practical examples will produce comprehensive analysis grounded in reality. To reach these objectives, this review has been constructed clearly and intends to meet the respective audiences needs through thorough review and research. The overall timeframe for the publications included in the review ranges from 2010 to 2025 and will consist of qualified, peer-reviewed academic articles and publications created by leading organizations globally

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(including but not limited to UNWTO and OECD) along with suitable and high-quality case studies. The overall scope of this review focuses on sustainable tourism, that is to say, tourism which is both "smart" (includes new technology as part of the tourist experience) and environmentally friendly through the introduction of new technologies (including artificial intelligence and digital tools) and through circular economy principles. This assessment will be conducted on a global scale but will focus specifically on the Global South (with a particular emphasis on Morocco) and other regionally developing countries regarding context specific adaptations for developing responsible and innovative tourism models. The weaknesses brought on by decades of unchecked growth and resulting from the pandemic are not limited to the pandemic. Mass tourism has had under- and over-bearing ecological impacts, particularly within communities that have depended upon mass tourism, specifically due to their reliance on forms of air travel, and packaged, standardized products. Dakhla, as a developing area, serves as a good illustration of how tourism can stimulate the development of two areas: the economic growth and creation of sustainable tourism. Dakhla's distinctive geopolitical location as a bridge between Africa and Europe provides the distinct opportunity to develop unique pathways towards smart and responsible tourism. The methodology employed has allowed this review of the subject to move from an exclusively theoretical debate to one that is based upon the application of practical methodology/techniques, by utilizing a practice-based and value-based approach to the subject.

The rationale for employing a practice-based methodology is that there are both theoretical and actual examples of best practices located in different countries/regions. Therefore, this provides both an analytical framework and practical information that can be used to provide/take action by government and planners involved in tourism development planning.

1. Literature Review Key Concepts in Tourism, Creativity, and Artificial Intelligence

A crucial aspect to consider when analyzing the growth of the tourism industry and its relationship with creative solutions for the future includes evaluating how existing relationships between creativity, tourism, and AI are evolving in relationships between these three areas. These evolving relationships are also an important example of the convergence relationship. As further illustrated through studies, converging is an essential element of developing new innovations (policies and experiences) within the tourism industry. For these reasons it is important to develop a full understanding of how these three concepts can work together; in order for this review to be successful. The next several sections will critically review the existing research on each of the three concepts and demonstrate a comprehensive approach to the topic.

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1.1. Tourism.

Tourism can be viewed as a multi-dimensional activity that goes far beyond travelling. The definition of tourism from the UN World Tourism Organization (UNWTO) focuses on the activities of travelers (throughout their journey) who stay outside of their usual environment for leisure, business and other reasons (UNWTO, 2018). As was shown by Weaver and Lawton (2014), tourism can be described as a system composed of economic, social and cultural elements, and forecasts how it will have an impact on the development of local communities. Recently, the emergence of the concept of smart tourism has highlighted the potential of new technologies and data-driven practices in terms of managing destinations, and enhancing visitors' overall experience (Galvão et al., 2024).

1.2. Creativity and Innovation.

The traditional definition of creativity has been described by Amabile (1996) as the ability to produce innovative and appropriate ideas, while Rhodes (1961) considered creativity through a "4P Model" (Person, Process, Press and Product) that identifies creativity as an intricate concept involving individuals, environments and the products of their creativity. In DOTS, this has developed into a definition for creative tourism, which is the co-creatively designed experience of visitors with the local community (Richards, 2018; Benhaida et al., 2024). Creativity is a broad term that is also associated with innovations. It involves putting these ideas into practice to create new products, services, or processes that improve competitiveness and adaptability (OECD, 2010; Fagerberg, 2005).

1.3. Artificial Intelligence (AI).

Artificial Intelligence (AI) aims to enable computers to perform tasks similar to human thinking, such as reasoning, which involves fundamental psychological processes like perception, association, prediction, planning, and motor control. Intelligence is not a singular concept but a complex set of interconnected abilities; similarly, AI uses various techniques to solve a wide range of tasks (Boden, 2017).

2. Research Methodology

In order to provide a solution to a scientific question, this review of the literature will perform a search based on scientific literature and other documents; nevertheless, the search based on the literature will be the only approach that is used. The review is carried out in accordance with a sound plan, prior to which the assessment criteria have been worked out in great detail, for the purposes of this investigation, the relevant previous research was chosen based on a variety of factors.

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2.1. Selection Criteria

Table 1. Inclusion and Exclusion Criteria for the Literature Search

Inclusion Criteria	Exclusion Criteria
Articles published between 2010 and 2025	Articles published outside the selected period
Peer-reviewed academic journal articles, including empirical, theoretical, and review studies	Book chapters, conference proceedings, editorials, letters, notes, and prefaces
Articles focusing on tourism, creativity, artificial intelligence, sustainable tourism, or smart tourism	Articles not related to tourism, creativity, artificial intelligence, sustainability, or smart tourism
Articles written in English or French	Articles written in languages other than English or French
Articles available in full-text format	Articles without full-text access
Studies published in indexed and recognized scientific journals	Non-academic publications and unpublished documents
Studies providing theoretical, empirical, or methodological contributions to the research topic	Studies with insufficient relevance to the research objectives

Source: Developed by the author.

These criteria ensured that the review captured high-quality, relevant, and recent research, while excluding materials not directly relevant to the study objectives.

2.2. Data Collection and Analysis

The literature search initially yielded approximately 410 articles. After removing duplicates and applying the exclusion criteria, 45 articles were retained for full- text review. The analysis followed a three-step process, illustrated in Figure 2:

- Title and abstract screening to ensure alignment with the research objectives.
- Full-text reading to extract key findings, theoretical frameworks, and methodological approaches.
- Coding and categorization using thematic analysis (Braun & Clarke, 2006), grouping the literature into five main themes:
  - Responsible and solidarity-oriented values in tourism
  - Resilience in tourism in the 2000s and beyond
  - Creativity and innovation in tourism experiences
  - Applications of artificial intelligence in tourism
  - Circular economy and local tourism initiatives (staycations)

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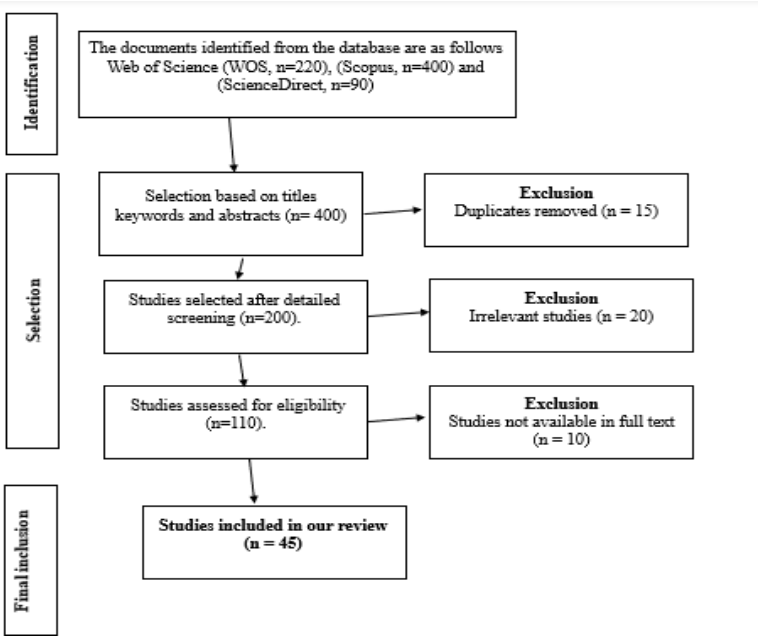
A systematic literature review was carried out in a methodical manner to ensure all relevant literature is included within the review. To start, a number of keywords that corresponded to the key areas of the study were used to search SCOPUS for studies; these keywords included TITLE (tourism) AND TITLE (creativity) AND TITLE-ABS-KEY ("artificial intelligence") as the goal of the search was to find connections between tourism, creativity and artificial intelligence and in particular how these areas can be used together to create both smart tourism and sustainable tourism.

After this, the string searches were modified for each database according to the specific syntax of Boolean operators and the specific thematic filtering options that each database possessed. By doing this, the consistency of the literature review strategy was maintained in order to identify high-quality studies related to AI's influence on innovation and sustainability in tourism.

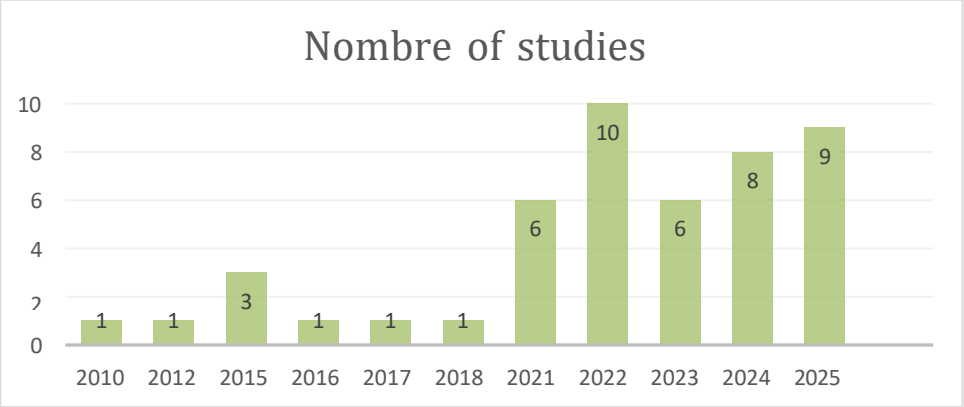
The Research Methodology Flowchart (Figure 1) shows how each study was found and evaluated while the total number of studies that were found (all collected articles for use in the systematic review) is displayed graphically in Figure 2.

Figure 1. Research Methodology Flowchart.



Source: Authors' own compilation

Figure 2: Yearly distribution of studies



Source: Authors' own compilation based on the reviewed literature.

2.1. Synthesis Approach

The choice of using a systematic literature review was made because of the exploratory/integrative nature of the research objective, which is to determine how creativity+AI will help develop sustainable tourism. There are multiple disciplines related to this topic and a large number of published studies. Therefore, a systematic review is appropriate as it is a rigorous and transparent method through which relevant knowledge can be obtained and organized by identifying, selecting, and synthesizing the relevant knowledge. This investigation will use an interpretivist epistemological lens because its goal is to understand the meanings, view-points, and conceptual relationships discovered in the literature, rather than to confirm or disprove pre-existing hypotheses. In addition, this investigation will use an inductive reasoning method to develop broad theoretical insights and concepts from the analysis and comparison of previous studies about creativity, AI, and sustainability in developing tourism destinations. Therefore, this approach can provide researchers with the opportunity to identify common themes, trends, gaps in current research, and relevant issues of practice for the integration of creativity, AI, and sustainability at tourism destinations.

3. Results and Discussion

3.1. Responsible and Solidarity Values for Tourism

Multiple authors have explored the idea of responsible and solidarity tourism with regards to Sustainable Tourism through a vast amount of literature (Smith, 2019; Brown et al., 2021). Prior research has identified common dimensions within the concepts of Responsible and Solidarity Tourism, such as stakeholder involvement, responsibility toward the environment, equitable social conditions, providing power to local communities, ethical governance, and improving the quality of life for communities. The dimensions mentioned above will serve as the basis through which to analyze how creativity and AI can help foster more inclusive and environmentally sustainable tourism development in this review. The

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reason for this dimension being selected is that it is a key component of how tourism is currently governed (particularly regarding emerging destinations wanting to promote balanced economic growth with environmental and social considerations).

Tourism that is responsible and based in solidarity has moved from being an idea to an actual government-run plan to change the way tourism functions. In the past there were no programs or procedures to hold companies accountable for their responsible tourism practices other than voluntary commitments made by them (publicly) or through symbolic charters. Today, there is progress being made toward creating a dual system of responsible tourism by both tourism operators and destinations working collaboratively that can be categorized as having both "soft" and "hard" elements. As part of this dual system, many companies have begun using various strategies to help establish responsible tourism including through ethical codes of conduct or voluntary certifications, as well as with new regulation in the form of environmental requirements such as sustainable procurement policies and environmental impact assessments. The presence of voluntary initiatives can provide stake-holders with the opportunity to create a forum for dialogue and align on common values.

Alternatively, regulatory frameworks create the legal and economic framework for ensuring that standards are being adhered to. Collectively, these initiatives represent a transition from mere declarations of intent to tangible responsible actions. Thus, artificial intelligence (AI) is becoming increasingly relevant as a powerful tool for enhancing these initiatives. The use of electronic, participatory digital platforms to empower residents to co-design itineraries, establish acceptable thresholds for visitors within fragile ecosystems, and propose cultural innovations represent a significant area of development in the context of supporting responsible tourism overall.

Evidence suggests creativity plays an important role in redefining the meaning and function of responsibility to change it from being a constraint to one of the more attractive alternatives to be considered. There is now a growing body of evidence showing that heritage-based initiatives combined with low-impact forms of mobility (bike tours, electric shuttles, etc.) provide authentic visitor experiences while reducing pressure on the environment. Additionally, data shows that food (gastronomy) contained in local short supply chains and using local traditions can reduce transportation emissions and enhance the cultural richness of tourism experiences. Sustainability practices that integrate creativity will allow destinations to redefine responsibility as being both ecologically sound and marketable, thus linking ecological responsibility with visitor attraction. It is necessary to develop accountability systems for the purpose of ensuring that responsibility does not remain only about managing an image or “ethics washing.” To do this, key performance indicators (KPIs), transparency portals, and independent audits can create measurable standards of progress. In addition, studies show

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there are very strong associations between these systems and the trust factor, which is one of the most significant resources for tourism. All parties concerned should accept the following as a basic prerequisite: this includes all residents and visitors alike. Authorities should provide residents with the confidence that tourism will positively impact them in an equitable and fair manner. At the same time, the authorities should give visitors assurance that their visiting will not have a detrimental impact upon the environment or society as a whole. The above policies will combine with training initiatives and accountability mechanisms to enhance the capability of small and medium sized enterprises (SMEs) and public authorities to implement good practice on a wider scale.

The process in question has been shown to create a virtuous cycle that builds upon itself over time (Smith, 2019). The development of this virtuous cycle has been shown to embed accountability into not only the governance frameworks, but also the organizational cultures and further afield (Brown et al., 2021).

As a result, the concept of responsible and solidarity-based tourism cannot continue to be dismissed as just an idealistic notion; it has matured into a functional governance model. The integration of artificial intelligence and creativity should provide the impetus for the systemic transformation of tourism, thus creating competitive, inclusive and sustainable forms of business and tourism in a manner that is well-coordinated.

3.2. Resilience of Tourism in the 2000s

In the years following the millennium, the travel industry experienced a variety of unprecedented interruptions (Smith, 2023). Global travel was profoundly changed, and many countries implemented new security measures for their citizens; equating the uncertainty that came with these changes, inflicted a combined decline in international movement. Airlines and other travel-dependent industry were affected by sharp spikes in fuel costs, and the 2008 global economic downturn highlighted the extreme sensitivity that tourism has to toy and disposable income and consumer confidence. Current conventional sequential planning models are set up on the notion of continuous positive growth and have shown themselves inadequate in mitigating the effects of such interruptions, thus resilience has become a primary focus.

Resilience has migrated from its earlier notion of recovery from financial setbacks; to one of a broader and total effort involving public bodies, private companies, civil society, and local citizens to work together to build resilience in their region's tourist economy. The use of tourism systems will impact the ability of affected locations to absorb disruption, and adapt to the expectations placed upon them. Ultimately, research and building of resilient communities can occur when the areas involved foster a sense of strong social cohesion by establishing trust, promoting active dialogue between parties, and

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collaborating effectively together as a group. Early response efforts have already begun in parts of Southeast Asia.

When evaluated with community evacuation protocols, new protocols for communities seeking emergency assistance will differ from those established with the help of neighboring communities. Cities in Southern Europe, especially since the financial crisis of 2008, have diversified their tourism markets away from international tourism to cultural and domestic tourism. In contrast to North Africa, the Moroccan government has developed methods to connect solar energy production with tourism facility construction through a series of renewable energy projects that have been launched in Ouarzazate and Dakhla, Morocco.

There are projects throughout the country that will link solar energy production with hotel operations, allowing hotels to reduce their susceptibility to volatility caused by fossil fuels while establishing Morocco as a leader in building the capacity for resilience and sustainability. The last decade has shown that, while resilience can be outsourced and automated in part, it can only be achieved through collaboration among multiple stakeholders at multiple levels (international, national and local) from multiple sectors (public, private and civic). Although artificial intelligence may be able to increase efficiency and predict adverse conditions, without a strong collaborative capacity, legitimate recognition and an unambiguous commitment to diversification and environmental sustainability, long-term sustainability cannot occur.

3.3. FabLab's and New Technical Thinking

FabLab's and maker communities have become places for creativity and collaboration through which local residents, artisans, students, and entrepreneurs can work together on shared projects. They are an example of how local initiatives can respond to specific needs that traditional means of manufacturing have difficulty serving. These labs adapt existing tools to be more suited to the cultural, linguistic, and environmental context of each area, rather than relying on imported technologies. A primary force driving this transformation is artificial intelligence (AI). AI was previously only available to large corporations that had large amounts of data; today, it is available to individual actors with targeted data so they can produce novel and inclusive solutions. In these labs, AI has changed from being a remote and highly technical device to being a collaborative tool that promotes co-creation and testing of new types of tourism. The bottom-up nature of FabLabs differs from traditional hierarchical models by focusing on intercultural dialogue, protecting the environment and ensuring the autonomy of the community. For example, in the city of Barcelona, many of the local FabLabs are working with municipal staff on eco-friendly signs in urban areas and solutions for smart mobility in the city. In West Africa, local FabLabs are working to design and produce low-cost water purification units for use in eco-

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lodges. And in Latin America, partnerships with indigenous communities are enabling the development of virtual reality experiences to teach and preserve their oral history.

Local and collective experimentation has demonstrated universal efficacy in transforming tourism. The modeling of sustainable, creative, and local community-rooted businesses provides an ideal approach for reconciling technological advancement with the preservation of tradition and advancement through inclusive economic development.

3.4. Artificial Intelligence and Tourism

AI has been an important force for change in the tourism industry and an essential part of the travel experience. AI contributes to the development of various technologies associated with travelling that create more efficient operations, provide improved experiences for travellers (Buhalis & Amaranggana, 2016; Gretzel et al., 2016; Li et al., 2019; Xiang, 2025). These factors have served as a framework for the evaluation of AI's contributions to sustainable tourism, resilient tourism, and tourism competitiveness as part of this review. Additionally, the increasing use of AI within the tourism sector illustrates the need for ongoing research.

Demand forecasting and price optimization tools are two major applications that provide balance between a company's economic performance and social justice. Likewise, immersive experiences created with augmented and virtual reality must maintain local values and cultural integrity if they are to be relevant from an ethical standpoint. The management and regulation of visitor flows is another important lever with real-time visitor flow monitoring systems that protect fragile ecosystems. Precautionary maintenance strategies being used in hotels also highlight how artificial intelligence can reduce risk and costs while improving service quality.

Significantly, this study demonstrates that the territories studied possess tangible and relevant opportunities to incorporate artificial intelligence into the development dynamics of the territories, thereby creating a foundation for developing smarter, more sustainable, and more responsible forms of tourism.

3.5. Circular Economy and Staycations

Recently, artificial intelligence (AI) has become an important part in creating tourism based on circular economy principles, and it is generating new prospects for sustainable and responsible growth of the tourism industry. Through AI, tourism owners like hotels, restaurants, or event planners can monitor and adapt to changing processes on a real-time basis, which allows them to utilize their resources more effectively, reduce their waste, enhance energy utilization performance, strengthen water reuse and recovery systems. Specifically, the southern Moroccan region provides a great example of how digital-

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based tools can be extremely beneficial for using irrigation and de-salination techniques, which can combine the growth of tourism while also conserving extremely fragile ecosystems (Jones et al., 2023). In this way, AI serves as a strategic leverage for tourism responsible for both economic development, environmental conservancy, and social responsibility. AI is also positively impacting sustainable mobility through the advancement of alternative transportation modes like rideshare and low-emission options, which alleviate urban congestion, as well as by preserving vulnerable natural areas. Finally, AI affects not only physical infrastructure but also influences travelers actions. AI allows for the use of recommendation systems to encourage travelers to visit less traveled areas, thus easing congestion in major destination cities and supporting the economy of local smaller areas.

From a practical perspective, tourism platforms might be able to market eco-lodges in the Anti-Atlas Mountains or provide cultural tours in Dakhla. Both alternatives could provide an opportunity for staff and customers to gain experience and contribute to environmental protection while both locally and internationally boosting economic development. To conclude, the circular and community-centered tourism paradigm highlights that measures of success must be based upon visitors experiences and the benefit to the community rather than merely an effort to increase the number of tourists with little idea as to how it impacts the environment.

Artificial intelligence tools enable the measurement and transparency of these qualitative elements, which will facilitate the development of a tourism paradigm that meets the criteria for sustainability, equity, and environmental responsibility. Sentiment analysis has been shown to measure visitors' perceptions of authenticity and sustainability (Jones, 2022). Blockchain has provided an avenue for tracking the provenance of goods and services from their source to the consumer. This allows for greater transparency and higher levels of fairness along supply chains (Smith et al., 2021). In Scandinavia, AI-based platforms were established to optimize the integration of renewable energy into tourism infrastructure. In Japan, circular tourism includes the use of AI to connect hotel food surplus with local charities.

Morocco has a lot of opportunity for combining renewable energy facilities located in Dakhla with sustainable aquaculture, eco-tourism and using AI in managing the tourism related to fisheries in an environmentally sustainable manner. By focusing on the concepts of proximity, fairness and responsibility, this model allows destinations to change their focus from just surviving in the current crises, to actually being sustainable based upon justice and creativity.

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Table 2. The connections between tourism, creativity, artificial intelligence, and sustainability.

Dimension	Role in Tourism	Creativity	AI Contribution	Sustainability Impact
Product & Experience	Differentiates offerings	Storytelling, co- creation	Personalization, multimodal generation	Disperses flows, protects heritage
Operations	Reliable delivery	Human-centered design	Predictive maintenance, forecasting	Resource efficiency
Governance	Coordinates actors	Participatory charters	Dashboards, bias detection	Transparency, equitable value sharing
Markets	Matches demand & supply	Place branding	Recommenders, fair pricing	Local multipliers
Territory & Ecology	Protects assets	Interpretation of landscapes	Remote sensing, flow management	Lower emissions, conservation

Source: Authors' own compilation based on the reviewed literature.

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Conclusion

Based upon our extensive review of the literature with respect the systematic literature review, we concluded that tourism is a leading sector where creativity and AI can be used to generate profit and ultimately produce an environmentally sustainable and socially inclusive form of tourism. However, there is no guarantee to achieving those objectives simply because of the application of AI. A significant emerging risk is related to employing imported technologies without accommodating to the local context and specifications. These technologies are designed to maximize efficiency and profitability, therefore they will not address the important human dimensions of equity, social and cultural diversity, and ecological sustainability in a meaningful way, and as a result will create disempowerment for local actors, dependency on global platforms and threaten natural resources

Thus, we believe it is vital to not only take a functional approach to utilizing AI in conjunction with innovative and responsible tourism strategies and to collaborate with local cultural identities in a creative way through tourism and local communities. The Dakhla-Oued Eddahab region provides a model for such a process. Dakhla is emerging as an important nexus of Africa and Europe, creating the opportunity for the region to become a successful laboratory for sustainable tourism. The use of renewable energy and the proper management of marine parks and Saharan land use can lead to a harmonious balance between economic and environmental sustainability. AI also has the potential to improve all aspects of the Dakhla-Oued Eddahab region, including monitoring of ecosystems, managing visitor flows, and connecting suppliers through sustainable supply chains. When coupled with environmentally sustainable built structures, AI will assist in developing Dakhla as a leading example of intelligent sustainable community-based tourism. The model can only succeed if the residents are actively involved through participatory planning, citizen science projects, and co-creating the tourism experience will encourage local self-determination and help to reduce the risk of losing contact with their community

We conclude that our method honors and respects indigenous knowledge and technology by designing innovations to fit specific contexts and not replacing them. The future of tourism will not solely be influenced by technology. The choices made regarding governance, ethical commitments, and creating images will determine the future of tourism. Although AI and creativity are both strong tools, they do not possess an inherent value or force of their own.

Those using AI and creativity should be guided by the values of solidarity and responsibility for the use of these tools to benefit all rather than only a few. The question that needs to be answered is normative and political: **who chooses the technologies that are deployed and what are their respective values?** In order for tourism to be sustainable and equitable into the future, we must reject determinism (both technological and economic) and embrace agency. By working together to combine AI, creativity,

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responsible government, ethical foresight, and culture, places like Dakhla can provide leadership for the future.

Limitations

There are demerits to the comprehensive and rigorous methods used within this review, which include:

- Research studies that were sufficient for inclusion may not have been able to be located because of language bias, database-selection bias, or publication-selection criteria.
- Due to the conflicting methodologies, definitions, etc., across studies, comparisons cannot be made and conclusions cannot be generalized.
- The dynamics within urban/metropolitan tourism destinations may not have been explored, as the majority of studies focused on emerging/rural regions
- A limited amount of theoretical work has been conducted within the area of sustainable tourism, resilience and innovation framework perspectives, which means that there are fewer ways to analyze the data than there would otherwise be if the theoretical perspective base was larger.
- Since there is a large amount of existing empirical literature that is either context-specific and/or cross-sectional, making conclusions about the longer-term and/or more broadly generalizable conclusions is not possible.

Research perspectives

The contributions and limitations of this review suggest multiple potential directions for future research:

- Extended geographic coverage: Further research should investigate tourism, the uptake of AI and creativity across less studied geography and destinations, both urban and rural, so as to develop a better understanding of spatial and cultural dynamics.
- Longitudinal research: More research is needed to assess the long-term effects of the introduction of AI, innovative creative practices, and sustainable tourism on destination performance, resilience and community development.
- Research options that are methodological diversified: By employing qualitative, quantitatively, and mixed-methods approaches together will give richer insights and further allow for comparison and strength of findings.
- Alternative theoretical perspectives: The expanded view of sustainable practices and innovative creative behaviors in regards to tourism outcomes may also necessitate alternative theoretical approaches such as institutional, sociological, or behavioral frameworks.
- Digital and knowledge-based tourism: New research examining digital technology and AI-based innovation ecosystems and knowledge based practices are being introduced to further our

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understanding of current trends in support of developing resilient and sustainable tourism in countries in the global south.

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