

CO-CREATING NATURE-BASED TOURISM EXPERIENCES: FROM CLIMATE RISKS TO IDENTITY BREAKTHROUGH IN THE MEKONG DELTA

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ABSTRACT

The Mekong Delta is currently facing a "dual crisis" characterized by severe climate change impacts, particularly salinity intrusion, and post-pandemic economic shifts. Based on the Social-Ecological Systems (SES) framework, this qualitative study explores how coastal communities in Ben Tre and the new Vinh Long province co-create nature-based tourism experiences with tourists to foster destination resilience. Through in-depth interviews and participant observation, the findings reveal that extreme climate risks do not diminish adaptive capacity; rather, the indigenous philosophy of "living with salinity" acts as a catalyst for innovation. By shifting from traditional eco-tourism to brackish-water livelihood tourism, the destination achieves an "identity breakthrough." This study proposes a paradigm shift from sustainable to regenerative tourism, offering strategic implications for Destination Management Organizations (DMOs) and polycentric governance.

Keywords: Regenerative tourism, destination resilience, co-creation, nature-based tourism, climate change, Mekong Delta.

1. INTRODUCTION

The Mekong Delta is currently identified as one of the world's most vulnerable regions to climate change and sea-level rise [1], [2]. In recent years, extreme climate events, particularly severe salinity intrusion and prolonged droughts, have occurred with increasing frequency and intensity, severely disrupting agricultural livelihoods and the socio-ecological systems of coastal provinces [3], [4]. In the context of tourism, the global industry is undergoing a profound paradigm shift following recent cascading crises, including climate extremes and the COVID-19 pandemic [5], [6]. The traditional approach of "sustainable tourism," which primarily focuses on "bouncing back" to a pre-crisis equilibrium to minimize negative impacts, is increasingly being challenged [7]. Instead, it is being replaced by the concept of "regenerative tourism," which emphasizes "bouncing forward" [8], [9]. This new paradigm recognizes that disastrous situations can act as a catalyst for innovation, utilizing crises to drive adaptation, business model transformation, and the active regeneration of both ecological resources and community well-being [10], [11].

Despite the urgent need for adaptation, traditional coping mechanisms - such as purely infrastructural solutions or short-term reactive agricultural measures - have proven insufficient to sustain local livelihoods and tourism development under continuous climate pressures [12], [13]. Furthermore, while quantitative assessments of economic and environmental damages are prevalent, there is a significant lack of qualitative understanding regarding the micro-level dynamics and the underlying nature of human behavior [14], [15]. Specifically, it remains

underexplored how local communities and tourists interact and co-create to transform environmental threats into unique, resilient tourism experiences [16]. This knowledge gap hinders the ability of destination management organizations to foster genuine, long-term social-ecological resilience and limits the potential of utilizing tourism as an effective, community-led tool for climate adaptation [17], [18].

Driven by the identified gaps, this study aims to decode the psychosocial "black box" of livelihood transformation among local stakeholders confronting climate extremes [19], [20]. By taking an ethnographic, actor-centered, and agency-oriented perspective, the research seeks to explore the co-creation process of nature-based tourism between host communities and tourists [21]-[23]. Ultimately, the study intends to demonstrate how this collaborative adaptation not only ensures survival but leads to a destination identity breakthrough, effectively turning severe climate risks into highly unique, regenerative tourism assets [24], [25].

2. LITERATURE REVIEW

2.1. Destination resilience and social-ecological systems

The Social-Ecological Systems (SES) framework, originally formulated by Holling (1973) and further expanded by Folke (2006) and Biggs et al. (2015), conceptualizes tourism destinations not merely as geographic or economic units, but as complex, adaptive systems where human and natural components co-evolve and interact continuously [26]. Within this framework, destination resilience has shifted from a static "engineering" perspective (simply bouncing back to a previous state) to an evolutionary approach that emphasizes the capacity for absorption, adaptation, and transformation in the face of continuous environmental shocks [29]-[31]. Central to this SES perspective is Adaptive Capacity (AC), which is defined as the system's ability to learn, self-organize, and innovate in order to mitigate potential damages and seize new opportunities during crises [32]-[35]. Furthermore, to activate and sustain AC, the theory of Polycentric Governance (PG) proposed by Ostrom (2010) is increasingly applied. PG involves multiple, semi-autonomous decision-making centers that coordinate across different scales (e.g., local communities, tourism cooperatives, businesses, and state authorities) [29], [36]-[38]. This decentralized yet collaborative governance structure provides institutional flexibility, enables rapid responses to localized environmental shocks like salinity intrusion, and fosters social learning, which is a vital condition for managing complex socio-ecological vulnerabilities [39].

2.2. Co-creation of tourism experiences and tourists

Traditional tourism literature often views tourists as passive consumers whose arrival relies entirely on the safety and attractiveness of a destination. However, recent scholarship highlights the active role of tourists in the recovery process, conceptualizing "Tourist Resilience" (ToR) as the capacity of visitors to adjust their risk perceptions, adopt protective behaviors, and maintain travel intentions post-crisis [40]-[42]. In the context of disaster recovery, tourists increasingly act as co-creators of the tourism experience [43]. Through shared responsibility, responsible tourists participate in co-creating value by engaging in alternative, nature-based activities (e.g., exploring brackish-water livelihoods), volunteering for conservation efforts, or accepting modified services during times of crisis [44]-[46]. This collaborative engagement not only restores the economic flow necessary for destination survival but also generates moral and social support, strengthening the destination's overall adaptive capacity and shaping a proactive, resilient recovery trajectory [9]-[47].

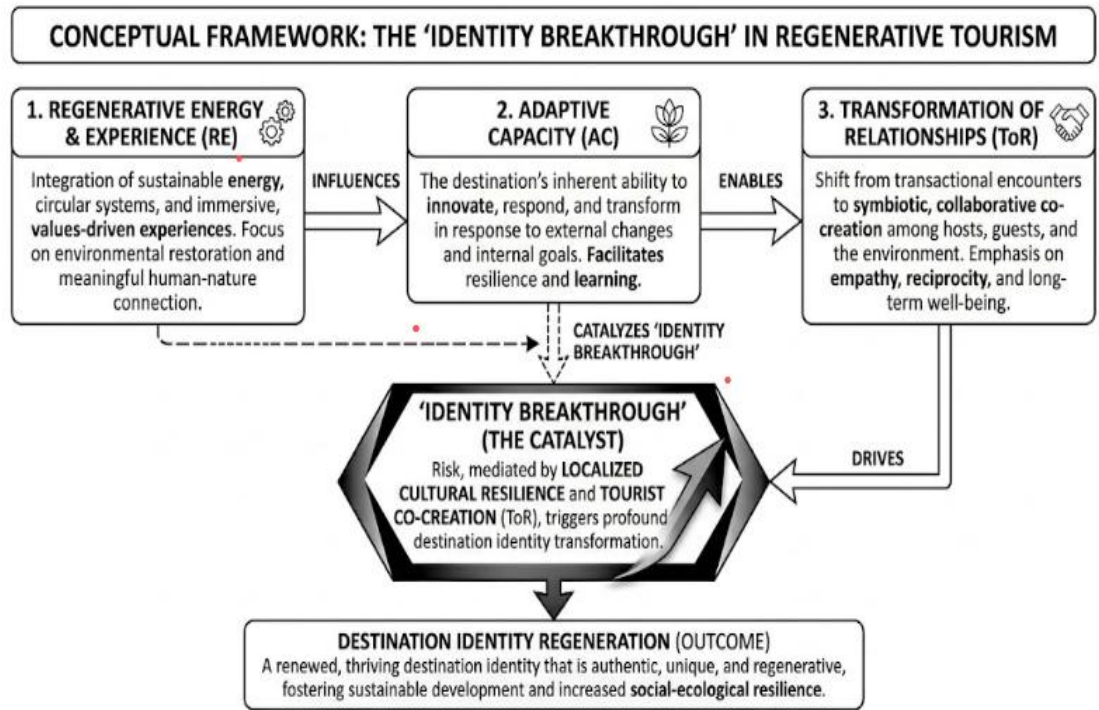
To fully integrate Tourist Resilience (ToR) into the SES framework, this study conceptualizes tourists not merely as external consumers, but as a dynamic 'ecological component' embedded within the destination system. During crises, resilient tourists actively

inject essential Social Capital (SC) through empathy and advocacy, as well as Economic Capital (EC) through sustained visitation despite suboptimal conditions. Consequently, this research proposes a conceptual flow demonstrating this mechanism: Extreme Climate Risk (RE) + Local Cultural Capital Adaptive Capacity (AC) + Tourist Co-creation (ToR) = Destination Identity Breakthrough. This equation posits that risk, when mediated by localized cultural resilience and tourist participation, serves as the exact catalyst for regenerating destination identity.

The concept of “**identity breakthrough**”, originally introduced and popularized by Gregory V. Diehl in the field of brand identity development, provides a useful lens for tourism studies by explaining how destinations can construct and communicate a distinctive identity based on their cultural values, local narratives, and experiential attributes[48], emphasizes the strategic articulation of a unique organizational narrative and core value proposition to create a compelling and irreplaceable brand identity. While initially rooted in corporate brand strategy, the application of "Identity Breakthrough" in tourism studies - particularly for small and medium-sized enterprises (SMEs) - is highly justified and theoretically significant.

First, in an increasingly homogenized and competitive global tourism market, an identity breakthrough allows tourism SMEs and destinations to differentiate themselves not merely through pricing or basic services, but through authentic cultural, historical, and experiential narratives. Second, this concept serves as a micro-foundation for destination resilience. By establishing a profound, identity-based emotional connection with tourists, SMEs cultivate robust customer loyalty. During systemic shocks or crises, this loyal customer base acts as a critical buffer, accelerating the organizational and destination-level recovery processes. Finally, an identity breakthrough aligns synergistically with the philosophy of regenerative tourism. Breaking through to a destination's true socio-ecological identity compels businesses to look inward, valuing and actively restoring local heritage and ecological assets, thereby transforming brand identity into a catalyst for destination regeneration [48].

Figure 1. Conceptual framework



Source: Author's

2.3. From climate risks to regenerative tourism

Climate change introduces severe and continuous hazards, such as salinity intrusion, prolonged droughts, and sea-level rise, significantly elevating the risk exposure (RE) of vulnerable coastal and agricultural destinations [49]-[53]. Within highly exposed areas, local communities have often "normalized" these risks, integrating phenomena like saltwater intrusion into their systemic boundary conditions and developing a resilient ethos of "living with salinity" [50],[51]. This normalization fundamentally shifts the destination's strategic direction from merely mitigating harm (sustainable tourism) to actively healing and revitalizing the social-ecological system paradigm known as regenerative tourism [52]. Regenerative practices utilize tourism as a restorative tool, redirecting revenues and tourist participation into nature-based solutions (NBS) such as mangrove reforestation, ecological aquaculture, and clean water initiatives [54]. Consequently, extreme climate risks act as catalysts for systemic innovation rather than purely destructive forces, enabling the destination to achieve an "identity breakthrough." The destination brand is thus redefined and elevated from a climate-vulnerable victim to an ecologically smart, regenerative, and highly resilient community [55], [56].

3. METHODOLOGY

3.1. Research design

This study adopts a qualitative research design, grounded in ethnography and phenomenology, to capture the lived experiences and behavioral patterns of local stakeholders and tourists facing severe climate risks. While quantitative approaches often focus on measuring macro-economic impacts, a phenomenological perspective allows for a deep exploration of the psychosocial "black box", revealing how individuals perceive, interpret, and adapt to continuous environmental shocks like salinity intrusion. Concurrently, ethnographic methods, including prolonged engagement and participant observation, provide a contextualized understanding of the socio-cultural dynamics and polycentric governance mechanisms within the destination. This dual-methodological approach is particularly suited for tourism resilience research, as it effectively decodes human adaptation behaviors and co-creation processes that transform crises into unique nature-based tourism experiences.

3.2. Study area

The research is conducted in the coastal ecological zones of Ben Tre and Tra Vinh, which strategically merged to form the new Vinh Long province by July 2025. Specifically, the study focuses on key coastal districts: Ba Tri, Thanh Phu, Binh Dai (formerly Ben Tre), and Duyen Hai (formerly Tra Vinh). Although merging under a single macro-administrative boundary, the data analysis in this study rigorously accounts for the cultural specificities and distinct community-based tourism practices of both former provinces to ensure analytical validity. This region was purposefully selected as it represents a unique intersection of sweet, brackish, and saline ecosystems, making it highly representative of the Mekong Delta's severe vulnerability to climate change, particularly sea-level rise and saltwater intrusion. These coastal strips are not only the "frontline" facing extreme risk exposure but also hold significant ecological capital, such as mangrove forests, which are currently transitioning from traditional agricultural-fishing livelihoods towards resilient, regenerative tourism models.

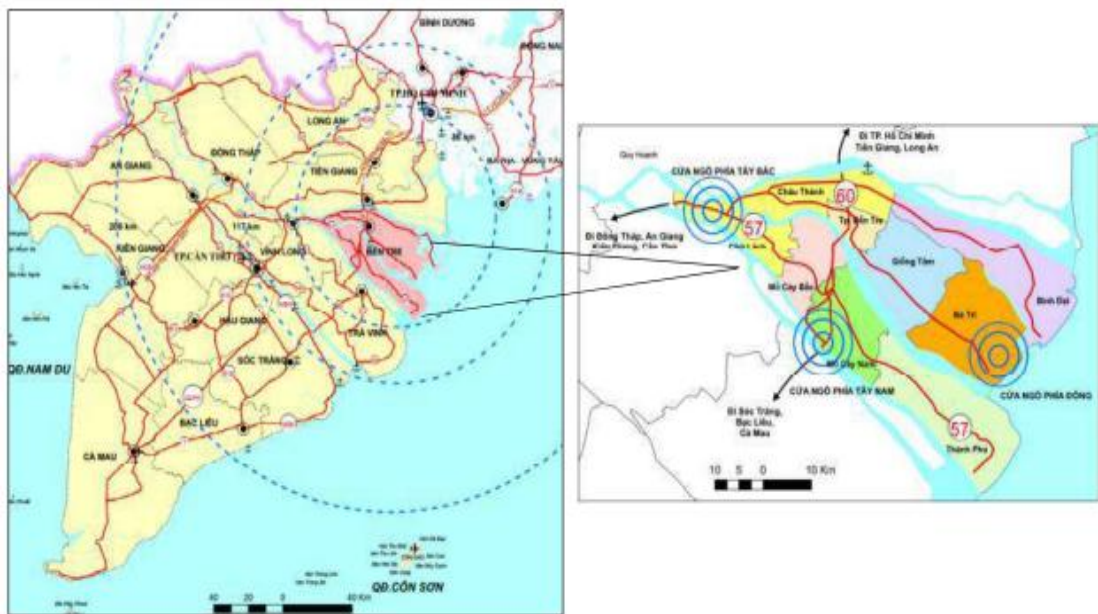


Figure 2. Map showing Tra Vinh and Ben Tre’s location within the Mekong Delta region

Source: [57]

3.3. Data collection & analysis

Data collection involved a rigorous combination of in-depth semi-structured interviews and participant observation, conducted between 2023 and 2025.

- *In-depth interviews:* A purposive sampling technique was utilized to recruit 35 key informants across three primary groups. *The demographic profiles of these 35 respondents are detailed in Table 1 to ensure high transparency in qualitative representation.* The groups include: (1) Destination Management Organizations (DMOs) and local authorities to evaluate polycentric governance, (2) Local tourism cooperatives and households to explore livelihood adaptation, crisis coping strategies, and the indigenous philosophy of "living with salinity"; and (3) Tourists to assess their risk perception, resilience, and willingness to co-create value by accepting modified services during crises. The interview protocols were meticulously designed to align with high-impact journal standards, featuring specific modules on product innovation (e.g., brackish-water tourism), local knowledge application, and regenerative practices.

Table 1. Demographic profile of interviewees (N=35)

Participant group	Quantity (n)	Key characteristics / roles
1. Destination management organizations (DMOs) & authorities	5	Provincial/District tourism officials and commune leaders in high-risk coastal zones of Ben Tre and Tra Vinh. They evaluate polycentric governance and institutional support.
2. Local tourism cooperatives & households	15	Heads of cooperatives, homestay owners, and farmers transitioning from freshwater agriculture to brackish-water tourism. They provide insights into livelihood adaptation and the "living with salinity" philosophy.
3. Responsible tourists	15	Domestic and international visitors purposively selected based on their active participation in brackish-water eco-tours and their stay at local homestays during periods of severe salinity intrusion

Source: Author's

- *Participant observation*: To validate the interview data, the researchers engaged in ethnographically driven "salinity-season tours". This allowed for first-hand observation of the interactions between hosts and guests, the integration of local ecological knowledge into tourism activities, and the physical manifestations of environmental adaptation.

- *Data analysis*: All interviews were audio-recorded, transcribed verbatim, and systematically analyzed using thematic analysis. The coding process strictly followed three stages: *open coding* to identify initial, raw concepts (e.g., "water scarcity", "tourist empathy"); *axial coding* to establish linkages and group them into broader categories (e.g., "adaptive strategies", "polycentric coordination"); and *selective coding* to construct overarching themes answering the research objectives (e.g., "Identity Breakthrough via Nature-based Solutions", "Co-creation in Regenerative Tourism"). Interviews with local stakeholders were conducted in Vietnamese (or the local Mekong Delta dialect) to capture the exact psychosocial nuances of the 'living with salinity' philosophy and were subsequently backtranslated into English by the researchers to ensure linguistic rigor.

4. FINDINGS

4.1. The "Living with salinity" philosophy

Discarding the victim mentality. Communities shift from vulnerable freshwater agriculture to resilient brackish-water aquaculture integrated with tourism. Facing the continuous shocks of climate change, particularly salinity intrusion, local communities in the Mekong Delta have successfully discarded the "victim mentality", effectively decoding the psychosocial "black box" of livelihood transformation outlined in the research objectives (Section 1). Instead of passively waiting for freshwater recovery or relying solely on traditional coping mechanisms, they actively restructure their livelihoods. The normalization of salinity has fostered an endogenous resilience where high risk exposure (RE) is no longer a disruption but a new boundary condition for tourism operations, marking a clear paradigm shift toward regenerative practices.

- This argument is robustly supported by ethnographic and phenomenological data collected during field surveys. Capturing the lived experiences of local stakeholders, an in-depth interview with the Director of an agricultural tourism company emphasized: *"The beauty of Ben Tre people lies in their flexibility. When the water turns saline, we switch to 'Living with Salinity' tours. The adaptive capacity scale should include the creation of alternative products."* [Author's In-depth Interview Data, 2025].

This qualitative finding directly reflects the core of Adaptive Capacity (AC) within the Social-Ecological Systems (SES) framework discussed in the literature review. The local tourism operators do not aim for "engineering resilience" - which merely focuses on bouncing back to the exact pre-crisis state of purely freshwater tourism. Instead, they demonstrate "evolutionary resilience" and transformative capacity (bouncing forward). By integrating brackish-water aquaculture with tourism experiences, the destination proactively adapts its Economic Capital (EC) and Environmental Capital (EN) to thrive under high Risk Exposure (RE). Consequently, extreme climate risks act as a catalyst for systemic innovation, fulfilling the core theoretical proposition that integrating AC and local agency transforms vulnerabilities into highly unique, resilient tourism experiences.

Crucially, the 'living with salinity' philosophy is not merely a passive adaptive mechanism; it signifies a definitive transition toward regenerative tourism. While adaptation focuses on minimizing harm, regeneration actively utilizes the saline conditions to heal and upgrade the ecosystem. The fundamental differences defining this identity breakthrough are synthesized in Table 2.

Table 2. Paradigm shift in the Mekong Delta's coastal tourism

Criteria	Traditional Eco-tourism (Sustainable)	Brackish-water Eco-tourism (Regenerative)
Water State condition	Strictly requires freshwater to maintain landscapes and services.	Accepts and explores saline/brackish water as a unique tourism asset.
Tourist Role	Passive observer / Consumer seeking standard services.	Active co-creator participating in restoring mangroves and local livelihoods.
Strategic Goal	Minimizing negative environmental impacts and maintaining status quo.	Healing and upgrading the socio-ecological system via nature-based solutions.
Community Mindset	Passive "victim" mentality, waiting for freshwater recovery.	Proactive "living with salinity" philosophy, fostering innovation.

Source: Author's

4.2. Co-creating the "Nature-based" experience

The interaction between responsible tourists and hosts. Examples include tourist participation in planting mangrove "green walls," harvesting brackish-water produce, and contributing to ecological funds. Addressing the research objectives outlined in Section 1 (decoding the psychosocial dynamics of livelihood transformation), the resilience of a destination is not solely generated by the supply side (e.g., DMOs, local businesses) but is significantly co-created by the demand side. Grounded in the theoretical framework of Tourist Resilience (ToR) and value co-creation (Section 2), responsible tourists exhibit high empathy, are willing to accept modified services, and actively participate in nature-based solutions. This demand-side engagement acts as a crucial psychosocial and economic buffer, protecting the destination against severe environmental shocks.

- Following the qualitative and phenomenological methodology aimed at capturing lived experiences, data collected from an in-depth interview with a representative of a coastal community-based tourism cooperative recorded a distinct shift in tourist interaction: *"Tourists visiting Ben Tre today tend to show high empathy. They are willing to use slightly brackish bathwater if they know it is the general situation. The survey variable regarding 'tourists accepting reasonable risks' is very realistic"* [Author's In-depth Interview Data, 2025].

This phenomenological excerpt profoundly validates the concepts of Tourist Resilience (ToR) and value co-creation discussed in the literature review. Traditional tourism literature often views tourists as passive actors whose risk aversion leads them to abandon a destination during crises [58]. However, this evidence highlights a paradigm shift: when tourists are informed and their values align with the destination's regenerative goals, the transition from passive consumers to active "co-creators" of resilience [59], [60]. By empathizing with the local context and showing a willingness to accept slightly brackish water or engage in restorative agricultural activities, tourists directly prevent severe economic leakages. This co-creative behavior effectively sustains the destination's Economic Capital (EC) and Social Capital (SC) within the SES framework during peak salinity periods. Ultimately, it proves that building an alliance between hosts and responsible tourists is indispensable for transforming climate threats into sustainable, regenerative tourism experiences [60], [61].

4.3. Destination identity breakthrough

Transforming the destination brand from a "climate-vulnerable region" to an "ecologically smart and resilient community." Risk (RE) becomes a catalyst for innovation rather than a destructive force. Aligning directly with the research objectives set out in Section 1 to decode the psychosocial "black box" of livelihood transformation, extreme climate risks do not inevitably lead to the collapse of a tourism system. Grounded in the theoretical

transitions discussed in Section 2, through robust adaptive capacities (AC) and polycentric governance (PG), the destination actively leverages high Risk Exposure (RE) to forge a new, resilient identity. This profound paradigm shift marks the transition from traditional sustainable tourism - which merely attempts to maintain the status quo (bouncing back)- to regenerative tourism, where the system is actively healed, upgraded, and transformed (bouncing forward) in the face of ongoing crises.

- Consistent with the ethnographic and phenomenological methodology adopted in Section 3 to capture lived experiences, qualitative survey data from an in-depth interview with a 48-year-old female resident participating in local community-based tourism reveals a striking positive shift in both livelihood and psychology: *"Whatever we grow in the field, tourists buy it all... Previously, when growing fruits, if the salinity season caused them to drop and we couldn't sell them in time, we just threw them away. Bringing them to the morning market, by afternoon the sun would ruin them, and they ended up as cow feed. Now, doing tourism is much better, it's not miserable at all, and there is extra money. No matter how hard it is, if it puts money in my pocket, I can endure it all"* [Author's In-depth Interview Data, 2025].

This phenomenological narrative is a classic manifestation of "Transformative Resilience" and the concept of "Bouncing Forward". The agricultural vulnerability induced by severe salinity and high Risk Exposure (RE) did not paralyze the community; instead, it acted as a powerful catalyst that pushed households to innovate and actively diversify their livelihoods from pure freshwater agriculture into community-based tourism. Qualitatively, this finding suggests that human agency and robust endogenous adaptation can sustain community resilience even under considerable external environmental stress. Ultimately, the destination's identity undergoes a breakthrough: it transforms from being a passive "victim" of climate change (dumping ruined crops) to an ecologically smart, regenerative tourism community where risk fuels economic restructuring, empowers local actors, and redefines the destination brand.

5. DISCUSSION AND IMPLICATIONS

5.1. Theoretical contributions

5.1.1. Expanding the SES framework by integrating tourist resilience (ToR)

Traditional Social-Ecological Systems (SES) research in tourism has predominantly focused on supply-side components, such as local communities, natural resources, and institutions. This study makes a groundbreaking theoretical contribution by expanding the SES framework to formally integrate the demand side. It conceptualizes Tourist Resilience (ToR) not merely as a passive outcome of destination recovery, but as an indispensable, active co-creator of the destination's systemic resilience.

This integration represents a profound paradigm shift. Resilient tourists are no longer viewed as passive consumers whose risk aversion leads them to abandon a vulnerable destination during crises. Instead, they act as proactive agents embedded within the SES. Their willingness to adapt their expectations, accept modified services, and share responsibilities buffers the destination against severe economic leakages. Theoretically, this validates that demand-side resilience is a critical catalyst that fuels the destination's adaptive capacity

5.1.2. Affirming that environmental risk (RE) does not break adaptive capacity (AC) backed by cultural capital

The study successfully proves the "risk paradox" in tourism vulnerability literature. Conventional vulnerability models assume that extreme Risk Exposure (RE) inevitably

depletes a system's Adaptive Capacity (AC). However, this research demonstrates that severe environmental risks do not break the local adaptive capacity if the system is fortified by strong cultural capital and indigenous knowledge.

These finding challenges static resilience frameworks. It proves theoretically that when a community possesses a deep-rooted cultural resilience (e.g., the indigenous philosophy of "living with salinity"), risk becomes a catalyst for transformative resilience (bouncing forward) rather than a purely destructive force. The system innovates through livelihood diversifications such as transitioning from vulnerable freshwater agriculture to brackish-water eco-tourism—thereby redefining destination identity and fostering an unyielding endogenous robustness. However, the 'living with salinity' philosophy is not an absolute panacea. It is imperative to critically acknowledge the trade-offs involved in this regenerative model. For instance, transitioning from freshwater agriculture to brackish-water tourism imposes substantial financial barriers for impoverished rural households. Furthermore, this resilience is constrained by biological thresholds; if salinity levels exceed the maximum ecological tolerance of the local flora and fauna, the systemic adaptive capacity may ultimately fracture.

5.2. Managerial implications for DMOs and tourism city planning

5.2.1. Polycentric governance: Empowering local cooperatives for rapid response

Although the administrative merger scheduled for July 2025 may enhance regional coordination capacity, it could also create risks of administrative delay and uneven institutional responsiveness to localized climate-related shocks. Destination Management Organizations (DMOs) must decentralize polycentric governance (PG) to empower grassroots levels (communes, cooperatives) in high-risk zones for immediate climate response.

Establishing a 'scenario-based delegation mechanism' is vital. In the face of sudden salinity intrusion, waiting for top-down provincial directives can paralyze operations. Therefore, local tourism cooperatives must be formally recognized and empowered as 'semi-autonomous decision-making centers'. When salinity thresholds are breached, these grassroots centers hold the ultimate authority to autonomously trigger immediate adaptive scenarios—such as closing temporary sluice gates or shifting from freshwater orchard tours to brackish-water experiences—without requiring higher-level administrative approval. This ensures institutional redundancy and agility

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5.2.2. Regenerative marketing: Leveraging digital media to attract responsible tourists

DMOs must pivot from mass tourism marketing to "Regenerative Marketing". By leveraging digital transformation, smart algorithms, and social media, destinations can specifically target "responsible tourists" who are willing to participate in the destination's "ecosystem healing" journey.

To effectively implement this, DMOs must integrate Smart Tourism technologies. By deploying IoT sensors for real-time salinity and flood monitoring, destinations can utilize smart algorithms to push transparent, real-time risk warnings directly to tourists' mobile devices. Instead of concealing these risks, this data-driven 'Regenerative Marketing' approach reframes environmental challenges into safe, educational, and nature-based experiences. By targeting the right audience and issuing 'Regenerative Tourism Certificates' to tourists who

engage in mangrove planting... the destination transforms the *Psychosocial Black Box* of crisis into a tangible *Identity Breakthrough*.

6. CONCLUSION

6.1. Summary

Nature-based tourism is not merely a survival strategy but an identity regeneration, turning risks into development capital. The overarching conclusion of this study redefines the fundamental purpose of nature-based adaptation. In the face of continuous environmental shocks, local communities do not merely engage in "survival" tactics. Instead, they leverage extreme climate risks (such as salinity intrusion) as unique developmental capital to regenerate the destination's identity, officially transitioning from a "vulnerable victim" to a "resilient, ecologically smart destination".

6.2. Limitations of the study

The study is limited by its qualitative design in a specific province, which restricts generalizability. While the qualitative methodology successfully decoded the psychosocial "black box" of livelihood transformation, the study inherently suffers from boundaries in statistical generalizability. Conducted exclusively within the specific socio-ecological context of Ben Tre province, the findings may reflect hyper-localized cultural traits that differ from other regions.

Methodologically, ethnographic and phenomenological research prioritizes depth over breadth. Therefore, the rejection of the moderating effect of risk (the "risk paradox") or the high impact of Polycentric Governance (PG) might be highly context-dependent. This single-case limitation means that extrapolating these exact socio-ecological mechanisms to a macro-national level or to tourism destinations lacking similar indigenous adaptability must be done with academic caution.

6.3. Future research directions

Proposing cross-regional comparative studies (cross-case analysis) in the new Vinh Long super-province or other global deltas, as well as integrating Smart Tourism technologies for climate risk warning. To overcome the aforementioned limitations and advance destination resilience theory, future research must expand spatially and technologically. Spatially, cross-case analyses across the impending new Vinh Long administrative boundary or other global deltas will validate the Polycentric Governance (PG) model. Technologically, integrating Smart Tourism as a proactive tool for climate risk warning is a critical frontier for reinforcing Infrastructure & Technology (IT) capital.

A cross-regional analysis within the new "super-province" acts as a natural institutional experiment to test how Polycentric Governance mitigates administrative lags during localized climate shocks. Furthermore, weaving Smart Tourism into the SES framework addresses a critical gap. By utilizing digital algorithms, IoT sensors for salinity/flood warnings, and data-driven regenerative marketing, destinations can transition from reactive coping to proactive technological adaptation. This symbiosis of digital transformation and ecological resilience accurately aligns with the future trajectories of the digital economy and sustainable tourism.

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