

Community Resilience as a Cornerstone of Climate Adaptation in Small Island Tourism Destinations: An Integrated Conceptual Perspective

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ABSTRACT

Climate change poses significant challenges to tourism destinations, particularly small islands, where high environmental exposure, dependence on tourism, and limited adaptive capacity increase vulnerability to multiple climate hazards. Although climate adaptation has traditionally emphasized technical and infrastructural solutions, growing attention has been given to community resilience as a key driver of long-term adaptation. This review examines the concept of community resilience in small island tourism destinations and develops an integrated conceptual perspective on the factors that enable communities to anticipate, respond to, and adapt to climate-related challenges. A narrative review of interdisciplinary literature was conducted using peer-reviewed scientific publications alongside relevant policy reports from international organizations. The review synthesizes current knowledge on the theoretical foundations of community resilience and identifies its key dimensions, including social capital, governance, economic diversification, environmental stewardship, local knowledge, adaptive capacity, and learning. The findings indicate that community resilience is a dynamic and multidimensional process emerging from the interaction of social, ecological, economic, institutional, and cultural systems. Effective climate adaptation therefore requires collaborative governance, stakeholder participation, the integration of scientific and local knowledge, and sustainable resource management. By bringing together concepts that are often examined separately across disciplines, this review presents an integrated conceptual perspective that positions community resilience as a cornerstone of climate adaptation in small island tourism destinations. The study provides a conceptual foundation to support future research, policy development, and practical adaptation strategies for climate-vulnerable island communities.

Keywords: community resilience; climate change adaptation; small island tourism destinations; adaptive capacity; sustainable tourism

INTRODUCTION

Climate change is progressively reshaping the social–ecological systems upon which tourism destinations depend, transforming relatively stable environments into dynamic systems characterised by increasing uncertainty, recurrent disturbances and continuous adaptation pressures. Rather than occurring as isolated environmental hazards, climate-related stressors interact with existing ecological, economic and social vulnerabilities, generating cascading effects that influence destination sustainability, community well-being and long-term development pathways (1–5).

Small island tourism destinations are widely recognised as some of the world's most climate-vulnerable socio-ecological systems due to the combined effects of high environmental exposure, strong economic dependence on tourism and limited adaptive resources (6–8). Their vulnerability extends beyond physical exposure to sea-level rise, coastal erosion and extreme weather events. It also reflects structural characteristics such as geographical isolation, limited land availability, freshwater scarcity, small and often undiversified economies, dependence on imported resources and constrained institutional capacity, all of which restrict their ability to respond effectively to climate-related disturbances (9–12). Unlike mainland destinations, many islands rely heavily on climate-sensitive tourism as a primary source of employment, income and regional development, making environmental degradation not only an ecological concern but also a direct threat to local livelihoods, economic stability and community well-being (6,8,13).

The close interdependence between natural ecosystems, tourism activities and local communities means that disturbances affecting one component rapidly propagate across the destination system, creating cascading effects across environmental, social, economic and institutional dimensions rather than isolated impacts (12–15). Consequently, climate change should be viewed not merely as an external environmental pressure but as a systemic challenge that reshapes the functioning of island tourism socio-ecological systems, ultimately influencing their capacity to adapt and remain resilient through governance, social capital, institutional capacity and local knowledge (11,16–18). This systemic perspective provides the conceptual basis for understanding why community resilience has emerged as a central approach to climate adaptation in small island tourism destinations.

The recognition that climate change affects destinations through interconnected social, environmental and economic processes has shifted scientific attention from hazard reduction towards strengthening the resilience of communities and socio-ecological systems (19–21). Rather than focusing solely on resisting or recovering from individual disturbances, resilience is now widely understood as the capacity of communities to anticipate, adapt and transform in response to changing environmental conditions while maintaining essential functions and well-being (19,22,23). Within tourism research, this perspective has gained particular importance for small island destinations, where the ability of local communities to mobilise resources, learn from experience and collectively respond to climate-related challenges has received growing attention as a prerequisite for sustainable adaptation (13,17,11).

Although community resilience has become a central concept in climate adaptation research, there is growing consensus that it cannot be understood as a single attribute or outcome. Instead, resilience emerges from the interaction of multiple social, institutional, economic and environmental dimensions that collectively shape a community's ability to prepare for, respond to and adapt to change (22,24,25). These dimensions include social capital, effective governance, institutional capacity, local and indigenous knowledge, diversified livelihoods, ecosystem stewardship and continuous learning processes, all of which contribute to strengthening adaptive capacity and supporting long-term sustainability (19,26,18,16). Understanding how these dimensions interact is therefore essential for identifying effective adaptation pathways in small island tourism destinations, where resilience depends not only on environmental conditions but also on the capacity of communities to coordinate collective action and respond to increasingly complex climate challenges (17,13,11).

Despite the growing body of literature on climate change adaptation, tourism resilience and island sustainability, existing research remains fragmented across disciplines, often examining environmental, social, governance or economic dimensions in isolation. Consequently, there is still limited understanding of how these interconnected dimensions collectively shape community resilience as a comprehensive climate adaptation strategy in small island tourism destinations (22,16,13,11). To address this gap, the present narrative review synthesises multidisciplinary evidence to examine community resilience as the cornerstone of climate adaptation in small island tourism destinations. By integrating insights from climate change adaptation, resilience theory, tourism studies and socio-ecological systems research, the review identifies the key dimensions of community resilience, explores their interactions and discusses their implications for future research and policy development. The remainder of the paper begins by presenting the conceptual foundations of community resilience, followed by an analysis of its principal dimensions in the context of small island tourism destinations, before concluding with future research directions and practical implications.

METHODOLOGY

This study adopted a narrative literature review approach to examine the role of community resilience as a climate adaptation strategy in Small Island Tourism Destinations (SITDs). A narrative review was considered appropriate because it enables the integration of concepts and evidence from multiple disciplines, including climate change adaptation, resilience theory, tourism studies, public health, and social-ecological systems. Rather than statistically synthesising findings, the review aimed to provide a comprehensive conceptual understanding of the key dimensions of community resilience and their interrelationships.

Relevant literature was identified through searches of Scopus, Web of Science, and Google Scholar using combinations of keywords including community resilience, climate change adaptation, small island tourism destinations, social capital, governance, adaptive capacity, ecosystem stewardship, and sustainable tourism. Priority was given to peer-reviewed journal articles, seminal theoretical contributions, and reports published by international organisations such as the Intergovernmental Panel on Climate Change (IPCC), the World Tourism Organization (UN Tourism/UNWTO), and the Convention on Biological Diversity (CBD). Sources were selected based on their relevance to the objectives of the review and analysed thematically to identify recurring concepts, principal resilience dimensions, and their interactions within tourism-dependent island communities.

CONCEPTUALISING COMMUNITY RESILIENCE

The evolution of the concept

The concept of resilience has evolved considerably over the past five decades, becoming one of the most influential theoretical frameworks for understanding how complex systems respond to disturbance and change. Originally introduced in ecology by (27), resilience was defined as the capacity of ecosystems to absorb disturbances while maintaining their essential structures, functions and relationships. This perspective challenged traditional engineering approaches that viewed systems primarily in terms of resistance and rapid recovery to a pre-disturbance equilibrium, instead emphasising persistence, adaptation and transformation in the face of change (27,19).

As resilience theory expanded beyond ecological sciences, it expanded to encompass social and socio-ecological systems, recognising that communities, institutions and economies are intrinsically linked with the natural environments in which they operate (19,21,22). Within this broader perspective, resilience is no longer understood simply as the ability to “bounce back” following a disturbance but as the capacity to anticipate change, adapt to evolving conditions, learn from experience and, where necessary, transform governance structures, livelihoods and development pathways to sustain long-term well-being (20,22,28).

This conceptual shift has been particularly important in climate change research, where resilience is viewed as a dynamic process that supports adaptation under conditions of uncertainty rather than the restoration of previous system states (29,19). As climate-related hazards become more frequent and interconnected, resilience provides a framework for understanding how communities can maintain essential functions while continuously adapting to changing environmental, social and economic conditions (16,26).

Defining Community Resilience

Despite its widespread use across multiple disciplines, community resilience remains a concept with no universally accepted definition. Rather than representing a single attribute, it has been interpreted through different theoretical lenses, reflecting the complexity of social-ecological systems and the diverse contexts in which resilience is applied (25,24,22).

One of the earliest social interpretations was proposed by Adger (21), who described social resilience as the ability of communities to withstand external shocks while maintaining their social structures and collective identity. This perspective shifted attention from the resilience of ecosystems to the capacity of human communities to cope with environmental change through social organisation, institutions and collective action (21).

Building upon this foundation, Norris et al. (30) conceptualised community resilience as a dynamic process emerging from the interaction of adaptive capacities, including economic resources, social capital, information

and communication, and community competence. Their framework highlighted that resilience is not a fixed characteristic but develops through the mobilisation and interaction of available resources before, during and after disturbances (30).

Similarly, Magis (31) emphasised the long-term capacity of communities to sustain and improve their well-being while responding to change. Rather than simply recovering from adverse events, resilient communities actively develop their resources, strengthen relationships and create opportunities for future adaptation. Berkes and Ross (22) further expanded this perspective by integrating ecological and social dimensions, arguing that resilience emerges through continuous learning, knowledge exchange, leadership, community networks and adaptive governance. In this view, resilience is understood as an ongoing process of adaptation rather than a static outcome.

Although these definitions differ in emphasis, they converge around several fundamental principles. Community resilience is widely understood as a dynamic, multidimensional and adaptive process through which communities anticipate, prepare for, respond to and learn from disturbances while maintaining essential functions and enhancing their capacity to adapt to future change (19,22,24,29). This understanding is particularly relevant for small island tourism destinations, where resilience depends not only on environmental conditions but also on governance, social cohesion, local knowledge, institutional capacity and the ability of communities to collectively navigate increasing climate uncertainty.

Community Resilience in the Context of Small Island Tourism Destinations

The growing recognition of community resilience as a climate adaptation strategy has been particularly significant for islands where tourism constitutes a dominant socio-economic activity. For the purposes of this review, the term Small Island Tourism Destinations (SITDs) is used to describe islands where tourism represents a principal driver of local economies, livelihoods and development, and where climate adaptation is intrinsically linked to the resilience of tourism-dependent communities. This operational definition builds upon the literature on tourism-dependent islands and island socio-ecological systems (18), while providing a consistent analytical focus throughout the review. Rather than referring to a formal geopolitical classification, the term emphasises the functional characteristics of island destinations in which tourism shapes both community development and climate vulnerability.

Within these destinations, climate change affects far more than environmental conditions. The close interdependence between natural ecosystems, tourism activities, local economies and community well-being means that climatic disturbances can generate cascading impacts across multiple sectors, challenging not only ecological integrity but also economic stability, governance and social cohesion (13,18,21). Consequently, community resilience has become a central component of climate adaptation, supporting the capacity of local communities to anticipate change, mobilise resources, learn from experience and collectively respond to increasingly complex and uncertain conditions (16,22,29).

The characteristics of Small Island Tourism Destinations—including geographical isolation, limited natural resources, high tourism dependency and constrained institutional capacity—often reduce the range of available adaptation options while increasing the importance of local knowledge, community participation and collaborative governance (7,11,17). In this context, resilience cannot be understood simply as the ability to recover from individual climate-related events. Instead, it represents a continuous process through which communities strengthen their adaptive capacity, maintain essential social and economic functions and pursue sustainable development under conditions of ongoing environmental change (19,22,26).

KEY DIMENSIONS OF COMMUNITY RESILIENCE IN SMALL ISLAND TOURISM DESTINATIONS

Community resilience is widely recognised as a multidimensional construct that emerges through the interaction of social, institutional, economic and environmental processes rather than from any single characteristic or intervention (24,25,22). Consequently, building resilience requires more than improving physical infrastructure or reducing exposure to climate hazards. It depends on developing complementary capabilities that enable communities to anticipate risks, mobilise resources, coordinate collective action, learn from experience and adapt to changing environmental conditions (19,26,29).

Although the literature proposes different resilience frameworks, several dimensions consistently emerge as fundamental for strengthening climate resilience in tourism-dependent island communities. These include social capital, governance, institutional capacity, local knowledge, livelihood diversification, ecosystem stewardship and adaptive learning (13,16,22). While each dimension contributes independently to resilience, their effectiveness depends largely on their interaction within the broader socio-ecological system. The following sections examine each dimension individually before discussing their integration as components of a comprehensive climate adaptation strategy.

Social Capital

Social capital is widely recognised as one of the fundamental dimensions of community resilience, influencing how individuals and communities respond to environmental disturbances and adapt to long-term change. Rather than referring solely to interpersonal relationships, social capital encompasses the networks, norms, trust and reciprocity that facilitate collective action and cooperation within a community (32,21,33). These social connections strengthen the ability of communities to share information, coordinate responses, mobilise resources and provide mutual support before, during and after climate-related events.

Within the context of climate adaptation, social capital strengthens resilience by enabling communities to collectively identify risks, develop locally appropriate solutions and support vulnerable groups during periods of environmental stress (21,22). High levels of trust and social cohesion facilitate knowledge exchange, encourage civic participation and improve the effectiveness of local decision-making processes. Conversely, fragmented social networks, weak community engagement and low levels of trust may limit adaptive capacity by reducing cooperation and delaying collective responses to emerging climate challenges (33).

The importance of social capital becomes even more pronounced in Small Island Tourism Destinations, where relatively small populations and strong social interactions often shape local governance, resource management and economic activities. Tourism-dependent island communities frequently rely on informal networks and community cooperation to respond to crises, recover from disasters and maintain essential services when external support is limited (18,17). In these settings, social capital contributes not only to disaster preparedness and recovery but also to strengthening long-term adaptive capacity by fostering collaboration among residents, local authorities, tourism stakeholders and civil society organisations.

Recent research increasingly emphasises that social capital should not be viewed as a static community characteristic but as a dynamic resource that evolves through continuous interaction, participation and shared learning (16,22). Communities that invest in participatory processes, inclusive decision-making and local partnerships are generally better equipped to respond to uncertain climate conditions while maintaining social cohesion and supporting sustainable tourism development. However, social capital alone cannot ensure resilience. Its effectiveness depends on complementary institutional arrangements, governance structures and access to resources that enable collective capacities to be translated into meaningful adaptation actions.

Governance

Governance has emerged as a fundamental pillar of community resilience, shaping how societies prepare for, respond to and adapt to climate-related challenges. In contrast to the traditional concept of government, governance encompasses the processes, institutions, policies and interactions through which public authorities, private stakeholders, civil society and local communities collectively make decisions and manage shared resources (19,29). Within the context of climate adaptation, effective governance promotes coordination across sectors, facilitates stakeholder participation and supports flexible decision-making under conditions of uncertainty.

A growing body of literature emphasises that climate resilience depends not only on the existence of formal institutions but also on the quality of governance processes. Transparent decision-making, accountability, public participation and cross-sectoral collaboration enhance a community's capacity to identify emerging risks, prioritise adaptation measures and allocate resources effectively (16,34). Conversely, fragmented governance systems, institutional silos and limited stakeholder engagement often reduce adaptive capacity by constraining information exchange and delaying coordinated responses to climate-related disturbances.

Governance is particularly importance in Small Island Tourism Destinations, where limited financial, human and institutional resources require strong collaboration among local authorities, tourism stakeholders, residents, researchers and non-governmental organisations. Because tourism, environmental management and community well-being are closely interconnected, climate adaptation frequently depends on integrated governance approaches capable of balancing economic development with environmental protection and social equity (18,17). Participatory governance mechanisms also strengthen local ownership of adaptation strategies, increasing both their legitimacy and their long-term effectiveness.

Recent studies increasingly advocate adaptive and collaborative governance as essential approaches for managing the complexity and uncertainty associated with climate change (19,26). Adaptive governance emphasises continuous learning, institutional flexibility and the ability to revise policies as environmental and socio-economic conditions evolve. Collaborative governance complements this perspective by encouraging partnerships across multiple levels of governance and promoting the integration of scientific expertise with local and indigenous knowledge. Together, these approaches strengthen resilience by enabling communities to respond proactively rather than reactively to climate risks.

Institutional Capacity

Institutional capacity constitutes a fundamental dimension of community resilience by determining the ability of organisations, institutions and governance systems to design, implement and sustain effective climate adaptation measures. While governance defines the processes through which decisions are made, institutional capacity refers to the availability of the human, financial, technical and organisational resources required to translate these decisions into practical action (16,35). Consequently, communities with stronger institutional capacity are generally better equipped to anticipate climate risks, coordinate adaptation efforts and respond effectively to both gradual environmental change and extreme events.

In the context of climate adaptation, institutional capacity extends beyond administrative competence to include leadership, inter-institutional coordination, technical expertise, access to reliable information and the ability to mobilise resources across multiple sectors (29). Effective institutions also facilitate long-term planning, policy continuity and the integration of scientific evidence into decision-making processes. Conversely, institutional fragmentation, limited financial resources, insufficient technical knowledge and weak organisational coordination can significantly constrain adaptive capacity, even where governance frameworks and adaptation policies are formally established (16,35).

Institutional capacity is particularly critical in Small Island Tourism Destinations, where local authorities and public organisations often operate under considerable financial, technical and human resource constraints. Small municipalities may face difficulties in accessing climate information, securing external funding, developing specialised expertise or maintaining dedicated personnel responsible for climate adaptation planning. At the same time, the strong dependence of island economies on tourism increases the need for institutions capable of coordinating adaptation across multiple sectors, including environmental management, tourism, infrastructure, public health and emergency management (18,7,17).

Recent research recognises that institutional capacity is not a static organisational characteristic but a dynamic process of continuous development. Learning, knowledge exchange, professional training and collaboration between local governments, universities, research institutions and civil society organisations contribute significantly to strengthening institutional effectiveness and improving long-term resilience (16,26). Furthermore, institutional capacity is strengthened when governance systems encourage innovation, adaptive management and the incorporation of scientific evidence alongside local experience in policy development.

Local Knowledge

Local knowledge has received growing attention as a critical component of community resilience, providing place-based insights that enhance climate adaptation and support sustainable resource management. Unlike scientific knowledge, which is often generated through formal research and monitoring, local knowledge develops through lived experience, continuous interaction with the environment and the accumulation of observations across generations (22,29). It encompasses an understanding of local ecosystems, weather patterns, natural hazards, resource use and community practices, enabling residents to recognise environmental changes

and respond to emerging risks in ways that are grounded in local realities.

Within the context of climate adaptation, local knowledge contributes to resilience by complementing scientific evidence with context-specific information that may not be captured through conventional monitoring systems alone. Communities often possess detailed knowledge of environmental variability, seasonal changes, ecosystem dynamics and historical hazard patterns that can improve risk assessments and inform locally appropriate adaptation strategies (22,36). Increasingly, climate adaptation research advocates the integration of scientific and local knowledge, recognising that neither approach alone is sufficient to address the complexity and uncertainty associated with climate change (29,37).

The importance of local knowledge is particularly evident in Small Island Tourism Destinations, where communities maintain close relationships with their surrounding natural environment and where livelihoods frequently depend on healthy ecosystems and climate-sensitive economic activities. Residents, tourism operators, fishers, farmers and other local stakeholders often develop a detailed understanding of coastal processes, water availability, biodiversity, seasonal tourism patterns and environmental change through everyday experience. Such knowledge can support more effective adaptation planning by identifying local vulnerabilities, recognising emerging environmental changes and strengthening community participation in decision-making processes (18,17).

Recent literature further highlights that local knowledge should not be perceived as static or confined to traditional practices. Instead, it evolves continuously through social learning, innovation, education and interactions with scientific institutions and governance systems (22,38). This dynamic perspective encourages the co-production of knowledge, where scientists, policymakers and local communities collaborate to develop adaptation strategies that are both scientifically robust and socially relevant. Such collaborative approaches strengthen legitimacy, increase public acceptance and improve the long-term effectiveness of climate adaptation policies.

Livelihood Diversification

Livelihood diversification is widely recognised as a key strategy for strengthening community resilience by reducing socio-economic vulnerability and enhancing adaptive capacity in the face of climate change. Communities that depend heavily on a single economic sector are generally more vulnerable to external shocks, as disruptions affecting that sector can rapidly translate into widespread economic and social consequences (29,39). Diversifying livelihoods enables households and communities to distribute risk across multiple income sources, thereby increasing their ability to absorb disturbances, recover from adverse events and adapt to changing environmental conditions.

Within climate adaptation research, livelihood diversification extends beyond income generation to encompass the capacity of individuals and communities to develop flexible economic strategies that respond to evolving environmental and socio-economic circumstances (40,41). Diversified livelihoods reduce dependence on climate-sensitive activities, strengthen financial security and enhance the availability of resources required to support adaptation measures. Moreover, economic flexibility enables communities to cope more effectively with both sudden disasters and gradual environmental changes, reducing the likelihood that climate-related impacts will trigger long-term socio-economic decline.

The importance of livelihood diversification is particularly evident in Small Island Tourism Destinations, where tourism frequently remains the primary source of employment, income and local economic development. While tourism generates substantial economic benefits, excessive dependence on this single sector can significantly increase vulnerability to climate change, natural hazards, global economic crises and fluctuations in visitor demand. Extreme weather events, coastal degradation, sea-level rise and changing climatic conditions may directly affect tourism infrastructure, destination attractiveness and seasonal visitation patterns, producing cascading effects throughout local economies (42,7,13).

Strengthening resilience therefore requires diversification both within and beyond the tourism sector. Opportunities such as sustainable agriculture, fisheries, renewable energy, digital entrepreneurship, creative industries and nature-based tourism can improve economic flexibility while reducing dependence on traditional mass tourism. At the same time, climate adaptation within tourism itself—including the development of year-round tourism products, sustainable destination management and climate-resilient infrastructure—can further

strengthen local adaptive capacity. Increasingly, the literature argues that resilient island economies are characterised not by the elimination of tourism dependence but by the ability to maintain multiple complementary livelihood opportunities capable of absorbing environmental and economic shocks (43,29).

Ecosystem Stewardship

Ecosystem stewardship has emerged as a fundamental dimension of community resilience, recognising that healthy ecosystems provide the ecological foundation upon which human well-being, economic activities and climate adaptation depend. Rather than focusing solely on environmental conservation, ecosystem stewardship refers to the responsible management, restoration and sustainable use of natural resources in ways that maintain ecosystem functions while supporting the long-term needs of society (19,44). This perspective reflects the principles of social-ecological systems theory, acknowledging that human and natural systems are inherently interconnected and must be managed as integrated systems rather than independent components.

Within the context of climate adaptation, ecosystems provide a wide range of services that make a direct contribution to community resilience. Coastal wetlands, dunes, coral reefs, forests and marine ecosystems reduce exposure to natural hazards, regulate water resources, support biodiversity and sustain livelihoods that depend on healthy environmental conditions (45,29). These ecosystem services not only reduce physical vulnerability to climate-related hazards but also enhance the adaptive capacity of communities by preserving the natural assets upon which local economies and social well-being depend.

The significance of ecosystem stewardship is particularly evident in Small Island Tourism Destinations, where environmental quality is closely linked to both economic prosperity and community resilience. Tourism in island destinations frequently depends on the conservation of beaches, coastal landscapes, marine ecosystems, biodiversity and cultural landscapes that attract visitors while simultaneously supporting fisheries, freshwater resources and local livelihoods (7,13,18). Climate change threatens these natural systems through sea-level rise, coastal erosion, biodiversity loss, ocean warming and increasing frequency of extreme weather events, creating cascading impacts that extend beyond ecological degradation to affect tourism competitiveness, public health, economic stability and quality of life.

Consequently, recent research promotes ecosystem-based adaptation (EbA) as an essential component of climate resilience. Ecosystem-based adaptation integrates biodiversity conservation, ecosystem restoration and sustainable natural resource management into climate adaptation planning, enabling communities to reduce climate risks while simultaneously generating environmental, social and economic co-benefits (46,29). Examples include the restoration of wetlands and dunes for coastal protection, the conservation of forests to improve water regulation and erosion control, and the protection of marine ecosystems that sustain fisheries and nature-based tourism. Such approaches demonstrate that ecosystem conservation should not be viewed as a competing objective to economic development but rather as a prerequisite for long-term resilience and sustainable tourism.

Adaptive Learning

Adaptive learning can be understood as the dynamic process through which communities continuously acquire, share, evaluate and apply knowledge in response to changing environmental, social and economic conditions. Unlike static approaches to climate adaptation, adaptive learning emphasises continuous reflection, experimentation and adjustment, enabling communities to improve their responses as new information, experiences and challenges emerge (19,47,26). Rather than viewing adaptation as a one-time intervention, this perspective recognises resilience as an ongoing process of learning and transformation.

Within the context of community resilience, adaptive learning strengthens the capacity of individuals, organisations and institutions to cope with uncertainty by promoting innovation, flexibility and continuous improvement. Learning takes place through multiple pathways, including monitoring environmental change, evaluating previous adaptation measures, exchanging knowledge among stakeholders and integrating scientific evidence with local experience (29,38). These iterative processes enable communities not only to respond more effectively to climate-related disturbances but also to anticipate future challenges and proactively adjust adaptation strategies.

Adaptive learning is particularly important in Small Island Tourism Destinations, where climate risks evolve

rapidly and where environmental, social and economic systems are closely interconnected. As climate change alters coastal processes, ecosystem conditions, tourism demand and resource availability, island communities require governance systems capable of learning from experience and adapting policies over time rather than relying on fixed management approaches (18,17). Continuous learning further strengthens collaboration among local authorities, researchers, tourism stakeholders and community members, supporting the co-production of knowledge and encouraging evidence-informed decision-making.

Recent literature highlights adaptive learning as a defining characteristic of resilient social-ecological systems. Communities that invest in education, stakeholder participation, knowledge exchange and institutional learning are generally better positioned to respond to complex climate challenges than those relying exclusively on technical solutions or static adaptation plans (16,19,26).

TOWARDS AN INTEGRATED COMMUNITY RESILIENCE PERSPECTIVE

The preceding sections have demonstrated that community resilience cannot be adequately understood through isolated social, institutional, economic or environmental dimensions (22,24,25). Instead, resilience emerges from the interaction of multiple and interconnected processes operating within complex social-ecological systems (19,26). While existing studies have provided valuable insights into individual resilience dimensions, these are frequently examined independently, resulting in fragmented perspectives that overlook the dynamic relationships through which resilience is developed and sustained, particularly in Small Island Tourism Destinations (11,13,16).

Drawing on this synthesis, the present review proposes an integrated conceptual perspective that brings together the key dimensions identified throughout the literature. As illustrated in Figure 1, community resilience is conceptualised as the outcome of interactions among three complementary dimensions: the social dimension, represented by social capital; the institutional and knowledge dimension, encompassing governance, institutional capacity and local knowledge; and the environmental and economic dimension, including ecosystem stewardship and livelihood diversification (16,22,26). Rather than operating independently, these dimensions continuously influence one another through reciprocal interactions that shape the adaptive capacity of tourism-dependent island communities (19,22,29).

Figure 1. Conceptual synthesis of the key dimensions of community resilience in Small Island Tourism Destinations.

Community Resilience

in Small Island Tourism Destinations

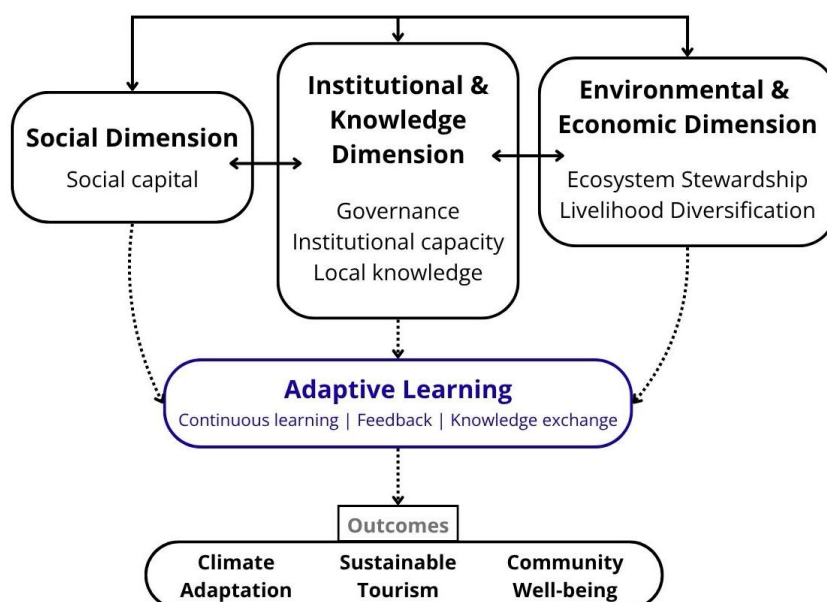


Figure 1 illustrates the integrated conceptual perspective proposed in this review. It demonstrates that community resilience in Small Island Tourism Destinations is not determined by individual dimensions acting independently but emerges through the interaction of social, institutional, environmental, and economic processes. Social capital supports collective action, governance and institutional capacity enable effective decision-making, local knowledge informs context-specific adaptation, while ecosystem stewardship and livelihood diversification strengthen long-term sustainability. Adaptive learning connects these dimensions through continuous knowledge exchange, feedback, and institutional improvement, ultimately contributing to climate adaptation, sustainable tourism, and community well-being.

Within this perspective, adaptive learning functions as the central integrating mechanism linking all resilience dimensions (19,26,34). Continuous learning, knowledge exchange and feedback processes enable communities and institutions to evaluate previous adaptation efforts, incorporate new scientific and local knowledge, strengthen governance processes and improve future decision-making (26,29,38). Consequently, resilience is viewed not as a fixed state but as a dynamic and iterative process through which communities continuously adjust to changing environmental, social and economic conditions (19,22,29).

The integrated perspective presented in this review further highlights that climate adaptation within Small Island Tourism Destinations cannot rely on isolated interventions targeting individual sectors (13,29). Strengthening resilience requires coordinated action across communities, institutions, local economies and ecosystems, recognising that improvements within one dimension frequently reinforce adaptive capacities across the others (19,22,16). Similarly, weaknesses in one component may generate cascading effects throughout the entire social-ecological system, reducing the effectiveness of otherwise well-designed adaptation measures (19,22).

By synthesising these interactions into a single conceptual perspective, the present review contributes to the growing resilience literature in three principal ways. First, it consolidates fragmented knowledge from multiple disciplines into a coherent multidimensional understanding of community resilience. Second, it places tourism-dependent island communities at the centre of climate adaptation discussions by adopting a functional perspective based on Small Island Tourism Destinations rather than geopolitical classifications alone. Third, it emphasises adaptive learning as the process through which resilience continuously evolves, highlighting the importance of ongoing collaboration, knowledge exchange and institutional learning for long-term climate adaptation (19,26).

Although the proposed perspective is conceptual rather than predictive, it provides a structured foundation for future empirical research. It may guide the development of resilience assessment frameworks, support comparative studies across island destinations and inform policy design by encouraging integrated adaptation strategies that simultaneously strengthen social cohesion, institutional effectiveness, environmental stewardship and sustainable local development.

Interactions among the Dimensions of Community Resilience

The multidimensional nature of community resilience becomes evident when examining how its individual components reinforce one another through continuous feedback processes (22,26). Social capital provides the trust and social networks necessary for collective action, while governance transforms these relationships into participatory decision-making processes capable of addressing climate risks (32,33,19,34). Institutional capacity subsequently determines whether these decisions can be translated into effective policies, programmes and adaptation measures (16,35).

At the same time, local knowledge enriches governance and institutional decision-making by providing context-specific understanding of environmental change, cultural practices and community priorities (22,36). When integrated with scientific evidence, local knowledge contributes to adaptation strategies that are both technically robust and socially legitimate (37,29). This interaction enhances public participation, strengthens stakeholder ownership and improves the long-term effectiveness of adaptation policies (34,38).

Economic resilience, expressed through livelihood diversification, further supports adaptive capacity by reducing dependence on climate-sensitive sectors and increasing the flexibility of households and local economies (40,41). However, diversified livelihoods remain closely linked to the condition of natural ecosystems (45,44). Environmental degradation reduces tourism attractiveness, threatens biodiversity, affects water availability and

undermines the ecosystem services upon which local economies depend (7,13,29). Consequently, ecosystem stewardship provides the ecological foundation that sustains both economic development and community well-being (19,45).

Adaptive learning integrates these dimensions by enabling continuous evaluation, knowledge exchange and policy adjustment (19,34). Learning strengthens governance, improves institutional effectiveness, refines local adaptation practices and encourages innovation across sectors (26,38). Rather than functioning as an independent resilience dimension, adaptive learning operates as the dynamic mechanism that continuously strengthens the interactions among all other components of community resilience (22,26).

Collectively, these relationships illustrate that resilience should be conceptualised as a continuously evolving process rather than a static condition (19,22). Communities become resilient not because they excel in one particular dimension but because they successfully coordinate multiple capacities that reinforce one another over time (16,26).

Table 3. Interactions among the Dimensions of Community Resilience

Dimension	Interacts primarily with	Resulting adaptation outcome
Social Capital	Governance	Collective action
Governance	Institutional Capacity	Effective implementation
Institutional Capacity	Local Knowledge	Evidence-informed planning
Local Knowledge	Ecosystem Stewardship	Context-specific adaptation
Ecosystem Stewardship	Livelihood Diversification	Sustainable local economy
Adaptive Learning	All dimensions	Continuous resilience building

Towards an Integrated Perspective for Small Island Tourism Destinations

Building upon this synthesis, community resilience in Small Island Tourism Destinations can be conceptualised as an integrated social-ecological process in which adaptive capacity emerges from the interaction of social, institutional, economic and environmental systems (22,19). This perspective moves beyond sector-specific adaptation by recognising that sustainable climate resilience requires coordinated action across governance, community participation, ecosystem management and local development (16,29).

Within this integrated perspective, social capital establishes the relationships that enable cooperation, governance provides the institutional arrangements for collective decision-making, and institutional capacity ensures that adaptation measures can be implemented effectively (32,19,35). Local knowledge contributes context-specific understanding that enhances policy relevance, while livelihood diversification reduces socio-economic vulnerability and ecosystem stewardship safeguards the natural capital upon which island communities depend (36,41,44). Adaptive learning connects these dimensions through continuous reflection, monitoring and adjustment, enabling resilience to evolve as environmental and socio-economic conditions change (26,34).

Rather than representing a prescriptive framework, this integrated conceptual perspective highlights the interconnected nature of community resilience within tourism-dependent island systems. It demonstrates that climate adaptation cannot rely exclusively on technological solutions or isolated policy interventions but instead requires coordinated efforts that strengthen the relationships among communities, institutions and ecosystems (19,22,29).

This synthesis also addresses an important gap identified throughout the literature (13,16). While previous studies have generated valuable knowledge regarding individual resilience dimensions, comparatively fewer have examined how these dimensions interact as components of an integrated social-ecological system, particularly within tourism-dependent island destinations (11,16,22). By bringing these strands of research together, the present review contributes a holistic perspective that may support future empirical research, interdisciplinary collaboration and the development of more comprehensive climate adaptation policies.

This review has certain limitations that should be acknowledged. As a narrative review, it provides a conceptual synthesis of the existing literature rather than an empirical validation of the proposed perspective. Although the

review draws upon interdisciplinary sources, the selection of literature was based on relevance to the study objectives and therefore may not capture all perspectives within the rapidly expanding resilience literature. Furthermore, the integrated conceptual perspective has not yet been tested across different island contexts and should therefore be considered as a foundation for future empirical investigation rather than a predictive framework.

CONCLUSIONS

Climate change presents complex challenges for tourism-dependent island communities, requiring adaptation approaches that extend beyond sector-specific interventions and technological solutions. As demonstrated throughout this review, resilience in Small Island Tourism Destinations is shaped by the interaction of social, institutional, economic and environmental processes that collectively determine the capacity of communities to anticipate, respond to and adapt to climate-related change. Consequently, community resilience should be understood not as a single characteristic but as a dynamic and multidimensional process operating within interconnected social-ecological systems.

The synthesis presented in this review highlights that social capital, governance, institutional capacity, local knowledge, livelihood diversification, ecosystem stewardship and adaptive learning represent complementary dimensions of community resilience rather than independent determinants. Their effectiveness depends not only on the strength of each individual dimension but also on the quality of the interactions among them. Adaptive learning, in particular, emerges as the mechanism that continuously strengthens these interactions by promoting knowledge exchange, institutional improvement and collective adaptation in response to evolving climate conditions.

By integrating evidence from climate adaptation, resilience theory, tourism studies and social-ecological systems research, this review contributes to the existing literature by offering a multidimensional conceptual perspective of community resilience in Small Island Tourism Destinations. Rather than introducing a new theoretical framework, it synthesises fragmented knowledge into a coherent perspective that emphasises the interdependence of resilience dimensions and their collective contribution to climate adaptation. This integrated perspective provides a clearer understanding of how community resilience can be conceptualised within tourism-dependent island systems and offers a common basis for future interdisciplinary research.

The findings also have important practical implications. Policymakers, local authorities and destination managers should recognise that effective climate adaptation cannot be achieved through isolated environmental or infrastructure measures alone. Long-term resilience requires integrated strategies that simultaneously strengthen community participation, institutional effectiveness, local knowledge, ecosystem stewardship and economic diversification while promoting continuous learning and collaboration among stakeholders. Such approaches can enhance both the adaptive capacity of island communities and the sustainability of tourism development under changing climatic conditions.

Although this review provides a comprehensive conceptual synthesis, several opportunities remain for future research. Empirical studies are needed to examine how the identified resilience dimensions interact across different island contexts and to explore whether their relative importance varies according to environmental, socio-economic and governance conditions. Comparative research between Small Island Tourism Destinations could further improve understanding of context-specific resilience pathways, while future studies may also build upon the integrated perspective proposed in this review to develop and validate resilience assessment tools capable of supporting climate adaptation planning and evidence-informed decision-making.

Ultimately, strengthening community resilience should be viewed as a long-term process of social learning, institutional development and environmental stewardship rather than as a fixed adaptation outcome. As climate risks continue to intensify, adopting integrated and community-centred approaches will become important for safeguarding the sustainability, competitiveness and well-being of Small Island Tourism Destinations.

Future studies could build upon the proposed integrated perspective by developing measurable indicators for each resilience dimension and applying them across different Small Island Tourism Destinations. Such empirical

validation would support comparative assessments, strengthen evidence-based policymaking, and improve the practical implementation of community resilience as a climate adaptation strategy.

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