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The interplay of social and economic capital in coastal community resilience: A scoping review

Firyal Nada Salsabila Agung[1,*], Hertria Maharani Putri[2]
[1] *Independent Researcher;*
[2] *National Research and Innovation, Central Jakarta, Special Capital Region of Jakarta 10340, Indonesia.*
*Correspondence: nadasalshabilaa@gmail.com

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ABSTRACT

Background: Coastal areas are dynamic and sensitive socio-ecological systems, home to over 40% of the world's population. Over the past century, they have experienced major socio-economic and environmental changes due to urbanization, industrialization, and ecosystem degradation. Coastal communities, especially those dependent on small-scale fisheries, face multiple challenges from climate change, declining biodiversity, and market pressures. Their ability to cope and adapt depends not only on natural resources but also on social and economic capital. However, the interaction between these two types of capital remains poorly understood, especially in different global contexts. **Methods:** This study conducted a scoping review of 53 scholarly articles published between 2019 and 2025. Using the three Resilience Capitals framework (C1, C2, C3), the review synthesized evidence on how social and economic capital interact to shape the resilience of coastal communities in both the Global South and Global North. **Findings:** The synthesis confirms that coastal community resilience is fundamentally a product of a complex, mutually reinforcing interaction where social capital (e.g., trust, networks, collective action) provides the foundation for information exchange and solidarity, while economic capital (e.g., assets, financial capacity) offers the material means for adaptation and recovery. Strong social capital amplifies the utility and reaches of limited economic resources, enhancing adaptive capacity, whereas a deficiency in either capital exacerbates vulnerability. **Conclusion:** Sustainable coastal development must prioritize the integrated strengthening of both social and economic capital as the foundational core of effective resilience policies. **Novelty/Originality of this article:** This study offers a comprehensive synthesis of the reciprocal causality between social and economic capitals, providing an evidence-based roadmap for integrated policy interventions, particularly relevant for vulnerable populations in the Global South.

KEYWORDS: coastal communities; resilience; social capital; economic capital.

1. Introduction

Coastal areas are dynamic and sensitive socio-ecological systems (Haslett, 2009) and are home to more than 40% of the world's population (Haslett, 2009; Maul, 2021). Over the past century, these areas have undergone significant socio-economic and environmental changes due to urbanization, industrialization, and coastal ecosystem degradation (Neumann et al., 2015; Pascual-Fernandez et al., 2018). Although coastal areas play an important role in economic growth and livelihoods, especially in island nations (Bijlsma et al., 1995), the acceleration of global social and ecological change has increased pressure on natural resources and the welfare of their inhabitants (Pelling & Uitto, 2001). Shocks,

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uncertainties, and local and global changes are now recognized as inherent elements of the dynamics of coastal socio-ecological systems (Schwarz et al., 2011).

Globally, climate change has had major consequences for coastal communities, both ecologically and socio-economically (Janmaimool et al., 2025). Marine ecosystems, which have long been the mainstay of economic development and livelihoods for communities, are now facing degradation due to rising sea temperatures, salinity intrusion, coastal erosion and coastal flooding (Dong et al., 2024; Trégarot et al., 2024). These pressures are exacerbated by anthropogenic activities such as land conversion, mangrove deforestation, and urban expansion (Nicholls & Cazenave, 2010). In the Global South, these impacts are further complicated by high population density, structural poverty, and weak governance (Neumann et al., 2015; Wang et al., 2021; Tanim et al., 2022).

Fisheries communities and coastal communities, especially those dependent on small-scale fisheries (SSF), face multiple challenges due to environmental change, declining biodiversity, and market pressures (El-Shayeb et al., 2025; Blasiak et al., 2017). They operate with limited adaptive capacity, facing the cumulative impacts of extreme events and long-term trends such as rising sea temperatures and changing rainfall patterns (Portner et al., 2014; Stott et al., 2016). In this context, resilience is a key concept for understanding the ability of coastal communities to cope with, adapt to, and transform in the face of various changes (Cinner et al., 2018; Engle, 2011).

Recent studies indicate that adaptive capacity is determined not only by biophysical factors, but also by the community's ability to access and mobilize social and economic capital (Aldrich & Meyer, 2015; Garcia et al., 2020). Social capital—which includes networks, trust, and collective action—enables communities to share information, coordinate responses, and strengthen solidarity during times of crisis (Nguyen-Trung et al., 2020). Meanwhile, economic capital provides the material foundation for resilience through livelihood diversification, savings, and access to credit and insurance. These two types of capital interact closely: economic strength without social support can result in short-term adaptation, while social solidarity without economic support can limit a community's ability to recover and transform.

The relationship between social and economic capital highlights the need for a deeper understanding of how these two dimensions interact in shaping the adaptive and transformative capacity of coastal communities. However, most studies still examine the two separately, either through local case studies or specific types of hazards, resulting in findings that are fragmented across geographical contexts and disciplines (Gisevius et al., 2025; Visave & Aldrich, 2025; El-Shayeb et al., 2025). Most empirical evidence also focuses on physical exposure and environmental vulnerability, while the causal relationship between social and economic assets play an important role in shaping long-term adaptive capacity—remains under-explored. On the other hand, cross-context studies linking learning between the Global South and Global North remain limited, creating a knowledge gap in understanding cross-regional dynamics and their implications for sustainable and equitable coastal development.

Based on these gaps, this scoping review aims to map and synthesize the latest empirical evidence on the role of social capital and economic capital in shaping the resilience of coastal communities to climatic and non-climatic pressures in various global contexts. This study examines how these two types of capital interact in strengthening or limiting adaptive and transformative capacities, and the extent to which governance and social justice contexts influence the effectiveness of these interactions in building sustainable resilience. The novelty of this research lies in its integrative approach, which combines cross-regional analysis of the Global South and Global North to understand the causal relationship between social capital, economic capital, and resilience capacity. Unlike previous studies, which tended to be local and sectoral in nature, this study provides a comprehensive synthesis of how these two forms of capital work together to shape the transition from reactive coping strategies to long-term transformative resilience. Thus, the results of this review are expected to provide a conceptual and empirical basis for the

formulation of contextual, inclusive, and socio-ecologically just coastal adaptation strategies.

2. Methods

2.1 Research design

This study employed a scoping review approach to identify, analyze, and synthesize existing research related to the resilience of coastal communities. The scoping review method was selected because it provides a structured and transparent process for gathering and evaluating relevant literature, ensuring both the reliability and comprehensiveness of the review. The steps in this scoping review followed the guidelines proposed by the *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) framework (Tricco et al., 2018). The PRISMA protocol outlines several key stages, including the identification of relevant studies, a two-stage screening of articles based on pre-defined eligibility criteria, the compilation of a final list of studies that align with the review's scope, the extraction and classification of relevant data from the included articles, the synthesis of the obtained data using a thematic analysis approach, and finally, the presentation of the findings (Ewane et al., 2023; Mengist et al., 2020; Moussa et al., 2024).

2.2 Data search, collection and screening criteria

A comprehensive search was conducted in the scholarly databases ScienceDirect**,** MDPI, and Springer Open to perform a preliminary scoping review of the existing literature. The search employed the following Boolean keywords: ("social capital" OR "economic capital") AND ("coastal community" OR "fishing community") AND (resilience). To ensure the relevance and quality of the included studies, a set of pre-defined inclusion and exclusion criteria was established. These criteria guided the screening process in determining which articles were eligible for analysis, in line with the research objectives and scope of this review. The detailed eligibility criteria are presented in Table 1 below.

Table 1. Inclusion and exclusion criteria

Category	Criteria
Inclusion Criteria	Focused on coastal or fishing communities.
	Discussed aspects of social, economic, or livelihood resilience
	Studies available in open/full access.
	Studies published in peer-reviewed journals.
	Studies written in English.
	Studies published between 2019 and 2025.
Exclusion Criteria	Studies from which relevant information could not be extracted or were not aligned with the scope of this review.
	Grey literature, including reports, conference papers or proceedings, books, book chapters, theses, dissertations, and blog posts.

From the search results, a total of 166 articles were obtained and exported to Zotero software to check for duplication, but no duplication was found at this stage. The second screening process involved evaluating the relevance of titles and abstracts using Excel, eliminating 111 articles and leaving 55 articles. The next stage was full-text screening of each article. After applying the quality screening process, 53 articles were finally included in the final analysis of this review (Figure 1).

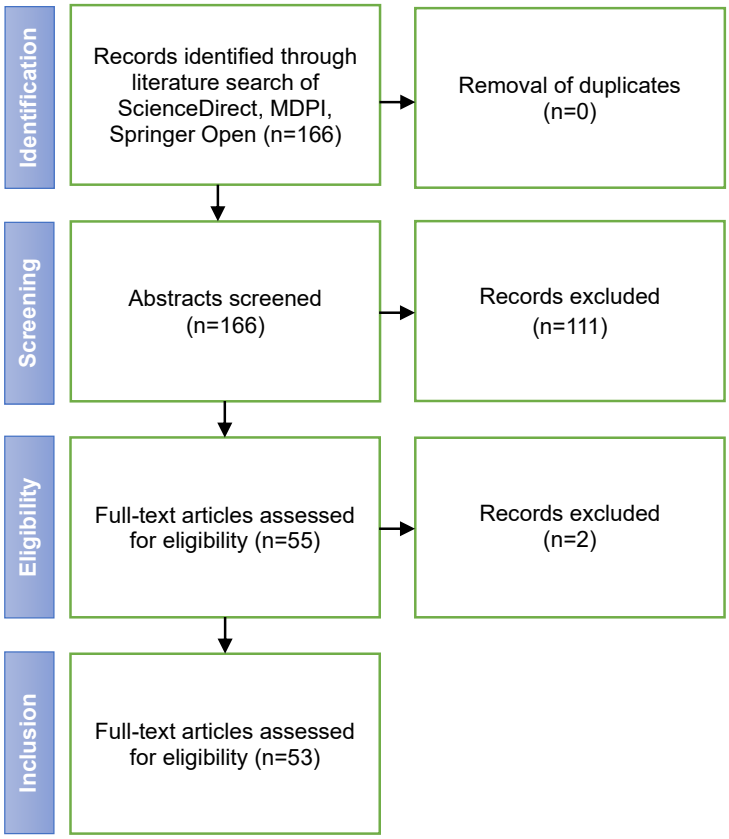

Fig 1. Visual representation of the literature search methodology and results (2019-2025)

2.3 Data analysis

We applied qualitative content analysis to all selected articles. This process aimed to identify key themes, main variables, and findings relevant to coastal community resilience. Data extraction was carried out systematically on 53 articles using a standardized form coded through Microsoft Excel. The extracted data included article identification, geographical location (city or coastal area), main results, dimensions of resilience (e.g. social, economic, or institutional), types of hazards studied, both those arising from climate change and non-climate factors such as development, urbanization, and environmental degradation as well as resilience strategies (adaptation and mitigation), implications, and resulting policy recommendations. Following the extraction process, we conducted thematic coding to group studies based on their focus areas (e.g., social, economic, or institutional capital). Thematic analysis was then used to harmonize and synthesize the data through an iterative coding process, with the aim of highlighting common patterns, conceptual frameworks, and research gaps that directly addressed the objectives of this review.

3. Results and Discussion

3.1 Global context, structural vulnerability, and geographical disparities

3.1.1 Geographical dominance and multi-dimensional global issues

Results and discussion contain results obtained by the author during the research. The This scoping review screened and synthesized findings from 53 scientific articles published in the recent period (2019–2025), confirming that the discourse on the causal relationship between social capital (C1), economic capital (C2), and coastal community resilience (C3) is a critical agenda in global research. A notable spatial finding is the significant dominance of

studies in regions classified as the Global South, including the coastal regions of South Asia (India, Bangladesh, Pakistan), Southeast Asia (Indonesia, Malaysia, Vietnam, Thailand), Oceania (Papua New Guinea), Southern Africa, West Africa (Sierra Leone, Ghana), Central Africa (Cameroon), East Africa (Malawi, Kenya, Seychelles), South America (Uruguay, Chile, Brazil, Colombia), the Caribbean (Dominica, Antigua & Barbuda, Grenada), with only a few comparative studies from the Global North such as North America (USA), East Asia (Japan), and Western Europe (Spain and the UK).

Table 2. Reviewed study profiles and geographical distribution

No.	Lead Author (Year)	Geographical Focus (Country/Region)	Classification	Capital Focus
1	Chambon et al. (2024)	Coastal Kenya, Western Indian Ocean	Global South	Human Capital (Knowledge) and Institutional Capital/Governance (Inclusive Policies) (C1) as prerequisites for Adaptive Capacity.
2	Shelton et al. (2024)	The Caribbean coastline	Global South	The role of the fisheries sector (C2) as a determinant of resilience.
3	Xu et al. (2023)	Manchar Lake, Pakistan	Global South	Economic Capital Constraints (C2) as a Barrier to Adaptation.
4	Langkulsen et al. (2022)	Thailand coastline	Global South	Social (C1) & Economic (C2) Resilience to Response Capacity.
5	El-Shayeb et al. (2025)	Uruguay coastline	Global South	The Role of the Family (C1) as the Core Unit of Social Capital in Resilience.
6	Mitu et al. (2021)	Bangladesh coastline	Global South	Gender Disparity & Social Interrelationships and Traders' Associations (C1).
7	Selvaraj et al. (2022)	Southern Pacific coastline of Colombia	Global South	Financial Buffer Capacity (C2).
8	Allen et al. (2021)	Southeastern USA	Global North	Infrastructure and Socio-Economic Resilience (C1 & C2).
9	Babanawo et al. (2023)	Ghana coastline	Global South	Vulnerability to the Vicious Circle (Economy (C2) & Human Capital).
10	Escudero & Mendoza (2021)	Mexico coastline	Global South	Limited economic capital (C2) and institutional barriers (C1).
...	43 Other Studies	Various	Global South Dominance	Variations in C1, C2, and C3 Interactions.

Note: This table is a representative sample of 53 reviewed articles. Most studies focused on South Asia and Southeast Asia (Bangladesh, India, Indonesia, Thailand).

This geographical orientation not only reflects the distribution pattern of studies but also indicates the main conceptual assumption that the issue of resilience in developing countries is multidimensional. The vulnerability of coastal communities in the Global South is not solely caused by exposure to natural hazards such as cyclones, storms, or sea level rise. This vulnerability is also reinforced by interrelated structural factors, including institutional failure (Sarkar et al., 2024), pressure from large-scale development interventions (Chambon et al., 2024), financial capital deficits (Shelton et al., 2024), and weak institutional capacity at the local level. Therefore, resilience needs to be understood not only as part of disaster management, but also as an issue of development justice and structural transformation. Empirical findings support this view. Allen et al. (2021) found that communities that depend on vulnerable infrastructure and face large socio-economic disparities tend to have low levels of resilience. Limited economic and social capital has also been shown to be closely related to low adaptive capacity, as identified by Posen et al. (2023).

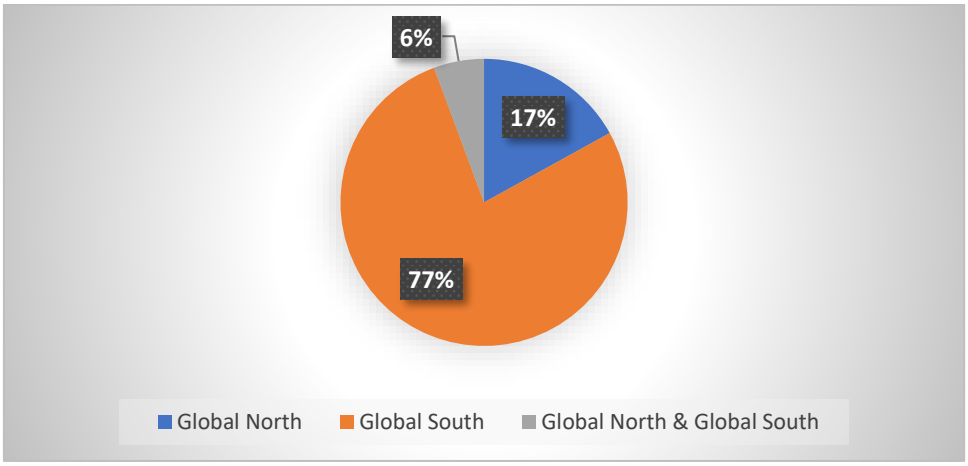

Fig 2. Geographical Distribution

Gender-sensitive analysis adds an important dimension to understanding this vulnerability. Masud-All-Kamal et al. (2021) show that NGO-led Community-Based Adaptation (CBA) initiatives in Bangladesh, despite focusing on empowering poor women's groups, often fail to create sustainable social capital. Overlapping social statuses—poverty, gender, and marginal position in the social structure—limit women's access to resources and power, resulting in fragile social networks and short-lived economic benefits.

Conceptually, these findings emphasize the importance of an integrated measurement approach. Components such as community networks, trust levels, collective participation, and local leadership (social capital/C1) need to be analyzed alongside economic indicators, including financial capacity, livelihood diversification, and recovery capacity (economic capital/C2) to assess the adaptive capacity and resilience of coastal communities (C3) more comprehensively (Oktari et al., 2020). This integrated understanding forms the analytical foundation for exploring how social and economic capital interact in shaping adaptive and transformative capacities in coastal contexts.

3.1.2 Acute exposure and economic vulnerability

Case studies on coastal fishing communities consistently show high levels of economic vulnerability, where dependence on marine resources and a lack of livelihood diversification increase sensitivity to climate shocks such as storms, extreme rainfall, and changes in sea temperature (Sarkar et al., 2024; Pulgar et al., 2025; Baker et al., 2023; Selvaraj et al., 2022; Makwinja et al., 2021; Mahmood et al., 2023). Repeated exposure to these hazards causes damage to physical capital—including boats, fishing gear, and homes—as well as loss of productive land, resulting in reduced resilience and large-scale economic losses (Babanawo et al., 2023; Chambon et al., 2024). This situation is exacerbated by a combination of highly exposed locations, high ecological sensitivity, and local economic constraints (Babanawo et al., 2023).

Economic capital deficits (C2), reflected in dependence on a single type of employment, low levels of productive assets, and minimal savings and access to formal financial services, make the small-scale fisheries sector highly vulnerable to environmental and market changes (Villasante et al., 2022; Shelton et al., 2024). Climate impacts such as rising sea temperatures, changing rainfall patterns, and storms reduce catches and damage assets, threatening the economic sustainability of coastal households (Chambon et al., 2024; Mahmood et al., 2023). These capital constraints often lead to short-term coping responses such as the sale of productive assets or high-interest loans, which further deepen the cycle of economic vulnerability (Makwinja et al., 2021).

In addition, limited operational readiness is an obstacle to adaptive capacity (C3). Although some communities have shown increased risk awareness, many households are reluctant to evacuate because they would have to leave behind livestock and valuable assets—demonstrating how economic capital deficits directly hinder adaptive actions

(Sahana et al., 2023). Access to formal financial capital such as credit, insurance, and savings also remains low; most fishers rely on high-interest informal loans or uncertain daily incomes, while fisheries insurance schemes are rarely available (Xu et al., 2023; Nurzaman et al., 2020; Shelton et al., 2024). These conditions are a major obstacle to rapid recovery and investment in more climate-resilient assets (Korowi et al., 2025).

Household financial constraints also hinder investment in physical and human capital, including disaster-resilient infrastructure or non-fishing skills that could potentially increase economic diversification (Babanawo et al., 2023). As a result, many communities remain trapped in short-term coping strategies that do not address the root causes of vulnerability.

Non-climatic factors also play a significant role in exacerbating this situation. Urban expansion and unstable spatial planning policies encourage the conversion of aquaculture land into housing, infrastructure, and industrial areas, which erodes natural capital and forces a shift in livelihoods to the tertiary sector without any guarantee of improved welfare (Janmaimool et al., 2025). A similar situation is seen in the context of fisheries closures, where the loss of a primary source of income causes financial losses for fishers and supply chain actors, while formal financial support often arrives too late or is inadequate. These conditions have prompted communities to adopt detrimental coping strategies, such as depleting savings or seeking low-paying non-fishing jobs, which in turn weaken human and social capital (Moore et al., 2020).

Limitations in human capital—particularly education and skills—along with economic capital deficits constrain households' ability to make effective adaptive investments. When disaster exposure occurs repeatedly, low adaptive capacity is unable to absorb the impact, leading to a cycle of asset decline and increased debt that exacerbates vulnerability (Babanawo et al., 2023; Xu et al., 2023; Makwinja et al., 2021; Sahana et al., 2023). These findings confirm that the resilience of coastal communities is multidimensional and rooted in inequalities in access to various forms of capital. Therefore, effective interventions must strengthen financial capital while addressing limitations in human, social, and physical capital to break the cycle of vulnerability.

3.2 Economic capital (C2) as the primary driver of adaptive capacity

The synthesis shows that financial capital (C2) serves as a causal determinant and prerequisite for the transition to long-term resilience. Measured through savings, assets, and access to credit, economic capital emerges as the most significant predictor influencing both buffering and adaptive capacities (C3). The availability of household financial assets, including savings, investments, insurance, and access to formal loans, along with income diversification, provides vital buffers against shocks such as floods. Access to microcredit and other liquid financial instruments enables households to absorb losses without relinquishing productive assets (Langkulsen et al., 2022). Households with higher financial capital demonstrate stronger recovery capacity and are less likely to adopt coping strategies that deplete productive resources, confirming the pivotal role of financial capital as a key determinant of local resilience (Amadu et al., 2021). Ultimately, the adequacy of economic capital determines whether coastal communities can move beyond short-term coping toward sustained adaptive transformation.

3.2.1 Buffer Function and Barrier to Adaptive Investment

Economic capital adequacy enables coastal communities to invest in long-term adaptation strategies, such as replacing fishing gear with more efficient alternatives, building protective infrastructure, or educating children to access non-fishing employment. However, many studies show that single economic dependence on the capture fisheries sector leads to high vulnerability. Declining catches due to overfishing or changes in sea temperature directly reduce fishermen's household incomes.

Economic capital adequacy is a key factor in determining the adaptive capacity of coastal communities. Households with strong economic conditions are able to invest in long-term adaptation strategies, such as replacing fishing gear with more efficient equipment, building protective infrastructure, or educating children to work in non-fishing sectors. Conversely, economic dependence solely on fisheries increases vulnerability. Declining catches due to overfishing practices or changes in sea temperature directly reduce household income and erode productive assets (Chambon et al., 2024; Selvaraj et al., 2022).

Household financial assets such as savings, investments, insurance, and access to formal loans and diverse sources of income serve as important buffers against climate shocks such as floods. Access to microcredit and liquid financial instruments allows households to absorb losses without selling productive assets (Langkulsen et al., 2022; Amadu et al., 2021). Findings on the island of El Hierro show that job diversification, such as working part-time in the tourism and port sectors and utilizing family savings, can strengthen local economic resilience (De la Cruz Modino et al., 2022).

Conversely, a lack of financial capital, characterized by low savings, minimal insurance, and limited access to formal credit, can hinder adaptive investment. Many fishers rely on informal loans with high interest rates or unstable daily incomes. Access to fisheries insurance and formal credit is also often difficult to obtain, resulting in a slow economic recovery process. As a result, households tend to rely on unsustainable short-term coping strategies (Xu et al., 2023; Nurzaman et al., 2020; Shelton et al., 2024; Korowi et al., 2025). Empirical evidence shows that households with higher financial capital have stronger buffering capacity and higher overall resilience scores (Amadu et al., 2021; Mitu et al., 2021).

The interaction between social capital and economic capital also shows a mutually reinforcing relationship. Trust and social networks within communities support the success of community-based economic institutions, while economic stability helps strengthen social cohesion and collective solidarity (De la Cruz Modino et al., 2022). Limited economic capital has direct implications for community preparedness. Although awareness of evacuation has increased, there are still gaps in its implementation. The reluctance to leave livestock or productive assets shows that low economic capital is an obstacle to the implementation of more practical adaptive capacities (Sahana et al., 2023). In addition, limitations in human capital, such as education and skills, narrow opportunities for income diversification (Ehsan et al., 2022). As a result, transitioning to non-fishery sectors does not always result in greater prosperity or resilience without financial support and training (Janmaimool et al., 2025).

Several comparative studies also confirm that financial strength is directly related to adaptive resilience. Higher savings rates, non-agricultural income, and access to microcredit are positively correlated with the ability to absorb losses and accelerate recovery after a disaster (Al-Maruf et al., 2021; Langkulsen et al., 2022). The quality of housing as a form of physical asset is also an important determinant of resilience. However, building disaster-resistant houses or replacing expensive equipment is often unaffordable for low-income households without adequate credit or savings support (Babanawo et al., 2023; Xu et al., 2023; Korowi et al., 2025; Escudero & Mendoza, 2021).

Ultimately, limited financial resources are a major obstacle to implementing long-term mitigation strategies, such as constructing erosion control structures or stronger houses. Without increased economic capacity, most coastal communities can only implement low-cost adaptation strategies that are insufficient to break the chain of vulnerability (Mattah et al., 2024). In this regard, economic capital functions as both a protective buffer and a structural constraint. Its adequacy determines whether households can move beyond short-term coping toward sustainable adaptive investment.

3.2.2 Economic diversification as a response to pressure

Diversification of livelihoods has emerged as the most common and effective economic adaptation strategy, including a shift to non-fishing occupations such as agriculture,

tourism, and micro-enterprises to offset losses due to declining catches (Dias et al., 2023; Chambon et al., 2024; Korowi et al., 2025). Fishermen who diversify their catch portfolio by targeting various species also show higher resilience to stock fluctuations due to climate change (Caballero et al., 2023; Rahman et al., 2024). In the study by Caballero et al. (2023), diversification of catch portfolios is identified as the main adaptive behavioral mechanism that acts as a buffer against fish stock fluctuations. Species with high economic value act as 'key species' in the local economic system, where fishermen who target more than one species have better resilience because losses in one species can be compensated by other species. Rahman et al. (2024) also show that coastal communities that process various types of fish, including through drying activities, have lower dependence on any one particular marine resource.

Research by Richmond and Casali (2022) shows that declining fish resources and regulations that restrict access have resulted in local fishermen only obtaining a 'poverty quota'. This condition has prompted some fishermen to switch to part-time work or leave the fisheries sector altogether, even moving to other growing industries. However, a number of studies highlight that many forms of diversification are forced—that is, dependent on low-wage daily work that arises due to economic pressures and asset constraints—rather than the result of proactive investment initiatives aimed at transformation (Xu et al., 2023). This confirms the difference between adaptive diversification and reactive diversification in response to a crisis in primary livelihoods (Mondal et al., 2022).

Uddin et al. (2021) identified the potential of fisheries-based ecotourism as a transformational strategy capable of enhancing social and ecological resilience. Ecotourism not only reduces dependence on fishing but also strengthens economic capital and promotes resource conservation through reduced fishing intensity. Similar findings were reported by Nurzaman et al. (2020), who highlighted the diversification of employment from pure fishing to the tourism sector, such as tourism site management, food stalls, and guiding services, as an effective economic adaptation strategy. This strategy is largely supported by increased human capital capacity (Chambon et al., 2024). Other forms of adaptation include changing target species to fish that are more tolerant to high temperatures or shifting to agriculture and micro-enterprises to maintain household income stability (Dias et al., 2023).

In essence, these findings indicate that livelihood diversification reflects a broad spectrum of strategies—ranging from reactive adaptation in response to economic pressures to long-term transformation driven by increased human capital and institutional support. In the context of this scoping review, the general pattern identified is the dominance of economically driven diversification, with limited evidence of truly transformative and sustainable forms of diversification.

3.3 The causal role of social capital (C1) in mitigation

3.3.1 Informal social networks as crisis buffers

In the context of institutional and economic deficits, particularly in the Global South, social capital (C1) plays a crucial substitute role. This capital serves as an anchor of resilience, connecting households to informal resources that protect them from total ruin. Social capital, embodied in kinship networks, mutual aid norms, and community cohesion, acts as a crucial buffer when economic and institutional capital fail to operate effectively (Mondal et al., 2023; Susilo et al., 2021). Owing to its informal, trust-based, and responsive nature, social capital often proves more effective than formal financial systems, which are typically more bureaucratic, in maintaining consumption stability and protecting household assets during crises (Sahana et al., 2023). Among its various dimensions, trust plays a particularly vital role in shaping how communities mobilize social capital to cope with and recover from environmental shocks.

Visave & Aldrich (2025) research found a significant positive correlation between the level of trust among community members and the adoption of flood resilience strategies. Trust in neighbours was an important predictor of proactive coping strategies, such as preparing emergency bags and moving belongings, as well as psychosocial strategies such as social support and positive assessment of the situation. Emotional and material support provided by neighbours and relatives acts as an important buffer in absorbing post-disaster shocks (Mondal et al., 2023). In this context, social networks function as pillars of the social safety net that significantly increase community resilience capacity (Mondal et al., 2023).

Studies by El-Shayeb et al. (2025) and Moore et al. (2020) show that interest-free loans, cash donations, or sharing of catches among family members and friendship networks reduce dependence on formal financial institutions. Such support increases household financial capacity in difficult times and provides crucial emotional coping mechanisms. Similar results were reported by Korowi et al. (2025), who confirmed that family relationships and community ties serve as primary coping mechanisms when catches decline through the exchange of resources, food, temporary shelter, and labour.

Participation in community groups also strengthens social resilience. Langkulsen et al. (2022) found that membership in local groups provides access to important information and immediate support during and after floods, aiding social and physical recovery processes. Strong social cohesion, especially in fishing communities, creates rapid coordination and collective decision-making in the face of disasters (De la Cruz Modino et al., 2022).

Community leadership has proven to be an important factor in strengthening social networks. Gisevius et al. (2025) showed that local leaders act as catalysts for strengthening social bonds, organizing collective physical adaptation actions, and bridging access to technical knowledge from external institutions. The level of trust in leaders is positively correlated with the community's readiness to participate in resilience initiatives. Similarly, Sawaneh et al. (2024) found that bonded social capital—reflected in mutual assistance, group membership, and trust among residents—mediates community participation in flood prevention efforts. The stronger the sense of togetherness and social trust, the higher the collective involvement in community-based adaptation actions.

The research by Sarkar et al. (2024) reinforces these findings, showing that during and after disasters, communities with high social capital are better able to survive through informal loans, food sharing, and home repair assistance. Amadu et al. (2021) also emphasize that strong social networks contribute significantly to community adaptive capacity, enabling planned and sustainable change. Participation in local fisheries organizations increases fishermen's opportunities to acquire new knowledge and strengthens transformative capacity through policy advocacy (Amadu et al., 2021).

Shelton et al. (2024) describe how networks of fellow fishermen serve as a primary coping mechanism immediately after storms, facilitating cooperation in clean-up, equipment lending, and emotional support. Meanwhile, Chambon et al. (2024) emphasise that networks among fishermen also enable them to detect climate change trends, such as shifts in fish migration patterns, which form the basis of resilience based on local ecological knowledge. In a broader context, Takakura (2021), through a study in Miyagi, Japan, illustrates how a flexible social structure between competitive individualism and collectivism contributed to the revival of communities after the 2011 tsunami. The distribution of catches is regulated based on the type of resource—competitive for resident fish and collective for migratory fish—showing how social values and local knowledge shape a dynamic adaptive system.

Dias et al. (2023) and Korowi et al. (2025) highlight the role of social-based local governance in supporting coastal resilience. Communities with strong social cohesion and traditional governance mechanisms are able to enforce rules, prevent illegal fishing practices, and manage marine resources sustainably. Traditional leaders play a crucial role in regulating access, resolving conflicts, and maintaining socio-ecological balance. Furthermore, Adams & Kay (2019) found that solidarity and mutual support within communities increase residential satisfaction, which ultimately raises the tolerance

threshold for environmental stress and reduces the tendency for forced migration. Inter-community social relationships have also been shown to strengthen resilience by providing access to market information and informal financial support during shocks (Mitu et al., 2021).

Overall, evidence from various studies shows that social capital functions not only as a short-term coping mechanism but also as the foundation for long-term adaptive capacity. In the context of this scoping review, a common pattern identified is that the strength of social networks, trust, and local leadership are central to shaping the resilience of coastal communities. While informal support and mutual aid help to deal with immediate crises, long-term leadership and social collaboration determine the community's ability to transform in the face of socio-ecological change.

3.3.2 The role of social capital in driving economic recovery

A synthesis of the literature shows that social capital and economic capital have a mutually reinforcing relationship in building the resilience of coastal communities. Social recovery is often a prerequisite for economic recovery. The case of Shelter Cove shows that when trust and social networks are successfully restored, communities can re-establish fishermen's organizations, raise funds, and attract investment from local governments (Richmond & Casali, 2021). This confirms that social recovery serves as a critical entry point for revitalizing community-based economic systems and strengthening long-term resilience.

Occupational diversity has emerged as an economic adaptation strategy that is largely enabled by the power of family social capital. In the study by El-Shayeb et al. (2025), families play a key role in facilitating livelihood diversification. When shellfish harvesting activities fail, family members can switch to part-time jobs such as construction, tourism, or small household businesses run by wives and children. This family social capital ensures the availability of labour, knowledge sharing, and provides a financial and emotional safety net amid shocks such as resource degradation or policy changes.

The power of social capital is also evident in the role of community savings groups. Palash et al. (2024) found that membership in these groups significantly improved women's economic well-being, as reflected in increased household assets and expenditure. Savings and loan groups provide access to unsecured microloans that are used to develop small businesses such as animal husbandry or trading. In addition to strengthening women's economic empowerment, this mechanism also functions as a social and economic safety net: protecting assets from forced sale during crises and maintaining household consumption stability (consumption smoothing).

More broadly, the availability of social capital is positively correlated with household income and access to informal economic opportunities (Xu et al., 2023). Kinship networks and community-level social relationships play an important role in providing informal loans and emotional support (Selvaraj et al., 2022). In this context, social capital is not only a tool for survival, but also a risk distribution mechanism that strengthens household economic sustainability. Research by Sahana et al. (2023) shows an indirect relationship between social capital and economic resilience. Households with good social communication networks receive early warnings more effectively and experience much lower economic losses than households without such networks. This indicates that social capital can act as economic protection against losses caused by disasters.

In Global North countries, the role of social capital is also strong, although it takes a more institutional form. In Maine Bay, United States, fishermen's ability to adapt is supported by human capital (knowledge and experience) and social-institutional capital manifested through roundtable forums. These forums facilitate social learning and knowledge exchange, enabling the mobilization of economic and physical capital for changes in fishing strategies (Mason et al., 2024).

Other studies show how community social capital is activated during economic crises. In the case of Susilo et al. (2021), coastal communities utilize social relationships to

overcome economic difficulties during lean seasons, either through informal loans from relatives or involvement in social institutions such as informal rotating savings groups, locally known as "arisan" and savings and loan groups. These mechanisms are important resources for local economic sustainability. Frawley et al. (2024) highlight that community-based self-governance is a tangible form of institutional social capital that enhances collective adaptive capacity. Good governance enables adaptation strategies such as economic diversification to be more effective, while strengthening community independence. Meanwhile, in Kakdwip, on the coast of West Bengal, social capital serves as a key buffer when economic and physical capital weaken, demonstrating social flexibility in the face of environmental and economic pressures (Mondal et al., 2023).

The research by Rahman et al. (2024) confirms that merchant associations and social relationships between actors in the value chain (processors, workers, and dried fish merchants) play an important role in stabilizing livelihoods and maintaining local economic sustainability. These networks function as informal support systems that help economic actors withstand external shocks.

Taken together, this literature synthesis confirms that social capital not only functions as a social glue but also as a key driver of economic recovery. It works through various mechanisms, including family support, microfinance groups, trade associations, and self-governance, which together strengthen communities' capacity to cope with change and restore their economic well-being. However, while social capital provides a strong foundation for community resilience, its potential is often constrained by weak institutional support and limited policy integration, issues that will be discussed in the following section.

3.4 Institutional capital weaknesses

Institutional capacity weaknesses are one of the main causes of low resilience among coastal communities in various contexts. Governments are often seen as failing to provide adequate post-disaster services and support, leading communities to rely more on their own internal social networks (Sarkar et al., 2024). The low adaptive capacity of formal institutions is also reflected in the limited reach of government and non-governmental programmed, which are unable to target the most vulnerable households (Selvaraj et al., 2022).

The wide gap between communities and government institutions demonstrates the weak function of bridging social capital. Coastal communities often feel under empowered and lack access to the technical, financial, and long-term planning support that should be provided by formal institutions (Mattah et al., 2024). Similar conditions were also found in Sindh, Pakistan, where the relationship between fishermen and formal institutions such as the government or NGOs was very limited. As a result, fishermen found it difficult to gain access to assistance, training, or welfare programmed (Xu et al., 2023).

Institutional weaknesses are also evident in the context of fisheries governance. In the Caribbean region, the low level of integration of risk information into fisheries policy exacerbates the vulnerability of small-scale fishers. Governments have failed to enforce zoning and development regulations in high-risk areas, allowing structural vulnerabilities to persist (Shelton et al., 2024; Babanawo et al., 2023).

Various studies also show that top-down planning approaches undermine trust between communities and formal institutions. Morris et al. (2024) found that fishing communities are often excluded from resilience planning processes that are ceremonial and in substantive. Low trust in government institutions hinders the formation of equal partnerships in the co-production of resilience knowledge. This situation indicates a failure of bridging institutional capital, where relationships between actors are not two-way.

Similar findings were reported by Baker et al. (2023), who highlighted the feelings of exclusion experienced by traditional fishers in marine planning processes such as Marine Spatial Planning (MSP). Although consultations were held, the community considered the process to be merely a formality that ignored local knowledge. Failure to integrate the

voices of fishing communities' risks undermining trust and weakening the social capital necessary for collaborative and effective marine governance.

Institutional limitations are also reflected in government-managed early warning systems. Sahana et al. (2023) show that formal systems often use technical language that is difficult to understand and communication media that are not easily accessible to the community. This situation causes communities to turn to social capital, such as verbal information from neighbors, family, or volunteers, which has proven to be more effective in disseminating early warnings. Thus, social cohesion not only functions as a social buffer but also replaces the role of weak institutional communication.

In summary**,** various studies indicate that weak institutional capacity, minimal coordination between actors, and limited public access to adaptation policies and information are major challenges to the formation of inclusive resilience. The general pattern identified in this review confirms that the success of adaptation depends not only on internal social strength but also on the extent to which formal institutions are able to build sustainable bridges and relationships of trust with coastal communities. Furthermore, understanding how these institutional gaps intersect with gender dynamics provides deeper insight into who benefits most or is left behind in resilience-building efforts.

3.5 Gender and inclusive roles in resilience

Various studies highlight the role of gender as an important link between social capital and economic capital in building the resilience of coastal communities. In general, coastal women play a key role in maintaining household sustainability through post-harvest activities, financial management, and the maintenance of social networks between families. However, these roles are often informal and rarely recognized in public policy.

Several studies show that community-based interventions focused on women's empowerment have not always resulted in sustainable resilience. Masud-All-Kamal et al. (2021), for example, found that Community-Based Adaptation (CBA) programmed led by non-governmental organizations in coastal communities in Bangladesh failed to build long-term social capital. This occurred because poor women in these communities faced complex structural barriers—related to social status, poverty, and their position outside the traditional social hierarchy—that prevented them from challenging the existing system. As a result, interventions designed to strengthen adaptive capacity instead resulted in new dependencies and fragile social capital.

In a broader context, the modernization of fisheries and connectivity with global markets has transformed social relations among fishers into more competitive ones. Gender-based and social status-based power inequalities further weaken solidarity and reduce the participation of marginalized groups in decision-making processes (Baker et al., 2023). These findings reinforce the argument that resilient coastal development requires a participatory approach that takes into account social justice and gender inclusion. True resilience cannot be achieved without social justice. Baker et al. (2023) emphasize that communities can only become resilient if conflicts of interest are resolved fairly and vulnerable groups, such as small-scale fishers, are empowered in the development process.

Several studies also highlight the reciprocal relationship between social capital and economic capital. Palash et al. (2024) show that increasing economic capacity through participation in savings and loan groups can strengthen social capital, particularly through increased self-confidence, financial independence, and women's participation in household decision-making. Findings from Bangladesh show a similar pattern. Sarkar et al. (2024) found that women play an important role in managing social networks and coordinating coping strategies during times of crisis, while Chambon et al. (2024) highlight the ability of women fish processors to utilize social networks to secure markets, diversify income, and stabilize household economies.

Research by Chumky et al. (2023) provides a more in-depth illustration of left-behind families in Shyamnagar, Bangladesh. When husbands migrate due to environmental and economic pressures, their wives leverage social capital in the form of kinship networks to

obtain assistance and loans, assume the role of breadwinner, and adjust consumption patterns to ensure household survival. These strategies demonstrate a form of micro-resilience that relies heavily on the strength of social networks and solidifies gender roles. The link between gender and adaptive capacity is also evident in female-headed households. Bari et al. (2024) show that in such household contexts, social capital is more strongly correlated with adaptive capacity than in male-headed households. Close ties with government and non-governmental institutions help women compensate for limited economic capital and develop more diverse livelihood strategies. Consequently, their vulnerability is lower and household resilience is higher. However, gender-based economic inequality remains a major obstacle. Mitu et al. (2021) and Rahman et al. (2024) show that despite women's high levels of economic participation, they still receive lower wages and have limited control over their income. This situation suggests that strengthening social capital is not always accompanied by an equal distribution of economic power.

The literature indicates that the economic empowerment of coastal women not only improves household welfare but also strengthens the social stability and collective resilience of coastal communities. Therefore, resilient coastal development requires an approach that places gender equity as a key foundation for strengthening social and economic capital.

3.6 Strategic gaps: From reactive coping to transformative barriers

3.6.1 Reactive coping and the risk of maladaptation

The most significant gap in coastal community resilience lies in the inability to transition from survival (coping) strategies to transformative adaptation (C3). This gap represents an accumulation of structural, economic, and institutional barriers. Most adaptation measures found in the literature are reactive and short-term, reflecting coping patterns rather than proactive adaptation strategies (Mattah et al., 2024; Shelton et al., 2024). The adaptive capacity of coastal communities is generally limited to buffer measures such as securing boats before storms, clearing drains after floods, or filling houses with sand. While these measures are effective in maintaining livelihoods, they fail to address the underlying structural problems such as chronic poverty, coastal erosion, and weak coastal resource governance (Babanawo et al., 2023; Mattah et al., 2024).

Limited economic capital is a key factor hindering the shift from coping to proactive and transformative adaptation (Mondal et al., 2022). Most households remain heavily reliant on local social networks and temporary assistance from external institutions as a form of social safety net. This dependency suggests that the resilience developed is more temporary than sustainable (Mondal et al., 2023). When access to basic services such as clean water, sanitation, and electricity remains limited, adaptive capacity is difficult to develop as communities remain trapped in a cycle of reactive coping. Mondal et al. (2023) emphasize that sustainable resilience can only be achieved through the simultaneous strengthening of economic and physical capital, not simply through social networks. Without increased access to productive assets and adequate infrastructure, adaptation measures tend to stagnate at the level of temporary crisis responses. This condition creates the risk of maladaptation, a situation where strategies that appear adaptive actually exacerbate long-term vulnerability.

Increasingly unpredictable climate change exacerbates this situation. Variability in catches encourages fishermen to diversify their incomes by switching to other activities such as agriculture or trade. However, this diversification often occurs as a short-term response to economic pressures, not the result of thorough adaptation planning (Korowi et al., 2025). Furthermore, more transformative adaptation efforts such as building houses from stronger materials or undertaking permanent relocation are still rare due to high costs and limited access to capital (Babanawo et al., 2023). In this context, Escudero & Mendoza (2021) note that local communities tend to rely on experience-based adaptations, such as planting protective vegetation or modifying house structures, in response to environmental

hazards. The highest resilience was observed in communities that were able to combine local knowledge with external resource support, highlighting the importance of integrating social, human, and economic capital in building long-term adaptive capacity.

3.6.2 Non-climatic stressors and equity challenges

The resilience of coastal communities is often hampered by deep-rooted structural factors, such as poverty, weak governance, and limited financial capital (Shelton et al., 2024). Furthermore, several studies have shown that external non-climate pressures, including the expansion of large-scale fishing industries, also weaken the resilience of small-scale fishing communities (Chambon et al., 2024). This situation makes small-scale fishers increasingly vulnerable to climate and economic shocks.

Several studies have identified conflicts of distributive justice in coastal development policies, particularly in the implementation of the Sustainable Development Goals (SDGs). Baker et al. (2023) found a trade-off between SDG 14 (marine conservation) and socio-economic SDGs such as SDG 1 (poverty eradication), SDG 2 (food security), and SDG 8 (economic growth). Conservation efforts, while crucial for environmental sustainability, often reduce fishers' access to fishing resources, threaten incomes, and worsen household food security. Similar findings emerged in Bui et al.'s (2025) study in Vietnam's coastal forests, which demonstrated that conservation policies, such as the establishment of protected zones, can have unequal impacts on social groups. Communities with a high dependence on natural resources experienced reduced income opportunities and increased economic vulnerability.

Procedural and distributive justice are key to ensuring inclusive resilience. Morris et al. (2024) emphasizes the importance of resource redistribution and the recognition of local knowledge in knowledge co-production processes. In the context of post-disaster recovery, Garcia et al. (2023) demonstrate that an economic logic oriented toward capitalist expansion can deepen inequities. Their study in Florida, Puerto Rico, and North Carolina shows that the allocation of recovery resources tends to favor coastal development sectors and high-income groups, while marginalizing rural and low-income communities. As a result, minority groups such as Black and Indigenous communities often face slower recovery due to limited social capital and institutional networks.

3.7 Transformative resilience: Demands for structural justice and integrative policies

Sustainable resilience demands a shift from incremental adaptive capacity to transformative capacity, namely the ability to make fundamental changes in social, economic, and ecological systems (Villasante et al., 2022). The synthesis of various studies in this scoping review indicates that policies for adaptation and strengthening coastal community resilience need to be designed multidimensionally, integrating various forms of community capital. Effective policies should not only emphasize technical aspects but also be tailored to the local context, involve community participation, and be grounded in principles of social and ecological justice. In general, the policy strategies identified from various studies can be categorized based on the community capital and adaptive approach they focus on. The six main categories summarized in Table 3 illustrate policy directions for trans formatively strengthening coastal community resilience.

Table 3. Policy strategy review on community resilience

Capital Category	Strategy Policy	Objective Resilience	Source
Social Capital: Bonds and Connectors (C1)	Strengthening local social networks, community leadership, and activation of social norms through public campaigns and	Enhancing collective participation, social trust, and	Visave et al., 2025; Janmaimool et al., 2025; Sawaneh et al., 2024; Kabir et al., 2025; Selvaraj et al., 2022; Shelton et al., 2024;

	recognition of citizen participation.	community-based adaptive capacity.	Bari et al., 2024; Baker et al., 2023.
Economic and Financial Capital (C2)	Livelihood diversification, expanding access to microcredit, savings, and subsidized insurance, targeting vulnerable households and using vulnerability maps for investment allocation.	Reducing economic dependency, strengthening household financial capacity, and increasing economic resilience to shocks.	De la Cruz-Modino et al., 2022; Palash et al., 2024; Moore et al., 2020; Makwinja et al., 2021; Sarkar et al., 2024; Awah et al., 2025; Kabir et al., 2025; Mondal et al., 2022; Selvaraj et al., 2022; Mattah et al., 2024; Amadu et al., 2021; Nurzaman et al., 2020; Shelton et al., 2024; Korowi et al., 2025; Babanawo et al., 2023; Villasante et al., 2022; Masson et al., 2024; Bari et al., 2024; Susilo et al., 2021; Chumky et al., 2023; Mitu et al., 2021.
Human Capital and Capacity Building	Gender-based vocational education, technical training, and psychosocial support. Adapting training to climate-resilient sectors such as services, tourism, and mariculture.	Improving self-efficacy, adaptive skills, and individual preparedness in facing climate change.	Janmaimool et al., 2025; Gisevius et al., 2025; Palash et al., 2024; Makwinja et al., 2021; Sarkar et al., 2024; Mondal et al., 2022; Selvaraj et al., 2022; Armadu et al., 2021; Shelton et al., 2024; Korowi et al., 2025; Bari et al., 2024; Chumky et al., 2023; Mitu et al., 2021; Uddin et al., 2021.
Institutional Capital and Governance Strengthening	Institutional reforms to support decentralization, recognition of CBOs, and integration of local knowledge into planning. The use of co-production mechanisms and water-based governance.	Enhance institutional legitimacy, decision-making effectiveness, and connectivity between social and ecological systems.	Masud-All-Kamal et al., 2021; Sarkar et al., 2024; Kabir et al., 2025; Selvaraj et al., 2022; Mattah et al., 2024; Xu et al., 2023; Chambon et al., 2024; Korowi et al., 2025; Babanawo et al., 2023; Mason et al., 2024; Escudero & Mendoza et al., 2021.
Natural Capital and Physical Infrastructure	Coastal ecosystem restoration and climate-resilient basic infrastructure development. Integration of vulnerability assessment results into spatial planning.	Reducing physical exposure to climate risks, strengthening ecosystem protection, and supporting long-term sustainability.	Awah et al., 2025; Mondal et al., 2022; Mattah et al., 2024; Xu et al., 2023; Nurzaman et al., 2020; Shelton et al., 2024; Mondal et al., 2023; Mahmood et al., 2023; Korowi et al., 2025; Babanawo et al., 2023; Rahman et al., 2024; Posen et al., 2023.
Integrated and Justice-Based Adaptation Approach	Spatial, social, and ecological integration in adaptation planning. Emphasis on environmental justice and outreach to the most vulnerable groups.	Improving the effectiveness of cross-sectoral adaptation, addressing structural vulnerabilities, and ensuring equitable distribution of benefits.	Jacob et al., 2023; Nurzaman et al., 2020; Morris et al., 2024; Mahmood et al., 2023; Garcia et al., 2023; Baker et al., 2023.

The policy synthesis in Table 3 demonstrates that strengthening coastal community resilience cannot be achieved through a single type of intervention. Each form of capital complements each other and functions within an integrated socio-ecological system. Social and human capital serve as the foundation for building trust, capacity, and collective action at the local level, while economic and financial capital provide the means to maintain household economic sustainability. At the same time, institutional and governance reforms are prerequisites for the inclusive and equitable implementation of adaptation policies. Furthermore, integration between natural capital and physical infrastructure is necessary to reduce exposure to climate risks while maintaining the functioning of coastal ecosystems that support community livelihoods. An integrated and equity-based adaptation approach serves as a connecting link across these capital dimensions, ensuring that the benefits of adaptation policies are not only technical but also social and ecological. Therefore, future policy directions need to emphasize a transition to equitable, transformative resilience, where coastal community capacity building is simultaneously implemented through investments in human, economic, social, and institutional capital. Such an approach not only builds resilience to climate change but also drives structural change toward a more resilient and equitable coastal system.

4. Conclusions

Based on a synthesis of 53 recent scientific articles published between 2019 and 2025, this study found that the relationship between social capital (C1), economic capital (C2), and adaptive and transformative capacity (C3) in the context of coastal communities is complex and asymmetrical. The resilience of coastal communities, particularly in the Global South, emerges as a result of the dynamic interaction between economic constraints, the strength of social networks, and institutional structures that do not always support adaptive equity. Economic capital (C2) has been shown to play a determinant role as a key prerequisite for increasing adaptive capacity. Acute financial and physical deprivation acts as a significant barrier, preventing adaptive investment and trapping communities in a cycle of short-term coping strategies. Meanwhile, informal social capital (C1) serves as a moral buffer and a substitute mechanism when institutional support and formal financial systems are ineffective. During crises, local social networks act as a form of "social safety net" that maintains consumption stability and protects household assets from further economic vulnerability.

Further findings indicate that most adaptation strategies implemented by coastal communities are still reactive and oriented towards short-term coping. While this approach can mitigate the direct impacts of disasters or environmental shocks, it fails to address the roots of structural vulnerability, such as poverty, unequal access to resources, and weak governance. The transition to transformative capacity (C3)—the ability to make fundamental changes in socio-ecological systems—can only be achieved if increased economic capital is accompanied by strengthened institutional capital that ensures procedural justice and equitable distribution of adaptation opportunities.

Furthermore, the synthesis confirms that coastal community resilience cannot be understood solely as a technical response to climate hazards but must be positioned as an issue of structural justice. Low resilience in coastal communities is often rooted in non-climate factors such as pressure from large-scale industrial expansion, non-inclusive conservation policies, and inequities in the distribution of development benefits. Therefore, building sustainable resilience requires efforts to redistribute economic resources and strengthen institutional capacity at the local level so that coastal communities are not only able to adapt to climate change but also transform into more just and resilient socio-ecological systems.

This scoping review study has several limitations that need to be considered in interpreting the results and designing further research. First, methodologically, as a scoping review, this study focused on a broad mapping of concepts and breadth of evidence from the available literature, without conducting an in-depth critical assessment of the

methodological quality of each study, such as a risk of bias analysis. Second, there is a potential geographic bias, where the findings are largely dominated by literature originating from the Global South. As a result, generalizations regarding the interactions between resilience capitals may be less appropriate for the context of the Global North, which has very different levels of institutional and economic capital. Third, there is a conceptual limitation because this study uses the three Resilience Capitals framework (C1, C2, C3), which may overlook other factors such as political or cultural capital that may play an important role in certain contexts.

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Declaration of Generative AI Use
During the preparation of this work, the author(s) used ChatGPT (OpenAI), Gemini (Google), Copilot (Microsoft), and DeepL to assist in improving the clarity, coherence, translation accuracy, and readability of the manuscript. After using these tools, the author(s) reviewed and edited the content as needed and took full responsibility for the content of the publication.

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Biographies of Authors

Firyal Nada Salsabila Agung is a graduate of Hasanuddin University, Indonesia, with a master's degree in Agribusiness (socio-economic), focusing on fisheries business, consumer behaviour, and seafood marketing.

- EmaI: nadasalshabilaa@gmail.com
- ORCID: 0009-0003-2189-6301
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: N/A

Hertria Maharani Putri, National Research and Innovation, Central Jakarta, Special Capital Region of Jakarta 10340, Indonesia.

- Email: hert003@brin.go.id
- ORCID: 0009-0009-4642-0354
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: N/A