

# Reframing Adaptive Capacity: Gendered Vulnerability and Social Resilience in Coastal Community Development

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## ABSTRACT

*This study seeks to investigate the adaptive capacity within the Coastal Community Development Program in the village, employing a qualitative descriptive methodology. The analysis utilizes the Pacific Adaptive Capacity Analysis Framework (PACAF), with a particular focus on women's groups, which have been identified in several studies as vulnerable populations. Social vulnerability is associated with various dimensions, including the distribution of assets and resources, knowledge acquisition through experience and communication, social organization, agency, flexible adaptation options, as well as worldviews and values. The key findings reveal that the program's adaptive capacity has not yet achieved optimal functionality, particularly due to limited access to raw materials, the sporadic provision of training, and the underutilization of social media as a tool for innovation and marketing. Nonetheless, effective internal knowledge transfer processes, supportive social organizational structures, and a collective spirit among group members—especially women, motivated by household economic needs—are evident. However, challenges persist, such as limited capital, decision-making dominated by the group leader, and low environmental awareness regarding the use of natural materials. These findings are anticipated to contribute to community-based policy recommendations and the enhancement of adaptive capacity dimensions to promote the sustainability and independence of coastal communities.*

**Keywords:** Coastal Community, Adaptive capacity, Social Vulnerability

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## INTRODUCTION

In recent decades, maritime regions have become the epicenter of attention in global development and geopolitical discourse. Coastal and marine areas not only hold economic potential—such as fisheries, maritime transportation, and marine tourism—but also play a strategic role in national security and the socio-cultural integration of coastal communities. Indonesia, as the world's largest archipelagic nation with more than 17,000 islands, makes the maritime area its primary identity and strength. However, behind this potential lies the social complexity and vulnerability experienced by coastal communities, especially at the village level, which often go unnoticed in the architecture of national policy.

The focus on development that emphasizes Villages as a national strategic agenda in Indonesia has gained momentum since the enactment of the Village Law. This regulation marks a paradigm shift in development from a top-down approach to a bottom-up approach, positioning villages as the main subject of development with administrative, economic, and social empowerment. The Village Fund Program, which is rolled out annually, strengthens villages' fiscal capacity to manage development according to local needs. In this context, coastal villages face unique dynamics, especially regarding limited access to infrastructure, seasonal migration of fishermen, as well as vulnerabilities experienced by at-risk groups such as women and children.

The research location in this paper is Pajjukukang Village, a coastal village in South Sulawesi, which offers an engaging context for study within the landscape of maritime and social village development. Most adult men in this village rely on fishing activities for their livelihood, which often requires them to leave home for extended periods. This mobility pattern creates a skewed social structure, in which women bear a double burden as household managers as well as economic and social decision-makers in the community. With minimal structural and cultural support, women in this village are the most vulnerable group, facing social inequality, limited access to basic services, and gender-biased public decision-making. The social vulnerability experienced by women in coastal communities like the research location is multidimensional. Llorente-Marrón et al. (2020) note that social vulnerability can affect women as a consequence of the feminization of poverty, which is an additional factor to consider. Furthermore, it encompasses economic aspects, such as dependence on husbands' remittances; political aspects, such as low representation in village institutions; and psychosocial aspects, such as increased workloads and social isolation. This research aims to identify and analyze the forms of social vulnerability experienced by

women within the context of maritime structures and village development. The findings of this study are expected to provide significant empirical contributions to the formulation of more inclusive and responsive coastal village development policies regarding social vulnerability.

The development of coastal communities requires an inclusive, community-centered approach. Evans et al. (2023) believe that sustainable management—such as small-scale fisheries, coastal aquaculture, seaweed farming, and ecotourism—is more likely to benefit communities. Initiatives designed to empower communities through education, skills training, and active participation in managing local natural resources should be an integral part of coastal development policies. One promising initiative in this area is Community-Based Development (CBDev), which, according to Baldwin et al. (2017), empowers citizens through various mechanisms. One way is by emphasizing the role of local communities as main agents in identifying needs, planning, and implementing development processes. This approach not only facilitates active community participation but also cultivates a sense of ownership over development programs, which is crucial for ensuring sustainability. Furthermore, Yunus et al. (2024) that the challenges in delivering public services are becoming a more strategic policy issue as advancements in public services tend to plateau. They argued that this impacts all public domains, including economic, social, cultural, and other areas.

A community-based approach offers advantages in building social resilience and strengthening local solidarity. Through local community development training, facilitation of participatory dialogue, and strengthening of village institutions, this approach empowers coastal communities to identify their own challenges and formulate solutions that are appropriate to the local context. Furthermore, expanding collaborative networks among local governments, civil society organizations, and the private sector can add resources and technical support needed for program success. In the long term, this strategy has the potential to realize an inclusive and adaptive coastal development model, capable of responding to social and environmental dynamics.

Within the framework of human resource development and regional resilience, coastal communities that are socially, economically, and ecologically resilient are strategic assets for regional development. Efforts to strengthen the capacity of coastal communities are not only aimed at improving short-term well-being, but also represent a long-term investment in shaping societies that are adaptive, innovative, and competitive. Therefore, it is crucial for all stakeholders to actively participate in ensuring that the development of coastal communities in Maros Regency proceeds in an inclusive, sustainable, and equitable manner.

At our research site, the majority of residents work as traditional fishermen, seaweed farmers, or are involved in seafood processing. This dependence on marine catches makes the coastal community in the village vulnerable to environmental changes such as shifting seasons, coastal abrasion, and the decline in fish stocks. According to the Ministry of Marine Affairs and Fisheries (KKP), through its study of coastal areas in South Sulawesi, the coastal region of Maros Regency is included in a productive coastal zone that faces challenges in adapting to climate change and the sustainable use of resources (KKP, 2022). In addition, research by Rahim et al. (2021) notes that coastal communities face gaps in access to modern fishing technology and fair markets, which hinders their welfare improvement.

The traditional fisheries sector is considered important for introducing community-based interventions that can enhance local economic capacity through training, livelihood diversification, and strengthening fishermen's institutional frameworks. Additionally, an integrated approach to coastal development combined with sustainable resource management is key to strengthening the long-term socio-economic resilience of village communities.

In line with the Village Law enacted since 2014, which provides a legal basis for villages to implement various programs, including programs to enhance women's economic creativity. The Village Law positions village communities, including women, as subjects of development and grants villages the authority to manage local economic potential, including businesses run by women. The object of this research is programs that exist in villages in the form of community empowerment, particularly women's empowerment, in building women's economic creativity capacity. This women's empowerment program is in the form of enhancing women's economic creativity capacity. Through this program, women in the village create handicrafts such as tissue boxes, pot mats from water hyacinth, macramé bags, and wall decorations from yarn. The program has a positive impact on women by increasing their capacities through new skills and provides opportunities to improve their family's economic situation.

The above phenomenon is captured through the concept of adaptive capacity in coastal communities, which has been widely studied in theoretical discourse. Carvajal (2024) conducted research showing that these communities face challenges related to biodiversity and food security, especially due to decreasing productivity in the fisheries and agricultural sectors. This demands a comprehensive understanding of land-sea interactions and their impacts on ecosystem services and human well-being. The study aims to identify knowledge gaps and evaluate the relationship between local knowledge, values, livelihoods, and dimensions of adaptive capacity that influence community responses to environmental change.

In examining individual adaptive capacity, Datta and Roy (2022) conducted a study on coastal communities along the Bay of Bengal in India, emphasizing factors that mitigate vulnerability to natural threats. Their research highlights the critical role of income security through livelihood diversification, personal savings, access to financial institutions, and community collaboration in enhancing adaptive capacity. They analyzed individuals' perceptions of vulnerability and adaptive actions, underscoring the importance of government support, public investment in infrastructure and services, and community empowerment in strengthening adaptive capacity for those dependent on coastal ecosystem-based livelihoods. Furthermore, adaptive capacity is inherently linked to a region's resilience to climate change. Birch and Carney (2020) discuss the necessity of enhancing the resilience and adaptive capacity of communities in coastal and inland Louisiana in response to climate change impacts such as sea level rise, land loss, and marsh erosion. This underscores the importance of interventions at various scales, as outlined in Louisiana's Comprehensive Master Plan for a Sustainable Coast, to address these environmental challenges. They emphasize the sustainable development of six community-specific strategic urban design and implementation plans, addressing issues such as green infrastructure, river restoration, and corridor redevelopment, which can be generalized to other communities facing similar challenges. Ultimately, their findings advocate for a holistic approach to adaptation, demonstrating that while various planning frameworks and agencies address physical and social environmental needs, collaborative and community-based design processes are essential to enhancing resilience and adaptive capacity in coastal and inland communities.

Purifyningtyas and Wijaya (2016) conducted analogous research assessing the adaptive capacity of coastal communities, which is vulnerable to tidal flooding, focusing on the villages. They employed quantitative methods to evaluate adaptive capacity at individual, community, and city levels, considering physical, social, and economic aspects. The findings indicated that individual adaptive capacity in both villages was low due to limited housing improvement capabilities, influenced by education and income levels. At the community level, adaptive capacity was moderate, driven by improved infrastructure and organizational presence, while at the city level, adaptive capacity was high due to effective technology and institutional support.

This study aims to examine development programs in villages characterized as coastal areas, through the framework of Adaptive Capacity. This research will use the concept of Adaptive Capacity as introduced by McMichael et al. (2024). The main issue of this study is that the coastal communities in the village, particularly vulnerable women's groups, require various community development programs that adopt the concept of Adaptive Capacity.

### **Theoretical Review**

Adger (2006) defines adaptive capacity as the capability of a system to evolve in response to environmental hazards or policy changes, thereby expanding the range of variability that can be managed. In a different context, Smit and Wandel (2006) contend that this approach does not seek to identify the processes, determinants, or drivers of adaptive capacity. Additionally, Ralph and Robin (2010) assert that adaptive capacity is linked to the ability of institutional processes to adapt to unique challenges. This is associated with the capacity of individuals within an institutional framework to implement strategies that effectively address new situations and unique events. The decision-making process at various levels of governmental institutions is critical to adaptive capacity, particularly at the community level.

### **Adaptive Capacity in Coastal Communities**

Coastal communities, defined as populations residing near the sea, are characterized by practices uniquely influenced by their marine environments. These communities are essential in promoting ocean sustainability. Currently, over 40% of the global population lives within 100 kilometers of the coastline (website: Seaside Sustainability). Due to their direct exposure to oceanic conditions, coastal communities

are more inclined than others to prioritize ocean sustainability. They are considered primary defenders of marine ecosystems, possessing expertise in sustainable resource management. Their understanding of local ecosystems enables them to advocate for sustainable initiatives that consider biodiversity. Coastal communities actively engage in decision-making processes concerning sustainable practices for local fisheries and the marine environment, promoting strategies that mitigate overfishing and bycatch. Furthermore, they participate in conservation efforts aimed at safeguarding marine ecosystems, often focusing on habitat restoration, pollution remediation, and educational outreach to enhance sustainability awareness. Through these endeavors, coastal communities demonstrate to society that conservation efforts are accessible to all. They play a crucial role in educating others about the repercussions of pollution, climate change, and ocean sustainability.

The conceptual framework employed in this study is the concept of adaptive capacity, as applied in the research of The Pacific Adaptive Capacity Analysis Framework (PACAF). Broadly, the framework proposed by McMichael et al. (2024) references Cinner et al. (2018) and Warrick et al. (2018). This concept is utilized as an indicator in this study because the proposed dimensions are deemed pertinent to the phenomenon under investigation.

#### Concept of Community Development in Coastal Areas

In the context of coastal community development, there is potential even though it requires community participation in enhancing resilience and infrastructure (Pratama & Raudatul Jannah, 2024). Meanwhile, Archey (2023) emphasizes that coastal communities are ecologically, economically, and socially interdependent, so various forms of change affect their development. In villages where the majority of residents make their living as fishermen, the productivity dynamics described above highlight the urgent need to enhance the adaptive capacity of the local community. The concept of adaptive capacity is crucial in assessing a community's ability to effectively respond to environmental and social pressures and to leverage opportunities through learning, innovation, and institutional reorganization. Increasing adaptive capacity in the village can be achieved through community-based approaches that prioritize livelihood diversification, strengthening local institutions such as fishermen cooperatives, improving climate literacy, as well as participatory and sustainable marine resource management. By enhancing the community's ability to understand and manage risks associated with changes in productivity, both independently and collectively, their socio-economic resilience can be strengthened. In this context, development based on adaptive capacity aims not only to improve short-term welfare, but also to build strong and sustainable socio-ecological systems in coastal areas. Coastal community development must be directed toward structural transformation that positions the community as the main actor in development, capable of adapting to environmental changes and global market dynamics.

#### Methods

The methodology employed in this study is a descriptive qualitative approach. As articulated by John W. Creswell (2019: 4-5) in his work "Research Design," qualitative research encompasses methods aimed at exploring and comprehending the meanings that individuals or groups ascribe to social or human issues. The descriptive qualitative research method, grounded in the philosophy of post-positivism, is utilized to examine the natural conditions of an object, as opposed to experimental settings, with the researcher serving as the primary instrument. Data collection is conducted through triangulation, which involves a combination of methods, and data analysis is performed inductively and qualitatively. The outcomes of qualitative research prioritize meaning over generalization. The objective of employing a descriptive qualitative approach in this research is to thoroughly describe, illustrate, explain, and address the issues under investigation by conducting an in-depth examination of an individual, group, or event. This approach facilitates the acquisition of objective data intended to describe and analyze adaptive capacity within the Coastal Community Development Program in Pajjukukang Village, Maros Regency.

#### Data Collection Techniques

Data collection techniques are a strategic step in obtaining data in research. The data collection techniques used in this research are as follows:

1. Observation is a systematic process conducted to gather data and information from phenomena, such as events or occurrences, in alignment with the investigative objectives previously established. In this

study, observations were undertaken within the framework of the Coastal Community Development Program to acquire a comprehensive overview and supporting data pertinent to the research topic.

2. Interviewing involves a dialogue between two parties, wherein the interviewer poses questions and the informant provides responses. The researcher employed semi-structured, in-depth interviews, which necessitate the interviewer to prepare an outline of key points that need not be addressed in a sequential manner.

3. Document review was utilized by the researcher through the examination of records and documents relevant to the Coastal Community Development Program in the village, thereby supplementing the findings derived from observations and interviews.

#### Data Analysis Techniques

Data analysis is the next step for processing data that has been collected, processed, and utilized to form conclusions in the research. Data analysis techniques involve several steps, including:

##### Data Collection

The data for this research is derived from observations and interviews with informants, as well as document reviews pertaining to the Coastal Community Development Program, and is further augmented by additional documentation.

##### Data Reduction

Data reduction involves the processes of summarizing, selecting salient points, concentrating on key issues, and identifying themes and patterns. This approach ensures that the condensed data offers a clear representation and aids researchers in collecting information pertinent to the Coastal Community Development Program.

##### Data Display

Data display entails the systematic organization of reduced data, presenting it in a narrative text format. This organized data is instrumental in addressing research questions and serves as the foundation for drawing conclusions.

##### Conclusion Drawing and Verification

Following the presentation of the data, the subsequent step involves drawing conclusions through interpretation or explanation to elucidate the significance of the presented data. This process enables the data to be employed as solutions to the issues under investigation within the context of the Coastal Community Development Program in the Village.

#### Validity and Reliability of Data

Validity is defined as the process of ensuring the accuracy of research outcomes through adherence to specific procedures (Creswell, 2019). In this study, the researcher employs triangulation testing, a method for verifying data validity by comparing or aligning information obtained from diverse sources or external criteria to enhance data credibility. The triangulation employed in this research encompasses both source and technique triangulation, wherein the collected data is cross-verified with informants to ascertain its accuracy (Creswell, 2019).

Additionally, data for this research are gathered through interviews and literature review. The researcher utilizes triangulation as a validity test for data obtained from multiple sources, including literature studies on evidence-based policy theory and policy implementation, observation results, and in-depth interviews. From these three sources, the findings are subsequently described, categorized, and analyzed by the researcher to derive conclusions. The reliability of data in this research pertains to the consistency and stability of the data, which is deemed valid if there are no discrepancies between the results obtained and those presented, and if the data are clearly, thoroughly, systematically, and credibly presented (Creswell, 2019).

## FINDINGS AND DISCUSSION

Adaptive capacity, as delineated by the six primary dimensions in McMichael et al. (2024), serves as a framework for comprehending how communities respond to diverse environmental and socio-economic challenges. This study examines a program aimed at enhancing women's economic creativity capacity in Pajjukukang Village, Maros Regency. The six dimensions of adaptive capacity employed in this research

include: asset and resource distribution; experiential and communicated knowledge; social organization; agency; flexible adaptation options; and worldview and values.

#### Asset and Resource Distribution

In this indicator, McMichael et al. (2024) elucidate that it pertains to social access to material, financial, and technological resources, as well as services. Within the program's context, this encompasses access to raw materials, equipment, training, funding, and markets. This indicator aims to examine how the women's group acquires access to the primary raw materials in the implemented program. Furthermore, it focuses on the tools or facilities utilized during the production process in the ongoing program. The production process involves various materials, contingent upon the type of craft being produced. The scarcity of raw materials presents a challenge for the group.

According to the researcher's observations, the Village's program lacks indigenous raw materials sourced from within the village. Additionally, within the asset and resource distribution indicator, an analysis is conducted on the challenges faced by members, specifically the lack of capital, which hinders the procurement of materials and tools. The researcher also highlights the assistance from agencies that provide financial aid or craft tools to the group. The findings indicate that only the Village Government provides financial assistance, albeit not on a continuous basis. This initial indicator emphasizes social access to material, financial, and technological resources within this crafts program.

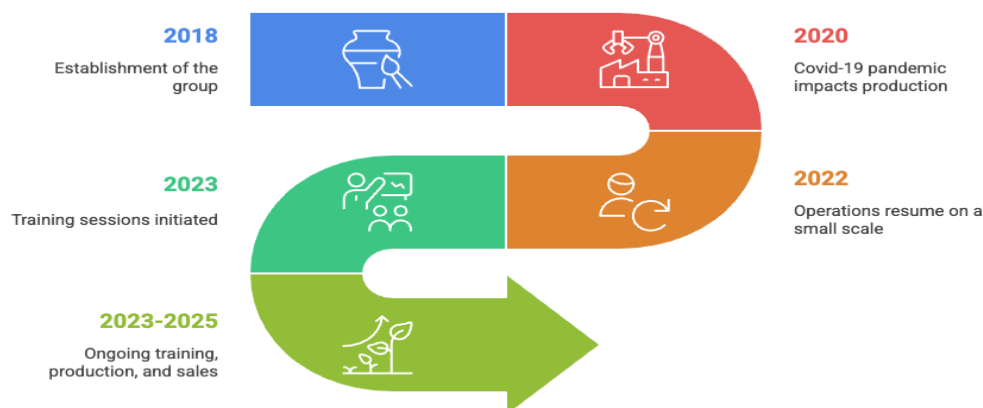
The researcher concludes that there is difficulty in accessing raw materials such as water hyacinth, which must be sourced from other areas. Moreover, the water hyacinth requires manual drying. Other materials, such as kur yarn and macrame cord, are procured online, rendering the limitation of raw materials a primary challenge. Another finding is that the tools employed include sewing machines, zippers, hot glue guns, and the manual drying process of water hyacinth, which lacks drying equipment. An additional obstacle is that the group members do not possess their own capital; although assistance from the Village Government has been provided, it is not sustainable.

#### Experiential and Communicated Knowledge

In this second indicator, the research involves information regarding knowledge of crafting techniques, markets, and learning from experiences. This indicator attempts to explore the process of knowledge sharing between participants, whether there are facilitators such as forums, meetings, or courses aimed at developing mutual knowledge. Furthermore, it investigates how this program has enriched or changed team members' understanding of production processes or business potential. Knowledge and experience are also things that the female participants of the empowerment program want to gain and share, and these contribute to developing their skills, product innovation, and problem-solving in the economic creativity program.

Based on the interviews conducted by the researcher, it was found that this crafters' group was formed in 2018. Since then, the forms and types of crafts have developed, although there were obstacles in 2020 during the Covid-19 pandemic. As with other industries and businesses, this newly developed group encountered difficulties when the pandemic spread in Indonesia in 2020.

Figure 1. Evolution of Women's Group



Source: Research findings based on interviews (2025)

The process of knowledge transfer within the craft group is conducted in small sub-groups. Typically, the group leader invites a select number of members who receive direct training in the production of craft items. In this training context, the Village Government plays a role by providing a room at the village office. According to the researcher's observations, although the facility is limited, it has positively impacted the development and dissemination of knowledge within the group. While the trainings are incidental, the group holds routine meetings every Sunday afternoon in the Village Hall. Observational findings, corroborated by interviews with informants, indicate that both Experiential and Communicated Knowledge are effectively transmitted. Although the method is manual—relying on word of mouth—it is deemed effective for transferring knowledge related to crafting techniques within the group. Furthermore, the village government's initiative to provide a training venue is perceived as significantly facilitating the effective dissemination of knowledge.

#### Social Organization

This indicator pertains to the social structure—comprising individuals, households, families, communities, and organizations—that either facilitates or impedes cooperation, social support, and the exchange of resources and knowledge. The primary focus is on the cooperation among women participating in this program, as well as community leaders such as neighborhood heads, community figures, or other women's groups. Additionally, it aims to assess whether families or household members offer support for participation in this program. By the conclusion of this indicator, it will provide an overview of how the social structure and networks within the Village influence the level of collaboration, support, and collective sustainability of the women's economic creativity development program.

The craft groups in the Village consist of housewives who are typically at home while their husbands engage in fishing activities. The fishermen in the Village have varying sailing durations, ranging from two weeks to six months. Regarding support from the village government, group members have specific expectations they hope will be fulfilled. Researchers observed a desire for support, as the crafted products were only displayed at the village office, which is suboptimal for marketing purposes. Ideally, marketing should extend to other village or district government activities.

The researcher has not identified involvement from the District Government, despite the District's diverse tourism activities and locations. For this indicator, the researcher concludes that Social Organization is functioning effectively. This conclusion considers the significant support provided by close family members, who recognize the potential for additional income. Another finding is the spirit of togetherness and mutual assistance, although cooperation often becomes individual when working on products after initial training. Community support from various levels, such as the Village and District Governments, exists but is not optimal—particularly in providing adequate marketing spaces at every tourist site and event.

#### Agency

The fourth indicator emphasizes initiative, decision-making, and the capacity for independent action in economic activities. This encompasses elements that personally motivate individuals to participate and remain engaged in the craft program, as well as the process of developing new product ideas or exploring alternative methods for producing or marketing crafts, such as innovative designs for corded bags or variations in wall decorations. As elucidated in the preceding indicator, the increase in group membership is facilitated through invitations from fellow women in the village. Their motivation to join primarily arises from shared circumstances, as many of their husbands are fishermen who are frequently absent for extended periods. However, fluctuations in sales significantly impact members, particularly when craft sales decline and become inconsistent.

This presents a challenge for the group to sustain its activities, and the profit orientation that motivates members to join is a crucial aspect that requires prioritization. For specific crafts, such as those made from water hyacinth, specialized training is necessary, prompting the group to invite practitioners to provide instruction. Decisions regarding product selection, pricing, and marketing strategies are predominantly made by the group leader. Members do not always engage in discussions about pricing but generally concur once the leader provides explanations. This dimension pertains to individuals' abilities to act, take initiative, make decisions, and manage responses to events. In this context, it concerns initiative, decision-making, and the capacity for independent action in economic activities.

The researcher concluded that the mothers (team members) are highly motivated to join and actively participate in the program to engage in activities and augment family income. However, their enthusiasm often diminishes, and they become inconsistent when sales are low. Decisions concerning product types, pricing, and marketing strategies are largely determined by the group leader. Members do not always discuss prices but agree once they are elucidated by the leader. In this indicator, the researcher identified implementation challenges: the women encounter obstacles in selling products due to marketing constraints. They have not yet initiated product or marketing innovations, such as utilizing TikTok or collaborating with the tourism office or other villages.

#### Flexible Adaptation Options

The sixth indicator pertains to the availability of diverse adaptation strategies, encompassing product diversification, production methods, marketing strategies, and sources of income. Within the scope of this research, the researcher aims to elucidate the various forms of product marketing and the different sales avenues, such as social media, local markets, and custom orders. The economic strategies and flexible options explored or implemented by team members through their participation in this program are particularly relevant in addressing challenges or shifts in market conditions. The widespread use of social media appears to exert a positive influence on creative industries, such as handicrafts. Consequently, the researcher sought to investigate the impact of social media on the types of crafts produced.

Adaptive strategies employed by members are primarily limited to selecting sources for purchasing materials, given the extensive and varied options available in online stores. This selection process provides an opportunity for members to opt for the most cost-effective choices. This approach is intended to create a differential in capital utilization for craft production. In the context of the Flexible Adaptation Options indicator, the researcher concludes that the mothers (team members) have not leveraged social media as a source of product ideas. Furthermore, they have not utilized social media for external product promotion and sales. Adaptation in options remains confined to the selection of supply sources, with numerous and varied options available in online stores.

#### Worldviews and Values

The values referenced pertain to the local values upheld by the community, whether they have been maintained or marginalized. These values are anticipated to be reflected in the implementation of the program under study. The beliefs or norms held by women as team members and their influence on the motivation to participate are also considered. Values originating externally, possibly as a consequence of globalization, such as those disseminated through social media, may impact the values, motivation, and participation embraced within the group. The group of artisans in the village comprises housewives.

In the context of "Eastern values," women are often perceived as individuals who should remain at home while their husbands or partners engage in external work. This aims to demonstrate that the program aligns with local values that support the role of women, particularly the wives of fishermen. The program provides activities and generates additional income without disrupting family values, as it is conducted while the husbands are at sea. Furthermore, the use of raw materials sourced from natural resources, such as water hyacinth, has become an attractive selling point. Based on the researcher's observation, all of the handicrafts are made from natural materials like water hyacinth, kur rope, macrame rope, zippers, hot glue, and silk fabric. This is appealing, yet members have not fully comprehended that using natural materials also contributes positively to environmental preservation.

The indicator "Worldviews and Values" is not yet fully realized. This is evident in the way the program aligns with local values supporting women's roles, especially fishermen's wives, to engage in activities and earn supplementary income. This work does not interfere with family values since it is performed during the husbands' free time at sea. There is a spirit of togetherness and mutual cooperation in the program's implementation, although motivation can decline if sales results are unsatisfactory. In terms of environmental utilization, there is potential for links with sustainability values, particularly through the use of water hyacinth as a basic material, but this has not yet led to a comprehensive understanding of its positive contribution to environmental preservation.

#### CONCLUSION

The present study concludes that the Adaptive Capacity within the Coastal Community Development Program in Pajjukukang Village has not yet been fully optimized. The primary challenges include limited



access to essential raw materials, such as water hyacinth, which must be sourced externally, and the provision of training that is both suboptimal and sporadic. Nonetheless, the oral exchange of knowledge within the group and the support from the village government have positively contributed to enhancing the experience and knowledge of the members. Social organization is relatively robust, characterized by family involvement and a spirit of mutual cooperation, although production activities are still conducted individually post-training. Conversely, the high motivation among team members to augment family income has not been adequately supported by sufficient product innovation and marketing strategies. Decision-making remains centralized with the group leader, and the utilization of social media has not been fully leveraged, posing a challenge to enhancing the group's adaptive flexibility. Adaptation strategies are currently limited to sourcing raw materials, without exploring other digital opportunities. Local values, such as the role of women and the spirit of togetherness, have fostered participation in the program, yet awareness of the environmental benefits of using natural raw materials like water hyacinth has not been fully realized.

These findings suggest that adaptive capacity in the context of coastal community empowerment programs, particularly for women's groups, is intrinsically linked to broader social-ecological dynamics. Constraints in accessing local raw materials, the absence of continuous training, and the minimal use of digital technology are indicative of existing structural social vulnerabilities that warrant further investigation. Consequently, this study paves the way for future research agendas to explore the interplay between social vulnerability, gender, and adaptive capacity in coastal landscapes, employing comparative cross-regional approaches that can enhance global understanding of community-based adaptation strategies.

The involvement of women as pivotal actors in natural resource-based economic activities also emerges as a critical aspect in future studies on social sustainability in coastal areas susceptible to climate change and economic pressures. Furthermore, the findings of this study have significant policy implications, particularly in formulating evidence-based interventions to bolster the adaptive capacity of communities. Policy recommendations include the development of systematic and sustainable training systems, the integration of product innovation and digital marketing strategies, and the decentralization of decision-making within micro-enterprise groups. Additionally, it is imperative to incorporate ecofeminism perspectives and local wisdom into coastal development planning to devise approaches that are inclusive, resilient, and grounded in local potential. This approach aligns with global imperatives to enhance the social-ecological resilience of coastal communities in addressing the challenges of sustainable development.

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