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Wives' multiple roles in supporting coastal families' economy

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ABSTRAK

Penelitian ini bertujuan untuk mengeksplorasi peran ganda istri nelayan, bagaimana kontribusi para istri nelayan terhadap perekonomian keluarganya, serta menentukan strategi-strategi yang tepat dilakukan istri nelayan dalam menunjang ekonomi rumah tangga di wilayah pesisir Kota Tegal. Istri nelayan yang tingkat pendidikannya rendah dan memiliki akses ekonomi terbatas ditemukan di daerah penelitian. Teknik analisis data yang digunakan dalam penelitian ini adalah mixed-method (pendekatan kuantitatif dan kualitatif). Teknik pengambilan sampel menggunakan purposive sampling sebanyak 100 responden. Wawancara mendalam dengan para keyperson juga dilakukan. Hasil penelitian ini menunjukkan bahwa para istri nelayan di daerah Kelurahan Tegalsari dan Kelurahan Muarareja memiliki peran ganda (dalam peran produksi, reproduksi, dan managing community). Para istri nelayan bekerja untuk mencari penghasilan, menjadi ibu rumah tangga dan aktif dalam kehidupan sosial. Selain itu, para istri nelayan juga berkontribusi signifikan terhadap pendapatan keluarga mereka. Strategi untuk pemberdayaan istri nelayan kemudian dilihat dari aspek ekonomi, sosial budaya dan kelembagaan di analisis menggunakan alat analisis kualitatif ATLAS.ti.

ABSTRACT

This study aims to explore the triple role of fishermen's wives, analyze how they contribute to their families' economy, and determine appropriate strategies for fishermen's wives to support household economies in the coastal area of Tegal City. This study finds that, on average, fishermen's wives have low educational levels and limited economic access. We use the mixed method (combining the quantitative and qualitative approaches) to analyze

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the data from 100 respondents selected with the purposive sampling method. Additionally, we also conduct in-depth interviews with selected key persons. Our results indicate that fishermen's wives in Tegalsari and Muarareja villages have triple roles (production, reproduction, and community management). They work to earn revenues while playing their domestic role (becoming housewives) and play active roles in their social lives. Further, these wives contribute significantly to their families' incomes. We then use ATLAS.ti as a qualitative analysis tool to analyze strategies for empowering fishermen's wives from the economic, cultural, and institutional aspects.

INTRODUCTION

Tegal City is a city in Central Java Province that boasts its fishery production because it produces various relatively high-value fishery products. BPS-Statistics of Tegal Municipality (2020) also demonstrates that this city produces one of the highest fishery products in Central Java Province, with the West Tegal Sub-district has the largest production due to its direct adjacency with the Java Sea. Table 1 shows the number of fishermen households in Tegal City in 2016-2019.

The number of fishermen households in Tegal City increases annually that in 2019 the number of marine fisheries in the West Tegal Sub-district reached 1,364 households. In the fishery sector, men and women involve in different activities that often complement each other depending on their social, cultural, and economic context. Hence, gender relations vary based on economic status, power relations, and access to productive services and resources (FAO, 2016).

Table 1
The Number of Fishery Households based on Sub-district and Sub-sector in Tegal City, 2016-2019

Year	Indicator	Sub-district			
		South Tegal	East Tegal	West Tegal	Margadana
2016	Marine Fisheries	0	21	878	1
	Inland water	-	-	-	-
	Total	0	21	878	1
2017	Marine Fisheries	5	34	1,142	10
	Inland water	0	0	0	0
	Total	5	34	1,142	10
2018	Marine Fisheries	3	32	1,205	10
	Inland water	0	0	0	0
	Total	3	32	1,205	10
2019	Marine Fisheries	3	35	1,364	0
	Inland water	0	0	0	0
	Total	3	35	1,364	0

Source: BPS-Statistics of Tegal Municipality (2020) (processed)

It is necessary to develop an analysis to mitigate the economic and socio-

cultural vulnerabilities in fishermen's communities. Women integrally belong to the human dimension of the fishery system, although they are considered insignificant in the male-dominated industry. Women actually have, and remain, integrated into the fishery industry uniquely and sometimes obscurely. However, their roles have become more visible and developed along with popular changes, including making fishery policies or management (Calhoun et al., 2016).

Fishermen's wives or coastal women bear the most burdens when their husbands find it more difficult to earn a living. When their husbands' income declines or disappears, coastal women are required to fulfill their households' economic needs by becoming the breadwinners for their families (Majid, 2013). Coastal women play crucial roles in creating and supporting the added values of their husbands' fishery products (Istiqomah, 2018). Specifically, they have three critical roles: production, reproduction, and community management (Majid, 2013). These roles indicate that fishermen's wives also play crucial public roles. Fishermen's wives play their production roles to earn a living. Meanwhile, they take care of their houses and children, cook, and wash as their domestic roles. Lastly, they play their social roles in public activities. In sum, women's roles, especially in Tegal City, cannot be underestimated because of their vast number, as shown in Table 2 below.

Table 2
Population Number by Sex and Kelurahan in West Tegal Sub-district, 2019

<i>Kelurahan</i>		Population		
		Men	Women	Total
1	Pesurungan Kidul	3,086	2,945	6,031
2	Debong Lor	2,240	2,206	4,446
3	Kemandungan	1,901	1,905	3,806
4	Pekauman	3,971	4,051	8,022
5	Kraton	7,933	8,055	15,988
6	Tegalsari	11,890	11,897	23,787
7	Muarareja	4,006	3,762	7,768
	Kecamatan Tegal Barat	3,027	34,821	69,848

Source: BPS-Statistics of Tegal Municipality (2019)

Women play crucial roles in the economy of coastal families in Tegal City. Hence, coastal women, especially fishermen's wives, need to be empowered to contribute optimally to their families and communities. Developing human resource development and strengthening institutions are instrumental in empowering fishermen's wives in Tegal City.

Several studies have analyzed coastal women's roles. For example, Febri et al. (2017) explain that women play crucial roles in domestic, production, and social activities. They tend to work for several reasons, including to fulfill their families' daily needs, to be financially independent, and to respond to job opportunities. Women

are also important in households' decision-making and social activities. Acehese culture used not to discriminate against men and women, especially in religious rites. Men and women play their roles clearly based on their abilities. However, at the same time, social hierarchies still position women in their natural positions, including by considering women physically weaker than men. Meanwhile, Beaven (2013) documents that about 64 percent of coastal women involve in fishery activities. On the other hand, they do not have sufficient opportunities to exploit their potentials in fishery activities because men almost completely dominate these activities.

As a city directly adjacent to the Java Sea, many people in the coastal areas of Tegal City earn their living as fishermen. However, not all fishermen in these areas earn sufficiently. Most of them even earn below their daily needs. In this regard, fishermen's wives play crucial roles to help their husbands fulfill family needs. When husbands' catch declines, their wives are responsible for fulfilling family needs, including developing revenue sources to secure the economic conditions.

Women and men in coastal areas play equal roles in fulfilling family needs. Women's multiple roles (production, reproduction, and community management) arguably enable them to improve their families' economic independence by fulfilling their needs. However, wind, waves, and weather uncertainty often force coastal people to adapt to their economic activities. Fishermen's wives can help their husbands adapt and mitigate the risks. Based on these arguments, this study seeks to analyze the triple role of fishermen's wives in Tegalsari and Muarareja villages, their income contributions to families' economy, and appropriate empowerment strategies for them.

LITERATURE REVIEW AND HYPOTHESIS FORMULATING

Coastal communities represent communities that reside together in coastal areas that create or have distinctive cultures related to their dependence on coastal resources (Muswar & Satria, 2015). Fishermen are laborers who engage in productive activities by catching fish in the seas. The development of modern fish-catching technologies (such as motorization) has classified fishermen into two categories: traditional and modern ones. Traditional fishermen still retain simple catching technologies by relying on natural signs to determine catching locations without technological innovation, sufficient capital, and established business institutions. In this respect, efforts to improve coastal communities' welfare should be baseline studies that analyze their activities holistically (Handajani et al., 2016), including empowering coastal women. Women's roles in fisheries greatly affect development policies, management, and poverty eradication (Harper et al., 2013).

The community development concept has its own meaning for each

community. Empowerment refers to allocating or optimizing power in abilities, courage, and bargaining power or positions (Baum, 2008). Community development represents a process of power renegotiation to gain more control in empowering communities. When parts of communities are empowered, others will share their power to enhance community participation. This condition implies community ownership and actions that explicitly aim for various changes, including better socioeconomic and political conditions (Baum, 2008). (Ansori & Rosita, 2018) also emphasize that the entire components should support community lives to initiate community independence in various sectors. However, in practice, many community development practices only focus on economic issues to eradicate poverty. Hence, community development should develop productive activities to generate income (Mardikanto & Soebiato, 2013). However, empowerment should focus on increasing economic income and emphasize the main objective of community development, namely social growth-oriented and sustainable development, to empower natural resources that ensure natural resource availability in the future (Rusdianti et al., 2018).

An indicator of community development success is better women's positions in the communities that support gender equality through poverty eradication and women empowerment (Rusdianti et al., 2018). Women empowerment is one of the main elements to improve community independence, including enhancing economic and mental empowerment (Karwati et al., 2018). The women empowerment concept includes women's abilities to participate equally in the market; access to and control productive resources; access to decent jobs; and control of their own time, lives, and bodies (UN Women, 2017). Women's economic empowerment increases economic diversification and productivity, income equality, and other positive development achievements. Also, women's and girls' education levels contribute to their economic empowerment and more inclusive economic growth (International Monetary Fund, 2018). Education, better skills, and reskilled lives – especially to keep pace with rapid digital and technological transformations that affect occupations – are crucial for women's and girls' health and welfare that will improve their income and participation in the formal labor market (OECD, 2012).

Gender is different from biological sex. Gender is a set of roles that informs others about one's feminism or masculinity. This specific behavior set includes appearance, clothes, work attitude inside and outside households, sexuality, responsibility on families, and others. Gender and development emphasize that development projects will affect men and women (Mosse, 1994). However, the gender concept has not been fully integrated into the development process (Malau, 2015).

In Parson's social theory, roles are defined as the organized expectations related to certain interaction contexts that form individuals' motivational orientation towards

others. Through these cultural patterns, blueprints, or behavioral examples, people learn who they are in front of others and how they should act towards others (Scott, 2011). In general, in Indonesian society, the division of labor between men and women illustrates the role of women. The initial basis of this sex division of labor is undoubtedly related to the different roles of men and women in reproductive functions. In society represents the role displayed by a woman (Ahdiah, 2013).

Kusnadi (2009) proposes women's three roles in their daily lives: production, reproductive, and managing community roles. The production role represents coastal women's role in earning income to fulfill their daily household needs. The reproduction role is related to women's responsibilities to produce and preserve their offspring. Lastly, the managing community role aims for economic interests and households' social investments by participating in *arisan*, saving-and-loan activities, reciprocal donation, and other cooperation activities. Agunggunanto (2012) explains that the number of working family members affects family income. Family members' roles greatly improve family income. Improving the welfare of fishermen's families should focus on women's roles because coastal women contribute greatly to the productive economic activities of coastal communities (Anggraini, 2018).

RESEARCH METHOD

We conducted the study in two *kelurahan* (Tegalsari and Muarareja villages) in West Tegal Sub-district from 2018 to the end of 2019. Both *kelurahan* are located in the northernmost part of the sub-district directly adjacent to the Java Sea.

Figure 1
Map of Research Area

This study employed the mixed method that combines both quantitative and qualitative approaches. According to Creswell (2007), the mixed method arguably produces more accurate research results because it will better understand the research problem than solely relying on a quantitative or qualitative approach. To answer the first two research issues (the role of fishermen's wives and their economic contributions to the family economy), we selected 100 respondents as the fishermen's wife sample with the purposive sampling method. The criteria for sample selection were fishermen's wives in Tegalsari Village and Muarareja Village, 15-60 years old (in their productive ages), and work in certain activities (fish traders, fish processors, fillet managers, fish skin processors, shop owners). The quantitative analysis relied on descriptive statistics and the qualitative analysis used ATLAS.ti by attaching coding in each data (Afriansyah, 2018). For the third research objective, we conducted in-depth interviews with key persons representing ABGC (Academician, Business, Government, and Community). Specifically, we interviewed a lecturer *cum* gender activist from a state university in Semarang City, two business owners (one fish skin and one smoked fish), the head of the Fishery Department of the Municipal Marine and Fishery Office (*Dinas Perikanan dan Kelautan*) of Tegal City and the head of the Women and Children Department of the Population Control and Family Planning, Women's Empowerment, and Child Protection Municipal Office (DPPKBP2PA) of Tegal City, and three well-respected community leaders.

After in-depth interviews with key persons, we processed the interview results with ATLAS.ti (coding the transcripts). We then related the transcript codes of the interview results to generate quantitative data from the qualitative data. The quantitative results focused on respondents' emphasis and perceptions on pre-selected criteria. Criteria that the respondents more frequently emphasized indicated that they were more important. Further, we analyzed the descriptive statistics of the quantitative data as the quantitative analysis to investigate the multiple roles of fishermen's wives and their contributions to families' economy.

ANALYSIS AND DISCUSSION

Table 3 presents respondents' socio-demographic profiles, including wife's and husband's ages, husband's main jobs, husband's and wife's education, and the number of dependents in fishermen's families. This table displays the descriptive statistics with percentages.

Table 3
Respondents' Profiles – Fishermen's Families (n=100)

Respondent's Characteristic		Frequency	Explanation
Husband's age (year)	28-37	30	Mean = 44.03
	38-47	38	Max = 65
	48-57	19	Min = 28
	>57	13	
Husband's Education Level	Not Completed School	0	Mean = 7.53
	Elementary School	64	Max = 12
	Junior High School	21	Min = 6
	Senior High School	15	
	Academy/ University	0	
Husband's Main Job	Ship-owner Fisherman	37	
	Ship-leasing Fisherman	14	
	Ship crew	49	
Fishing days	< 3 days	43	Mean = 39.16
	3-16 days	14	Max = 180
	17-30 days	11	Min = 1
	>30 days	32	
Income Level (Rp)	350,000-1,349,999	85	Mean = 350,000
	1,350,000-2,349,999	13	Max = 3,250,000
	2,350,000-3,349,999	1	Min = 350,000
Wife's Age	24-33	34	Mean = 39.26
	34-43	31	Max = 60
	44-53	25	Min = 24
	>53	10	
Wife's Education	Not Completed School	12	Mean = 6.09
	Elementary School	68	Max = 12
	Junior High School	13	Min = 0
	Senior High School	7	
	Academy/ University	10	
Income Level (Rp)	175,000-674,999	63	Mean = 640,075
	675,000-1,174,999	29	Max = 1,750,000
	1,175,000-1,674,999	7	Min = 175,000
	1,675,000-2,174,999	1	
Number of Dependents	1 person	15	Mean = 2.59
	2-3 persons	67	Max = 5
	4 persons	14	Min = 1
	>4 persons	4	

Source: Primary data (processed), 2020

All respondents (fishermen and their wives) belong to the productive ages (15-64 years old). Most fishermen (about 64 percent) and their wives (68 percent) only graduated from elementary school. Our respondents are fishermen who directly exploit the environmental resources with their wives who process fishery or other sea products. Most of the fishermen are ship crews, followed by those who have small boats (not more than 5 G-T) to find fish. Fishermen's households mostly have not too many dependents (2-3 persons) because they still have to support other family members, including in-laws or close relatives, who live at other houses. Besides, many of their children have married or worked. Children who have worked and still live at

the same house with their parents are no longer their parents' dependents because they have not received financial support from their parents. They even financially support their parents. Although fishermen and their wives have varying income levels, most of them earn little.

Women's Roles in Production Activities

Women's contribution to development can be classified into three main roles: reproduction, production, and community development (Alliyu, 1970). The production roles represent those that earn money (ILO, 2008). In this respect, Indonesia can provide opportunities for women to work according to th/eir nature and abilities by eliminating gender stereotypes at home and at work to unleash the existing economic potentials. Empowered women will arguably enhance the national economy because Indonesia depends on small and micro firms mostly owned by women. It is worth noting that UNICEF Indonesia (2016) estimates that about 44 million Indonesian women work in the domestic economy to help their families' economy. Our research reveals that most fishermen's wives engage in fish product processing as their economic activities, especially smoked fish, fish fillet, fish skin crackers, and opening small shops (*warong*). They engage in economic activities to improve their families' fluctuating economy depending on their husbands' income. Most of them do not have side jobs.

Figure 2
Percentage of The Occupation of Fishermen's Wives

Women's Roles in Domestic Activities

The reproductive roles consist of all activities starting from biological

reproduction. In these roles, women are responsible for nurturing their children and household activities to take care of all household members (Malami, 2009). We define women's domestic roles as the entire activities of fishermen's wives in fulfilling their household responsibilities as a wife and mother: childcare, household appliances (managing household finance, prepare food), formal and informal education for their children, purchasing jewelry and electronic equipment, and managing family health.

Figure 3
Domestic activities of fishermen's wives on Tegalsari and Muarareja Kelurahan

Fishermen's wives can play their domestic roles thanks to their husbands, children, and other family members. Most fishermen's wives take care of their children because their husbands are busy working outside. This condition is suggested by *Ibu Yunita*, who works as a fish cracker maker.

"I do all the domestic work by myself: sweeping, mopping, washing, ironing. I am a bit ashamed if my husband helps me. I want my house clean when my husband comes home."

They also play important roles in managing finances and determining family education and health. However, they play a minor role in purchasing jewelry and electronic equipment.

Women's Roles in Community Activities

Besides being wives and mothers, fishermen's wives also belong to their social environments that they need to socialize with others. Socialization does not solely imply gathering or chatting around their houses with their neighbors, but also actively participating in PKK association, Islamic religious activities, integrated health services, and other social activities or associations (including helping neighbors organize ritual ceremonies or *slametan*). Our study documents that fishermen's wives mostly participate in *PKK* and ritual ceremonies. *PKK* helps them obtain important information related to their economy. Meanwhile, *slametan* is the form of inter-

neighbor solidarity. This analysis is in line with *Ibu Waeni*, who produces smoked fish:

"I participate in PKK to obtain important information, including government aids. Besides, I can meet and chat with my neighbors. It's mind-refreshing and really makes me happy. I once received training in fish nugget production. For slametan, I always came to help the neighbors. When I have ritual ceremonies one day, they will surely come to help us."

Figure 4
Community Activities of Fishermen's Wives on Tegalsari and Muarareja Kelurahan

Figure 4 illustrates that fishermen's wives exhibit the highest participation rate in *PKK* activities that potentially empower their economic potentials. Accordingly, the women empowerment strategies must focus on developing women's active participation and initiatives to manage institutions jointly formed by them. Such efforts will potentially improve their living standards that involve local development activities that are supported by both governmental and non-governmental institutions (Sopandi, 2010). Thus, women's participation plays an important role in community development because they better inform their communities' characteristics (Purnamawati & Utama, 2019).

Women's Economic Contribution on Fishermen's Families

We discuss the income contribution of fishermen's wives to analyze the income distribution of fishermen's wives on fishermen's income (Wawansyah et al., 2012). This study divides the income contribution percentage of each fisherman family into wife's, husband's, and family's contributions. In this context, families refer to parents' children who have worked and help parents' economy. Fishermen's families mostly rely on fishermen's income. However, fishermen's low education, limited knowledge and access to honing skills, and lack of capital for improving sailing equipment cause them to catch impoverished fish around the coastal areas of Tegal City. Further, some fishermen choose to remain petty with limited fishing activities due to their ages or

personal choices. Although husbands' income fluctuates, wives' contributions help much.

Despite their husbands' fluctuating income, fishermen's wives contribute significantly to their families' income. They contribute to their families' economy by supplementing their husbands' income. Additionally, some families also receive financial supports from their working children. Table 4 below presents the percentage of the economic contributions of fishermen's families.

Table 4
The Economic Contributions of Fishermen's Family Members

Job n=100	Economic Contribution of Fisherman Families (monthly)		
	Wife	Husband	Family
Fish Seller	40.19%	55.86%	3.95%
Fish Producer	49.66%	45.38%	4.95%
Fish Skin Producer	33.23%	64.48%	2.29%
Fillet Worker	39.82%	59.46%	0.71%
Small Shop	30.08%	66.24%	3.68%
Average	38.60%	58.28%	3.12%

Source: Primary data (processed), 2020

Table 4 informs that women's occupations are related to their economic contributions to their families (KemenPPPA, 2012). Fish-producing women contribute the most to families' economy (almost 50 percent), and their contributions are even greater than their husbands' (45 percent) by almost 5 percent. Women in other occupations contribute much less than fish-producing women, with small shop owners contribute the least (only about 30 percent of their families' total income). Female shop owners share their time in business and domestic activities, with the latter dominate the time allocation. Consequently, they cannot generate higher income to support their families. Lastly, fishermen's children contribute very little to their families. Hence, our data highlights the importance of women's empowerment because they have already significantly supported their families' economy (Doepke & Tertlit, 2017).

Strategies to Empower Fishermen's Wives

Fishermen's wives in West Tegal have various problems in their daily lives, including financial problems, being left by their husbands for days, social problems, and difficulties in sharing time between jobs and families. Prior studies on women empowerment demonstrate that women with greater roles in decision-making processes improve their families' welfare. For example, Sell & Minot (2018) suggest several strategies to help fishermen's wives play their roles optimally in improving their families' welfare. This study proposes adaptation strategies for fishermen's wives based on the interviews with key informants. We analyze the results of the interviews with *ATLAS.ti*. Our analysis reveals three aspects of the strategies to empower

fishermen's wives: economic, institutional, and socio-cultural.

The in-depth interviews with A-B-G-C (Academic, Business, Government, Community) indicate that structured empowerment strategies are appropriate for fishermen's wives by improving human resources and institutional quality. Further, the analysis using ATLAS.ti shows that economic empowerment is considered the most important one because it includes the use of applicable technologies, ease of distribution and job opportunities, capital supports in the form of goods and money, quality improvement for fishermen's wives who have legal household-scale industries, health license, and product value improvement. Specifically, the key persons emphasize capital supports as the most important economic aspect. Further, the most important institutional aspects are improved institutional communication with the government, other institutions, and other communities; and institutional counseling. Meanwhile, for the socio-cultural aspect, fishermen's wives emphasize the importance of human resource improvement through training, political knowledge, socialization, and workshops. Table 5 presents the prioritized criteria and alternatives for strategies to empower fishermen's wives.

Table 5
Prioritized Criteria and Alternative Strategies to Empower Fishermen's Wives

Code Criteria	Score
Economic Aspect	38
a. Technology	1
b. Marketing	6
(i) Distribution	4
(ii) Marketing Areas	2
c. Capital Supports	17
(i) Equipment Capital	9
(ii) Money Capital	8
d. Product Quality	9
(i) Legal License	2
(ii) Health License	2
(iii) Product Selling Value	5
e. Financial Management	5
Institutional Aspect	6
a. Organizational Role	4
(i) Communication	4
b. Organizational Quality	2
(i) Institutional Counseling	2
Socio-cultural Aspect	27
a. Human Resource Improvement	24
(i) Training	16
(ii) Political Knowledge	2
(iii) Socialization	3
(iv) Counseling	3
b. Advocacy	3

Source: Primary data (processed), 2020

Fishermen's wives emphasize three aspects (economic, socio-cultural, and institutional) that deserve further attention to support their families' economy. The emphasized economic aspects include the provisions of low-interest credits and equipment to help fishermen's wives improve their productions, product quality improvement for products with legal licenses, health licenses, and attractive packaging. The socio-cultural aspect emphasizes human resource improvement through training, while the institutional aspect focuses on actively motivating organizational roles to facilitate communication between fishermen's wives and related parties. The following is the triangulation of the empowerment strategy of fishermen's wives in supporting their household economy.

Figure 5
The Triangulation of Strategies to Empower Fishermen's Wives to Support Household Economy

CONCLUSION, LIMITATION, AND SUGGESTION

Fishermen's wives in Tegal City play multiple roles to support their families' economy: production, domestic, and community managing roles. These women increase their families' income by working in various business sectors, contributing 38.60 percent of total family income. Hence, their income contribution can be considered quite high. Our analysis of the in-depth interview with *ATLAS.ti* shows the three aspects of the strategies to empower fishermen's wives: economic, socio-cultural, and institutional. The policy implication of this research is that it can be used as a basis for knowing policies to empower coastal communities by empowering women.

This study does not discuss problems encountered by fishermen's wives. We also rely much on information from several key persons. We then advise future studies to explore more the causes of coastal communities' vulnerabilities based on fishermen's perception of waves, changing weather, and the emergence of large-scale fishery industries) and the effect of such vulnerabilities on the roles of fishermen's wives. We also suggest that further research also analyzes the relationships between key persons to formulate more robust policies.

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