The Social Characteristics of Fisherman Communities in Cangkol Village, Cirebon, Indonesia

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Authors’ contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

The social mapping is intended to map social characteristics, as well as to analyze the driving and inhibiting factors of the fishing community in Cangkol Village, using a survey method with a questionnaire and analyzed descriptively. The research was conducted in April–June 2023. The fishing community of Kampung Cangkol is a community with the majority of middle-aged individuals graduating from elementary school, Muslim, with Cirebonese ethnicity who still preserve local traditions and wisdom. Fishermen’s wives have a double role as being in charge of domestic affairs and helping fishermen earn a living. There is a patron-client relationship between fishermen and middlemen as the main access to capital in the fishing business. The upper layer in the fishing community of Cangkol Village is community leaders, the middle layer is skipper fishermen, and the lower layer is the Ship's Crew (ABK). The fishing community in Cangkol Village are fishermen with a traditional fishing unit. The driving factors in the fishing effort of the Cangkol Village fishing community are the preservation of cultural manifestations in the community, the fishermen's wives’...
dual roles, kinship, and social organizations. The inhibiting factors in the fishing business are weather, age structure, level of education, the existence of middlemen, and the use of technology that is still traditional.

Keywords: Social condition; traditional fisherman communities; Indonesia.

1. INTRODUCTION

The city of Cirebon is part of the West Java province which connects the DKI Jakarta area with the Central Java region. Location Cirebon City is in the coastal area with a beach length of ± 7 km [1]. This is a distinct advantage associated with the abundance of marine products obtained [2]. Compared to coastal areas in other areas, the coastal areas in Cirebon City tend to be narrower because they are only found in two sub-districts, namely Kejaksan and Lemahwungkuk Districts with a total area of 8.56 km². According to the Cirebon City Agriculture and Fisheries Food Security Service (DKP3), the amount of capture fisheries production in Cirebon City will reach 7,160.67 tons in 2021, with 6,590.15 tons acquired from Lemahwungkuk District in 2021.

Four points of fishing villages are scattered in Cirebon City namely Samadikun Village, Pesisir Village, Cangkol Village, and Kejawanan Village [2]. Cangkol Village is part of a fishing village located in Lemahwungkuk Village, Lemahwungkuk District. Fishermen in Cangkol Village are more advanced than fishermen in other villages because they are more productive and good in terms of their management [2]. Indicators of fishermen’s progress are seen from fishermen's ability to make rumpon or FAD (Fish Aggregating Device), and marine tourism has been opened for tourists who come. The Red Snapper and Jenaha Joint Business Groups (KUB) in Cangkol Village are running actively so that the existing fishermen's associations are developing [2].

The statement above is a contradiction because quoting from the results of an interview with the Chairman of the Leadership Council of the Indonesian Fishermen Association (DPCHNSI) Cirebon City, Kasrudin said that fishing communities are still living in a state of concern because the income from fishing is not comparable to expenses for fuel, food, and other logistics [2]. Some points in the Cirebon coastal area are even in a state of decline with the characteristics of a slum and not a prosperous area [2].

The low welfare of fishing communities shows that the development has not been optimal. Community development cannot be carried out optimally if there is no understanding of the characteristics of the community in a region [3]. Without existing understanding, it will be difficult for related parties to maintain stability or make the desired changes [3]. Conducting social mapping provides a description of the social conditions of the fishing community in Cangkol Village.

2. METHODOLOGY

The research was carried out in Cangkol Village, Lemahwungkuk Village, Lemahwungkuk District, Cirebon City, West Java. Data collection, processing, and analysis were carried out in April–June 2023. Shown in Fig. 1 is the map of the research’s location.

The method used in this research is a survey method. Survey research is conducted by asking several respondents about beliefs, opinions, characteristics, and behaviors that have occurred or are currently occurring [4]. The data used in this research are primary and secondary data. The main data in the form of primary data was obtained through interviews with respondents using a questionnaire tool regarding the social characteristics of the fishing community in Kampung Cangkol. Secondary data includes data on the general condition of the Cangkol Village fishery area and sector. These data were obtained from the Cirebon City Food Security, Agriculture and Fisheries Service (DKP 3), and the Lemahwungkuk Village Office.

There are a total of 60 fishermen in Cangkol Village and 26 of them meet the predetermined criteria. Respondents were taken using the purposive sampling method. In order to support research objectives, then Respondents were taken based on the following criteria:

a. Respondents work as full-time fishermen or main part-time fishermen;
b. Respondents are members of fishermen groups;
c. Respondents are residents of Cangkol Village;
d. Respondents are willing to be interviewed.

Stakeholder-related parties, namely officials from the Cirebon City Food Security, Agriculture and Fisheries Service (DKP3), and community leaders in Cangkol Village act as triangulators for the data collected.

In carrying out the research, the data collected is qualitative data covering the social characteristics of fishing communities, which is the descriptions of the age structure, level of education, religion, ethnicity, language, local art, local wisdom, livelihood, gender roles, kinship, social organization, and social stratification. The information collected will be processed in the form of tables or graphs, to then be interpreted in the form of explanatory sentences.

3. RESULTS AND DISCUSSION

3.1 Social Conditions of the Fisherman Community of Cangkol Village

3.1.1 Age structure

The life cycle hypothesis theory by classifying the age structure into four important phases in the adult human life cycle, namely young adults (15–29 years), prime working age (30–49 years), middle age (50–64 years), and old age (≥65 years) [5]. The age structure of the fishing community in Cangkol Village is shown in Table 1.

<table>
<thead>
<tr>
<th>Age Group (Years)</th>
<th>Amount (Person)</th>
<th>Percentages (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–29</td>
<td>2</td>
<td>7.7</td>
</tr>
<tr>
<td>30–49</td>
<td>11</td>
<td>42.3</td>
</tr>
<tr>
<td>50–64</td>
<td>13</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>26</td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 1. The age structure of the fishing community in Cangkol village
The age range of fishermen in Cangkol Village is 28–63 years or belongs to individuals of productive age, namely 15–64 years [5]. The population in the productive age group is identical to individuals of working age, meaning that these individuals are actively working to meet their needs and their dependencies [6]. Research on the relationship between work motivation and fishermen's behavior suggests that fishermen at productive ages tend to have good physical conditions so that they are able to develop themselves and work optimally with the aim of making their families prosperous [7]. Productive age is considered a prime age for hand-line fishermen because hand-line fishermen constantly need physical strength to run their businesses [8].

The fishing community of Cangkol Village is dominated by individuals aged 50–64 years, in which there are residents aged >60 years and over or ages with the possibility of potential and non-potential old age [5]. This affects the work productivity of fishermen because based on the results of field observations and interviews with respondents that the frequency of going to sea for fishermen in their late 50s tends to decrease due to old age so fishermen's physical condition is no longer prime.

3.1.2 Level of education

Table 2 shows the education level of fishermen in Cangkol Village starting from not having finished elementary school to high school. Fishermen in Cangkol Village are dominated by elementary school graduates, which means that the education level of fishermen in Cangkol Village is still relatively low [9]. The results of interviews and observations concluded that there were several factors causing the low level of education of fishermen in Cangkol Village, namely:

a. Economic factors, where the low economic level of the family forces former fishermen to use child labor to help make ends meet so that fishermen's children drop out of school and choose to work;

b. Fishing effort is carried out in a subsystem, meaning that the priority of former fishermen when working was to fulfill their basic needs, namely clothing, food, and shelter. Children's formal education needs are not a priority;

c. The assumption is that fishermen's work is the work of muscles and nature, so the frequency of fishermen's participation in fishing activities will train fishermen's motor skills and adaptation to existing natural signs.

3.1.3 Religion

The religion adhered to by each individual will influence the nature, attitude, and way of life of a person in their environment [10]. The fishing community in Cangkol Village is classified as religiously homogeneous, meaning that only one religion is followed, namely Islam. It is possibly caused by the location of Cangkol Village which is part of Cirebon City, which is the center of the spread of Islam in West Java. Cirebon Islamic histography briefly explains the history of the spread of Islam in the city of Cirebon [11]. Referring to the results of the interviews that have been conducted, some of the Islamic teachings that have become a habit of the fishing community in Cangkol Village are:

a. Prayer is a form of worship performed by fishing communities as adherents of Islam. Fishermen tend to perform the obligatory prayers at their homes, and occasionally go to the mosque to perform Friday prayers;

b. Prayer before going to sea, by the captain and crew. A joint prayer is made to ask for smoothness, safety, and good results when the arrest activity is carried out;

c. Joint recitation by all fishermen from Cangkol Village which is held at least once a year. Large recitations are usually held at the end of the year, as a form of gratitude to Allah SWT for the blessings, abundance of fortune, and smooth sailing during the past year;

d. *Tahlilan*, which is done when someone dies. The *tahlilan* is carried out by gathering at the funeral home to pray for the deceased together. People who come usually give alms in the form of small favors such as money or treats, and families left behind usually give alms in the form of small treats as a symbol of appreciation for guests who come.

3.1.4 Ethnicity

All fisherman respondents in Cangkol Village are residents of the Cirebonese ethnic group, commonly called Wong Cerbon. Wong Cerbon is a term for residents who were born and raised in Cirebon culture. The Cirebonese are the result of
cultural hybridity between the Sundanese culture, which in this context is the location of Cirebon which belongs to the West Java region, with "marginal culture" attached to the Koek, Jawa Reang, Jawa or Wong Jawa Cerbonan cultural entities [12]. Based on the results of interviews and observations, several factors that cause ethnic homogeneity of fishing communities in Cangkol Village are as follows:

a. The fishing community in Cangkol Village is classified as an old fishing community, where those who occupy the settlement are native Cangkol residents who have had a livelihood as fishermen since ancient times;
b. Immigrants tend to come and settle in the Kejawanan area. The opportunity for migrants to leave and enter is greater through the Kejawanan PPN as a center for trade, industry, and tourists to Cirebon [2].

3.1.5 Languages

Language is one of the main differentiators of a cultural area. Language as the verbal identity of a community is self-image and is an affirmation of self-existence, and is a link for the social system within it [12]. This also applies to the people of Cirebon which are the result of hybridity between the cultures of West Java and Central Java. The communication of the fishing community in Cangkol Village is carried out using the Cirebonese language. Cirebonese language is still very strongly used in the daily life of fishermen, both among fishermen and with fishermen's family members. Communication in this context is not only verbal communication but includes communication made by fishermen via WhatsApp and short messages [12].

3.1.6 Art

Art is a form of culture as a form of expression of the beauty of the human soul. Art is a determinant of norms that must be derived so as to form a separate system in the life of a community group [13]. These arts are still sustainable and are exhibited at least once a year when a big event takes place. The exhibition of these arts is a form of preservation of culture that has existed and has been introduced from generation to generation:

a. Wayang kulit is a traditional performing art of the Javanese palace culture [14]. The stories told during the wayang kulit show are usually folklore from Cirebon;
b. Drama, is an art form in the form of acting where a group of people will play a role on the stage. Just like in wayang kulit, the storyline in acting is Cirebon folklore;
c. Dances, especially mask dances, and sintren. Mask dance and sintren are dance arts originating from Cirebon. Mask dance is a symbol of the spread of Islam in Cirebon, while Sintren is an art that is closely related to fishing communities. It is said that sintren is a sacred game played by fishermen's wives and children while waiting for the return of their husbands and fathers who go to the sea [15].

3.1.7 Local wisdom

Social problems that arise in the lives of fishing communities are addressed and unconsciously form a separate adaptation strategy in the form of local wisdom [16]. The forms of local wisdom in the fishing community of Cangkol Village are shown in Fig. 2. This local wisdom was formed as an adaptation strategy for social problems in the fishing community of Cangkol Village. Furthermore, an explanation regarding the formation of local wisdom in Cangkol Village is as follows:

a. Use of environmentally friendly fishing gear. All fishermen in Cangkol Village use hand-line fishing gear. Based on the results of interviews with fishermen, fishermen choose to maintain handlines because handlines are fishing gear that is easy to operate, inexpensive to maintain, does not damage the environment, and fishermen can select catches directly when fishing is carried out.
b. Prohibition of catching fish <1 oz. This prohibition arose as a result of the fishing efforts of Cangkol Village as an effort to maintain existing fishery resources. Fish < 1 ounce should not be caught to maintain fish stocks in the ocean. Fish is an exhausted resource, so it must be managed wisely [17]. Fishermen who violate this rule will be fined.
c. Nadran, is a designation for sea alms parties for fishing communities in almost all areas of Java, including Cirebon [18]. Nadran is done once a year at the end of the year. Nadran is a symbol of the gratitude of fishermen from Kampung
Cangkol to Allah SWT for the good fortune he has bestowed in the past year.

3.1.8 Livelihoods

The fishing communities in the Cangkol Village area have their main livelihood as fishermen and fishermen's crew members to fulfill their daily needs. The only side job that is another source of income is to open a fishing tour guide business. Livelihoods as fishermen have been carried out since ancient times by the community in Cangkol Village, while fishermen crew members are fishermen who do not own boats but help out when fishing activities at sea. The causative factor is that the closest source of livelihood in the area is the sea so the surrounding community automatically utilizes existing resources. The fishing community of Cangkol Village will take advantage of the transitional and western seasons to repair the boat if there are holes or other damage, paint the boat, repair fishing gear, and repair the boat's motor if there is damage. Fulfillment of fishermen's needs during the west famine season depends on saving or borrowing from one another.

3.1.9 Gender roles

In contrast to sex which is biologically static, gender is fluid following the social system in society. The definition of gender leads to cultural construction regarding gender differences regulated by society [19]. The criteria for the gender role of the fishing community in Cangkol Village are shown in Table 3. Fisherwmen's wives in Cangkol Village play a dual role in their household life because they play a dominant role in domestic affairs, and still have to help their husbands work to supplement their income in an effort to meet their daily needs. In addition to selling fish caught by their husbands, two people or 8% of all respondents' wives work by opening stalls. Two other people or 8% of all respondents' wives sell cooked dishes.

Table 2. The level of education of the fishing community in Cangkol village

<table>
<thead>
<tr>
<th>Level of education</th>
<th>Amount (Person)</th>
<th>Percentages (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not completed in elementary school</td>
<td>5</td>
<td>19.2</td>
</tr>
<tr>
<td>Elementary school (SD)</td>
<td>15</td>
<td>57.7</td>
</tr>
<tr>
<td>Junior High School (SMP)</td>
<td>4</td>
<td>15.4</td>
</tr>
<tr>
<td>Senior High School (SMA)</td>
<td>2</td>
<td>7.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 3. Criteria for the gender role of the fishing community in Cangkol village

<table>
<thead>
<tr>
<th>Aspects</th>
<th>F*</th>
<th>M**</th>
<th>F/M***</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Domestic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooking</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parenting</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children's education</td>
<td>12%</td>
<td>8%</td>
<td>80%</td>
</tr>
<tr>
<td>Family health facility</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family saving</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household needs</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>House chores</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Productive</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provider of fishing venture capital</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fishing preparation</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fishing activity</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post fishing</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Management</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Events attendance</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Female  
**Male  
***Female/male, together
3.1.10 Kinships

The kinship pattern in the fishing community in Cangkol Village is shown in Fig. 4. The kinship system in the fishing community in Cangkol Village adheres to a patrilineal system, in which the lineage in the family is drawn from the male side [5]. The inheritance pattern of the fishing business in Cangkol Village follows the kinship system, that is, it is handed over to the fishermen's sons. The kinship system of the fishing community in Kampung Cangkol influences the management of fishery resources as a source of livelihood for fishermen.

The kinship system in Cangkol Village has a positive influence on the management of marine resources in the Cangkol Village area, namely:

a. A strong sense of kinship and mutual help can be felt and seen in the way fishermen interact with each other. The fishermen in Cangkol Village are very friendly and open to anyone who comes. Other fishermen will not hesitate to join in the conversation and join in the conversation when they see several people gathered. Fishermen help each other if one of them is going to sea but there are no crew members available, fishermen who don't go to sea will immediately go to sea;

b. Transparency, chairman of the Fisher Association Mr. Suparman said that the fishing community in Cangkol Village tended to be outspoken in reminding one another when there were deviant things being done, such as violating the rules or doing things that were not in accordance with the agreements and provisions.

Negative influences are also present in addition to the positive influence of the extent of kinship in the fishing community in Cangkol Village. Based on the results of interviews with the heads of fishermen's associations, sometimes the title of a brother makes some people a little indifferent to the warnings given. An example is the existence of piles of garbage along the route to the fishing boat base. The fishing community of Cangkol Village has repeatedly held voluntary work to get rid of the existing piles of garbage, but not long after that the piles of garbage will appear again even though warnings not to litter in the area have been carried out very often.

3.1.11 Social organization

Fig. 5 shows that there are two social organizations formed in fishing community groups in Cangkol Village, namely the Jenaha Joint Business Group (KUB) and the Kakap Merah Joint Business Group (KUB). The two joint business groups were inaugurated simultaneously by the Head of the Cirebon City Food Security, Agriculture, and Fisheries Office in 2014. Initially, the fishermen community would only establish one joint business group with the provision that there were at least 10 fishermen members in it, but the enthusiasm of the fishing community caused quite a lot of fishermen who wished to join the fishermen group, namely as many as 40 people. Therefore it was decided to establish two joint business groups with 20 members each.
3.1.12 Social stratification

Shown in Fig. 2 is an illustration of the social stratification of the fishing community in Kampung Cakol. The stratification is based on the results of interviews with 26 fisherman respondents and three fishery extension officers in Cangkol Village, so the characteristics of fishermen in Cangkol Village are as follows:

a. Fishermen are of productive age, aged 28–63 years;
b. Education levels tend to be low with the majority of elementary school graduates;
c. 24 fishermen have their own boats and fishing gear in the form of hand lines;
d. Two people work as Ship's Crew (ABK);
e. All fishermen have decent houses, which are tiled and bricked;
f. Fishermen's children endeavored to go to school at least up to high school;
g. The wife helps the economy by selling the rest of the catch, or opening a basic food stall or food stall;
h. All fishermen have side businesses as sea tour guides;
i. All fishermen are members of a joint business group;
j. Leadership is centered on three people who are considered pioneers.

The layer of social stratification is formed from aspects of prestige and ownership of fishing units. The social stratification in Cangkol Village
is divided into three layers consisting of top, middle, and low layers:

a. The top layer of community leaders. Community leaders are an important aspect of the fishing community in Cangkol Village because these figures are regulators of almost all aspects related to the sustainability of the fishing business in Cangkol Village. Community leaders are at the highest strata in the social structure of traditional communities because they are the most respected people [20].

b. The middle layer in the social stratification of the fishing community in Cangkol Village is skipper fishermen as coolies. All boat owners in Cangkol Village are basically masters and captains. The captain is in charge of leading fishing activities as well as being responsible for the safety and wages of the crew. There is no division or special expertise possessed by the crew.

c. The bottom layer in the social stratification of the fishing community in Cangkol Village is the Ship's Crew (ABK). ABK are fishermen who do not have a fishing unit or capital, so ABK will go to sea with the skipper. ABK gets ¼ share of fishermen's income in each fishing activity.

3.2 Factors Affecting Cengkol Village Fishermen’s Catching Business

3.2.1 Driving factors

Of the various aspects identified in the research, the social aspects that are driving factors for fishing efforts and the development of the fishing community in Cangkol Village are:

a. Preservation of cultural manifestations in the fishing community of Kampung Cangkol: The demands of globalization must be balanced with the inheritance of local culture so that the cultural identity of a nation is not erased. Ideally, this should be used as an opportunity for the revitalization of local culture and as soft cultural diplomacy with other countries [21];

b. The dual role of the fisherman's wife: The dual role of fishermen's wives is a driving factor for the development of fishing communities because apart from ensuring that household needs are met, the wives also try to increase household income.

c. Kinship: The kinship system gave rise to a pattern of patron-client relations between skipper fishermen and crew members [22]. This happened in the fishing community of Kampung Cangkol. The patron-client relationship between skipper fishermen and crew members forms a symbiosis of mutualism for both parties because skipper fishermen get assistance while crew members need skipper fishermen as owners of capital to earn income [22].

d. Social organization: Community groups in the form of joint business groups are a symbiosis of mutualism formed between fishing communities and stakeholders and are expected to be one of the opportunities and answers to the problems and challenges faced by fishermen [23].

3.2.2 Inhibiting factors

The social factors that become obstacles to fishing efforts and the development of the fishing community in Cangkol Village are:

a. Weather: The fishing profession is a profession that depends on weather conditions. Rising water temperatures cause damage to coral reefs so that the quantity of fish decreases, while increasing temperatures cause rapid and unpredictable weather changes, causing the risk of going out to sea to increase [24].

b. Age structure: The age structure of the fishing community in Cangkol Village raises concerns for fishermen and stakeholders because the majority or 50% of fishermen in Cangkol Village are residents aged 50–63 years or are in the middle age group. Another concern for fishermen related to the age structure is the lack of potential for regeneration of fishermen in Cangkol Village. The fishing profession in Cangkol Village is a hereditary profession, however, it is rare for the children of the current generation of fishermen to continue the fishing profession.

c. Level of education: The effect of the low level of fishermen's education is related to the absorption of information and mastery of the latest technology which can encourage fishermen's fishing efforts so that it has an impact on the limited use of existing resources [25].
4. CONCLUSION

Based on the mapping of fishing communities in Cangkol Village that has been done, it can be concluded that:

1. The fishing community of Kampung Cangkol is dominated by middle-aged people with low education and a homogeneous Muslim population, with Cirebonese ethnicity, who use the Cirebonese language in their daily lives. Various types of arts and local wisdom are still preserved in the environment. The profession of fishermen and crew members is the main livelihood, while a side livelihood is a tour guide. Fishermen's wives have a dual role as housekeepers and breadwinners in their household life. The kinship system and inheritance patterns are patrilineal. The social organizations that participated were KUB Kakap Merah and Jenaha. The top layer in the stratification of the fishing community in Kampung Cangkol consists of community leaders, the middle layer consists of fishermen who own boats, and the lowest layer is the crew members.

2. Factors driving the fishing effort of Kampung Cangkol fishermen are the preservation of cultural manifestations in the community, the dual roles of fishermen's wives, kinship, and social organizations, and the role of the government. The inhibiting factors for fishing in Cangkol Village are the weather, age structure, and level of education.

CONSENT

As per international or university standards, the respondents' written consent has been collected and preserved by the author.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES


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