



Social Mapping of Fish Farming Communities in Cikancung Village, Cikancung District, Bandung Regency

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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

This study aims to compile a social mapping of fish farming communities and social factors that influence fishery development in cikancung village, cikancung district, bandung regency. This research method is a survey method. This research was carried out from July 2023 – August 2023 in cikancung village. The data required is qualitative data, namely primary data and secondary data. Primary data was obtained through interviews and questionnaires with fish farmers in cikancung village, while secondary data was obtained through documents from the cikancung village government and the food and fisheries security service, bandung regency, west java. The sampling technique used was purposive sampling. The data analysis method in this research is qualitative descriptive analysis. The results showed that the social conditions of the cultivators were in the productive age with a secondary education level. Livelihoods as fish cultivators are sidelines. Most of the fish farming business is carried out by men, while women play a role in

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domestic activities. The social stratification of the cultivating community is at the lower strata, namely as ordinary people. Social factors that hinder cultivators in developing their business are uneven levels of education, lack of counseling, and cultivation as a side livelihood. There is a need for ongoing research regarding socio-economic mapping By using variables and other methods to monitor What are the social and economic conditions of the fish farming community in Cikancung village, cikancung district, bandung regency and also There needs to be more intensive outreach and training activities To fish farmers in cikancung village so that business activities are carried out Implemented can be more advanced and developed.

Keywords: Cikancung village; social mapping; fish cultivators; survey.

1. INTRODUCTION

In general, social mapping studies are activities carried out to understand the social conditions of local communities [1]. This activity is important for development planning because every community has different social conditions which then causes people to have different problems and needs. Furthermore, the results of this social mapping become the basis for planning sustainable community development programs [2]. An understanding of the social conditions of the people of an area is needed in planning a good community development program according to the needs of the community so that the program can achieve the right goals. Social mapping can be carried out on a micro scale, namely at the village level with the aim of understanding the characteristics of a village, potentials and problems, efforts to overcome problems that have been carried out and action plans that must be carried out [3]. In specific research in coastal areas, mapping is used to assist planning spatial management of coastal environments that are prone to conflict of uses [4]. Cikancung District is one of the sub-districts in Bandung Regency which has potential in the field of fish farming, such as cultivating carp, catfish, tilapia and other types of fish. Data from the Bandung Regency Food Security and Fisheries Office in 2023, Bandung Regency has fish production of 8049.82 tons/year from a total of 31 districts. Cikancung District is one of the many sub-districts in Bandung Regency which supports fishery activities by contributing as much as 74.99 tons/year to still water pond cultivation. From these data it can be concluded that Cikancung District is one of the potential fish farming centers in Bandung Regency. Cikancung District itself has quite a lot of Enlargement RTPs spread across several villages. Cikancung Village is one of the villages in the Cikancung Subdistrict where most of the population is fish cultivators, both small-scale fish cultivators and large-scale fish cultivators. Based on production

data obtained from the Bandung Regency food security and fisheries service, it was found that there were 81 RTP cultivators in Cikancung Village, Cikancung District, Bandung Regency. These data show that Cikancung Village has the potential for developing fish farming businesses. The people of Cikancung Village have been cultivating fish for a long time, but there has been no research regarding social mapping of the fish cultivating community there. Therefore it is important to do a social mapping of the fish cultivating community in Cikancung Village, Cikancung District, Bandung Regency to understand the description of the characteristics and social conditions of the community, and to know the social factors that influence fisheries development and can also be used as material for regional development planning.

As for previous studies related to Social Mapping Analysis, namely in Asnita Ode Samili's (2018) research regarding Social Mapping Economy of Fishermen's Community on Maitara Island, Tidore City, Islands Province North Maluku. Through this social mapping, social conditions can be identified economy of fishing communities on Maitara Island, Tidore City, Islands Province North Maluku and the needs and roots of problems felt by the community fishermen in improving their welfare in the form of survival strategies life of fishing communities on Maitara Island, Tidore City, Islands Province Maluku. In this research, a survey method was used questionnaire as a tool in collecting data. Data analysis using qualitative descriptive analysis to reveal facts about life Socioeconomic Fisherman Community on Maitara Island, Tidore City, Archipelago North Maluku Province. Sampling used a purposive method sampling, namely taking samples based on certain considerations by researchers, determined by selecting respondents who live in the island area Maitara works as a fisherman.

The research results mention the characteristics of socio-economic life In terms of income,

fishermen on Maitara Island are relatively low. This is due to several factors, namely fishermen still use simple tools in their fishing activities, low level of education (HR) of fishermen and lack of capital to carry out fishing business, this condition causes fishermen to become poor, this can be seen from the condition of the houses fishermen, fishermen's income is low and the majority of fishermen do not have savings. Apart from that, it is also a survival strategy for fishermen on Maitara Island namely the job diversification strategy, namely by doing side jobs. When fishermen are not out at sea, the work they do is as a craftsman motorbike taxi drivers, farm laborers or construction workers. Another strategy used for survival, namely involving family members (wife and children) in the labor market like selling fish by fishermen's wives.

Social Mapping of the Fish Farming Community in Cikancung Village yet has been researched before, therefore it is important to do research Social mapping. Cikancung Village is one of the centers for aquaculture fisheries bargain in Cikancung District. In the study of social mapping in In this research, social conditions and economic conditions were identified The freshwater fish farming community is divided into several variables. To be able to know and improve the socio-economic conditions of the community freshwater fish cultivators in Cikancung Village, Cikancung District both need to be studied and identified through qualitative descriptive analysis as well There is also a need for development programs from government agencies. Results It is hoped that this social mapping will be useful as material for preparation strategic development plans such as infrastructure development programs supporting programs to improve the social, economic and cultural conditions of society; as well as a program to develop the potential of fish cultivation and the farming community fish in Cikancung Village, Cikancung District, Bandung Regency

2. MATERIALS AND METHODS

2.1 Location and Time of Research

Social Mapping Research The fish farming community is located in Cikancung Village, Cikancung District, Bandung Regency, West Java Province. Time This research was carried out in July 2023 – August 2023. The location was chosen with the aim of knowing the socio-

economic conditions of fish farmers and what existing fisheries development exists in Cikancung Village, Cikancung District, Bandung Regency.

2.2 Method of Collecting Data

The method used in this research was a survey method. The survey method is a form of research approach activity with respondents to obtain some data, not in the form of the author's opinion but natural data [5]. The data collection technique in this research used a questionnaire. Questionnaire is a data collection technique that is carried out by giving a set of written questions to respondents to answer [6]. The types of data used in this research are secondary data and primary data. Primary data is collected by researchers to answer research questions. The primary data in this research is the fish cultivating community in Cikancung Village, Cikancung District, which has links in social mapping activities as a source of information in the form of interviews and observation notes. Interviews were conducted with fish cultivators spread across the research area randomly using a list of questions or (questionnaire) that had been prepared beforehand. Observations in this research were carried out by observing the behavior of the fish cultivating community in Cikancung Village, Cikancung District and documenting matters related to fish farming business activities in Cikancung Village, Cikancung District. The primary data that will be obtained later is in the form of respondent identity, cultivator characteristics, social and institutional conditions, gender roles, and kinship. Secondary data is data that does not directly provide data to data collectors or in other words is a source of data or documents obtained indirectly by researchers. Secondary data in this study were taken from the Cikancung Village Government in the form of Village monograph data which included information on population data and population numbers, as well as data taken from the Bandung Regency Food and Fisheries Service in the form of data on the number of RTP cultivators and fish production data in the sub-districts of Bandung Regency. The respondent collection technique used in this research was a purposive sampling technique with a total of 30 cultivator respondents with certain criteria such as (1) Fish farming community living in Cikancung Village, Cikancung District (2) Fish cultivating communities with at least 5 years of business experience (3) Group of fish cultivators who are

willing to be interviewed. In qualitative research, the number of respondents is known when data collection experiences saturation. Data collection begins by interviewing initial informants or key informants and stops at the umpteenth respondent as a source who no longer provides new information.

2.3 Data Analysis Method

The data analysis method used in this research uses a qualitative descriptive analysis method. According to Yuliani [7] descriptive qualitative is a simple qualitative approach method using an inductive flow. Inductive flow is defined as the implementation of research methods starting with a process or event which can ultimately be generalized into a conclusion. The images obtained include social conditions, community culture, social stratification, culture, ecosystem, natural resources and development. The results of the answers to the questionnaire were then tested using validity and reliability tests. The validity test in this study applied the concept of credibility (internal validity) with the aim of obtaining a level of confidence in the suitability between data and facts in the field. While the reliability test according to Ghozali [8] states that reliability is a tool for measuring a questionnaire which is an indicator of a variable or construct. A

questionnaire is said to be reliable or reliable if a person's answers to statements are consistent or stable over time.

3. RESULTS AND DISCUSSION

3.1 General Condition of the Research Location

3.1.1 Description of research location

Cikancung Village is a village in Cikancung District, Bandung Regency which has been established since 1908, initially as a result of the expansion of Cicalengka Village. Cikancung village comes from the word Ci which means water and kancung comes from the word nyungcung which means sharp, so the village means the village where the water is pointed under the sirah sand of Cikancung.

3.1.2 Population livelihoods

The livelihoods owned by the people in Cikancung Village are diverse, including those working in the food crop agriculture sector, the livestock sector, the fisheries sector, to the small sector or craftsmen. For more details on the livelihoods of the residents of Cikancung Village, see Table 1.

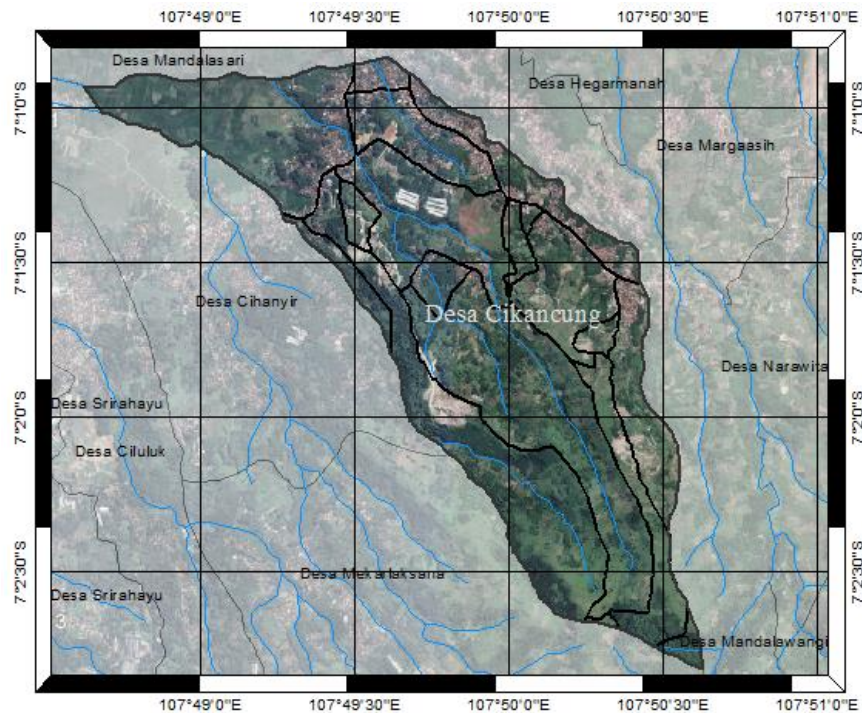


Fig. 1. Cikancung village location map

Table 1. Livelihoods of Cikancung village residents

No	Livelihood	Total
1	Not yet working	1290 people
2.	Job seeker	646 people
3.	Land Owner	1507 people
4.	rice field owner	817 people
4.	Tegal Land/Farm Owner	656 people
5.	Tenant/Cultivator	34 people
6.	Farm workers	542 people
7.	Breeder	330 people
8.	Medium/Large Entrepreneurs	6 people
9.	Craftsmen/Small Industries	330 people
10.	Industrial Workers	1668 people
11.	Construction workers	127 people
12.	Trader	368 people
14.	freight	8 people
15.	Government employees	25 people
16.	ABRI	2 people
	Total	8356

From the list above, it can be seen that the people of Cikancung Village have different jobs, but the people need each other. One of the jobs that really helps the economy of the people in Cikancung Village is in the agricultural sector with a population of 2049 people, including rice field land owners, upland/farm land owners, tenants/cultivators, as well as farm laborers because they own food crop farming land. The food crops themselves consist of corn, long beans, lowland rice, cassava, cucumbers, chilies, tubers, cloves, lema, and so on. There are also people who work as small and medium entrepreneurs who really help other people in meeting their daily needs, consisting of shop/kiosk businesses, beverage businesses, livestock businesses, fishing businesses and plantation businesses. The traders in Cikancung Village sell different merchandise, some sell clothes, shoes, vegetables, grocery, and there are also people who sell fish as a harvest from their cultivation ponds as a result of their side income.

3.1.3 Religion

Religion is a teaching that comes from God or is the result of reflection human beings contained in the holy books passed down from generation to generation by one generation to the next with the aim of providing guidance and life guidelines for humans to achieve happiness in the world and in the afterlife which includes elements of belief in supernatural powers which in turn gives rise to an emotional response and belief that Happiness in life depends on having a good relationship with the supernatural power. Religion has an

important position and role within community life. Religion itself can trigger such integration harmony, order and security, even within that society adhere to different religions [9]. Apart from that, religion too tasked with transferring life values individually and in groups society and the environment [10]. As for the majority religion or The belief held by the people of Cikancung Village is Islam. This can be seen in Table 2 below.

Table 2. Number of Cikancung village population based on religion

No	Religion	Total
1.	Islam	8.323
2.	Christian	33
	Total	8356

Data source: Cikancung Village Profile Report Data for 2022

Based on this table it can be seen that most religions which is adhered to by the people of Cikancung Village is Islam there is a prominent comparison, and the rest are Christians. Matter This is proven by the existence of quite a lot of religious activities which are often carried out include activities to commemorate Islamic holidays such as 1 Muharram activities, activities to commemorate the birthday of the Prophet Muhammad SAW, rajaban activities and other religious activities. Even though it's the majority The religion adhered to by the people of Cikancung Village is Islam, but religious life in the area is very important an attitude of religious tolerance between fellow members of society. Tolerance is a modern concept to describe

mutual respect and mutual cooperation between different community groups both ethnically, linguistically, culturally, politically and religiously. Tolerance is a noble concept that is completely an organic part of religious teachings, including Islam. Tolerance is also a necessity for a pluralistic nation. Plurality of citizens based on ethnicity, religion, race, skin color, culture is a visible and distinctive reality differentiate one country from another (Supriyanto and Wahyudi [11]. Awareness of tolerance between religious communities can be seen in attitudes of mutual respect and respect between communities [12]. Apart from that, in religion it is also very necessary to have facilities and supporting places of worship infrastructure so that the atmosphere is visible religion in society. Places of worship are facilities an important place for people to carry out religious activities in an area. Apart from being a place for religious activities, it also serves as a place for religious activities places for religious broadcasting and places of worship The facilities for places of worship in Cikancung Village are quite adequate with nine large mosque buildings and many buildings prayer room and break. However, for Christians in Cikancung Village places of worship have not been facilitated, so for those who want to To carry out worship you need to come to another place or village.

3.1.4 Ethnic group

As for most of the ethnic groups in Cikancung Village, the majority of the population is Sundanese, while other ethnic groups such as the Javanese and Batak tribes are immigrants from other areas. The Sundanese are an ethnic group originating from the western part of Java Island, Indonesia, which includes the administrative area of West Java Province and Banten as their region of origin. The majority of the population in Cikancung Village who are Sundanese are indigenous tribes who still live and generally live in the West Java or Sunda Tatar region, because the Sundanese are one of the ethnic groups that have low migration intensity. This is because the area of origin of the Sundanese tribe tends to have a more profitable location to live compared to the Javanese tribe, which is currently the center of economic or political activity. Thus, the Sundanese tend not to be interested in migrating. Apart from that, the majority of Sundanese people in Cikancung Village also occur because there has not been rapid urbanization and migration from other areas, making the village still classified as one culture. The majority of residents in Cikancung

Village belong to the same ethnic group, namely Sundanese, which means that the community still adheres to Sundanese customs and traditions that exist to this day. This can be seen from the traditions and customs that people often carry out, including the seven monthly ceremony which is a ceremony for pregnant women at the age of seven months of pregnancy by providing tubers as seven types of food, the marhabanan tradition of welcoming the birth of a baby for forty days, the traditional wedding ceremony of opening the door, as well as the death custom in the form of tahlilan which is a custom of praying for people who have died for 7 consecutive days.

3.1.5 Language

Language is a symbol of an ethnic group based on dialect or various language accents. Language is also a thing Very effective means of communication. Language is used as a characteristic or self-identity by society, and also as a means of social interaction people when communicating with anyone and anywhere. Language can be a tool for assessing behavioral patterns, usually most individuals can His behavior is assessed from the way he talks to individuals other. Language is very important for human life, Humans are social creatures who cannot be separated from social activities, Of course, in social activities, what is really needed are tools Communication itself is language. People from various regions should able to use more than one language, namely the regional language the community lives in and the unified language is Indonesian. As for most of the languages spoken by the people of Cikancung Dalam Village Daily life is a regional language. Regional language is a the language spoken in a region within a national state, whether it is in a small area, a federal state or province, or wider area. Regional languages are one of the supporting elements main traditions and customs, regional languages are also often found in traditional ceremonies and in everyday conversation. Thus regional languages 39 is an element that forms regional culture as well as national culture. The regional language used by the people of Cikancung Village namely Sundanese. The use of Sundanese is used as a tool communication used daily by the people of Cikancung Village, because the population of Cikancung Village is mostly Sundanese. Second language The language used by the people of Cikancung Village is Indonesian, However, Indonesian is only used in time and only formal

environments, such as in association meeting activities groups and other meetings.

3.1.6 Art

There are quite a lot of arts that still exist and survive in Cikancung Village until now including:

a. Pencak Silat

Pencak silat art is the result of human culture and also traditional art which aims to defend and maintain independence, as well as to achieve harmony in life in order to increase faith and devotion to God Almighty. Apart from that, pencak silat is also one of Indonesia's cultural heritages that should be preserved because the education imparted through pencak silat can form a tough, strong and virtuous national character and develop into the identity of the Indonesian nation [13]. Pencak silat developed in line with the historical development of society, the role of pencak silat is quite important in improving the attitude, mentality and quality of the younger generation [14]. The implementation

of pencak silat learning is not just theoretical, but involves physical, mental, intellectual, emotional and social [15].

Pencak silat is basically a martial art that has four values as one unit, namely ethical, technical, aesthetic and athletic values. These values are the characteristics and characteristics of the Malay community. Ethical values are the values of noble character or moral values of Pencak Silat based on ethics which implicitly contain religious values, socio-cultural values and moral values that are upheld by society. Technical value is the effectiveness of pencak silat in terms of the needs and interests of martial arts based on logic. Aesthetic value is the value of the beauty of pencak silat based on aesthetics. Athletic values are sports values based on sports rules. Thus, the fundamental concept of the pencak silat philosophy is understanding the essential meaning of the aspects and values contained therein. Pencak silat itself is often found in Cikancung Village as a martial art performed by two silat players who perform it at guest receptions and weddings.

b. Singa Depok



Fig. 2. Art of pencak silat



Fig. 3. Art of singa depok

Singa Depok or what is usually called Sisingaan is one of the arts in Indonesia which was created by artists from Subang as a form of rebellion against the Dutch and British, using a pair of stuffed lions as its main characteristic. Sisingaan is a symbol of the struggle of the people of Subang Regency against the rulers, or invaders, from oppression during the rule of the British Empire. The lion statue symbolizes the ruler/rulers, namely the symbol of the British Empire. The Depok Lion is a way for the Subang people to fight, symbolized by a lion statue and used as a performance that aims to express opinions and satire through this performance.

This Depok Lion art is characterized by the Sisingaan being carried on a stretcher by four people and one or two people climbing on it, then being lifted by the performer and accompanied by a song by swaying to the rhythm of the song. Depok Lion players must have dance skills as a team so that their dance movements are the same, unified, so that they look neat to the audience. These players are people who have special skills, both in dancing and playing waditra. Each performer needs to have these special skills because in a collective Sisingaan performance a cohesive team is needed so that all the dance movements performed while carrying a lion doll can be in harmony with the music played by the nayaga.

In the Sisingaan performing arts, there are several presentations that form a single unit that can entertain the people watching, namely the presentation of movement, music, floor design, dynamics, themes, make-up, costumes, props, lighting, stage and audience [16]. The art of the Depok Lion or Sisingaan itself is often found in Cikancung Village during children's circumcision events, and is also enlivened with other celebration parties. The event during the circumcision of children riding on a lion statue symbolizes the nation's next generation, the umbrella is a symbol of protecting the nation's future generation, the bearers symbolize the oppressed indigenous people.

c. Kuda Renggong

Kuda Renggong is a performance art event or parade. Kuda Renggong is a folk performance originating from Sumedang Regency. This attraction takes the form of a performance by a horse trained to perform dancing movements and walk to the beat of traditional Sundanese music called kendang pencak. A horse is well trained to

make movements like dancing or sometimes also make movements like fighting against its trainer in the pencak silat style. Therefore, this show is also often called a martial horse show.

The Renggong Horse art is often found in the people of Cikancung Village as an entertainment art event for processions at circumcision events, holiday celebrations and festivals. The performance of the Kuda Renggong art, which was found during the circumcision event, was held after the circumcised child was given a ceremony and given a prayer, then dressed up as the Gatotkaca puppet character, a typical Sundanese prince's clothing characterized by wearing a bendo (a type of hat similar to a blangkon). The child was then paraded around the city on the back of a Renggong Horse followed by family members and close relatives who danced in front of him and traveled from one village to another accompanied by enthusiastic musical accompaniment with selected songs such as kembang beureum, kembang gadung, and the typical bangreng art song Kuda Renggong. Along the road, the Renggong Horse dances, surrounded by children, young adults and old people who join the group. After touring the village, the Kuda Renggong group returned to the house of the circumcised child, usually accompanied by the song pileuleuyan (farewell).



Fig. 4. Art of kuda renggong

3.1.7 Social organization

The social organizations or fish cultivator groups in Cikancung Village are the Mina Putra Official Group, Subur 2, and the Mina Jaya Group. All of these organizations play a role in improving the welfare of cultivator groups with technical benefits in the form of facilitating production regulation patterns, speeding up the technology transfer process and facilitating the provision of production facilities as well as social benefits which include guaranteeing safety in cultivation,

expanding and accelerating learning. All community cultivator group associations in Cikancung Village are still active as evidenced by the existence of meetings every month 1-2 times with the topic of Good Fish Cultivation Methods (CBIB), access to capital and other topics related to fisheries regarding the obstacles felt by the cultivating community. Each cultivator group consists of 10 people including members, secretary and head of the cultivator group.

The goals of all fish cultivator groups in Cikancung Village have the same goal, namely creating productive environmental conditions and motivating the community to increase agribusiness production in the fisheries sector so that a physically and mentally prosperous society can be achieved. The routine activities carried out by the cultivating community who are members of fisheries organizations in Cikancung Village include making ponds, filling water, providing food, keeping and sorting fish and harvesting. Obstacles felt by members of cultivator groups include the imbalance in feed prices and fish selling prices, so this topic is often a topic of discussion in every cultivator group association. The target set by each group of fish farmers in Cikancung Village is to improve the economy and improve community nutrition.

3.1.8 Overview of fisheries

Cikancung Village is one of the villages in Cikancung District which has a very significant

area. This can be seen from the residents' quite spacious yards. Most of the people in Cikancung Village make their living as rice farmers. However, the rice fields in Cikancung Village are rain-fed, so people can only plant rice once a year. When the rice fields are dry and cannot be planted with rice, people use their free time to grow vegetables and there are also those who use their free time to cultivate freshwater fish using their home gardens. However, freshwater fish cultivators in Cikancung Village have difficulty getting fish food because of the high price, lack of capital and lack of knowledge and skills of cultivators in marketing, causing the majority of freshwater fish cultivators in Cikancung Village to decide not to continue this business. and make it a side business. However, for some respondents who have sufficient capital and adequate knowledge and skills, the fish farming business continues to this day.

The general condition of fisheries in Cikancung Village is that the majority of fish farming communities carry out fisheries activities in the grow-out stage. The fish cultivating community in Cikancung Village buys fish seeds from cultivators in other areas such as in the Ibun, Pacet and Majalaya areas, there are also those who get seeds from the Fish Seed Center in the Ciparay area and there are also those who get seeds from the Fish Farming Unit. People's Nursery in the Cicalengka area.



Fig. 5. Meeting of fish cultivator organizations in Cikancung village

The seeds that have been obtained are then spread and kept in traditional ponds that the cultivating community owns for several months until they reach consumption size at harvest time. After harvesting, most of the fish produced is sold and the rest is used for family consumption. Fish sales carried out by fish cultivating communities are mostly aimed at local communities, and some are sold through dealers or collectors and then resold at the Parakan Muncang fish market and Cicalengka fish market.

3.1.9 Overview of respondents

Based on Table 3, the characteristics of fish farmers in Cikancung Village based on age structure range from 31-85 years. A total of

23 people with a percentage of 77% were aged 15-64 years, while 7 people with a percentage of 23% were aged over 64 years. This means that the majority of respondents are of productive age [17]. The age level of fish cultivators affects their productivity in managing the aquaculture business. The age of most fish farmers in the productive age group shows that they have good physical and mental abilities and have great potential in developing cultivation businesses. Productive age usually has a sense of curiosity and actively seeks information [18]. Apart from that, people of productive age also still have very high work ability, enthusiasm and willingness to work to fulfill their living needs and the living needs of their families.

Table 3. Characteristics of fish cultivators in Cikancung village

Characteristics of Fish Farmers	Category	Total	Percentage
Age	<15	0	0
	15-64	23	77
	>64	7	23
Total		30	100
Gender	Male	27	90
	Female	3	10
Total		30	100
Formal Education Level	Elementary school	9	30
	Junior High School	5	16,7
	Senior High School	13	43,3
	College	3	10
	No school	0	0
Total		30	100
Work experience	Low (≤ 1 time)	0	0
	Moderate (2-3 times)	15	50
	High (> 3 times)	15	50
Total		30	100
Livelihood as a Fish Farmer	Primary	5	16,7
	Side	25	83,3
Total		30	100
Counseling and Training	Low (≤ 1 time)	20	66,7
	Moderate (2-3 times)	6	20
	High (> 3 times)	4	13,3
Total		30	100
Number Of Family Members	Low (≤ 4 people)	19	63,3
	Moderate (4-6 people)	8	26,7
	High (>10 people)	3	10
Total		30	100

The cultivators who are male are 90% or as many as 27 people, while the cultivators who are female are 10% or as many as 3 people. This happens because men have the responsibility to earn a living, namely by carrying out fish farming. The fish cultivating community in Cikancung Village still considers that the work of raising and cultivating fish is classified as hard work so that fish farming is only appropriate for men.

The level of formal education obtained by cultivators is generally not evenly distributed, but the majority are in the intermediate category with ≤ 12 years. The occurrence of differences or unequal levels of education among the majority of cultivators can also be called educational inequality. High educational inequality indicates a low level of production efficiency and tends to continue the problem of poverty between generations [19]. The occurrence of educational inequality can be caused by household characteristics, the child's personal condition, the quality of education and the rate of return from education (Saifuddin [19] According to Wulur et al. [20] the level of education is one of the most important social aspects for fish farmers because it influences technology adoption, because if the level of education is low it is difficult to accept new technology. Even though most of the fish farmers in Cikancung Village have a secondary level of education, the cultivation method used is still classified as traditional cultivation as evidenced by the fish feed used in cultivation activities, most of which only rely on food from nature alone without providing additional feed. This occurs because most fish farmers in Cikancung Village make fish farming activities a side income. Most fish cultivators use fish farming as a side activity because of the lack of capital owned by the cultivators, lack of knowledge and skills possessed by the cultivators.

The work experience of fish farmers in Cikancung Village generally has medium to high work experience. There are 15 cultivators who have moderate work experience ranging from 5-10 years, with a percentage of 50%. High work experience of 15 people with a percentage of 50%. According to Ulfa et al. [21] work experience is related to the skills they have, the longer they study a business field, the higher the skills they have. These skills will achieve good success in the fish cultivation

business, so that they will indirectly affect production results.

Most of the fish cultivators are 25 people with a percentage of 83.3% carrying out fish cultivation as a side business and 16.7% as many as 5 people carrying out fish cultivation as their main livelihood. Most of the respondents have their main livelihood, namely as rice farmers, traders, and village government employees, while fish cultivation is used as a side business because they only use existing land and the potential natural resources that support fish cultivation. They are not serious about running a fish cultivation business so that the fish production results are less than optimal and the income generated from the fish cultivation business is also small.

Cultivators generally participate in counseling in the low category. A total of 20 people with a percentage of 66.7% took part in counseling in the low category (≤ 1 time), 6 people with a percentage of 20% in the medium category (2–3 times), and 4 people with a percentage of 13.3% in the high category (>3 times). Cultivators included in the high frequency of counseling are mostly heads of fish cultivator groups and are people who make fish farming their main livelihood. They usually take part in counseling in groups or individuals or anjangsana. The cultivators with low and medium frequency are cultivators who participate in mass counseling. According to instructors from the Food Security and Fisheries Service, mass outreach is rarely carried out because of budget constraints, at least for consumption.

The fish farming community in Cikancung Village based on the number of family members, most of the cultivators have small family members (1-4 people) of 19 people with a percentage of 63.3%. According to Wulur et al [20] the number of family members is an important factor because the greater the number of family members, the greater the number of household needs that must be met. A family that has many members will have great needs. The larger the household size, the greater the number of household members, so the greater the burden on the household in meeting their daily needs. If the cultivator's income is not enough to meet his living needs, this will cause problems for the family's welfare. Cultivators in Cikancung Village have additional sources of income from other

jobs so they are able to meet their daily living needs.

3.2 Social Description of Fish Farmers

3.2.1 Gender roles

a. Productive Role

The productive role is dominated by the husband as the main breadwinner for the family. Respondents work as fish cultivators, while some of the wives work as small food vendors (stalls) and clothing tailors, so that the wife also acts as an additional breadwinner for the family. The percentage of respondents in the division of productive activity roles in fish farming business activities can be seen in Table 3.

Based on Table 4, fish farming business activities are dominated by men (husbands) starting from seeds, seed selection, seed distribution, feeding, pest and disease control, harvesting, to selling fish. As for fish farming activities, most of the respondents' wives usually only help in weighing fish, packaging fish for sale and also determining fish prices and only a few women help in selecting seeds, spreading seeds, feeding and harvesting. In the fish selling process, women also help, although their percentage is only small.

b. Reproductive role

Reproductive role means a role that does not receive payment or wages in cash or the like. This reproductive role is usually carried out by women (wives) who can look after family

members of the workforce, namely husbands and future workforce candidates, namely children. The roles of men (husbands) and women (wives) in carrying out reproductive activities are more dominated by women (wives), which include food provision, parenting/care for children, children's education, and general household work. The notion that only the wife is responsible for work in the domestic sector is not always true, because in reality, even though they rarely do this, husbands also work together in household chores. Cooperation between husband and wife also covers children's education, health of family members, management of family savings, and procurement of household appliances. The percentage of respondents in the role of reproductive activity can be seen in Table 5.

c. Role of community management

Community roles can be seen from the aspects of activities participated in in a society. The social role of the fish farming community in Cikancung Village is attending religious events and for the wives of Village government employees being active in PKK activities. Attending religious events is usually agreed upon by the husband and wife.

3.2.2 Kinship

Kinship is a form of social relationship that occurs due to heredity (consanguinity) and marriage (affinity) [22]. The existence of a kinship system occurs when someone is said to have blood ties or direct ties and marriage ties or indirect ties.

Table 4. Productive activity role percentage data fish cultivator community in Cikancung village

No	Productive Activity	Percentage (%)			
		Woman	Man	Woman/Man	Total
1.	Providing fish seeds	0	93	7	100
2.	Seed selection	0	94	6	100
3.	Spreading seeds	0	94	6	100
4.	Feeding	0	84	16	100
5.	Control of pests and diseases	0	100	0	100
6.	Harvesting	0	80	20	100
7.	Preparing fish and Selling fish	0	94	6	100
8.	Weighing fish for sale	6	88	6	100
9.	Packing fish for sale	6	88	6	100
10.	Setting the price of fish	3	77	20	100

Table 5. Data on the role of reproductive or domestic activities fish farming community in Cikancung village

No	Domestic Activities	Percentage (%)			
		Woman	Man	Woman/Man	Total
1.	Food preparation	97	3	0	100
2.	Caring for/taking care of children	97	3	0	100
3.	Children's education	17	3	80	100
4.	Health of family members	13	10	77	100
5.	Savings	23	3	74	100
6.	Procurement of household equipment	60	3	37	100
7.	General household work	97	3	0	100

The kinship of the fish cultivating community in Cikancung Village is formed in terms of cooperation in running a fish farming business. Some cultivators still have close relatives, namely blood relations. The people in Cikancung Village have been doing fish farming activities for a long time so that the kinship ties are very strong. If they need workers, they will prioritize or look for family or closest relatives. This is in accordance with research by Borneo et.al [23] which states that the kinship that occurs between fishing communities is in terms of cooperation between fishermen themselves. This cooperation is usually based on family or close neighbor relationships because it is more trustworthy.

3.2.3 Social stratification of society

Social stratification can be interpreted as a system in which there are groups of people composed of several layers of society based on ownership of assets, power and authority of a person. Social stratification is also a way to classify a large number of human groups into a hierarchy according to their special rights [24]. The social stratification of the people in Cikancung Village can be divided into three, namely high strata, medium strata and low strata. The social stratification of the people in Cikancung Village can be seen in Table 6.

Table 6. Social stratification of fish farming communities in Cikancung village

Community Group	Stratification/Layers
Village head	High
Ulama, Community Figures, and Teachers	Moderate
Ordinary People	lower

Based on Table 6, the pattern of stratification that occurs illustrates that society is rational and open because the influence of formal figures is at a high level, namely the village head as the main

reference. The people of Cikancung Village have a rational character because the chosen village head has sufficient education and also has good fish cultivation skills. According to Fahrudin et al. [25] the role of the village head includes being a reference and communication link between the government and the community, being a reference in solving problems experienced by the village community, and being an example for the community.

The Head of Cikancung Village is a cultivator who has many cultivation ponds and also cultivates fish and is an active member of the Pokdakan. The village head is made a role model for the community in fish farming. The Village Head also fully supports the community, especially young people who are starting to become interested in running a fish farming business.

Religious figures and community leaders have a very important role, although they are not the main reference because the entire community of Cikancung Village embraces Islam so the opinion of the ulama is needed in carrying out their social life so that it does not conflict with Islamic law. Community figures such as the head of Pokdakan also play a role in leading the fish cultivator group in Cikancung Village to make it more advanced and developed. Ordinary people occupy the lower strata such as farmers (rice farmers, fish farmers/cultivators, holiculture farmers), workers and traders. They become part of solving problems in society.

3.2.4 Programs from agencies and government

In 2023, the Bandung Regency Food Security and Fisheries Service has provided a program of assistance for 6,500 Nirwana tilapia fish seeds with a seed size of 5-8 cm, 1,600 kg of fish feed with a minimum of 28% protein, and also pond preparation tools and materials including a water

pump of 2-3 inches, digital scales with a capacity of 50-100 kg, water quality tools in the form of DO Meters and HDPE plastic for fish cultivator groups in Cikancung Village. Cikancung District, Bandung Regency. The Fish Cultivator Group in Cikancung Village does not specialize based on the type of fish commodity cultivated. The assistance program from the Department can motivate farmers to carry out fish cultivation activities.

Apart from that, the Cikancung Village Government has also implemented a fish cultivator development program through a food security program. The food security program is one of the development priorities in the Government Work Plan (RKP). It is very important to carry out this food security program with the aim of creating quality, independent and prosperous Indonesian people through the availability of sufficient, safe, quality, nutritious and diverse food that is evenly distributed throughout Indonesia and affordable by people's purchasing power. According to Purwaningsih [26] the concept of food security can be applied to 4 aspects, namely food availability, food safety, food equity and food affordability. Efforts to develop food security can be carried out through empowering humans to be able to manage and utilize natural resources efficiently and sustainably.

The food security program that has been implemented by the Cikancung Village Government is in the form of implementing the budikdamber system. This program is organized to meet basic human needs fairly and evenly [27]. Fish cultivation in buckets or better known as Budikdamber is the development of an aquaponics system that is cheap, easy and can be applied [28]. Budikdamber or cultivating fish in a bucket is a technique or method for raising fish and vegetables that is carried out together in a container [29]. The Budikdamber system can be implemented by utilizing yards to become productive land. This system only relies on a small area of land and is able to meet the nutritional needs of the community directly (Saputri and Rachmawatie 2020). The tools and materials used in budikdamber are also simple, easy to obtain, and you can use used, unused items. According to Suryana et al. [30] with the right techniques, budikdamber can provide solutions to the community's needs in fisheries cultivation and agriculture with capital costs that are affordable, practical, easy to do, more

economical and do not require large areas of land.

Types of fish and vegetables that are commonly used in the Budikdamber system are catfish and kale. Catfish were chosen because they have high and strong adaptability and can survive in a polluted environment. Catfish also have their own characteristics because they have additional respiratory organs called arborescents which enable catfish to be kept in a flexible environment with high stocking and low oxygen levels [31]. Meanwhile, kale was chosen because this vegetable is relatively cheap, easy to grow, and can grow faster than other plants [32]. According to Setyaningsih et al. [33] kale can also increase the absorption of inorganic nitrogen which causes the water in the bucket to have a high dissolved oxygen content. This is beneficial for the life of the catfish being bred.

This Budikdamber system can be useful in supporting food security in social, ecological and economic aspects for village residents in a sustainable manner [34]. The economic value of garden products can support household food security, assuming that the money obtained from product sales is used to buy food needs or for personal consumption, so it is hoped that it can improve the economy and provide sufficient food sources.

3.3 Social Factors that Influence Fish Cultivation Businesses

3.3.1 Social factors that increase fish farming business

1. Age structure

The age structure of fish cultivators has a positive effect because the age of most fish cultivators in the productive age group shows that they have good physical and mental abilities and have great potential in developing cultivation businesses. Meanwhile, older age cultivators do not mean they can no longer be productive in earning money. , they also still have productivity in the fish cultivation business. They are quite experienced and skilled in traditional fish farming.

2. Gender roles

The roles of men (husbands) and women (wives) can support the running of the fish cultivation business, although almost entirely the fish cultivation business is carried out by the husband (men), but the role of women (wives) is usually to help provide feed when the husband is doing

other work, so that the role of women can help in the running of cultivation businesses.

3. Kinship

Kinship can support fish cultivation businesses in Lengkong Kulon Village. The cultivators in Cikancung Village have a strong kinship and several cultivators have family ties. Strong relationships can help them when they need labor in fish farming, they will ask their closest relatives or neighbors for help.

4. Social stratification

Social Stratification has an influence on fish farmers in Cikancung Village because the highest strata is the village head who is used as the main reference. The Cikancung Village Head is also used as a role model for successful cultivators because he has a tilapia and gourami fish cultivation business with a fairly large pond.

5. Character of fish farmers

Most of the fish cultivator respondents in Cikancung Village are cultivators who have the character of a high willingness to learn, perseverance and independence. The existence of these positive characters can certainly improve the fish farming business being carried out.

3.3.2 Social factors that obstacle fish cultivation business

1. Unequal education levels

The level of education attained by fish farmers in Cikancung Village is not evenly distributed, but the majority of education attained is at elementary and high school levels. The differences in education pursued by fish cultivating communities lead to educational inequality which results in lower levels of innovation, lower levels of production efficiency, and a tendency to transmit poverty across the world. The many social factors that can hinder fish cultivation in Cikancung Village occur because the level of education attained by the fish cultivating community is not evenly distributed so that they have different background knowledge and basic skills in cultivation so that if counseling and training is held, of course it requires more effort and The treatment given to cultivators is of course different. This is one of the factors hampering fish cultivation in Cikancung Village.

Cultivators gain fish cultivation skills based on experience and inheritance from their parents. They don't adopt cultivation technology because they don't understand it, they continue to cultivate fish traditionally, which they have been doing for a long time.

2. Livelihood as a side cultivator

A livelihood as a fish farmer is generally a side income because the farmer only uses existing land and exploits the potential of abundant water sources. They are not serious about running a fish cultivation business so that the fish production results are less than optimal and the income generated from the fish cultivation business is also low.

3. Lack of counseling and training

There is a lack of counseling in Cikancung Village so that cultivators pay less attention to seed quality, seed stocking density and frequency of feeding. In fact, with the land we own and abundant water resources, fish farming can be a business prospect that can improve the community's economy. The training that the cultivators have participated in is not optimal in practice due to lack of capital and Pokdakan does not have a cooperative to borrow money at low interest. There needs to be intensive guidance by related institutions, such as counseling and training so that cultivators are more skilled, diligent and serious in managing their businesses.

4. Lack of awareness of local communities regarding waste disposal

The lack of awareness of local communities regarding the disposal of waste into waters without knowing the consequences that will occur on the quality of these waters is felt by several fish farmers in Cikancung Village. This can certainly affect the fish cultivation business for farmers because it can cause water pollution, thereby disrupting aquaculture activities in rivers, lakes and others.

4. CONCLUSION

1. The social condition of fish cultivators is that they are of productive age with a secondary level of education. Livelihoods as fish cultivators are sidelines, this makes cultivators less serious in carrying out fish farming business so that their

production results are small. Most of the fish farming businesses are carried out by men as breadwinners, while women play a role in domestic activities, the role of women in fish farming is only to help provide feed. The social stratification of the cultivating community in village society is at the lower strata, namely as ordinary people.

2. Social factors that increase fish cultivation in Cikancung Village include age structure, gender roles, kinship, social stratification, and the character of fish farmers. Social factors that hinder fish cultivators in developing their businesses are unequal levels of education, lack of counseling, training and cultivation livelihoods which are side jobs so they are less serious about running their businesses.

5. RECOMMENDATION

- 1 There is a need for ongoing research regarding socio-economic mapping by using variables and other methods to monitor What are the social and economic conditions of the fish farming community in Cikancung village, cikancung district, bandung regency.
- 2 There needs to be more intensive outreach and training activities to fish farmers in cikancung village so that business activities are carried out Implemented can be more advanced and developed.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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