

Life Survival Strategy of Bajo Fishermen in Achieving Psychological Welfare Amidst Climate Change

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Abstract / Abstrak

Climate change has significant impact on fishing communities. The decline in fishermen's catches affects economic and psychological welfare. A traditional group that is able to maintain its existence as fishermen is the Bajo tribe in East Tanete Riattang District, Bajoe Village, Bone Regency. This research aims to describe survival strategy by Bajo fishermen in climate change, identify challenges in implementing strategy, and describe the influence of strategies on conditions in achieving psychological welfare. The research uses qualitative phenomenological approach method. Data was obtained from observations and interviews. Research results show that Bajo fishermen apply active, passive, and network strategy to fulfill economic needs. In implementing these efforts, fishermen face challenges of technical problems, decreased catch quality, and incompatibility with government programs. Nevertheless, the strategies have had a positive impact on economic prosperity and also positive impact on the psychological well-being of Bajo tribe fishermen, which are indicated by six aspects.

Perubahan iklim berdampak signifikan bagi komunitas nelayan. Penurunan hasil tangkapan nelayan mempengaruhi kesejahteraan ekonomi dan psikologis. Salah satu kelompok tradisional yang mempertahankan eksistensi sebagai nelayan adalah suku Bajo yang berada di Kecamatan Tanete Riattang Timur, Kelurahan Bajoe, Kabupaten Bone. Riset ini bertujuan mendeskripsikan strategi bertahan hidup yang dilakukan nelayan suku Bajo dalam menghadapi perubahan iklim, mengidentifikasi tantangan dalam melakukan strategi tersebut, serta mendeskripsikan pengaruh strategi tersebut terhadap kesejahteraan ekonomi dalam mencapai psychological welfare. Riset menggunakan metode kualitatif pendekatan fenomenologi. Data diperoleh dari observasi dan wawancara. Hasil riset menunjukkan bahwa nelayan Bajo menerapkan strategi aktif, pasif, dan jaringan dalam pemenuhan kebutuhan ekonomi. Pada penerapan upaya tersebut, nelayan dihadapkan dengan tantangan permasalahan teknis, penurunan kualitas tangkapan, dan ketidaksesuaian program pemerintah. Meskipun demikian, strategi yang dilakukan memberikan dampak positif pada kesejahteraan ekonomi dan turut berdampak positif terhadap psychological welfare nelayan suku Bajo yang terindikasi dari enam aspek.

Keywords / Kata kunci

Climate Change; Life Survival Strategy; Bajo Fisherman; Psychological Welfare.

Perubahan Iklim; Strategi Bertahan Hidup; Nelayan Bajo; Psychological Welfare.

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Introduction

One of the global issues that is currently attracting worldwide attention is climate change. According to the United Nations (UN), climate change is a long-term change in temperature and weather patterns (Andayani & Rosalina, 2022). This phenomenon initially occurred due to solar activity and cycles, but human activity has been indicated as the cause of climate change since the

1800s (PBB Indonesia, 2022). The National Center for Environmental Information states that global surface temperatures as of May 2024 have increased by 1.18°C compared to the average temperature in the 20th century. Above-average global temperatures in May have occurred consecutively since 1976 (NCEI, 2024). Furthermore, BMKG stated that May 2024 was recorded as the month with the highest average temperature since 1981 (Sudirman, 2024). The

increase in temperature has impacted various aspects of people's lives, one of which is the lives of coastal communities.

Communities living in coastal areas, especially fishermen as a group that depends on marine resources, are highly vulnerable to the impacts of climate change (Irwan et al., 2022). Climate change has various impacts on marine conditions, including fish migration to cooler waters due to rising sea surface temperatures, coral reef damage due to increased carbon dioxide levels in the ocean, and increased frequency of storms (Direktorat Statistik Ketahanan Sosial, 2023). These conditions threaten the stability of catches and the economy of fishermen and have an impact on the psychological well-being of fishermen, as indicated by increased anxiety (Kurniadi et al., 2023; Prasita et al., 2023).

One of the traditional fishing communities in Indonesia that is synonymous with maritime culture is the Bajo tribe (Haerulloh et al., 2021). The Bajo tribe lives in various regions in Indonesia, including Bone and East Tanete Riattang. The Bajo tribe is also known as sea nomads. The Bajo tribe lives alongside the sea to support their activities, such as fishing, eating, and religious rituals. In addition, the Bajo tribe upholds the belief of their ancestors that the sea is a heritage that must be protected and preserved (Machmud & Alim, 2022; Kasmini & Mursalim, 2023). Although they have mixed with other communities on land, the majority of the Bajo tribe still make fishing their main profession. The continued existence of the Bajo fishermen today shows their efforts to survive and meet their economic needs in the face of worsening climate change.

Survival strategies are an individual's ability to apply various methods to overcome problems in their life (Suharto in Tarigan, 2018). Based on Suharto (2009), survival strategies for dealing with economic problems are grouped into active strategies, passive strategies, and network strategies. Active strategies refer to optimizing all potential to increase income and involve other efforts, such as increasing working hours, seeking additional employment, and developing a business. Passive strategies emphasize efforts to minimize daily expenses, such as food costs and social activities. Networking strategies involve utilizing social networks and interactions to obtain assistance or support, both in formal and informal settings (Suharto in Putri, 2019).

Human civilization is expected to create prosperous human beings. Indonesia has 77% of

its territory covered by water, which contains a variety of resources (Setiawan, 2023). Fishermen, as a group that is in direct contact with the sea, are the main actors in the management of marine products before they are distributed to the community. Therefore, the welfare of fishing communities deserves attention, especially the psychological welfare of the Bajo tribe fishermen. Psychological welfare is a term used to describe an individual's psychological health based on the fulfillment of psychological functioning criteria (Aprilia et al., 2023). Psychological welfare is also known as psychological well-being. According to Ryff (2019), psychological welfare consists of six aspects: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance.

The aspect of autonomy emphasizes that individuals are capable of making their own choices, evaluating themselves, and resisting social pressure to think and behave in a certain way. The aspect of environmental mastery emphasizes that individuals can manage their surroundings, use opportunities in their environment effectively, and create contexts that suit their personal needs and values. The aspect of personal growth relates to self-awareness and the achievement of personal potential, as well as seeing oneself as an individual who develops over time. The aspect of positive relations with others includes warm and trusting bonds with others, concern for the well-being of others, understanding of reciprocal social relationships, and the capacity for empathy and affection. The aspect of purpose in life emphasizes the individual's view that life has meaning, direction, and purpose. Finally, the aspect of self-acceptance refers to a positive attitude towards oneself and the capacity to see one's negative sides (Ryff, 2019).

In light of this, this study aims to describe the strategies and efforts undertaken by Bajo fishermen in response to climate change; identify the challenges faced by Bajo fishermen in implementing these strategies; and describe the impact of the strategies implemented by Bajo fishermen on economic well-being in achieving psychological welfare. This research is useful as a source of psychological studies related to the impact of climate change on community welfare and enriches the literature for academics, students, and scholars so that they can provide insights into the phenomenon of climate change that affects the economic welfare in achieving the psychological welfare of fishing communities.

Previous similar studies have discussed strategies for meeting needs, survival strategies on land, income levels during the west monsoon season, and the role of family members in facing challenges faced by Bajo fishermen (Asriadin et al., 2019; Umar & Syarif, 2019; Ramadhani, 2022). However, these studies are limited to discussions of the economic welfare of Bajo fishermen. This study aims to determine the impact and survival strategies employed by Bajo fishermen in facing climate change. Furthermore, this study offers novelty through a study that aims to identify the influence of the survival strategies of Bajo fishermen on economic welfare in achieving psychological welfare.

Method

This research was conducted in Bajoe Village, Tanete Riattang Timur Subdistrict, Bone Regency, South Sulawesi, using qualitative methods and a phenomenological approach. The phenomenological approach seeks to understand events experienced by humans within the framework of society's thinking and behavior as understood and thought by the subjects (Nasir et al., 2023). This approach was chosen to determine the Bajo fishermen's interpretation of the phenomenon of climate change that has impacted their lives. The informants consisted of five Bajo fishermen who were selected using judgment sampling. The criteria for the subjects were that they were Bajo fishermen, aged 20-65 years, had more than 10 years of experience as fishermen, and were willing to be interviewed.

This research data was obtained through direct observation and in-depth interviews as primary data, supported by secondary data from literature reviews. Observations were conducted by systematically recording the daily activities of Bajo fishermen, including the fishermen's activities themselves, the roles of their wives and families, and the environmental conditions surrounding their living areas. For in-depth interviews, a semi-structured approach was used, tailored to the characteristics of each informant, focusing on six dimensions of psychological welfare according to Ryff (2019), such as questions about autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Examples of questions asked included: "Do you feel there has been a change in fishing methods?" and "What do you do to adapt to weather changes when fishing at sea?" Data collection was conducted intensively over five days in two

periods, namely on May 11-12, 2024, and June 6-8, 2024, with a total of six observations and interviews. To ensure data validity, a confirmability test was used to ensure that data interpretation was supported by objective and accountable evidence, so that the research results could reflect the actual reality.

Primary data analysis of interviews was conducted using thematic analysis techniques consisting of six stages according to Braun and Clarke (in Dawadi, 2020), namely: familiarizing oneself with the data; creating initial codes; constructing themes; examining themes; defining themes; and writing reports. Meanwhile, primary data analysis in the form of observation results was conducted by interpreting the behavior exhibited by informants. Secondary data from literature studies were analyzed by examining relevant content to answer the research questions. Data analysis was conducted using a theory-driven approach by referring to theory in interpreting research data.

Table 1
Participant Demography

Initials	Age	Work Experience
HR	40 years	>20 years
AH	43 years	>20 years
SY	32 years	>20 years
SB	31 years	>17 years
SD	31 years	>10 years

N=5

Results

The results of this study consist of observations and interviews conducted with the subjects. Based on the observations, the Bajo fishermen have a close relationship and strong solidarity with one another, as seen from their frequent interactions and casual style of language when talking to each other. In general, the Bajo fishermen set out to sea in the afternoon and return in the morning, with the duration of their fishing trips varying. Most Bajo fishermen use small wooden boats equipped with engines that can carry around 3-5 people. In addition, Bajo fishermen still maintain Bajo tribal traditions, as seen in their houses built facing the sea and the storage of objects typical of the Bajo tribe, such as flags and fabrics used in certain events.

Based on the interviews conducted, informants have several strategies as a form of effort to survive amid the impacts of climate change. In addition, challenges faced by

informants in implementing these strategies were also identified. Furthermore, there is a positive influence of the strategies implemented by informants on economic welfare in achieving psychological welfare.

The Bajo Tribe Fishermen's Strategy in Facing the Impacts of Climate Change

Active Strategy

Based on research findings, one of the informants' strategies for dealing with climate change is to increase the frequency of fishing trips to catch fish to around 3 days. This is different from previous years, which required less time to obtain the target catch. After conducting observations in local settlements, it was found that some fishermen even spent up to a week at sea. This also depended on sea weather conditions, which were increasingly favorable during fishing trips. In addition, informants also increased the distance of their fishing trips by traveling further than in previous years and searching for new locations. This was conveyed by informant 3:

"29 Mil dulu, sekarang 397 mil, jauh sekali itu dek. Paling lama itu 2 jam lah, kalau mau terus kesana toh, tidak singgah-singgah"

"It used to be 29 miles, now it is 397 miles, that is very far. It would take 2 hours at most if I keep going, without stopping" (Informant 3; 216-216)

Another effort made by the informants was to maximize fishing activities by applying techniques mastered by the Bajo tribe, namely spearfishing while diving. This is in line with what was found after observing several boats owned by Bajo fishermen. There are tools stored in the boats, in the form of simple spears and diving goggles typical of the Bajo tribe, which are made of wood. This effort is made when their fish catch is low, as stated by informant 4:

"iya... kalo dirasa tidak dapatmi ini ikan, turun lagi menyelam. Cari gurita, sotong"

"yes... if it feels like I am not getting fish, I will dive. I look for octopi, cuttlefish" (Informant 4; 124-124)

Bajo fishermen are also exploring new techniques for fishing, such as modifying the bait they use. During a visit to the Bajo region, one fisherman showed us the bait he had made from used plastic drums, which he had painted with various spray paints to resemble small fish. Fishermen usually change the color of their bait regularly to attract fish. In addition, technological

advances are also being integrated into fishing activities. Changes in currents and fish availability due to climate change have forced fishermen to look for new locations. To do this, they use a special application that marks locations on their devices so that informants know the coordinates of locations they have passed through in the future.

Other efforts related to the impact of climate change were also found in changes to the shape of the boats used by Bajo fishermen. Based on interviews, informants modified their boats by increasing the height of the rear of the boat to make it more resistant to waves and other potential disasters. This was conveyed by informant 3:

"bagian belakang diubah bentuknya, dikasih tambah tinggi bagian belakangnya supaya kapal tidak tenggelam kalau naik ombak"

"the rear section was modified, making it taller so that the ship would not sink when the waves rise" (Informant 3; 905-905)

The strategies employed by Bajo fishermen are supported by the values of local wisdom that they embrace. One of these is a fighting spirit and perseverance in the face of adversity, known as *gagge'*. This enables Bajo fishermen to remain enthusiastic in their search for seafood despite facing various challenges. The *gagge'* spirit of Bajo fishermen is also accompanied by optimism. This is illustrated by one of the Bajo tribe's proverbs, which reads "*bara' salo' bekke na nia,*" meaning "be patient, tomorrow there will surely be sustenance." This optimistic attitude is one of the reasons for the patience and determination of the Bajo tribe fishermen in seeking marine resources amid the impacts of climate change. This was conveyed by informants 3 and 2:

"harus ki.. harus kuat. harus ki kuat itu, harus ki gagge itu. kalo nda gagge ki, nda bisa ki itu"

"we have to... we have to be strong. We have to be strong. If we are not strong, we will not be able to do it" (Informant 3 : 709-709)

"ee.. karena kita itu mengharapakan hari esok juga, istilahnya kalau nda hari ini besok lagi. Namanya rejeki kan begitu, nda menentu. Semangatnya disitu"

"well.. because we also hope for tomorrow, meaning that if it doesn't happen today, it will happen tomorrow. That's how fortune works, it's unpredictable. That's where the spirit lies" (Informant 2: 467-470)

The Bajo tribe's philosophy of life and local beliefs also support fishermen in maintaining their existence. There are three philosophical values of the Bajo tribe fishermen, which are "*Same iru pamanangne masapaa, kallumanne pakasapaang je, essaa sadiri jamanne pakasapaang je*", meaning "The Bajo tribe comes from the sea, their whole life is in the sea, and they will continue to go to the sea forever". This philosophical value shows the Bajo tribe's strong attachment to the sea, which strengthens the Bajo fishermen in continuing their maritime activities. In addition, the Bajo fishermen have a local belief that their ancestors always protect them when they go to sea, so the Bajo fishermen are not afraid when they have to spend days at sea to catch fish. This was conveyed by informants 5 and 4:

"orang bajo berani karena ada yang liati toh"

"the bajo people are brave because there is someone watching them" (Informant 5; 256-256)

"..kalau kencang angin di laut, seumpama takut ki, dianumi itu anuta.. disebutmi suruh jaga kita"

"if the wind is strong at sea, if we become afraid, we will then say it and tell it to protect us" (Informant 4; 220-220)

Passive Strategy

On the other hand, informants also manage their finances by saving money to reduce expenses. They must be smart in managing their finances and saving money when they have extra income as savings for unexpected situations in the future. The observations also showed the simplicity of the Bajo fishermen, which was reflected in their wooden houses with tall pillars, their boats, and their makeshift fishing gear, all of which demonstrated simplicity and good money management. This is in line with the results of interviews which explain that Bajo fishermen have a philosophy of living simply without extravagance, and when they have extra income, they choose to save it. This was revealed by one of the informants.

"kalau kemarin kita belanja ratusan ribu, sekarang dikurangi. Menghematlah, mungkin sekarang 20 ribu sehari. Kan anak-anak butuh biaya, belanja."

"if before we spent hundreds of thousands, now we have to cut back. We save money, maybe today it is 20 thousand a day. Because children need money, also for shopping" (Informant 2; 114-114)

"berhemat, dikasih cukup-cukupmi itu dulu, besok lagi toh cari"

"saving money, make it enough for the time being, we search again tomorrow" (Informant 5; 343-343).

Network Strategy

In implementing their strategies, informants also utilize their social networks and relationships to obtain assistance. The close bonds and mutual assistance among Bajo fishermen help informants cope with climate change. One example of this is regularly sharing strategic locations for fishing and helping each other when problems arise at sea, such as engine damage. This was conveyed by informants 5 and 1:

"pernah..teman saya kasih tau informasi lokasi atau tempatnya ikan kalau biasanya dilihat tidak adapi saya bawa ikan pulang. Saya juga tanya ke teman-teman atau kasih tau teman dimana tempatnya banyak ikan"

"I have... I usually tell my friend where to find fish when I see that he has not caught any. I also ask my friends or tell them places where there are a lot of fish" (Informant 5; 244-244)

"kita itu membangun hubungan. Bagaimana kita pergi.. jejaknya kemana.. kesini. Dari dulu sudah kompak memang, harus kita saling menolong. Ini kan turun temurun dari nenek moyang, harus kita bersatu, bercerai kita runtuh. Harus begitu pak, kita-kita, suku Bajo"

"we build relationships. How we go... where the trail leads... here. We have always been united, we must help each other. This has been passed down from our ancestors, we must be united, if we are divided we will fall. It must be so, sir, all of us, the Bajo tribe" (Informant 1: 203-203)

In addition to building good relations with fellow Bajo tribesmen, all informants described positive relationships with other communities. One informant mentioned that Bajo fishermen often receive government assistance through recommendations from communities that have established good relations with the Bajo tribe, one of which is the founder of the Bajo Tribe Nature School.

When informants are faced with minimal income or even losses, they will borrow from their superiors, who usually provide deposits.

"Untung ada namanya bos kan, yang terima kita punya ikan. disitu kita ambil biaya, pinjam istilahnya, pinjam dulu"

“Luckily, there is the boss, who accepts our fish. That is where we get the money, borrow it, so to speak, borrow it first”] (Informan 2; 91-91).

The positive relationships established among Bajo fishermen are consistent with observations made of their interactions with each other. Bajo fishermen display a high degree of familiarity and solidarity when they gather and speak in a relaxed manner. This is not only observed occasionally, but is encountered by researchers every time they visit Bajo fishing settlements, which may indicate an effort to maintain relationships with one another.

The Challenges Faced by Bajo Fishermen in Implementing Life Survival Strategies

The survival strategies employed by Bajo fishermen help meet their economic needs. However, in implementing these strategies, Bajo fishermen also face several challenges. These challenges hinder Bajo fishermen from maximizing their marine catch.

Technical Issues

This includes the threat of damage to engines or boats and running out of fuel due to storms when Bajo fishermen increase the frequency and intensity of their fishing trips. All informants mentioned that they had experienced these technical problems due to strong winds and waves. Similar things also happened to fishing equipment, which was damaged by sudden high waves, as described by the informants.

“Yah kadang-kadang. Mesin rusak kah apakah.. Saya dulu sudah kena mesin.. Perahu patah-patah pagarnya”

“Well, sometimes. The engine would break or something else... I have had engine trouble before... The boat's fence broke” (Informant 1; 152-152)

“pulangki dulu kalau mau habis solar...pulangki dulu.. sabar miki, besokpi lagi.. kalau ada rejeki”

“we would go home first if the fuel is running out... we go home first... be patient, we do it again tomorrow... if there is fortune” (Informant 5; 265-265)

Observations show that several boats and fishing gear are no longer in use because they have been damaged by the waves. Some fishing gear is broken and parts of boats are destroyed, left abandoned on the seashore below the fishermen's houses.

Decline in Catch Quality

When fishermen extend their time at sea by several days, the quality of their catch declines, which leads to a drop in price when it is sold.

“Kalo terlalu lama. Kalo lembek mi isinya toh, loyo ikan, murah mi juga”

“If it is too long. If it the inside become mushy, the fish is limp, the price also becomes cheap” (Informant 3; 230-230)

Government Support

In addition, there is the challenge of government assistance that often misses its target. Fishermen acknowledge that the government often provides assistance to fishermen in coastal areas in the form of machinery. However, informants expressed disappointment because the assistance provided was considered inappropriate as it was given to individuals who were well-off, while those who were more in need of assistance were neglected.

“itu...bantuan.. bertambah. Karena bantuan-bantuan yang disarankan oleh pemerintah itu diprogramkan pemerintah tapi.. bukan pada sasarannya pak. Salah-salah, bagi ke yang mampu.”

“it increases... Because the assistance recommended by the government... but it was not on target, sir. It was wrong, it was given to those who were capable” (Informant 1; 257-257)

The Influence of Life Survival Strategies of Bajo Fishermen on Economic Welfare in Achieving Psychological Welfare

The survival strategy implemented by Bajo fishermen supports them in obtaining sufficient marine resources, thereby positively impacting their economic welfare, especially in terms of meeting the needs of informants. This is demonstrated by the satisfaction of Bajo fishermen with their income from their catches.

“cukup, seandainya kalau tidak cukup, kenapa tidak berhenti kerja. Masa nda mau berhenti kalau nda cukup”

“it is enough, if it were not enough, why not stop working. Why not stop if it is not enough” (Informant 2; 143-143)

“iye tercukupi ji kebutuhan, cukup untuk saya..”

“yes it is sufficient for my needs, enough for me...” (Informant 4; 372-372)

The condition of Bajo fishermen after implementing life survival strategies then affected their psychological welfare. This can be seen through an analysis of the six aspects of psychological welfare described by the informants. Interviews conducted with informants provided an overview of the aspects of psychological welfare among Bajo fishermen.

Autonomy

The aspect of autonomy relates to an individual's ability to make their own choices, evaluate themselves based on personal standards, and resist social pressure to behave and think in a certain way (Ryff, 2019). Among the Bajo fishermen, the aspect of autonomy is evident in their decision-making based on independent judgment in their daily lives. Based on interviews, the desire to become a fisherman is based on their own will because of their love of sea activities. They have no interest in becoming crew members, even though the job is also related to the sea. Informants feel that being a fisherman gives them greater control over their work.

"kalo ikut-ikut sama orang ki rugi. kalo adami pengalamanku sama orang lain ikut, ya beli mi ki kapal toh sendiri"

"If you go with someone else, you'll lose out. But once you gain experience, you can buy your own boat" (Informant 3; 1440-1441)

In addition, informants did not show any pressure to replace their simple boats with larger ones or more sophisticated fishing gear. This decision involved considerations of cost and skill in using the boats and equipment they owned. Bajo fishermen explained that larger boats could carry more fish, but also required greater costs. Furthermore, Bajo fishermen also feel that it is easier and they are more skilled at using small boats. This was conveyed by informants 4 and 5:

"kalau kecil-kecil bagus... biar satu orang.. nda terlalu anu.. nda terlalu ribet"

"If it is small, it is good... just one person... not too much... not too complicated." (Informant 4; 525-525)

"nda pernah ada keinginan untuk tambah-tambah, kasih besar kapal, begitu saja.. seadanya"

"there was never any desire to add more, to make the ship bigger, just like that... as it is" (Informant 5; 620-620)

The use of small wooden boats by Bajo fishermen when searching for sea catches is consistent with researchers' observations when the subjects departed and returned from fishing using these boats. The Bajo fishermen's ability to make decisions based on their own assessments is also evident in the context of fishing in unfavorable weather conditions. The Bajo fishermen's knowledge of the marine environment helps them determine whether or not to go fishing, taking into account the conditions at the time.

Environmental Mastery

The aspect of environmental mastery relates to an individual's ability to manage their surroundings, use opportunities in their environment effectively, and create contexts that suit their personal needs and values (Ryff, 2019). The Bajo tribe's mastery of the environment, particularly in the context of fishing, can be seen from their explanations of the customs and actions they take in certain situations when carrying out maritime activities. The Bajo tribe's fishermen have knowledge and insight into the weather and the marine environment, as well as the resources within it. This knowledge is obtained from teachings passed down from generation to generation and from their own experiences at sea.

Knowledge of the marine environment covers various things, one of which is related to the weather. Bajo fishermen can recognize signs that indicate rain is coming, so they can take shelter in advance. When rain falls suddenly and the weather becomes dangerous, informants usually set up tents in places they deem safe and wait for the bad weather to subside. This demonstrates the ability of Bajo fishermen to adapt to the external environment. This was conveyed by informants.

"Buang jangkar..pasang tenda..tidak ada tempat berlindung. Tabah, tabahan saja. Sampai kapan teduh. Bilamana teduh tetap mencari, kalo tidak, pulang saja. Begitu saja"

"Drop the anchor... set up the tent... there is nowhere to take shelter. Be patient, just be patient. Until the rain stops. If the rain stops, I will keep looking, if not, just go home. That's all." (Informant 1; 126-126)

"dari kakek nenek moyang toh, kalau dilihat begitu aih pasti mau hujan ini"

"from our ancestors, if we see that it looks that way, we can tell it is definitely going to rain" (Informant 5; 665-665)

The Bajo fishermen's understanding of the marine environment also supports them in maximizing the benefits of the available marine resources. The Bajo fishermen do not limit themselves to searching for only one type of commodity. In addition to fish, Bajo fishermen also catch sea cucumbers, octopus, cuttlefish, and lobsters. The search for various commodities is based on observations made when researchers visited the homes of Bajo fishermen and showed the results of their catch in the form of sea cucumbers obtained by the subjects. Various techniques are used by Bajo fishermen according to the marine resources available in the environment, for example, using a variety of tools to catch fish such as fishing rods, spears, and fish traps, as well as modifying the fishing rods used. When at sea, Bajo fishermen can identify where fish gather by observing differences in the color of the sea water and the activity of seagulls. The informants also have knowledge about the times when fish feed more aggressively so that they can get more catches at those times. This was conveyed by informant 2:

“ikan itu kan, dia punya musim waktu makan juga. Jadi kita perlu pelajari itu semua. Oh jam-jam begini air naik, ikan mulai agresif lagi”

“fish have feeding seasons too. So we need to learn all about that. Oh, at this time of day the tide rises, and the fish become aggressive again.” (Informant 2; 209-209)

The Bajo fishermen's adaptation to the marine environment is also demonstrated by the actions they take when faced with critical situations. One of the obstacles often encountered by Bajo fishermen is engine failure while at sea. When faced with this situation, Bajo fishermen attempt to overcome it by repairing the engine themselves or signaling for help to other fishermen passing by their fishing grounds.

Personal Growth

The aspect of personal growth relates to self-awareness and the achievement of personal potential, as well as seeing oneself as an individual who grows and develops over time (Ryff, 2019). The aspect of personal growth among Bajo fishermen is demonstrated by their openness to new experiences and knowledge, especially in the context of fishing. In addition to experience, Bajo fishermen also gain a lot of knowledge related to fishing from each other, such as new techniques for obtaining marine products. Informants are

aware of the improvement in their skills over time as they gain more experience at sea. This was conveyed by informant 5:

“iya lebih baik ini sekarang caraku tangkap ikan dibandingkan dulu-dulu”

“yes, I am better at catching fish now compared to before.” (Informant 5; 447-447)

Positive Relations with Others

Positive relations with others include warm and trusting bonds, concern for the welfare of others, understanding of reciprocal social relationships, and the ability to empathize and show affection (Ryff, 2019). This aspect is clearly evident among the Bajo fishermen, who have strong and close relationships with fellow fishermen and family members. Informants explained that Bajo fishermen always help each other in obtaining marine products. This is done by helping each other when a fisherman's engine breaks down and sharing information about strategic fishing locations, especially when the weather is bad and fish are difficult to catch. In addition, Bajo fishermen often gather and chat casually about work and other matters, thereby increasing familiarity and strengthening bonds among them. Observations also show positive relationships between Bajo fishermen and their families and peers, as seen in their frequent and friendly interactions.

“pergi semua kita, disitu di.. pas di laut itu lepas karang berlabuh, baku.. baku anu, baku gandeng. Berunding bilang di sini ki nah. Baku anu semua ki di sana.. istirahat. Kalo malam cerita-cerita mi”

“We all go there, right there... right by the sea, anchor off the reef. We would discuss and decide to go there. We would all go there... rest. At night we share stories.” (Informant 3; 368-368)

“kita bantu kapalnya teman rusak, kalau sudah nda bisa, kita tarik”

“When our fellow fishers' boats are damaged, we try to help repair them; and if this is not possible, we tow them.” (Informant 2; 308-308)

Purpose in Life

The aspect of purpose in life emphasizes the individual's view that life has meaning, direction, and purpose (Ryff, 2019). Among the Bajo fishermen, this can be seen in the informants' explanations regarding their hopes and plans for the future. The life goals described by the Bajo

fishermen seem simple but measurable, such as the hope that their daily needs will be met, their children's future will be more secure, and they will be able to continue their profession as fishermen as they wish.

“kalau harapan sih ya istilahnya yang penting kita sudah tentram, nda usahlah kita cari pekerjaan lain. istilahnya membutuhkan modal apalagi kan. di laut ini kan yang penting kita sudah punya kapal, sudah punya apalagi.. mesin, sudah cukup. Cukup...”

“If we're talking about hopes, well... the important thing is that we are at peace, so there's no need for us to look for other jobs. Besides, it requires capital. At sea, the important thing is that we already have a boat, and what else do we need... an engine, that's enough. That's enough...” (Informant 2; 203-203)

“ya belajar juga, cari uang juga.. tapi nalurinya memang orang bajo itu”

“Yes, we still study and also earn money... but the Bajo people's instinct is indeed to fish.” (Informant 3; 1434-1434)

Self-acceptance

The aspect of self-acceptance includes a positive attitude towards oneself and the capacity to see one's negative sides (Ryff, 2019). The Bajo fishermen show self-acceptance as fishermen and awareness of their own capacities, strengths, and limitations. Informants acknowledged their abilities and skills as fishermen, such as their ability to dive longer than most people, which helps them catch fish. Informants also said that being a fisherman is part of the Bajo tribe's instinct and that they want to continue working as fishermen in the future. When Bajo fisherman encountering challenges such as unpredictable weather that negatively affects their catch, they tend to be accepting and deal with it patiently, as taught by their ancestors.

“Puasji tangkap ikan, alhamdulillah puaslah. Sebenarnya nelayan itu kalau lagi datang bagus-bagunya, kalah gaji-gaji pegawai”

“I feel satisfied with catching fish. Actually, being a fisherman is quite satisfying, because when conditions are favorable, the income can exceed an employee's salary” (Informant 2; 357- 357)

“Bah, sering ja na tawari juga orang lain, massunya kerja anu juga toh, tapi aih, saya berpikir aih bagus kayaknya pekerjaanku ini. Hehe”

“Yes, I am often offered other jobs by people. But I think that this job is good. Hehe” (Informant 3; 934-934).

Discussions

This study aims to describe the strategies and efforts made by Bajo fishermen in facing climate change; identify the challenges faced by Bajo fishermen in implementing these efforts; and describe the impact of the efforts made by Bajo fishermen on economic welfare in achieving psychological welfare. The results of the research show that Bajo fishermen apply three types of strategies based on Edi Suharto's survival strategy theory, consisting of active strategies, passive strategies, and network strategies. The challenges faced include technical problems, declining catch quality, increased fuel costs, and misdirected government support. The strategies that have been implemented show a positive impact on economic welfare and psychological welfare, as demonstrated by six aspects.

The Bajo tribe fishermen, as a traditional fishing community, still maintain their existence as fishermen until this day. This is in line with research conducted by Umar and Syarif (2019), which found that fishing is a means of survival for the Bajo tribe. This is not merely to fulfill their needs, but because the Bajo tribe has always had an inseparable connection with the sea. Over time, the impact of climate change has begun to be felt significantly by Bajo fishermen. Based on the findings, the most severe impact of climate change on the lives of fishermen has been felt since 2022. However, rather than focusing on the impact, the Bajo fishermen in Bone chose to focus on strategies they could implement to deal with these conditions. To that end, they implemented various strategies, which were then classified into three life survival strategies. Active strategies, by extending their time at sea, expanding their fishing range, and developing a variety of techniques to maximize the potential of available marine resources. This shows a difference from the research conducted by Ramadhani (2022), in which several Bajo fishermen in Central Buton, Southeast Sulawesi, switched to seaweed cultivation, construction work, carpentry, and daily labor. The Bajo fishermen in Bone continue to make fishing their main profession by developing various ways to survive despite the challenges posed by climate change. Although they have developed and adapted to the times, the

Bajo tribe in Bone has not forgotten their local wisdom and values.

Various strategies employed by the Bajo Bone fishermen are supported by local wisdom values that help motivate them to continue their fishing activities. Among these values is the philosophy of life, “*Same iru pamanangne masapaa, kallumanne pakasapaang je, essaa sadiri jamanne pakasapaang je*” which means “The Bajo tribe comes from the sea, their entire life is on the sea, and they will continue the activity on the sea forever.”

This philosophy of life has developed a very strong bond between the Bajo Bone tribe and the sea, so that the various difficulties they face do not prevent the Bajo Bone tribe from continuing to make the sea their main source of livelihood and a big part of their daily lives. This is in line with research conducted by Dai and Manahung (2020) on the Bajo Gorontalo tribe, which states that the Bajo tribe's life is very close to the sea and that the sea is seen as a separate culture that governs various aspects of human life relevant to the Bajo tribe. This is also in line with research conducted by Syarif (2021), which explains that the Bajo tribe in Bone is one of the communities that still upholds its local wisdom.

The nature of gagge' and the teaching of “*bara' salo' bekke na nia*” teach Bajo fishermen to remain enthusiastic and steadfast in facing difficulties in carrying out their maritime activities because it instills a never-give-up attitude and optimism about future fortune. With a positive mindset, the Bajo Bone fishermen can continue to survive amid climate change despite experiencing obstacles and look to the future with hope. Even on days when the Bajo fishermen have poor catches, their enthusiasm remains unbroken because they believe that good things will come in the future. This local wisdom plays a major role for the Bajo fishermen in implementing their survival strategies.

In addition to active strategies, Bajo fishermen also implement passive strategies to survive amid climate change. This is done by saving on expenses so that more income can be set aside for more pressing needs. These findings differ from those of Rahman (2018), who found that Bajo fishermen are not wise in spending their money because they use it for less useful purposes once they have earned an income. Bajo Bone fishermen recognize the importance of saving, especially when weather and sea conditions are unfavorable, so they make efforts to manage their money well.

Another strategy relates to social capital, namely networking. Since long ago, relationships among the Bajo tribe have been very close. This is also the reason why they always help each other. Based on previous research by Bahri (2017), it is said that the Bajo Bone tribe community has values that constitute their social capital, some of which are friendliness, both towards fellow Bajo tribesmen and outsiders (*Makacowe*), mutual trust (*Matappa*), high solidarity, and mutual assistance (*Situloh-tuloh*). With these relationships intact, Bajo fishermen actively share information about strategic fishing locations and help each other when problems arise.

In addition, they are also assisted by loans provided by their superiors and the government. When the income of Bajo fishermen is insufficient, they will borrow from their superiors or fellow Bajo tribesmen, as in the research by Umar and Syarif (2019) which found that one of the strategies of the Bajo tribe is to borrow from relatives to meet their needs.

The strategies employed by the Bajo Bone fishermen do not always run smoothly without obstacles. Based on research findings, several challenges faced by the Bajo fishermen were identified, one of which is related to technical problems such as the threat of damage to engines and fishing gear. Observations and interviews show that the number of fishermen with basic knowledge of engine repair is still minimal. Another challenge is related to the decline in the quality of catches and government assistance that is not on target. Research by Rosiana et al. (2023) also discusses the challenges in implementing survival strategies among fishing communities.

One of the challenges faced by fishermen is that government assistance is not distributed evenly to everyone. This has led the community to feel that the government is unfair. However, this has not dampened the spirit of the Bajo tribe to continue striving to maintain their livelihood as fishermen.

A new finding in this research is a study related to the impact of the strategies that have been obtained on the economic welfare and psychological welfare of the Bajo tribe fishermen. Based on the interviews conducted, it was found that Bajo fishermen feel satisfied with the fulfillment of their daily needs. This has a positive effect on the psychological welfare of Bajo fishermen, as shown by the description of the six aspects of psychological welfare.

In terms of autonomy, Bajo fishermen demonstrate the ability to determine their actions

based on personal will. They have the ability to assess the situation they face and take appropriate action in those circumstances. This is demonstrated by their decision to become fishermen based on their own desires and the initiative of the Bajo Bone fishermen to implement various survival strategies as fishermen. In addition, Bajo Bone fishermen do not show any signs of social pressure regarding their fishing methods. This is demonstrated by the attitude of Bajo fishermen who do not feel the need to replace their boats with larger ones and more sophisticated fishing gear, even though these are used by fishermen from other tribes. This attitude stems from their views and considerations regarding the costs and skills required to use the boats and equipment they have been using.

The aspect of environmental mastery among the Bajo Bone fishermen is clearly evident in their ability to take advantage of opportunities in the environment, particularly in the context of fishing. The Bajo Bone fishermen maximize the potential of existing marine resources by using a variety of techniques to exploit them. The Bajo Bone fishermen do not depend on just one marine commodity, but also vary their marine products so that they can catch more. The environmental mastery of the Bajo Bone fishermen is supported by local wisdom, especially teachings related to the sea and weather that have been passed down from generation to generation. Amid the threat of climate change, which brings various changes to the weather and makes it less stable, knowledge and insight into natural conditions are crucial in helping to obtain marine resources and protect oneself from the dangers of extreme weather conditions.

In terms of personal growth, Bajo fishermen show openness to new things that provide opportunities to continue developing their potential. The decline in fish populations due to climate change has forced the Bajo Bone fishermen to find new ways to survive as fishermen. This is done by learning and developing new techniques for catching fish. In addition, this aspect is also evident in the awareness of the Bajo Bone fishermen regarding the development of their abilities and skills in the context of fishing as they gain more experience.

The positive relations with others among the Bajo fishermen are demonstrated by the warm and strong bonds between the Bajo Bone fishermen. This can be seen in their behavior of helping each other when encountering difficulties at sea and sharing information about fishing locations with

abundant fish when sea conditions are poor. The Bajo Bone fishermen do not hide information from other fishermen. Outside of the context of fishing, Bajo fishermen show their closeness to one another by gathering and chatting casually with each other.

In the fifth aspect, namely purpose in life, it can be seen that the Bajo Bone fishermen have a simple purpose in life. This consists of the hope of fulfilling their daily needs as fishermen and securing a future for their children. Although simple, their purpose in life can be said to be clear and measurable, so that the steps to achieve it are clear.

The final aspect, self-acceptance, shows that the Bajo Bone fishermen accept themselves and are aware of their strengths, potential, and limitations. This awareness encourages Bajo Bone fishermen to continue developing and maximizing their abilities as fishermen, thereby improving their ability to survive amid various climate change issues. In addition, Bajo fishermen also show acceptance of the sometimes unfavorable conditions with patience, as taught by their ancestors.

The limitations of this research concern time and access to research subjects. Data collection was conducted by meeting with subjects six times over a period of two months, so the research results cannot reveal any changes that may occur in the subjects' activities or conditions in the long term. This is also related to the observation results, which cannot fully reveal the subjects' habits and daily lives. The limited access was due to the researchers' time constraints and the need to schedule interviews around the subjects' fishing activities, which often took several days to a week. Future research could collect data more intensively over a longer period of time.

Conclusion

The Bajo Bone fishermen are aware of the impact of climate change on their economic conditions. However, they are able to maintain their existence as fishermen by implementing survival strategies consisting of active strategies, passive strategies, and network strategies. Active strategies include increasing the distance and frequency of fishing trips, as well as developing various techniques integrated with local wisdom. Passive strategies include minimizing expenses, and networking strategies include building positive relationships to obtain assistance. In implementing these efforts, Bajo fishermen face challenges such as technical problems, declining marine product quality, and

misdirected assistance. Nevertheless, the efforts made by Bajo fishermen continue to have a positive impact on their economic and psychological welfare. The research findings show that the strategies of traditional fishing communities such as the Bajo Bone tribe need to be maintained and supported by the local government in order to be effective, so that fishermen can survive amid the threats of climate change with good economic and psychological welfare. In addition, the positive impact of the Bajo Bone tribe's philosophy of life and local beliefs demonstrates the importance of preserving local wisdom values.

Reference

- Andayani, A. R. D. & Rosalina, E. (2022). Mengenal Perubahan Iklim. Indonesia Research Institute for Decarbonization. <https://irid.or.id/wp-content/uploads/2022/08/FINAL-Mengenal-Perubahan-Iklim.pdf>
- Aprilia, H. D., Caturiani, S. I., Rachmawati, T. & Mahmud, I. (2023). The Identification of Psychological Welfare on the Social and Political Sciences Faculty Students, University of Lampung. *Srawung. Journal of Social Sciences and Humanities*, 2(4), 46-59. <https://doi.org/10.56943/jssh.v2i4.420?sid=semanticscholar>
- Asriadin, Kasim, S. S. & Sarpin. (2019). Strategi Bertahan Hidup Nelayan Tradisional Suku Bajo Dalam Pemenuhan Kebutuhan Keluarga (Studi di Desa Mantigola Kecamatan Kaledupa Kabupaten Wakatobi). *Journal of Neo Societal*, 4(2), 718-728. https://www.researchgate.net/publication/359844020_STRATEGI_BERTAHAN_HIDUP_NELAYAN_TRADISIONAL_SUKU_BAJO_DALAM_PEMENUHAN_KEBUTUHAN_KELUARGA_Studi_di_Desa_Mantigola_Kecamatan_Kaledupa_Kabupaten_Wakatobi
- Bahri, S. (2017). Modal Sosial Orang Bajo di Bajoe kabupaten Bone Sulawesi Selatan. *Jurnal Walasuji*, 8(1), 153-164. <https://doi.org/10.26858/sosialisasi.v1i2.51203>
- Dai, F. & Manahung, R. (2020). Kearifan Lokal Masyarakat Suku Bajo Studi Etnografi Nilai-Nilai Pendidikan Agama Islam dan Budi Pekerti Pada Praktek Ritual Keagamaan Di Desa Bajo Kecamatan Tilamuta. *Pekerti: Journal Pendidikan Islam Dan Budi Pekerti*, 2(1), 41-57. <https://journal.iaingorontalo.ac.id/index.php/pekerti/article/view/1267>
- Dawadi, S. (2020). Thematic Analysis Approach: A Step by Step Guide for ELT Research Practitioners. *NELTA Journal* 2020, 25(1-2), 62-71. <https://doi.org/10.3126/nelta.v25i1-2.49731>
- Direktorat Statistik Ketahanan Sosial. (2023). Statistik Sumber Daya Laut dan Pesisir. Badan Pusat Statistik. Jakarta.
- Haerulloh, A. A., Nurrohmah, S. L., Alim, M. & Ampera, T. (2021). Identitas Budaya dan Sejarah Suku Bajo di Bajo Pulau Pasca Nomaden. *Jurnal Metahumaniora*, 11(1), 75-90. <https://doi.org/10.24198/metahumaniora.v11i1.32115>
- Irwan, A., Ramdhon, M. M. & Juniarti, D. (2022). Nelayan Enggano dan Perubahan Iklim. (Ed. 1). Badan Penerbitan Fakultas Pertanian (BPFP). Bengkulu.
- Kasmini, N. & Mursalim, M. (2023). Perilaku Komunikasi Suku Bajo dalam Berinteraksi Perilaku Komunikasi Suku Bajo dalam Berinteraksi dengan Suku Bugis di Dusun Bajoe Kabupaten Bone. *Kareba: Jurnal Ilmu Komunikasi*, 12(1), 13-2. <https://doi.org/10.31947/kareba.v12i1.28011>
- Kurniadi, B., Minsas, S. & Helena, S. (2023). Sosialisasi dan Edukasi Mitigasi Bencana Perubahan Iklim bagi Masyarakat Pesisir Batu Ampar. *Jurnal Pengabdian kepada Masyarakat*, 8(4), 791-796. <https://doi.org/10.36312/linov.v8i4.1486>
- Machmud, H. & Alim, N. (2022). Merajut Harapan di Beningnya Air Laut: Keterampilan Sosial Anak Suku Bajo. (Ed. 1). SulQa Press. Kendari.
- Nasir, A., Nurjana, N., Shah, K., Sirodj, R. A., & Afgani, M. W. (2023). Pendekatan Fenomenologi dalam Penelitian Kualitatif. *Innovative: Journal of Social Science Research*, 3(5), 4445-4451. <https://doi.org/10.31004/innovative.v3i5.5224>
- NCEI. (2024). May 2024 Global Climate Report. <https://www.ncei.noaa.gov/access/monitoring/monthly-report/global/202405>
- PBB Indonesia. (2022). Apa Itu Perubahan Iklim? <https://indonesia.un.org/id/172909-apa-itu-perubahan-iklim>
- Prasita, V. D., Rosana, N., Kusuma, A. & Agustina, N. A. (2023). Pemanfaatan Sumberdaya Lahan Pesisir Berbasis Daya Dukung Lingkungan dalam Menghadapi Perubahan Iklim Global (Ed. 1). UHT Press. Surabaya.
- Putri, F. A. (2019). Strategi Bertahan Pedagang Pasca Bencana Kebakaran di Pasar Atas Kota Bukittinggi. *Jurnal Sosiologi Andalas*, 5(1), 35-48. <https://doi.org/10.25077/jsa.5.1.35-48.2019>
- Rahman, Andi. (2018). Suku Bajo dan Kemiskinan : Studi Kasus Kemiskinan Nelayan Suku Bajo di Desa Saur Saibus Kecamatan Sapeken

- Kabupaten Sumenep. (Skripsi) Universitas Islam Negeri Sunan Ampel Surabaya.
- Ramadhani, N. K. (2022). Strategi Adaptasi Masyarakat Suku Bajo Terhadap Perubahan Iklim: Studi Kasus Desa Terapung, Kec. Mawasangka, Kab. Buton Tengah, Sulawesi Tenggara. (Skripsi). Universitas Hasanuddin.
- Rosiana, I. N., Nurjannah, S., & Syuhada, K. (2023, Desember 45-59). Strategi Bertahan Hidup Masyarakat Nelayan di Kelurahan Ampenan Selatan Kota Mataram: Strategi Bertahan Hidup, Masyarakat Nelayan.[Prosiding Seminar] Prosiding Seminar Nasional Mahasiswa Sosiologi.
- Ryff, C. D. (2019). Entrepreneurship and eudaimonic well-being: Five venues for new science. *Journal of Business Venturing*, 34(4), 646-663.
<https://doi.org/10.1016/j.jbusvent.2018.09.003>
- Setiawan, A. (2023). Menggali Potensi Laut Dalam Indonesia.
<https://indonesia.go.id/kategori/editorial/7844/menggali-potensi-laut-dalam-indonesia?lang=1>
- Sudirman, M. (2024). Fakta Perubahan Iklim. BMKG. <https://www.bmkg.go.id/iklim/fakta-perubahan-iklim.bmkg?p=fakta-perubahan-iklim-6&tag=&lang=ID>
- Suharto, E. (2009). Kemiskinan dan Perlindungan Sosial di Indonesia (Ed. 1). Alfabeta. Bandung.
- Syarif, E. (2021). Kearifan Konservasi Sumberdaya Laut Nelayan Tradisional Bajoe Sulawesi Selatan, Indonesia. *Indonesian Journal of Social Science Education (IJSSE)*, 3(2): 113-123. <https://doi.org/10.29300/ijssse.v3i2.4826>
- Tarigan, M. (2018). Strategi Bertahan Hidup Penarik Becak terhadap Kehadiran Gojek di Kawasan Kampus USU Padang Bulan Medan. (Skripsi). Universitas Sumatera Utara.
- Umar, R. & Syarif, E. (2019, Oktober 142-147). Strategi Bertahan Hidup dalam Pemenuhan Kebutuhan Ekonomi Keluarga Suku Bajo di Daratan Tanete Riattang Timur Kabupaten Bone. [Prosiding Seminar] Prosiding Seminar Nasional LP2M UNM.

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