



## PATORANI: RESILIENCE AND LIVELIHOOD STRATEGY FOR FLYING FISH FISHERMEN HOUSEHOLDS, IN GALESONG, INDONESIA

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### Abstract

Patorani fishermen combine their livelihood assets to build household livelihood resilience. The study aims to evaluate community asset-based sustainable livelihood strategies to improve livelihoods, analyse the role of local wisdom in resilience implementation, and assess household resilience from household livelihood strategy assets. This paper is a rapid review with a case study design with a qualitative approach, starting with observation, followed by in-depth interviews, FGDs, and document analysis. The research setting is Pa'lalakkang fishing village, Galesong sub-district with sub-urban characteristics and the main occupation of torani (flying fish) fishermen. The participants were selected based on non-probability or deliberate selection of informants. Data analysis was conducted using qualitative descriptive analysis. The results show that the people of Pa'lalakkang Village are aware that the livelihood difficulties of fishermen households will be experienced every flying fish egg catching season. They utilise their livelihood assets to build resilience in the livelihood of torani fisher households. Socio-cultural assets become the most dominant household livelihood support. Local wisdom in "siri na pace" culture strengthens household resilience. Dual livelihood strategies, and the involvement of family members to help earn a living in the resilience efforts of fisher households.

**Keywords:** Assets, Resilience, Livelihood Strategy, Patorani

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## Introduction

In an era of global economic instability, fishing households are among the most vulnerable groups of people to environmental, economic and social changes. Fisheries play a critical role in ensuring food security and the livelihoods of millions of people, having significant socioeconomic impacts. Harvesting, processing, and marketing fish have contributed to economic growth (Manlosa et al., 2019), employment (Chen et al., 2020; Kusumo, 2019; Shaffril et al., 2017), and food production (Franco et al., 2020) worldwide. One of the fishery commodities targeted by fishermen is flying fish or flying fish eggs. Flying fish is called torani by the Galesong community while patorani is a term given to fishermen whose target catch is flying fish and/or flying fish eggs. Patorani form a community only in Takalar, South Sulawesi. The number of patorani has reached thousands of people who have migrated to several regions in Indonesia. Households who work as fishermen usually face more complicated problems compared to families who work as farmers. Fisherman families experience a unique cycle compared to farming families. The unique characteristic of fishing families is the use of the sea and coastal areas for family income (Benu et al., 2018; Manlosa et al., 2019). In addition, fishing gear must be appropriate to the situation and conditions. Uncertain natural conditions reduce or eliminate income, such as when there is no fishing season (Wijayani, 2016). Climate change is affecting the global productivity of marine fisheries (Franco et al., 2020) and exacerbating the challenges faced by marine life (e.g. overfishing, pollution and habitat destruction). Climate anomalies have a direct impact on fishers' incomes, which continue to decline. As a result, fishing households struggle to fulfil their family's daily needs, education and health. The ongoing effort for resilience is to adapt (Dillashandy & Panjaitan, 2019; Food and Agriculture Organization of the United Nations, 2020; Garba, 2018; Mirajiani & Ekawati Sri Wahyuni, Arif Satria, 2015). Based on the catch of flying fish eggs, neyalan torani divides three seasons. In the season calendar (Ambo Rappe & Moore, 2019; Cahaya, 2015) torani fishermen are; peak season, medium season and lean season.

Fishermen do not conduct fishing activities in the lean season due to increased intensity of storms and waves. In this season, the catch is low which does not cover the operational costs of fishing.

Climate anomalies (Wahyono, n.d.) are a source of vulnerability for fisher households that impact social, economic, and community welfare aspects. Fishing communities in each region have different adaptation strategies to the impacts of climate anomalies and their implications for populations dependent on marine fisheries. Patorani are currently more focused on finding flying fish eggs. Foreign market demand for flying fish eggs continues to increase. The problem is that torani fish spawn only in certain seasons. So the search for flying fish eggs is not year-round. When the flying fish do not spawn and the weather is bad, torani fishers are unemployed and there is no income from the sale of flying fish eggs. Therefore, this paper analyses utilising social assets and resilience, analysing the role of local wisdom of fishing communities in dealing with climate change disasters.

## Methods

Following a case study design, this research was conducted in Pa'lalakkang Village with sub-urban characteristics and high impact potential. Data were collected through focus group discussions (FGDs), in-depth interviews, observations, and documentation studies. The method of determining informants uses nonprobability or accidental retrieval of informants.

This research went through several stages, the stages are as follows; The first stage was the collection of documentary materials and relevant research reports both by students, researchers, and reports from research sources for the purposes of literature review on various previous studies conducted in the Galesong region of Takalar Regency. The second stage, conducting observation, especially to identify sources of vulnerability and livelihood strategies of torani fishermen and then analysing the resilience of torani fishermen. The third stage is conducting interviews with informants and then modelling the resilience level of torani fishermen.

In-depth interviews were then conducted with community leaders, fisher activists, and fisher households. The first FGD was conducted with 7 informants, and 6 people consisting of 3 women and 3 men in the second FGD. The first in-depth discussion was conducted with 5 community leaders and fishermen. After the data was collected, it was analysed using descriptive qualitative analysis.

### Results and Discussion

Pa'lalakang village has a strategic location, close to the city centre of Makassar, and close to all public facilities, such as health facilities, education, entertainment and business centres. Despite this, the people of Pa'lalakang Village remain traditional torani fishermen. The lives of fishermen are highly dependent on the sea as a source of household income. The resilience of sustainable household livelihoods, torani fishers will build adaptation strategies (Garba, 2018; Nasrnia & Ashktorab, 2021; Scherzer et al., 2019; Shaffril et al., 2017; Szumelda, 2019) by utilising the assets they have.

The sustainable livelihood approach, which is a person-centred approach, can be used to evaluate the livelihood quality of fisher households. The sustainable livelihood approach defines livelihood as "the capacities, assets, and activities necessary for the means of living" (Chen et al., 2020; Garba, 2018; Nasrnia & Ashktorab, 2021; Scherzer et al., 2019). The five categories of capital that make up livelihood assets are natural, physical, financial, human, and social capital (Adger, 2000; Cinner & Barnes, 2019; Eshun et al., 2019; Nasrnia & Ashktorab, 2021). The ability to cope with stress and recover from shocks is reflected by livelihood assets, which is in line with the meaning of adaptive capacity in the context of vulnerability assessment.

Livelihood strategies are efforts to plan alternative activities to respond to natural environmental conditions to be more resilient (Bennett et al., 2020; Manlosa et al., 2019; Perry et al., 2011;), social (Nasrnia & Ashktorab, 2021; Rammig et al., 2020) in household activities to achieve sustainable household life. Carner (1984) in (Widodo, 2011) argues that poor households will carry out various strategies to be more resilient. Patorani resilience is carried out based on the

ability to access existing assets. Low-income and poor torani fishermen are most vulnerable to fulfilling the basic needs of their household's livelihood.

### Multiple Livelihoods

The means of livelihood used by fisher households to maintain their existence are controlled by a number of capitals, known as pentagon assets. Sawi fishermen own assets and access (social capital, natural capital, human capital, physical capital, and financial capital). The utilisation of social capital, natural capital, human capital, physical capital, and financial capital will provide an overview of the livelihood strategy of mustard fisher families. Fishermen's livelihood strategy is the level of household income from fisheries and non-fisheries. The survival of fishermen can be influenced by the livelihood strategies and asset ownership used by each fisher household.

Each fishing family faces unique challenges. To prevent dependence on the catch and to provide alternative income, fishing households, whether in the fisheries sector or in other sectors, diversify their livelihoods or businesses. Every household from every socioeconomic stratum responds to stressful ecological vulnerabilities that destabilise their livelihoods by fortifying strong social capital. Each household can enjoy capacity-building benefits from strong social capital, which includes natural capital, physical capital, financial capital and human capital. Dual livelihoods by fishermen are just for survival. Dual livelihoods such as being a parking attendant, motorcycle taxi driver, construction labourer and independent fishing rod fisherman.

Fishing households in the livelihood strategy use a survival strategy pattern. The survival pattern is characterised by very limited asset ownership, low economic productivity and involvement in social roles and low social status. They often use a survival strategy pattern in fulfilling their livelihood needs. This pattern is characterised by very limited asset ownership, such as fishing boats, nets and other simple equipment. Economic productivity is also often low, due to dependence on fisheries and fish catches that are not always stable. In addition, fishing households also often face limitations in

access to markets and resources needed to improve productivity and economic diversification. Nonetheless, this pattern of survival strategies allows fisher households to survive by utilising available resources and minimising expenditure. Social role involvement and low social status are also factors that influence fisher households' livelihood strategies, as these limit access to resources and wider economic opportunities. Therefore, efforts to improve the welfare of fisher households should consider these factors and develop more inclusive and sustainable strategies to fulfil their livelihood needs.

They have very low participation in social obligations but many utilise local social networks to address their livelihood issues. To fulfil household needs, they work hard and optimise the potential of family resources in both the fisheries and non-fisheries sectors.

In fisher households, the proportion of expenditure of more than 50 per cent of their total income is used for consumption of basic household needs. The mustard fisher group has a heavy demographic burden and uncertainty in income generation. As a result of uncertain income and sometimes no income, they are forced to go into debt within their social network. Debts are usually for daily household needs (such as rice, sugar) to neighbouring stalls. Debt repayment is rarely promised to the debtor's neighbour, but if they have the money, they are paid as soon as they can.

Strong bonds of brotherhood and kinship provide a sense of empathy and solidarity. People who are vulnerable to poverty and the poor are the government's concern to be given a social safety net. Most sawi fishermen households receive assistance from the government, the government's social safety net programme in the form of the family hope programme (PKH), direct cash assistance (BLT), poor rice assistance (raskin) provides little space in fulfilling the basic needs of fishing families. Households that have not received assistance from the government because they have not been registered due to incomplete household profiles, missing or not having a family card. In social interaction, fisherwives have more time than their husbands in socialising with the surrounding

community or neighbours. The majelis taklim group is an organisation for women (fisherwives) as an alternative to building local-scale social networks. The recitation group is fostered by the wife of the RT/RW head or the wife of the pinggawa in her neighbourhood. The existence of the majelis taklim group is very helpful in strengthening the network of fellow women. The majelis taklim group is very active in helping people in their neighbourhood. If there is a family member who is sick, has a disaster or death (grieving) then this group takes a role in taking care of it.

“I am grateful that the government still pays attention to difficult people like me. Yesterday I received cash assistance from the government. The residents here are good, they still help each other when their neighbours are in trouble. Last month, there was a resident who was hospitalised due to an accident, the neighbourhood leader together with the residents helped raise money to ease the burden on the family. The boss's wife often helps my family with their difficulties. She lends them money, and when the fishing season comes, she pays them back.”

### **Involvement of Family Members**

Dual subsistence, or income earned from two or more sources, has become a key factor in maintaining the survival of fisher households. This is because fishermen often experience uncertainty in their income as they are dependent on natural conditions and catches. In difficult economic conditions, the existence of additional sources of income becomes very important to help fisher households survive. Dual income can come from various sources, such as small businesses, agriculture, or part-time work outside the fishing sector. However, it is important to remember that dual income can also affect the dynamics of fishing households, especially in terms of the roles and responsibilities of family members. Therefore, it is necessary to take a holistic approach in considering the role of dual livelihood in maintaining the survival of fisher households.

Involving family members in income generation can have a positive impact on overall family well-being. By involving all family members, responsibilities and risks can

be shared more equally, improving coordination and collaboration within the family, expanding the family's social network, utilising available resources, and communicating openly and honestly within the family, improving the skills and knowledge of family members and cooperation can be enhanced to achieve common goals. However, there are also challenges in engaging family members, such as conflicts in decision-making and differences in the goals and priorities of each family member. Therefore, it is necessary to take the right approach in facilitating the involvement of family members in income generation, so that it can provide optimal benefits for the welfare of the family as a whole..

“My family still lives a difficult life. It's very difficult to eat during the lean season. We don't have any savings, so my wife helps out by shredding flying fish eggs in the boss's warehouse. She earns between Rp50,000 and Rp100,000. I do whatever I can if someone calls me for a motorbike taxi service. (Dg NN,48 thn)

The resilience of fisher households depends on their ability to adapt to changes and optimise available resources. In this case, dual livelihood is a key factor in maintaining the survival of fishing households. In addition, social support from family, community and government is also important to improve the resilience of fisher households. This study provides a deeper understanding of how fisher households can become more resilient amidst uncertain economic and social changes, and provides policy suggestions to support the improvement of the welfare of vulnerable community groups.

### Capitalising on Socio-Cultural Ties

Fishermen as a coastal village community have distinctive socio-cultural characteristics. The socio-cultural characteristics of fishermen communities can be seen from various aspects, as follows; 1) fishermen have a knowledge system, 2) fishermen have a belief system 3) the role of women 4) fishermen institutions, 5) social status of fishermen (Fauzie et al., n.d.). The knowledge system of fishermen is inherited knowledge from their parents or ancestors based on empirical experience. Their knowledge system can be

seen in the skills of boat building and maintenance, fishing techniques, seasonal calendar system, sailing directions, tides, astrology or astronomy. The belief system of torani fishermen is closely related to theological matters. Fishermen believe that the sea has a guardian, a guardian with magical powers so that it gets special treatment, including safety spells. Fishermen's beliefs are manifested in the form of rituals ranging from boat building and maintenance to activities before and during fishing.

Traditions in these communities are difficult to break. They still believe that rituals are a requirement in order to get a lot of results and their lives will be protected by God Almighty. Rituals are also carried out by torani fishermen and even become the main requirement before they go fishing. The ritual is performed on Sanrobegi Island by a sanro (shaman). Sanro is a person who is highly respected by torani fishermen because he has a mantra (baca- baca) which is proven to bring the desired results and fishermen who leave return safely. Therefore, they assume that through rituals performed by the sanro, all threats and fears can be faced because they have been prayed for by the sanro This is as stated by Daeng PS that

"Patorani fishermen have a tradition of ceremony. Saro pabaca- baca was originally sanro cekele, sanro cekele died in palalakkang. Dg NR became a sanro (pabaca- baca) after receiving guidance in a dream. The ritual is the main requirement, because the local community has a belief that their profession as fishermen who look for flying fish in the ocean, must face natural challenges such as extreme weather that causes high waves or other forces.

An important feature of torani fishing culture is the patronage relationship. Patrons, or bosses, support their clients in times of difficulty in exchange for services, labour, or fishery products. Bosses/Pinggawa help their clients (sawi are people who work as crew) by employing them, by providing loans, or by providing advice. The pinggawa- sawi relationship in patron-client ties is more about practical considerations than loyalty. Sawi fishermen will make a new commitment to another pinggawa if the pinggawa does not



patronise the sawi. On the other hand, a pinggawa who is abandoned by a sawi means that the pinggawa bears the shame of fellow pinggawa, as losing a client means losing status. Thus, pinggawa will try to maintain strong ties with their clients, often by lending money. As long as the client is in debt, the commitment cannot be broken. Pinggawa as patrons do not ask for collateral or interest, but sawi pay by supplying labour at low wages. This patron-client relationship is of great significance to both, as the patron acquires production capital and the client increases access to assets and gains social, economic and security protection.

"My family with my boss is like parents with their children. The boss is very attentive to my family. All our needs are guaranteed by the boss, especially when he goes to sea. Usually, my wife is given Rp 5,000,000 for living expenses, which she pays later if she gets money from her husband's work. Usually, when my children are sick, the boss takes them to the hospital for treatment.

Culture is one of the important aspects in people's lives. One of the well-known cultures in South Sulawesi is "siri' na pacce". As people who live on the coast, fishermen have values and customs that are passed down from generation to generation. This cultural capital is very important for fishermen because it helps them to survive and make a living at sea. Galesong fishermen have very strong cultural ties. Local wisdom in the frame of "siri' na pacce" culture strengthens household resilience. This culture is a tradition passed down from the ancestors, which teaches about cooperation and mutual assistance between family members. In the "siri' na pacce" culture, every family member is obliged to help each other when a family member is experiencing difficulties, either financially or in other ways. Thus, this 'siri' na pacce' culture strengthens the bonds between family members and strengthens household resilience in the face of various problems. Through this culture, people in South Sulawesi can build good co-operation and harmonious relationships within the family, thus improving the overall quality of family life.

"We have a life principle, siri' na pacce. This principle means that the sense of

"shame and pain" is strongly held. shame if we are unfaithful to the boss, shame if we are caught cheating. Meanwhile, it is painful to see relatives living in distress and not being helped. No neighbour should go hungry all day, we are ashamed if they do because they are part of our extended family in the community."

### Migrate

Migration is an important set of resilience indicators. The level of mobility and migration of residents within an area does not provide a complete picture of resilience or changes in resilience. However, a significant amount of population migration can be an indicator of instability. Seasonal mobility and migration of torani fishers occurs due to push and pull factors elsewhere.

Fishermen in the Galesong area of the Makassar Strait, Indonesia, undertake seasonal migration to other waters as the state of fish resources in their area has declined. This is understandable given the dependence of fishermen on fish resources as their main source of livelihood. The decline in the number of fish in the waters of the Makassar Strait is caused by various factors such as overfishing, climate change while the destination area still has abundant resources to be explored. Seasonal migration contributes to livelihood security and resilience at the household level. The decline of flying fish resources in the waters of the Makassar Strait is a driving force to migrate in groups. The search for new areas to catch flying fish eggs characterises the area of origin as no longer able to sustain operational costs and fulfil household livelihood needs.

On the other hand, new fishing grounds promise better results. Galesong torani fishers choose the waters of Fakfak Regency as their seasonal migration destination. Seasonal migration by fishers is expected to help reduce pressure on fish resources in the Galesong area so that they can recover. However, it also has negative impacts on the social and economic lives of fishers, such as losing time with family and friends and incurring additional costs for travel and

accommodation. Therefore, efforts need to be made to address the decline in fish resources in the Galesong area so that fishermen are no longer forced to undertake seasonal migration to fish.

"My friends and I have to be patient, because we have to leave our families, children and wives for a long time, four to five months. We have to move to catch fish, because there is a lot of fish in

Fakfak. It's different here (Galesong). The catch is quite good, it can cover the cost of travelling to and from the village and there is still money to take home to the wife". (Dg Arm 51 years old)



Figure 1. Location of Flying Fish Egg Catch in Fakfak Regency Waters

## Conclusion

Pa'lalakang Village is strategically located near the centre of Makassar city and close to all public facilities such as health, education, entertainment and business centres. Despite this, the community still maintains their traditional livelihood as Torani fishers who rely on the sea as their main source of income. To ensure sustainable household income, the Torani fishermen will develop adaptive strategies using the assets they have.

The people of Pa'lalakkang Village realise the difficulties of fisher households' livelihood will be experienced every flying fish roe fishing season. Utilisation of livelihood assets owned to build resilience of Torani fisher households' livelihoods. The ability to cope with stress and recover from shocks is reflected in livelihood assets, which is in line with the concept of adaptive capacity in the context of vulnerability assessment. Socio-cultural assets are the most dominant support for household livelihoods. Local wisdom in the "siri na pace" culture strengthens household resilience. Multiple livelihood strategies, and the involvement of family members help fisher households' livelihood resilience efforts. Livelihood diversification and family involvement are important strategies for household resilience.

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