



# **Resilience Form of Jala Kurung Traditional Fishermen Group In Rompo Village, Langgudu District, Bima Regency**

**Ilman Nafi'ah<sup>1</sup>, Firdaus W. Suhaeb<sup>2</sup>**

Sociology Study Program, Faculty of Social Sciences and Law, Makassar State University, Indonesia

\* Correspondent Author: [ilmannafiah2002@gmail.com](mailto:ilmannafiah2002@gmail.com)

## **ABSTRACT**

This research aims to determine the strength of fisherman resilience in Rompo Village, This research aims to determine and analyze the extent of seafarers' resilience in Rompo Village, Langgudu District, Bima Regency. The research methodology used is qualitative research which is explained descriptively. In this research, research data was obtained from three steps, namely observation, conducting interviews and documenting activities. The data in this research was analyzed through data reduction and presentation, followed by drawing conclusions. this research shows the traditional fishermen group cage net Rompo Village has 3 forms of resilience, namely: resilience at the stability level, resilience at the recovery level and resilience at the transformation level. At the resilience stage, the level of stability of this fishing group is able to survive through economic capital such as family savings and mutual assistance between family members. At the recovery level, these groups of traditional fishermen show variations in their adaptive capacity, with some having low adaptive capacity and others having higher levels of adaptation. Meanwhile, at the transformation level, traditional fishing groups demonstrate resilience by utilizing physical assets, especially access to transportation and communication facilities. However, traditional fishing groups have not been able to innovate and make significant changes in fishing practices.

**Keywords:** Adaptation; Resilience; Traditional Fisherman Groups; *Jala Kurung*

## **1. INTRODUCTION**

Indonesia is the largest archipelagic country in the world with more than 17,000 islands. Indonesian waters cover an area of about 6.4 million km<sup>2</sup>, consisting of a territorial sea area of 0.29 million km<sup>2</sup>, an inland and archipelagic waters area of 3.11 million km<sup>2</sup>, and an area of Indonesia's EEZ (Exclusive Economic Zone) of 3.00 million km<sup>2</sup>. In addition, there is also an Additional Zone of waters with an area of about 0.27 million km<sup>2</sup>, a continental shelf with an area of about 2.8 million km<sup>2</sup>, and a coastline length of about 108,000 km<sup>2</sup> (Kementerian, 2020).

As a country with a vast coastline, Indonesia has enormous strength in the marine and fisheries sector. According to the Ministry of Maritime Affairs and

Fisheries (2020), the fisheries and marine sector in Indonesia has a potential of around 23.2 million tons balanced with Rp. 384.5 trillion. This large number comes from aquaculture and capture fisheries activities supervised by the government (Nursan et al., 2022). Marine assets owned by the State of Indonesia have various functions in addition to being a place to live, marine animals can also be a source of food for the community and can be used as a meaningful export commodity in improving the economy of the community and the state.

The designation of Indonesia as an archipelagic country cannot be denied that most of its population lives in peisisir areas with a livelihood as fishermen. The coastal area is a working environment for fishermen. According to Sastrawidjaya (Harumy &

Amrul, 2018). Fishermen are individuals whose main source of income revolves around marine resources. Most people in Indonesia live in coastal areas and do collective work.

Fishermen are human communities residing in coastal or rural areas that make a permanent living from marine products. Compared to other groups, fishermen's dependence on fisheries or coastal resources sets them apart. According to Adger (2010) dependence on resources is the point at which social demand, vocation and stability of a group constitute a direct ability of asset creation and nearby economy. According to Bailey and Pomemy (Hidayati & Pandjaitan, 2020) with respect to waterfront areas in Asia, coastal networks are considered dependent on a single asset as well as an overall biological system.

The number of seafarers in 2020 was recorded at 1,459,874 people based on information from the Marine and Fisheries Service (MMAF), with the poverty rate of seafarers reaching 20% to 48%. So far, many parties have assessed that the utilization of Indonesia's coastal and marine assets is still not ideal as a country that has high marine assets. Fishermen still face various problems and obstacles in their work of fishing. Some of them are the difficulty of obtaining boat assistance, not all fishermen have life insurance, high fuel costs, limited access to capital for marine operational costs, lack of knowledge about income management for business development and finally the decline in fishing results of fishermen groups due to the phenomenon of climate change (Akbar, Suhaeb et al., 2022).

Resilience is the ability of a person or group to survive and adapt when faced with various challenges and changes contained in their social and natural environment (Khatimah, 2018). According to Setiawan et al. (2022) studied several things that have an effect on the resilience of traditional fishing groups in coastal areas. The results showed that factors such as the sustainability of fishery resources, adaptation of new technologies, and strengthening the capacity of traditional fishing groups through training and mentoring, are factors that influence the high resilience of traditional fishing groups in coastal areas. Despite this, this group of fishermen was still able to survive and adapt to the difficult conditions. This shows that traditional fishing groups have high resilience in facing changes and challenges.

The expected marine potential in Bima Regency includes 6,814.9 Ha of land that has been developed, consisting of 1,008 Ha of general aquatic culture (only 0.01 Ha or 0.001% used) and 5,748 Ha of salt water/lake

(1,585.2 Ha newly used or 27%), new waters/new lakes. Waters covering an area of 58.90 Ha (only 11.16 Ha or 18.95% used), and marine waters for capture fisheries covering an area of 322,904 Ha (used 284,704 Ha or 88.17%). Meanwhile, the potential of coastal areas covers 640 km of  $\pm$  coast (Dinas Kelautan dan Perikanan Kabupaten Bima, 2020).

Traditional fishing groups rely heavily on fishing and marine production as their main source of income. However, changes in natural and environmental conditions such as climate change and competition with other fishing groups that use more modern fishing technology have an impact on the income and catch of these fishermen. Bad weather also challenges a number of fishermen in fishing due to wind and sea waves that hit as high as one to two and a half meters (Kabarbima.com, 2019). This ultimately hampers fishing activities that are usually carried out by fishermen.

Departing from the problems and theories mentioned above, researchers conducted a study entitled "The Form of Resilience of the Traditional Fishermen Group of Jala Kurung in Rompo Village, Langgudu District, Bima Regency."

## 2. METHOD

Qualitative research methods are the type of research used in this study. A descriptive approach derived from the results of written and oral research obtained from fishermen in Rompo Village is used to describe an incident as deeply as possible (Sugiyono, 2018). This research was located in Rompo Village, Langgudu District, Bima Regency, West Nusa Tenggara. The determination of informants in this study was determined by purposive sampling based on special capabilities and assessments, namely 8 people belonging to the traditional fishing group of jala kurung and 1 stakeholder or Rompo village government. Observation, interviews, and documentation of activities are research techniques used in this exploration activity. In this study, the researcher is an instrument or tool in this study. Meanwhile, to analyze the data in this study, techniques for reducing the information obtained, then presenting the information, and drawing the final results briefly in the research conducted.

### 3. RESULT AND DISCUSSION

#### Form of Resilience of Jala Kurung Traditional Fishermen Group in Rompo Village

##### a. *Resilience as Stability*

Resilience as stability refers to the ability to return to its original state. In the context of fishing groups, this can be interpreted as the level of ability of traditional fishing groups that use bracketed nets to recover from the downturn caused by climate change. Although they were able to survive, they have not fully recovered to their original condition. This is in accordance with the statement of the informant Shukrin, namely:

"Nothing, this is how it will be done if the weather again does not support rest first. If it is for daily needs, there are still savings from going to sea so far, so use it first." (Interview with Shukrin informant on August 04, 2023).

The same thing was also conveyed by Kamarudin's informant, namely:

"It's like this, sitting together like this while playing dominoes if you don't go to sea. The problem of daily necessities is still borne by parents." (Results of an interview with informant Kamarudin on August 04, 2023).

Interviews with several informants in this study explained that some traditional fishermen of nets brackets are at a stage of stability. These fishing groups adopt specific adaptation strategies to deal with climate change. For example, when not actively at sea, Shukrin informants used the savings they had for a while. On the other hand, informant Kamarudin had the support of his family who helped sustain their lives.

The resilience of the jala kurung traditional fishing group in Rompo Village, Langgudu District, Bima Regency at the level of stability, the fishermen group is able to survive by utilizing economic capital in the form of family savings. Income that exceeds expenses allows fishermen to have savings to deal with difficult situations, so they do not need to rely on loans. When they are not active at sea, they can rest or do other activities. Once they return to work, they can save or save again. In addition, in the level of stability, fishing groups also show mutual help between family members to meet daily needs. Economic dependence on fish catches can be minimized with help from family members working in other sectors outside the fishery, which are independent of weather conditions. This not only helps their survival in difficult times but also

provides additional income. At this level, the fishing group shows the ability to survive in difficult conditions and recover back to its original state after experiencing challenges. This adaptation reflects the efforts of fishing groups to maintain their economic stability through additional sources of income and mutual assistance between family members, so that they are able to overcome various risks that may arise in their fishery activities.

##### b. *Resilience as Recovery*

Resilience as recovery refers to a group's capacity to recover from changes or stressors and return to its original state. This capacity is measured by the amount of time it takes for a group to recover. Although groups of fishermen who lack resilience take longer to recover and never even get better, groups of fishermen who have resilience can return to their original condition relatively quickly. Based on the results of interviews with Saudi informants, namely:

"Wait for the calm weather to go down to sea again, if you are still dizzy now, there is nothing to do." (Interview with Saudi informant on August 02, 2023).

While informants who have a relatively fast level of adaptation are informant H. Ihsan, namely:

"If I don't go out to sea, I usually spend time resting at home, or checking the condition of the swallow's nest. The process of waiting for weather conditions to improve usually takes one to two weeks before we can go back to sea. In addition, we face obstacles with the presence of fishermen using modern equipment, who spread their flocks near our fishing sites on the seafront." (Results of interview with H. Ihsan on August 02, 2023).

In the recovery phase, these traditional fishing groups show variations in their adaptive capacity, with some having low adaptability and others having higher adaptation rates. Although groups of fishers who lack resilience may need a longer chance of recovery or never get better until the end, groups of fishers who have resilience can return to their original condition relatively quickly. Some of those with low adaptive capacity tend to depend on weather conditions and consider life risks when going to sea. Meanwhile, those with high adaptive capacity tend to have alternative jobs in other sectors, such as seaweed farmers, swallow farmers, or shopkeepers, as part of their recovery efforts. The importance of the education aspect is also reflected in the education level of traditional fishing groups, which on average only

reach junior high school, with the highest only up to high school. Nonetheless, they draw on local knowledge and hereditary expertise related to marine techniques, passed down from previous generations. The assistance of fishing gear is also a contributing factor in the recovery of this group. Thus, the resilience of traditional fishing groups in the recovery rate depends not only on external factors, but also on the internal strategies they implement, including adjustment of fishing activities, alternative work, and utilization of local knowledge.

#### c. *Resilience as Transformation*

Resilience as Transformation relates to the concepts of change, regeneration, and reorganization. This approach emphasizes the adaptation of the capabilities possessed by the traditional fishing group of jala kurung in Rompo Village, Langgudu District, Bima Regency. This group of fishermen has successfully overcome the challenges of deterioration caused by climate change and managed to improve their quality of life after experiencing disasters. At this level, this group of fishermen has only been able to restore themselves to the state they were before the change occurred, but they have not been able to reach the level of transformation. Based on the results of interviews with Saudi informants, namely:

"Most sew torn nets, repair engines and repaint ships, before going to sea." (Interview with Saudi informant on August 02, 2023).

The same thing was conveyed by informant H. Ismail, namely:

"I only repaired the fishing gear because it suffered severe damage from being stuck on the reef during bad weather yesterday, and repainted part of the ship's body. That's all that needs to be replaced because the others are still in good condition." (Interview with informant H. Ismail on 03 August 2023).

Based on the results of the interview above, actions such as replacing damaged parts of boats and repairing fishing gear reflect the adaptation efforts of traditional fishing groups of mesh brackets. Despite this, this group is still limited to the level of repair and maintenance that has not yet reached the transformation stage. In other words, this group has succeeded in returning themselves to their original state before the change, but has not been able to innovate or update so that their condition is still limited to the initial state before the change occurred.

Resilience at the level of transformation by utilizing physical assets, especially transportation access and communication facilities. At the transformation level, this group of fishermen faces limited supporting facilities in carrying out marine activities. The traditional Jala Kurung fishing group in Rompo Village has implemented an adaptation approach by repairing damaged parts of boats and damaged fishing gear. When the weather is not favorable, they focus on repairing the nets, ship paint, and boat engines to make sure all equipment is functioning properly. Although these efforts reflect adaptation measures, it appears that improvements made are still limited to the level of repair and maintenance. Actions such as replacing damaged parts of ships, repairing fishing gear, and making repairs to machinery are responses to climate change and extreme weather conditions. Although they managed to overcome these challenges, these steps are more about returning to their original state than achieving significant transformation. Although the fishing group has successfully overcome the crisis and changes that have occurred, they are still limited to the aspect of physical improvement and have not yet reached the level of transformation. This indicates that fishing groups have not been able to make significant innovations or structural changes in response to climate change and competition with modern fishers. In this case, the level of transformation resilience that includes the concepts of change, regeneration, and reorganization still needs to be further developed by this traditional fishing group.

## 4. CONCLUSION

Fishermen groups demonstrate the ability to maintain their economic stability by utilizing economic capital in the form of family savings. Income that exceeds expenses allows them to have reserves to deal with difficult situations. Mutual assistance between family members is also a strategy to meet daily needs and reduce dependence on fish catches. At the recovery rate, fishing groups showed variation in their adaptive capacity. Some rely on weather conditions and life risks, while others have alternative jobs in other sectors. Low education is balanced with local knowledge and hereditary expertise. The assistance of fishing gear is also a supporting factor. Resilience at this stage depends not only on external factors, but also on internal strategies such as adjustment of fishing activities, alternative work, and utilization of local knowledge. At the transformation level, fishermen

groups face limited supporting facilities in carrying out marine activities. Adaptation efforts involve repairing vessels and fishing gear when the weather is not favorable. Despite successfully overcoming the challenges, those improvements are still limited to the maintenance level rather than significant transformation. Fisher groups have not been able to make the innovations or structural changes needed to respond to climate change and competition with modern fishers.

This group of traditional fishermen showed good levels of resilience at the level of stability and recovery, but still faced obstacles in achieving the necessary transformation. The reliance on physical maintenance strategies demonstrates the need to develop transformational resilience involving deeper innovation, regeneration, and reorganization to face future challenges more effectively. In the face of changing dynamics, expanding their adaptive capacity is key to achieving holistic and sustainable resilience.

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