

Cultural Beliefs, Practices and Productivity of Fisherfolks in Selected Coastal Barangay in Odiongan, Romblon, Philippines

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ABSTRACT

Fishing communities know about fish stocks and other marine species and include information on the location of resources, migration patterns, movements, the seasonal abundance of species of economic importance, and details on their reproductive and feeding behaviour. Local people often understand how resources and the environment have changed over time and the possible causes of such changes. This study aims to determine the cultural beliefs, practices, and productivity of fisherfolks in selected coastal barangays of Odiongan. The study involved 100 local fishermen in the coastal area of Odiongan, Romblon. The research materials used were survey questionnaires. The data were analyzed using statistical procedures such as frequency percentage and weighted mean. The study found that fisherfolks lack safety equipment such as diving gear and fishing signboards and use goggles for eye protection. Boats and nets were used commonly in most barangays, with some fisherfolks using flippers, goggles, and spears (pana) for safety. Moreover, the sustainable use and better management of coastal resources are essential for the conservation of the coastal zone and its resources. This study highlights the importance of strengthening local integrated coastal management and encouraging the participation and cooperation among individuals and communities to achieve conservation and sustainable use of the coastal zone and its resources.

Keywords: coastal management, preservation, safety equipment, sustainable livelihoods

INTRODUCTION

The Philippines is an archipelago consisting of 7,100 islands. Around 60% of the population lives along the coastal zones (De Souza, 2004), where the dominant livelihood strategy revolves around fishing and farming. Fishing at sea is considered the most dangerous occupation in the world. The International

Labor Organization estimates that 24,000 fatalities occur worldwide (FAO, 2000). The fisheries sector reported 3,770 cases of occupational injuries, 2,846 workdays loss, and 924 without workdays lost. This likely number is undetermined due to the lack of established injuries reported in the informal sector (PSA, 2017).

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The fishery resources in several coastal barangays in the Municipality of Odiongan are the main subject of this study. Odiongan, a first-class municipality in the Romblon Province of the MIMAROPA Region, is the most economically developed municipality and the province's commercial entrance port. Odiongan is divided politically into 25 barangays. Budiong used to be a sitio of Canduyong, and because Romblon is an archipelago, it is well known for its fishery. Fish migrate to the fishing grounds of Romblon from the Sulu and Visayan Seas via the Tablas Strait, Sibuyan Sea, and Romblon Pass. Due to the coral reefs surrounding the islands, the waterways are teeming with demersal fish. The province created a coastline and resource management program because of the tremendous potential for aqua-marine development in the said area. Each city or town set up a fish sanctuary and passed laws on the fishery.

The use of air compressors in municipal waters was regulated and banned altogether in some municipalities. The traditional method of fishing is Pamana, which is a method that uses a spear gun and can be done either day or night. It uses a pana (spear), antipara (goggles), and Panyapak or flippers. Just like the cultural beliefs, practices, and productivity of the fisher resources in Selected Coastal Barangay in Municipality of Odiongan. The method fits the common fisher folks since this requires the least monetary cost. Spear guns require low initial Costs, no cash input in maintenance, and no boats are required.

However, spear guns are associated with high labour input when using them and require a relatively longer time to fish. Fishing gear, practices, local knowledge, tradition, and culture. The fisher folks' fishing activities match the tuig (season)- referring to the months of prevailing winds and lands and the direction of flow of the current in the region. March to August (dry season) are the months most fit for fishing, with May as the best, when fishes undergo pagbiyod (spawning). The months of October to February (typhoon

season) are experienced by strong winds and rough seas caused by North East monsoon winds and typhoons, on one hand.

On the other hand, the sea current is calm during these months, which offers good opportunities for fishing. To the fisher folks, the two indicators for good fishing conditions are humugot (low tide, westward direction) and the direction of the current flow, which is towards the lighthouse or San Bernardino Strait. The good current flow is fit for fishing twice in a day, i.e., more or less five hours in the afternoon and the same number of hours in the evening. Local fishers also consider the phase of the moon as an indicator. The best time is usually a few days before the last quarter (*katallo luyo si kawara*) and a few days before the full moon (*kaodto si kadayaw*). The information passed on by the elders to the young generation includes their knowledge of tuig and lands, which help improve fishing efficiency for the fisher folks. This research study determines and evaluates the cultural beliefs, Practices, and productivity of the fishery resources in selected coastal barangay in the municipality of Odiongan. The purpose of this research study is to maintain and give information and also to gain knowledge of the human experience of Fishery to the cultural beliefs, practices, and productivity of the Fishery resources for the next generation. Cultural beliefs have formed over thousands of years. The respondents of this research are the fisherfolks, which enables us to determine their ideas about the conservation of natural resources in the area. Another step is to gather information through the analysis of the Fishery Resources. This research strongly believes that using safety equipment measures for fisherfolks in selected coastal barangays in the Municipality of Odiongan would be beneficial.

MATERIALS AND METHODS

Research method

The data required for conducting the research exploration on cite was gathered using the descriptive qualitative survey approach. This approach entails acquiring data and describing, analyzing, and interpreting it. The researcher

used the survey as part of the descriptive research procedure. This will make it possible for the researcher to compile and examine the data required for this investigation. A questionnaire survey was employed to examine the comparative analysis of culture, practices, and fishing productivity in a selected coastal barangay. In a survey conducted in the town of Odiongan, Romblon, respondents were asked about their personal perceptions of the cultural values, customs, and productivity of the fishing industry in a number of coastal barangays.

The subject of the Study

The fisherfolks were the subject of the study.

Research Materials and Instrument Used

In determining the reliability of the research material, the researcher will utilize Cronbach's alpha. The data will be analyzed, tailed, and interpreted, and the researcher will administer

the questionnaire and distribute it to the participants. The researcher used a ballpen, pencil, and survey questionnaire content will be explained to the respondents so that they can understand and answer each question correctly according to their experience and what they do in fishing in cultural beliefs and productivity of selected Coastal Barangay in Odiongan.

Research Procedure

The procedure used to determine the cultural beliefs, practices, and productivity of the Fishery Resources in a selected coastal barangay in the Municipality of Odiongan. The data in this study were solicited from the residents, fishermen, divers, and actual residents of Odiongan Romblon as follows. (a) List of coastal Barangay /courtesy call. (b) Conduct the study distribution of survey material to respondents. (c) Actual interviews.

Data Processing and Statistical Procedure

The researcher will tabulate the data gathered using the formula: the first formula is the arithmetic mean to test the study's hypothesis.

$$X = (\sum [(x)]) / N$$

Where:

X=Arithmetic Mean

$\Sigma(x)$ =summation of Scores

N=total number of Respondents

The weighted arithmetic mean is utilized to quantify the data gathered for the problems. The formula is presented below.

Legend

$$X = F/N \times 100$$

Where:

X=Percentage

F=Frequency

N=total number of Respondents

Data processing

All of the significant data required for this research was compiled into a set of guided procedures. A series of questionnaires was created and produced by the researcher. A survey questionnaire to determine how fishermen believe they manage their business, conserving marine resources and providing overall high-quality services. The researcher

requests permission from the teacher. The researcher then created a questionnaire for the participants. Respondents are given time to respond after the researcher has provided some background information on how the study was conducted. All information was gathered, and their comments will stay private. Additionally, the researcher gathered data by posing pertinent follow-up questions.

RESULT AND DISCUSSION

Cultural beliefs and productivity of the fisherfolks in the selected coastal barangay in the Municipality of Odiongan.

Fishermen/fisherfolks stated that they are not allowed to bring money when they dive, and when there are jellyfish, fisherfolks are hesitant to go diving. The respondents also narrated that (respondents) cannot go diving and are not allowed to say where the location is because it brings bad luck, and then they go on diving in the last quarter.

Practices and productivity of the fisherfolks.

The highest figure of 23.66% indicates that neither fishermen nor those who work in the fishing industry use or use diving masks underwater. The lowest percentage (17.74%) showed that there are no fishing sign boards in the area, and the fishermen wear goggles to protect their eyes. All of them have stated that

the area is present, but they only do so infrequently because they already know how far they can fish, what is prohibited, and what should be done. Because there is a Bantay Dagat and people who can inform people about how to safeguard and preserve our natural world. In order to accommodate underwater divers, the fishing occasionally employs flippers and divers' masks. The availability of the fishing industry's safety gear might occasionally be a problem thing because they are extremely intelligent to accomplish so given their expertise and abilities. Fishermen and divers, whether wearing protective gear or not, may swim rapidly. The majority of the people in Canduyong are divers, while there are a few in the five barangays of Panique and Budiong rarely have fishermen or divers in the barangays of Tumingad, Gabawan, and Batiano since they always use boats and nets, especially in Batiano and Tumingad (Table 1).

Table 1. Practices and Productivity of the Fishery Resources in Selected Coastal Barangay in Municipality of Odiongan Relation to Safety Equipment

ITEM	Mean	Percentage	Rank	Description
1. Sign boards are present in the area	1.59	17.74%	4.5	Rarely
2. Fishermen use flippers to swim easily in water.	1.41	20%	3	Never
3. Fishermen or Drivers use goggles to protect their eyes and to see underwater, which can help you from getting injured.	1.59	17.74%	4.5	Rarely
4. Use a diving mask to allow underwater divers.	1.19	23.66%	1	Never
5. Fishermen use boats and nets.	1.35	20.84%	2	Never
Overall Mean	1.43			

The respondents are shown in Table 2 as being aware of managing the coastal area in a selected Barangay in the Municipality of Odiongan. Fishermen are not permitted to throw waste and garbage in the coastal area, despite the fact that we observed them cleaning up the residents and fishermen with the Barangay Captain while we were conducting the interviews. The highest percentage of 24.65% indicates the management. The lowest percentage, 18.08%,

indicated the strengthening of local institutions. Actually, some of those who spoke to us said they don't take part or don't get informed of the information too often. According to rumours, some people in the barangay we visited told them, but other people—like BFAR, Captain and their crew, or (Samahan)—always told them.

Table 2 Practices and Productivity of the Fishery Resources in Selected Coastal Barangay in Municipality of Odiongan Relation to Coastal Management

Item	Mean	Percentage	Rank	Description
1. Stop throwing garbage and waste in the Coastal area.	1.11	24.65%	1	Never
2. Strengthening local integrated coastal management.	1.52	18.08%	4.5	Rarely
3. Sustainable use and management of economically and ecologically valuable resources in the coastal areas	1.43	19.17%	3	Never
4. Encourage the participation and cooperation among individuals and communities to achieve the conservation and sustainable use of the coastal zone and its resources.	1.52	18.08%	4.5	Rarely
5. Sustainable use and better management of coastal resources, as indicated by an increase in fish abundance and improved coastal habitat conditions.	1.37	20%	2	Never
Overall Mean	1.39			

Table 3 represents the respondents' mean perception regarding sustained livelihood. According to the respondents, livelihood is sustainable and future without undermining the natural resources; they properly follow the rules and reminders from the leader of their association or the Barangay officials, especially to themselves, as indicated by the highest percentage of 21.17%. But it cannot be denied to them that sometimes you need to break or disobey the rules and regulations because they have a family to support and survive even though they have a big impact on

our natural resources. The lowest percentage, 9.11%, indicates that the simply harvesting the fish from the coastal water of the six Barangay that we interviewed, one in Barangay Batiano, Panique, Tumingad said that there was almost no fish to be caught because many fishermen were fishing every day. The productivity of the fish decreases because sometimes even small fish are taken when there is nothing to catch. So, through their association, they are given information on how to protect the coastal water and the habitats of the fish.

Table 3. Practices and Productivity of the Fishery Resources in Selected Coastal Barangay in Municipality of Odiongan Relation to Sustain Livelihood

Item	Mean	Percentage	Rank	Description
1. Fish resources are a source of food.	1.39	19.30%	2	Never
2. The ability to diversify sources of income.	1.70	15.81%	4	Rarely
3. Livelihood sustainable and future without undermining the natural resource.	1.27	21.17%	1	Never
4. Main source of employment for fish folk.	1.45	18.49%	3	Never
5. Simply harvesting the fish from the coastal water.	2.94	9.11%	5	Sometimes
Overall Mean	1.75			

As shown in Table 4, the respondents are aware of the availability of Plans/Programs/Practices in Selected Coastal Barangay in Municipality of Odiongan, Romblon. Management does not allow fishermen to fish on time during bad weather conditions, as indicated by the highest

percentage, 24.84%. The lowest percentage, 13.33%, indicates the information about the fisherman/fisherfolks is not allowed to overfish. It depends on their own behaviour if they follow it or not. They don't know on their own if they are fishing too much that almost even small fish that should multiply.

Overfishing is prohibited in the area due to small fish like forage fish. Information about the area is properly informed by the leader or group of (Samahan). Residents and fishermen are properly informed about the rules and

regulations in the area of Coastal Barangay. The Barangay official or BFAR. The six Barangay are led by the organization one of the Barangay Canduyong is led by Odiongan, Vice Mayor Diven Fos Dimaala.

Table 4. Cultural Beliefs, Practices and Productivity of the Fishery Resources in Selected Coastal Barangay in Municipality of Odiongan in Relation to Plan/Program/Practices

Item	Mean	Percentage	Rank	Description
1.Diver or fisherman is not allowed to overfishing	2.27	13.33%	5	Rarely
2.Fishing on time in bad weather conditions is not allowed by the management.	1.22	24.84%	1	Never
3.Overshing is prohibited in the area due to small fish like forage fish.	1.35	24.42%	2	Never
4.Information about the area is properly informed.	1.69	17.87%	4	Rarely
5.Resident and fisherman are properly informed about the rules and regulations in the area of Coastal Barangay.	1.41	21.51%	3	Never
Overall Mean	1.59			

As shown in Table 5, the Protection of the Cultural beliefs and Practices of the Productivity of the fishery resources in Selected Coastal Barangay in Municipality of Odiongan have a good impact on the protection of the area as indicated by the highest percentage of 23.69%. The lowest percentage of 10.19% indicates that the improved data and catch reconstructions. The respondents believe and see that through policies and protecting nature, especially the habitats of fish, the coral reefs, it maintains the safety of fish and for the livelihood of fishermen and fisherfolks and, of course, for the next generation that by being self -

disciplined it has a great contribution for the good and for the increase of fish that they properly follow the policy and strictly prohibit the activities that will destroy our natural resources. Through protecting our livelihood and our safety, we learn to be aware of what we are doing, and we should not only be a citizen who works but live our occupation as a lifestyle. The fisherman /fisherfolks learned their skills because of the value of culture, which is transferred to the next generation. To implement comprehensive and integrated policies in Fisheries management. Encourage sustainable fisheries management. Managing fisheries for sustainable yield.

Table 5. Cultural Beliefs, Practices and Productivity of the Fishery Resources in Selected Coastal Barangay in Municipality of Odiongan in Relation to Protection

Item	Mean	Percentage	Rank	Description
1.Having a good impact on the protection of the area.	1.16	23.69%	1	Never
2.Managing fisheries for sustainable yield.	1.20	23.14%	2	Never
3.To implement comprehensive and integrated policies in the Fisheries management.	1.31	21.21%	4	Never
4.Encourage sustainable fisheries management.	1.27	21.76%	3	Never
5.Improve data and catch reconstruction.	2.70	10.19	5	Sometimes
Overall Mean	1.53			

As shown in Table 6, the fishermen/Fisherfolks and the residents said to protect its natural and cultural features while allowing people to use and enjoy the ocean

sustainably, as indicated by the highest percentage of 27.27%. The lowest percentage, 13.78%, indicates the preserved economic value of a Fishery. Unsustainable fishing

practices lead to the destruction of ecosystems and habitats in many ways. All respondents in six barangays agree that the Cultural beliefs and Practices are still preserved and

maintained by the conservation of natural resources. Fish farming as an entrepreneurial Opportunity. Provide safe spaces in which fish can be bred undisturbed.

Table 6. Cultural Beliefs, Practices and Productivity of the Fishery Resources in Selected Coastal Barangay in Municipality of Odiongan in Relation to Preservation/Conservation Protection

Item	Mean	Percentage	Rank	Description
1.Preserve the economic value of a Fishery.	2.13	13.78%	5	Rarely
2.Provide safe spaces in which fish can breed undisturbed.	1.89	15.54%	4	Rarely
3.Unsustainable fishing practices lead to the destruction of ecosystems and habitats in many ways.	1.12	26.09	2	Never
4.Fish farming as entrepreneurial Opportunity.	1.70	17.3%	3	Rarely
5.To protect its natural and cultural features while allowing people to use and enjoy the ocean in a sustainable way.	1.15	27.27%	1	Never
Overall Mean	1.60			

Time of Departure and Length of Trip

The time they go out to fish depends on certain factors, according to the fisherfolk. Some say they go out in the early afternoon when using nets since fish tend to avoid moonlight. Other fisherfolks go out at midnight. *“Di talaga sila nakakahuli pag maliwanag ang buwan. Parang yung net nakikita ng isda. Pag malakas ang buwan, di mo sila ma-attract. I mean ano sila...kalat.”* (Whenever the moon is bright. They cannot catch fish because it seems that the fish can see the nets. When the moon is bright, you won't be able to attract them [fishes]. They are spread out.) Fisherfolks also catch different fishes at different times of the day and in varying durations depending on the tides, waves, and the flow of water. During high tide, fisherfolk are unable to catch fish since high water levels and rough waves make it difficult for them to fish. On the other hand, during low tide, fisherfolk prefer to go diving (*nangangapa, sisid or mano-mano*) since water levels are low. *“Kung anong oras yung low tide, doon sila. Pwedeng umaga, pwedeng gabi. Anytime, basta maliit yung tubig. Yun ang binabagayan nila kung kailan maliit yung tubig.”* (If it's low tide, that's when they fish. It can be in the morning, or it can be in the

evening. Anytime, as long as the water is low. They base it whenever the water is little.) Fishing trips of the fisherfolk that go out to sea sometimes take as long as three days to capitalize on the equipment they bring as well as their diesel. Those that dive take around 4 to 6 hours when they fish, while those that use gillnets take up a whole day because they have to wait for the fish to enter the net.

CONCLUSION

The study presents the following conclusions based on the findings of the study. The null hypothesis is being rejected, and the alternative hypothesis is therefore accepted. It shows that there is a significant relationship between the Practices and Productivity of the Fishery Resources in Selected Coastal Barangay in the Municipality in terms of Safety Equipment, Costal Management, Sustaining livelihoods Plan/Program/Practices and Cultural Beliefs, And Productivity of the Fishery Resources in Selected Coastal Barangay in Municipality of Odiongan in terms of Protection, Job Opportunities and Preservation /Conservation. The study showed in safety equipment that the fishermen/fisherfolks never used flippers,

goggles and diving masks to swim, but some of them used boats, nets and spears (pana).

Competing interests

No potential conflict of interest relevant to this article was reported.

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Availability of data and materials

Upon reasonable request, the datasets of this study can be available from the corresponding author. Ethics approval and consent to participate. This study conformed to the guidance of animal ethical treatment for the care and use of experimental animals.

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