



Coastal community perceptions and management strategies towards the coastal and marine resources of Ipil and Tungawan, Zamboanga Sibugay

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Abstract

This study was conducted to assess the perception and management strategies of coastal communities towards the coastal and marine resources of Ipil and Tungawan, Zamboanga Sibugay. With the use of survey questionnaire, a total of 45 respondents from the coastal community of Ipil and Tungawan participated in the study. Most of the respondents in the study practice fishing and most of them have relied 76-100% of their family income in in this activity. Based on the study conducted, all of the residents in the coastal community have participated in the management strategies which were implemented through law enforcement and community development activities. Ipil focuses on providing an incentive based approach among its residents while Tungawan focuses on strengthening its law enforcement while coordinating with other government agencies that requires the residents to join the community development activities. Respondents of the study described the condition of coastal and marine resources upon their arrival in the area, were in deteriorating state and has improved at present. With the current government efforts most of the respondents were hopeful and thus, perceived that the resources would improve in the coming 5, 10 to 15 years. Moreover, a study that focuses on the socioeconomic effect of this management strategies was therefore recommended for future researchers.

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Introduction

Marine Protected Areas (MPAs) were established initially to protect biodiversity by removal of human exploitation and occupation (Boudouresque, 2005). It is seen as a chosen strategy in the management of marine resources (Kamil, *et al.*, 2017), that should include enforcement, research and monitoring programs to evaluate design effectiveness (Hyrenbach, 2000). However, the Marine Protected Areas strategy may be ideally suited for some but may also be inappropriate for others in terms of its biological, socioeconomic and governance evaluation (Kamil, *et al.*, 2017). An incorrectly designed MPA can increase the risk of depletion of some resources and can reduce the value of the system of fisheries (Holland, 2002).

With this, an Integrated Coastal Management must be carried out simultaneously which in turn creates social benefit that its success lies in the gradual shift from a fragmented to an integrated approach with the contribution of relevant stakeholders (Ehler & Basta, 1993). Public participation inputs from the fishing community regarding regulations, visual census and interviews were proven to be useful and effective to assess the short-term effectiveness of the implemented management actions (Ferriera & Marques, 2015). As stated by Gabela-Flores & Diedrich (2021), people's trust in leaders were influenced by the perceived benefits of community-based Marine Protected Areas (MPAs) wherein people are likely to trust leaders who share their views. The success of these strategies are often predicted on local support which is strongly influenced by perceptions of local communities (Bennett & Dearden, 2014).

Buluan island marine sanctuary in Ipil and Bangaan island marine sanctuary in Tungawan were two of the locally declared marine protected areas in the province of Zamboanga Sibugay. With this, management plans to protect its marine resources were initially crafted and implemented by the Local Government Units to protect its resources. However, coastal community participation in these management strategies were assessed after the plan was implemented. With these, a

study on the assessment of the coastal community participation in the management of coastal and marine resources of Ipil and Tungawan was conducted. Also, coastal communities' perception on the coastal and marine resources' previous, present and future condition was assessed.

The results of this study are beneficial to different government and non-government agencies as well as coastal communities that are primarily dependent in the coastal and marine resources. This serves as a basis on the coastal community participation in the protection of the coastal and marine resources. This would also serves as a baseline data for policy formulation and implementation to protect and improve marine resources.

The result of the assessment on the perception of the local communities in the coastal and marine resources may help the local government units and law enforcement agencies to foresee the future status of these resources based on their current actions such as law implementation and community development activities to protect these resources.

This study was conducted to assess the coastal community participation in the management of coastal and marine resources in the municipality of Ipil and Tungawan, Zamboanga Sibugay. Specifically, this was conducted to:

1. assess the strategies focused in the coastal and marine resource management of Ipil and Tungawan;
2. evaluate the coastal communities' participation in the management of coastal and marine resources of Ipil and Tungawan; and
3. determine coastal communities' perception in the coastal and marine resources of Ipil and Tungawan.

Materials and methods

Research Locale

The municipality of Ipil (Fig. 1.) is one of the coastal municipalities in the province of Zamboanga Sibugay and serves as the provincial capital. It has a total land area of 241.60 square kilometers or 93.28 square miles which constitutes 6.7% of Zamboanga Sibugay's

total area. Its population, as of the 2015 census was 74,656 which represent 11.79% of the total population of Zamboanga Sibugay or 2.06% of the overall population of the Zamboanga Peninsula Region (PhilAtlas, 2020). Based on the 2020 record of the Provincial Environment and Natural Resources Office, one of the three locally declared marine protected areas in the municipality of Ipil is the Buluan Island Marine Sanctuary. It rests 2.63 km southwest of the mainland and is the westernmost barangay of the municipality of Ipil, Zamboanga Sibugay. Established in 2004 then passed as Municipal Fisheries thru Ordinance No. 09-214-2006, Buluan island in the only place in the municipal waters where hard and soft corals are still intact and undamaged by dynamite fishing, commercial fishing boats, and massive siltation. Based on Marine Protected Areas Support Network (MSN, 2020 (unpublished)), the island has 21 observed families of fishes including *Sphyraenidae*, *Scaridae*, *Nemipteridae*, and *Mullidae*, and sighting of giant clams (*Tridacna spp.*) and marine turtles.

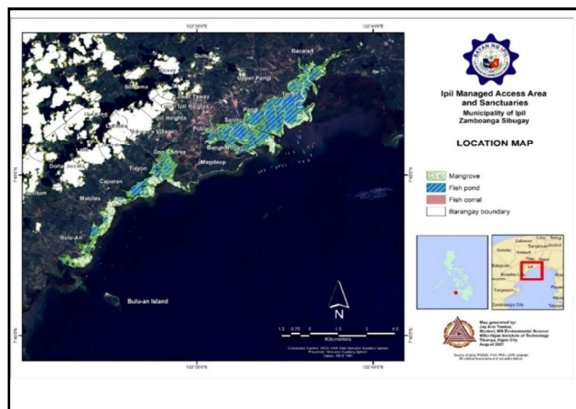


Fig. 1. Buluan Island Marine Sanctuary in Ipil, Zamboanga Sibugay.

Moreover, the municipality of Tungawan (Fig. 2.), also a coastal municipality of the province is where the Bangaan Island Marine Sanctuary is located. It is accessible through barangay Tigbucay which is 15km away, about 45 minutes ride from the heart of the municipality. It was established in 2004 through General Ordinance No. 30-04. This comprises 880 hectares of coral reef, seagrass beds, and mangrove (247 hectares buffer; 633 hectares core zone)

Within its sanctuary lies the 17-hectare hilly forested area with unique rock formation and white sandy beaches ideal for eco-tourism. Valuable resources on the island were commercially valuable fishes (Lapulu, Mantis, Talakitok, and Maming), Corals (*Montipora*, *Acropora*, *Porites*, and *Fungia*), endangered species of whales, sea turtles, and manta rays were also observed, and rich algae of different species and seagrass beds. Bangaan Island is also the nesting site of marine turtles, Tabon birds, and other wildlife (MSN, 2020 (unpublished)).

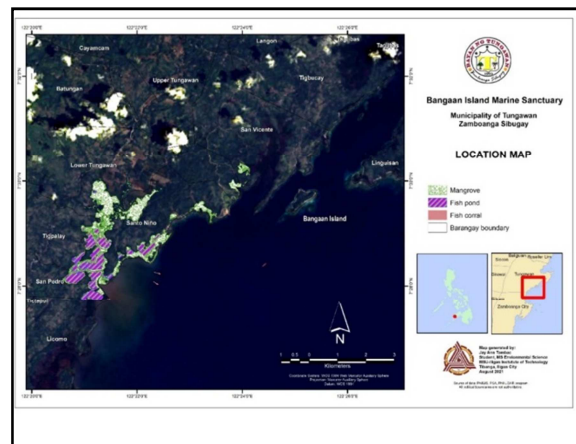


Fig. 2. Bangaan Island Marine Sanctuary in Tungawan, Zamboanga Sibugay.

There were 45 respondents who participated in the study. The municipality of Ipil has 15 respondents which were all members of Buluan Fisher folk Organization and the municipality of Tungawan has 30 respondents which came from barangay Logpond and barangay Libertad. A survey interview using an adopted with minor revisions survey questionnaires in the study of Cinner, J. (2005) on the socioeconomic factors influencing customary marine tenure in the Indo-Pacific was used in this study to assess coastal communities' participation to the management strategies in terms of law implementation and community development activities in the coastal and marine resources of Ipil and Tungawan, Zamboanga Sibugay. Coastal community's perceptions in the previous, present and future condition of the coastal and marine resources were also assessed. Perception will be analysed using Likert five-point scale as respondents described the resources status from very

good (5 points), good (4 points), fair (3 points), poor (2 points), to very poor (1 point).

Respondents of the study prioritizes fishermen living in the coastal areas of Ipil or Tungawan which has direct access to the resources. Key informant interview was also conducted among Municipal Environment and Natural Resources head of office of Ipil and Tungawan, Fisher folk Organizations President, Purok Presidents and community leaders (experienced fishermen residing in the area for a long period of time, as recommended by local communities) to determine the organization's participation and common problems encountered in the management of resources in the Marine Sanctuaries.

Data that has been collected were properly tabulated and are were subjected to statistical analysis such as mean and percentage. The results of data analysis were presented through charts and tables.

Results and discussion

Demographic

Ipil

Majority of the respondents' ethnicity from the municipality of Ipil were Bisaya (73%) and the rest 27 % of the respondents were Subanen. Years of residency of the respondents' ranges from 11 years to 50 years Most of the respondents were residing in barangay Buluan for 21-30 years (40%) while only 13% of the respondents that resides in the area for 41-50 years. In terms of income share from fishing, out of 15 respondents most of them get their 76%-100% of their income in fishing (40%). While others have other sources of income such as farming, buying and selling of goods and sari-sari store, 27% of the respondents get their 51%-75% of income from fishing. Also 27% of them relied 26%-50% of their family income in fishing and 7% of the respondents had relied 0-25% of their family income in fishing.

Most of the fishing method used by the respondents in Barangay Buluan is patuloy (gillnet-60%) which refers to the single-walled nets with a mesh opening of such a size that the wanted fish can gill themselves

in the netting. These type of fishing method were made of monofilament or multifilament thread, lead weight, and floats of any available material usually Styrofoam balls (Kawamura & Bagarinao 1980). Next most practiced fishing method in barangay Buluan is pamasol/pasol (hook and line 20%), a type of fishing gear where the fish is attracted by a natural or artificial bait (lures) placed on a hook fixed to the end of a line or snood, on which they get caught. Hook or metallic points (jigs) are also used to catch fish by ripping them when they pass in its range of movement (Food and Agriculture Organization of the United Nations 2021). Pamana (spearfishing- 7%), panagko (7%) and pamukot (7%) were least practiced type of fishing method of the respondents in barangay Buluan.

Tungawan

The fishermen in the coastal areas of Tungawan has a more diversified ethnicity which comprises 6 ethnic groups as located in barangay Logpond, Purok Dungcaan, and barangay Libertad. Out of 30 respondents in both barangays, most of them were bisaya (60%), followed by Muslims (27%), and a few of Subanen (3%), Kalibugan (3%), Ilonggo (3%), and Tagalog (3%).

Most of the residents have resided the area for 10 years and below (67%). Most of them are migrants while others temporarily stays in the coastal areas of Tungawan to try to shift their livelihood activities to fishing and then goes back to their original home in case this livelihood won't work for them. Other respondents have stayed in the coastal area of Tungawan for 11-20 years (7%), 21-30 years (7%), 31-40 years (13%), 41-50 years (3%) and 3% of the residents have resided the area for 51 years and above.

Most of the residents in the coastal communities of Tungawan have relied their family income in fishing. Based on the assessment on the respondents' income share in fishing, this study reveals that there were 63% of the respondents that get their 76-100 percent of income in fishing, 17% of them get their 51-75% family income in fishing. While 13% of the residents depends their 26-50% income in fishing, 7% of them

depends their 25% and below income from fishing. Most of the respondents (70%) practiced pamasol (hook and line) type of fishing method. Hook and line is a type of fishing gear where the fish is attracted by a natural or artificial bait (lures) placed on a hook fixed to the end of a line or snood, on which they get caught. Hook or metallic points (jigs) are also used to catch fish by ripping them when they pass in its range of movement (Food and Agriculture Organization of the United Nations 2021). Other fishing method practiced by the respondents in the municipality is New Look fishing (stationary bag net fishing) which practiced by 23% of the respondents. This type of fishing method is made up of a conical or cubical bag net with natural/synthetic fiber nettings which are set by means or regularly-spaced stakes or post as enclosure for the bag net (FAO 133, Series of 1981). However, this fishing method could create negative environmental impact since a very small mesh (3 ply nets in Tungawan) were commonly used which caught juveniles and fish fry. While 3% of the respondents used patuloy (gillnet fishing) as a method in fishing, which were made of monofilament or multifilament thread, lead weight and floats usually Styrofoam balls (Kawamura & Bagarinao 1980), 3% also of the respondents didn't engage in fishing and don't have used any fishing methods and have relied to other source of livelihood which is tricycle driver.

Management strategies of coastal communities in marine resources

There were prohibitions in the destructive and unsustainable use of marine resources in Ipil and Tungawan municipality, Zamboanga Sibugay Province. This is one of the methods of resource management that has been implemented in this two municipalities. With this, all of the respondents of these areas have participated in this law and policy implementation. There were 3 main reasons behind the respondents' participation as shown in Fig. 3. One of these is to avoid penalties of which 53% of the respondents from Ipil and 23% of the respondents of Tungawan have answered. Another reason of their participation is to improve the resources which 27%

of the respondents from Ipil, and 40% of the respondents from Tungawan have answered. Also respondents have participated in the law implementation to avoid conflict from the government such as penalties and other sanctions, which 20% of the respondents from Ipil and 37% of the respondents from Tungawan have answered.

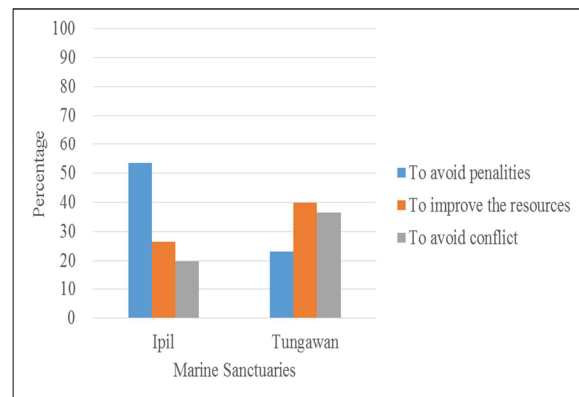


Fig. 3. Reasons of Coastal community's participation in policy implementation.

All of the respondents of the municipality of Ipil and Tungawan find these laws and policies useful and relevant to their everyday livelihood. However, there were recommendations from the respondents in terms of marine resource conservation and management to sustain these resources. Fig. 4 shows out of 15 respondents from Ipil and 30 respondents from Tungawan, 53% of the respondents from each municipality have no recommendations as to the improvement of the laws and policies.

This means that according to them, the laws that have been implemented were already enough to manage the resources sustainably. One of the recommendations of the respondents is to strengthen the law on the prohibition of illegal fishing methods which was still observed in the marine areas currently, of which 33% of the respondents of Ipil and 37% of respondents from Tungawan have recommended. Also, 13% of respondents from Ipil and 10% of the respondents from Tungawan have recommended strict law enforcement in the protection of marine resources.

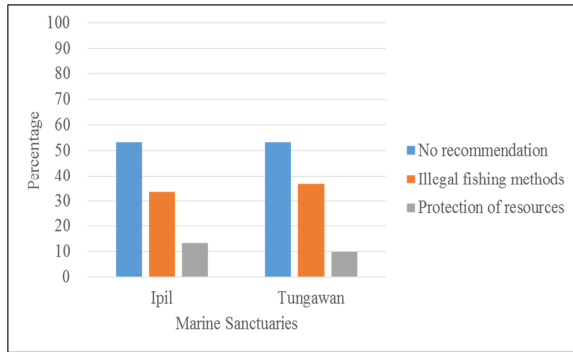


Fig. 4. Coastal community's management of marine resources.

In terms of participation of the respondents to the activities pertaining to the management of the coastal and marine resources such as tree planting, clean up drives, seminars and workshops, all of the respondents have been participating to these type of events. Fig. 5 shows the following reasons of the respondents' participation in the management activities under community development. One of these reasons is to improve environmental quality of which 27% of the respondents from Ipil and 13% of respondents from Tungawan have answered. The other 47% of the respondents from Ipil and 27% of the respondents from Tungawan participated in the community development activities because it gives them additional income. Moreover, 27% of the respondents from Ipil and 60% of the respondents from Tungawan participated in these activities because it is compulsory.

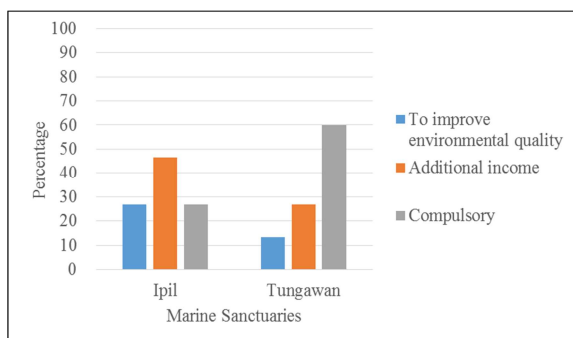


Fig. 5. Coastal communities' reasons of participation to activities.

Fig. 5 also shows the most frequent answer of the respondents which differs in two municipalities. For Ipil, the most frequent answer as to why they

participate into this community development activity is for additional income which 47% of the respondents have answered. This is because local government of Ipil has initiated projects to restore mangrove forest that gives the local communities some incentives through mangrove tree planting and potting activities. This activity does not only give the community an alternative source of income but also improve the quality of the environment and prevents overexploitation since people does not solely depend on the marine resources.

Also, the respondents have understood that participating in these activities, mangrove tree planting for example helps the marine resources improve its quality which serves as their primary source of livelihood. With this, the abundance of the marine resources could also lead to a progressive and abundance livelihood in their community. On the other hand, most frequent answer of the respondents from the coastal community of Tungawan as to the reason of their participation in community development activities is because it is compulsory. These were common especially to 4P's members where all beneficiaries of the said government programs are required to participate in all livelihood activities initiated by DSWD and other related agencies.

Perception of the respondents in marine resources of Ipil

Table 1 shows the perception of the coastal communities to the marine resources in Buluan, Ipil, Zamboanga Sibugay. Based on the result of the study conducted, it reveals that respondents describe the current condition of the mangrove forest as very good (mean=4.87), as compared to the previous status of the resources upon their arrival which the respondents described as very poor (mean=1.53). With the current effort of the Local Government in partnership with the community to preserve the mangrove forest, the respondents of this study believed that the mangrove condition in their area after 5, 10 and 15 years will be very good (mean=5). Table below shows the perception of the coastal communities in the mangrove area.

Table 1. Perceptions of the coastal community in Ipil on mangrove resources.

Statement	Mean	Interpretation
Current condition of the mangroves	4.87	Very good
Previous condition of the mangrove upon arrival	1.53	Very poor
Mangrove condition 5 years from now	5	Very good
Mangrove condition 10 years from now	5	Very good
Mangrove condition 15 years from now	5	Very good

In terms of the perception of the respondents of Ipil in the fish resources as shown in Table 2, this study revealed that the current status of fish resources is fair (mean=2.80) as compared to its previous condition upon the arrival of the respondents in the area which they described as poor (mean=2.27). After 5 to 10 years from now, the respondents perceived that the condition of fish resources is good since local efforts have already been initiated to start law implementation in conservation of this resources. In 10 years, respondents have anticipated that the law is fully implemented and fully enforced so respondents believed that in 10 years, fisheries resources condition will improved and be very good. During the survey interview that has been conducted, the respondents explains that the current condition of the fisheries resources is affected by the practice of illegal fishing methods which were still observed in the area currently. Though there law enforcement and local government initiatives were already in place in the municipality of Ipil, it takes time for resources to recover from the destruction. Hence, this explains the residents' response to the condition of the fish resources 5, 10, to 15 years from now.

Table 2. Perception of the coastal communities of Ipil in fisheries.

Statement	Mean	Interpretation
Current condition of fisheries	2.80	Fair
Condition of fisheries resources upon arrival	2.27	Poor
Condition of fisheries in 5 years	3.47	Good
Condition of fisheries in 10 years	3.87	Good
Condition of fisheries in 15 years	5	Very good

Respondents of Ipil, Buluan, Zamboanga Sibugay described the current condition of corals, as shown in Table 3, as in good condition (mean=3.87) compared to the condition of corals upon their arrival which was very poor (mean=1.73). As for the condition of the corals for 5, 10 to 15 years from its current condition, the respondents perceived it in a very good condition. As affected by illegal fishing activities, corals takes time to regenerate thus the good current condition of corals as described by the respondents of Ipil, progresses after 5 years.

Table 3. Perception of the coastal communities of Ipil in corals.

Statement	Mean	Interpretation
Current condition of corals	3.87	Good
Condition of corals upon arrival	1.73	Very poor
Condition of corals 5 years from now	4.27	Very good
Condition of corals 10 years from now	4.87	Very good
Condition of corals 15 years from now	4.87	Very good

With a mean of 2.60 respondents in the coastal communities of Buluan, Ipil, Zamboanga Sibugay describes the current condition of seagrass resources as poor as reflected in Table 4. The result of the analysis further shows that the seagrass condition upon the respondents' arrival is the same to its current condition, which means in poor condition. In terms of the seagrass future condition 5 years from now, the respondents have perceived its condition as good, and in 10 to 15 years later seagrass condition was anticipated by the respondents to be in a very good condition.

Table 4. Perception of the coastal communities of Ipil in seagrass.

Statement	Mean	Interpretation
Current condition of seagrass	2.60	Poor
Condition of seagrass upon arrival	2.40	Poor
Condition of seagrass 5 years from now	3.67	Good
Condition of seagrass 10 years from now	4.27	Very good
Condition of seagrass 15 years from now	4.47	Very good

Perception of the respondents in marine resources of Tungawan

Based on the results of the study that has been conducted in the coastal communities in the municipality of Tungawan in terms of mangrove perception, as shown in Table 5 the respondents described the current mangrove resources in fair condition (mean=3.23) of which as compared to its previous condition upon their arrival the respondents described the mangrove resources in poor condition (mean=2.10). In terms of the mangrove condition 5 years from now, the respondents anticipated it to be in good condition (mean=3.50). In 10 years and 15 years from the current time, the condition of the mangrove resources in Tungawan municipality was expected by the respondents to be in a very good condition.

Table 5. Perception of the coastal communities of Tungawan in mangroves.

Statement	Mean	Interpretation
Current condition of the mangroves	3.23	Fair
Previous condition of the mangrove upon arrival	2.10	Poor
Mangrove condition 5 years from now	3.50	Good
Mangrove condition 10 years from now	4.37	Very good
Mangrove condition 15 years from now	4.40	Very good

Results on the assessment of coastal communities' perception in fisheries resources in the municipality of Tungawan shown in Table 6 reveals that the current condition of the fisheries were good (mean=2.07), as compared to the condition of the resources upon the residents' arrival which is in fair condition (mean=2.83). The results indicate that the current status of the fisheries resources had become worse as compared to its previous status upon their arrival to the area. Moreover, the respondents have expected the fisheries resources to improve in 5, 10, and 15 years from its current status from poor condition to fair. The respondents have further describe that the fair status of the fisheries resources indicates fish catch that is just enough to sustain their basic needs. Shift to more expensive type of fishing method were also common among fishermen.

Table 6. Perception of the coastal communities of Tungawan in fisheries.

Statement	Mean	Interpretation
Current condition of fisheries	2.07	Poor
Condition of fisheries resources upon arrival	2.83	Fair
Condition of fisheries in 5 years	2.97	Fair
Condition of fisheries in 10 years	2.93	Fair
Condition of fisheries in 15 years	2.93	Fair

Table 7 reveals that the perception of the respondents on the current coral condition was described as poor (mean=2.07), as compared to their perception to the resources upon their arrival in the area which is fair (mean=3.37). It was further perceived by the respondents that for the coming 5, 10 to 15 years the condition of the corals will not improve and will still remain in a fair condition. Respondents further explains that, despite the efforts of the Local Government Units of Tungawan in terms of law enforcement illegal fishing is still observed by most of the fishermen and coastal communities in the area.

Table 7. Perception of the coastal communities of Tungawan in corals.

Statement	Mean	Interpretation
Current condition of corals	2.07	Poor
Condition of corals upon arrival	3.37	Fair
Condition of corals 5 years from now	3.17	Fair
Condition of corals 10 years from now	3.33	Fair
Condition of corals 15 years from now	3.33	Fair

Perceptions of the respondents on seagrass resources as shown in Table 8, indicates that the current condition of the resources is good (mean=3.55) as compared to its status as described by the respondents upon their arrival which is in fair condition (mean=3.00). The respondents have further described that seagrass in 5 years later will be in fair condition (mean=3.40). In 10 to 15 years later, respondents anticipated that seagrass condition would improve and were already in good condition. Based on the interview, seagrass were important for the respondents as an ecological habitat and they were not aware of its anthropological uses.

Table 8. Perception of the coastal communities of Tungawan in seagrass.

Statement	Mean	Interpretation
Current condition of seagrass	3.55	Good
Condition of seagrass upon arrival	3.00	Fair
Condition of seagrass 5 years from now	3.40	Fair
Condition of seagrass 10 years from now	3.63	Good
Condition of seagrass 15 years from now	3.63	Good

Conclusion

Management strategies in the municipality of Ipil and Tungawan were implemented through law enforcement and community development activities. Law enforcement refers to a form of management strategies which pertains to the formulation and implementation of municipal ordinances that addresses issues such as the use of illegal fishing method and overharvesting. Community development activities refers to the activities initiated by different government sectors in the coastal communities of Ipil and Tungawan that improves livelihood and quality of life of the respondents. Results of the study revealed that all of the respondents from the two municipalities have participated in coastal and marine resource management for both law enforcement and community development activities.

Hence, it was concluded in this study that Local government units of the two municipalities have different focus in involving public participation in the management of the coastal resources. Ipil focuses on providing an incentive based approach among its residents while Tungawan focuses on strengthening its law enforcement while coordinating with other government agencies that requires the residents to join the community development activities.

The perception of the respondents in the coastal and marine resources were based on their actual observation on its current trend, extent as well as community utilization of the resources. Respondents of the study described the condition of coastal and marine resources upon their arrival in the area, were in deteriorating state and has improved as described

in its present condition. Laws pertaining to the proper utilization of coastal and marine resources have been realized and was expected to be fully implemented for the next proceeding years. This explains the perception of the respondents from the municipality of Ipil that resources was expected to improve in the coming 5, 10, to 15 years.

Recommendations

A municipal ordinance was already implemented to sustainably manage coastal and marine resources in the municipalities of Ipil and Tungawan, Zamboanga Sibugay. However practices that violates this ordinance was still observed by most of the respondents in these areas. With this, it was recommended that there should strong and strict implementation of the municipal ordinance to properly protect coastal and marine resources from illegal and unsustainable methods of resource utilization.

Local Government Units should create livelihood opportunities from different stakeholders such as TESDA and DTI to provide trainings and seminars on having an alternative source of livelihood of the coastal communities to avoid overexploitation on the coastal and marine resources.

Conduct a series of Information, Education and Communication campaigns to educate coastal communities on the importance of protecting coastal and marine resources and how its abundance affects their livelihood to encourage them to protect the resources.

Implement incentive based approach to any activities pertaining to the rehabilitation and protection of the coastal and marine resources which opens for another source of income of the coastal communities thus, encourage them to participate to these activities. This extrinsic motivation has been practiced in the rehabilitation of Buluan mangrove areas and were found out to be effective since there is an improvement on the mangrove resources as validated through assessment of coastal communities' perception on the previous, present and future condition of the mangrove resources.

It was further recommended for future researchers to focus on the effects of the current coastal and marine resource status on the economic status in the coastal communities. Also, to conduct a thorough investigation on the effectivity of management strategies imposed by the local government of Ipil and Tungawan.

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Interval data descriptive analysis for Likert Scale.

Scores	Interpretation
4.21-5.00	Very good
3.41-4.20	Good
2.61-3.40	Fair
1.81-2.60	Poor
1.00-1.80	Very poor

Interval computation for descriptive interpretation (Bhandari, 2020):

Highest score – lowest score = Range/total number of scales

$$5 - 1 = 4/5 = 0.80$$

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