

Municipal Fisheries Registration and Licensing in the Philippines

A research report of the impacts and limitations of Municipal Fisheries registration and Licensing Policies and Implementation in the Municipalities of Alabel, Badian, Calatagan, Cortes, San Fabian and Unisan

I. INTRODUCTION

In the Philippines, jurisdiction over coastal marine waters within an expanse of 15 kilometers from the shoreline of every municipality has been turned over to the local municipal government by virtue of the National Fisheries Code of 1998. In turn, the Fisheries Code is based on the Local Government Code of 1991 which gave greater autonomy to the local governments.

Municipal Fisheries

This 15-kilometer expanse of coastal marine waters under municipal government jurisdiction is known as “municipal waters,” which are primarily used as fishing area of small-scale artisanal fishers. These fishers who fish in the municipal waters are called therefore called “municipal fishers.” Municipal fishers use small-scale and traditional fishing methods, thus limiting their fishing capacity to within 15 kilometers from the shoreline.

Under the Fisheries Code, the main criteria for determining whether a set of fishing equipment is qualified to be used in municipal waters is the weight of the fishing boat. Fishing boats weighing above three tons are prohibited by law to fish within the municipal waters; they are classified as “commercial” fishing boats that can operate only outside the municipal waters. In fact, the fishing boats of most municipal fishers would weigh far less than the three-ton limit under the law.

The term “municipal fishers,” as far as Philippine civil society organizations are concerned, should include the women in coastal communities since the majority of them also engage in fishing activities such as gathering shells and other seafood near the seashore for the family’s subsistence, while others work in aquaculture farms to augment the husband’s income from fishing. The government puts the total number of municipal fishers at 1.4 million nationwide, comprising the biggest labor force in Philippine fisheries. If their families are included in the head count, municipal fishers would make up a significant social sector of about 8.4 million people (i.e. 1.4 million multiplied by six, the national average household size).

Furthermore, fishers are the poorest of all sectors in Philippine society. Since 2000, the data of the National Statistics Coordinating Board (NSCB) have consistently shown that poverty incidence is highest in the sector—hovering between 40 and 50 percent of all fisher households.

Degradation of Fisheries Resources

The main threat facing municipal fisheries is unabated overfishing. Along with other factors, overfishing has resulted in declining fish catch, degradation of coastal ecosystems and other

socio-environmental costs. Critical fisheries habitats are also degraded, thus greatly reducing their capacity to sustain fisheries and provide ecological services. The fisheries production data confirm the degraded status of fishery resources in the country. From 1981 to 2001, the yearly total fish catch in the municipal waters had shown a stagnant trend, hovering between 900,000 and 1.1 million metric tons—despite the fact that over the same period, the number of municipal fishers had increased by 2.5 times from 580,000 in 1980 to 1.4 million in 2002. It means that the fish catch remained stagnant despite a 2.5 increase in fishing effort—a clear indication that fisheries production has gone beyond the maximum sustainable level and that fish stocks are harvested at a rate that exceeds their capacity to regenerate.

Overfishing persists due to the open-access situation of Philippine fisheries characterized by undefined property rights and weak management institutions. In this context, the current government program of registration and licensing in municipal waters can be a means of regulating fishing effort. However, as will be discussed below, the implementation of the Municipal Fisheries Registration and Licensing (MFRL) has seen a lot of complaints and even resistance from the fisherfolk who regard it as a burden rather than a regulatory measure.

The basis for MFRL can be found in the National Fisheries Code of 1998. However, the specific national law pertaining to MFRL and the guidelines for its implementation was issued only in 2004 in the form of an executive order by the Philippine president. This is Executive Order 305 (EO 305) which is entitled “Devolving to Municipal and City Governments the Registration of Fishing Vessels Three (3) Gross Tonnage and below.”

Even with the issuance of EO 305, municipal governments would not be able to implement MFRL within their jurisdictions without a local enabling ordinance based on EO 305. Because local governments were given autonomy under the Local Government Code of 1991, almost every national law has to be supplemented by a local ordinance for it to be applicable. Since EO 305 came out in 2004, several municipalities have enacted their own local ordinances based on it. However, there is no data yet on the number of municipalities that have already enacted these local ordinances, and whether or not they constitute the majority of the total 915 coastal municipalities (and cities) in the country. As a result, there is no way of knowing the extent of implementation of the MFRL on a nationwide scale.

Notwithstanding the lack of data, reports gathered by the Bureau of Fisheries & Aquatic Resources (BFAR) on the implementation of MFRL in several municipalities reveal the disturbing fact that municipal governments regard licensing basically as a taxation measure rather than a means to regulate fishing effort and prevent overfishing.

In fact, fishers who were interviewed at the start of the implementation have complained that the required registration and licensing fees, which are to be paid on a yearly basis, are set too high and that they found it difficult to pay them. Some fishers even refused to register and to obtain a license because of the perceived excessive fees. This would hardly be surprising given the present open access situation in most municipal fisheries where the declining fish catch now barely accounts for the “resource rent,” which means the profit above the normal return on all fishing costs, both explicit (e.g. cost of fishing implements) and implicit (i.e. opportunity lost).

Thus municipal fishers find the annual registration and licensing fees quite high because they are not based on the actual returns of fishing in the municipal waters.

Furthermore, the granting of licenses is merely based on “demand” considerations—i.e. the need of the applicant to fish as means of livelihood. Any fishing unit that is registered is automatically “licensed”, thus placing no limits to entry in the municipal waters. The provisions of the Fisheries Code for the estimation of resource capacity using maximum sustainable yield (MSY) or total allowable catch (TAC) as the basis for determining the number of licenses have not been implemented. Resource and ecological assessments are lacking or, if available, not adequately fed into the formulation of the local MFRL ordinances.

Finally, the women have criticized the present MFRL laws and ordinances as “gender-blind” in that they contain no provisions that take into account their role as fisher-gleaners (i.e. gatherers) of shellfish and other seafood in mangrove forests and seagrass beds near the shore—a role that is distinct from the sea-borne activities of men fishers. As fisher-gleaners, the women are the main users of such coastal resources as mangrove forests and seagrass beds. However, the current laws and ordinances do not have any provisions that make them part of the registration and licensing system. Thus the current MFRL system cannot be an effective means of fisheries management by completely disregarding a group of users of the coastal fishing ground (which includes mangrove and seagrass areas).

This treatment of MFRL as primarily a taxation measure and the neglect of resource and ecological assessments will have serious consequences on the already precarious status of the municipal fishery resources. As already mentioned, some affected fishers simply did not bother to register and apply for a license in defiance of EO 305 and its local ordinance. Of course, they will continue fishing even without a license since it is their only means of livelihood. On the other hand, fishers who paid the fees tried to “make up” for the amount “lost” by increasing their fishing effort subsequently. Therefore, the MFRL in its current form fails as a regulatory measure; it even tends to worsen overfishing in municipal waters instead of curbing it.

There is therefore a need to study the current MFRL implementation, assess its limitations and its impacts on municipal fishers and on the municipal fisheries resources, and analyze the factors or reasons behind the limitations and the impacts. Likewise, there is a need to study relevant foreign experiences to draw lessons on how other countries tackled similar problems and designed an appropriate version of small-scale fisheries registration and licensing in their own context. These studies are important in order to develop policy recommendations for a more appropriate and more effective MFRL framework, which means, among other things, taking into account the resource rent (surplus) of the municipal fishing ground and integrating the distinct role of women as fisher-gleaners. These policy recommendations should be based on studies of the limitations of the existing MFRL approach and implementation and of relevant foreign experiences in small-scale fisheries registration and licensing.

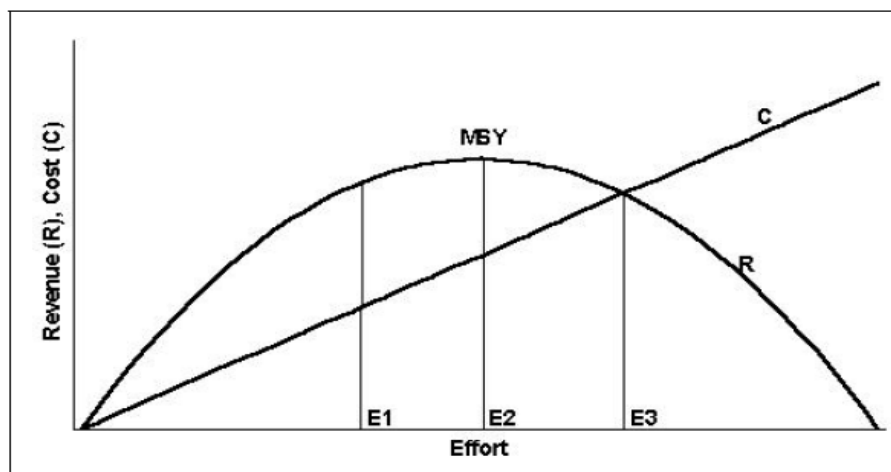
II. RESEARCH FRAMEWORK

A. RELATED LITERATURE ON RESOURCE RENT

In general, the literature on fisheries resource rent agrees that fishery is a biological resource with certain limits to renewability. An article on resource rent by the Department for International Development (DFID),¹ as well as other fishery academics, gives emphasis to the Schaefer model of biological growth function. The DFID article states:

“The diagram below presents a simple model of a fishery based on a Schaefer biological growth function. Assuming that the price of fish is not dependent on the quantity sold, the parabola shows that effort increases as does the fish catch up to the maximum sustainable yield (MSY) at effort level E2. Beyond this point, however, further increases in effort result in reductions in the fish catch. For many years, MSY was regarded as the ‘biological optimum’.

Diagram 1:



“Resource rent is the vertical difference between revenue (shown by the parabola marked R) and costs (shown by the straight line from the origin marked C). Initially resource rent increases as effort increases, reaching a maximum at effort level E1. This level is called the maximum economic yield (MEY). Increases in effort beyond this point result in reduced economic returns from the fishery. Note that the maximum economic yield, or MEY, is also the maximum resource rent (the economic optimum), which occurs at an effort level below MSY. Therefore, a policy aimed at achieving maximum resource rent would be more ecologically friendly than a policy targeting MSY.”

“Since fishing is usually undertaken in pursuit of profit, it might be thought logical that fishers would use fishing effort so that resource rent is maximised. Recall, however, that the cost line includes “normal” profit. As a result, at levels of effort below that where revenue and cost are

¹ DFID, “Resource Rent,” pp. 1-3. May 2004. www.odi.org.uk/resources/docs/3113.pdf

equal, fishers will be earning above normal profits. As with any industry, such profits will attract new entrants and, if access is free and open, this process will continue until all resource rent has been dissipated, at effort level E3.

“In equilibrium then the fishery will operate at the point where revenue equals cost. Fishers will earn normal profits but the fishery is overexploited both economically and biologically. In practice the situation is likely to be worse than described by the model because of the variability of the key parameters in fishing – biological productivity, prices and costs. Above normal profits can easily emerge in the short run encouraging non-viable increases in effort that are difficult to correct.

“The key policy problem is to design management arrangements that prevent resource rent from being dissipated. Only two broad options present themselves—either management instruments must be developed that enable rents to be capitalized or rents must be removed through royalty payments (or a combination of the two).”

Calculation and importance of resource rent

Therefore, the DFID article states that the “calculation of resource rent essentially requires giving values to the diagram above. Key data requirements include the biological productivity function, and costs and earnings associated with the various segments operating in the fishery. Generally speaking, bio-economic models must be constructed for the major fisheries. Such models can be more or less complicated depending upon requirements.”

1. Bio-economic Model and Resource Rent

The notion of economic rent in fisheries is based in the bio-economic fishery models. Fish stock as a natural resource is productive and thus earns a return. The return or resource rent is realized in a well-managed fishery. The rent accruing directly from the fishery may be accounted for as the difference between revenues and the cost of fishing. Fishers earn normal return to capital equivalent elsewhere in the economy (besides the surplus above the normal return of capital). However, with an efficient fisheries management regime, rents can be maximised at the optimum sustainable yield.

In the absence of rent capture by government for society-wide benefits, fishers receive and may keep these above-normal amounts, in addition to the normal return of capital. In a polar case of free and open-access to the resource, rents are dissipated as effort runs away unmitigated in search of perceived rents, continuing up to a point where return from fishing just equals the cost, corresponding to the common property sustainable yields.

Suppose the government, as a steward of the resource, is interested in capturing rents from the fisheries. Presumably rent capture should not bite into the normal profits of the fishing enterprises. The extent to which excessive rent capture might occur largely depends on the magnitude of the resource rent in the fishery and the method of rent

capture.²

Rent Capture

The subject of rent capture to fisheries is closely related to the question of who owns the fish stocks and who should be entitled to the rent the resources can generate. The government, by virtue of the regalian doctrine, serves as the steward of the fishery resources and grants property rights to the resource.

In this case the government addresses the open-access dilemma which leads to the ruin of the resource system. Of particular interest is how the surplus generated goes back to the owner of the resource and thus makes community property rights compatible with public ownership of the resources. For this purpose the government, as a custodian of the resource, may capture some of the rents.

2. Registration and Licensing in the Philippines under the Fisheries Code of 1998

In the Fisheries Code (RA 8550), the concept of resource rent was introduced, although its use and purpose was not described.

Registration

Registration as defined in the Fisheries Code will serve as a means of information on the number and characteristics of fishers, vessels and gears employed in fishing operations. The registry of fishers and fishing vessels will serve as important inputs in licensing and subsequent management initiatives of Local Government Units (LGUs).

Licensing

The Fisheries Code gives preference to resource users in the local communities nearest to the municipal waters and highlights the prominent role of fisher associations and cooperatives. Section 17 provides that duly registered fisher organizations shall have preference in the grant of fishery rights by municipal city council pursuant to Section 149 of the Local Government Code.

Regulating access to municipal fishing resources is addressed by vesting municipal governments with the jurisdiction over its waters and giving responsibility for the management, conservation, development of its fishery resources. LGUs are authorized to establish closed seasons in municipal waters and other areas reserved for the use of municipal fishery and enact ordinance to discontinue the issuance of licenses and permits for fisheries activities in municipal waters.

² Andreas P. Ithindi, "Rent Capture in Namibian Fisheries: The Case of Hake," pp. 11-14. Ministry of Marine Resources, Namibia. 2003.

Potential Yield

Determining MSY through catch monitoring is a difficult task since physical and social infrastructures which aid in monitoring might not be ready yet in the Philippines. One of the tool in estimating MSY is the potential yield. There are different estimates of the potential yield for each marine ecosystem that are useful in the process of determining or estimating the MSY which can be used as basis for limiting effort or number of licenses of specific gears.

Mangroves

- 1 hectare (ha) of mangroves = 1.08 metric tons (mt) of fish and other marine organisms/year³

Seagrass

- a single acre may support as many as 40,00 fish and 50 million small invertebrates/year⁴

Corals

Quality of coral cover

75-100 Percent	- Excellent
50-74.9 Percent	- Good
25-49.9 Percent	- Fair
25 Percent	- Poor

- Poor: 1 ha = 0.02-0.03 mt of fish and other marine organisms/year
- Fair: 1 ha = 0.08 mt of fish and other marine organisms/year
- Good: 1 ha = 0.13 of fish and marine organisms/year
- Good-Excellent 1 ha = 0.35 mt of fish and other marine organisms/year⁵

Coastal waters

- 1 ha = 0.04 mt of fish and other marine organisms/year⁶

Bases for Computation of License Fees

The resource rent can be computed considering three factors: 1) resource rent, 2)

³ R. E. Schatz, (1991), Economic Rent Study for the Philippines. Fisheries Sector Program. Asian Development Bank Technical Assistance 1208-PHI, Manila.

⁴ Smithsonian Marine Station at Fort Pierce, "Seagrass Habitats," June 2002. <http://www.sms.si.edu/>

⁵ McAllister as cited by Cesar, Herman J. Undated. Coral Reefs: Their Functions, Threats and Economic Value. http://www.oceandocs.org/bitstream/1834/557/1/cesar_04.pdf

⁶ Ibid.

willingness to pay, and 3) the way how business permits are computed based on the tax code.

The resource rent can be determined by computing the catch and cost of fishing for each and all types of gears. This will require reliable monitoring and recording of catch data including the cost of gears. Second is willingness to pay, in which the government can either arbitrarily put value or fee to certain types of fishing activities (but has to comply with the limits of tax code) and let anyone interested and willing to pay for such activities can have access to the resource. This is under the assumption that no one will venture to pay for something without evaluating his(er) chances of gaining from such venture. Thus the willingness to pay is equal to his(er) evaluation of positive surplus from the access to the resource. This is where negotiations between users and resource allocators comes in. A third factor to consider is the status of the resource as may be determined by resource assessment.

Considerations

There is a need to research on which type of fishing gears/ activities have surplus and which types do not have.

Equation 1:

A basic formula for calculating resource rent might be:

$$RR = TR - (IC + CE + CFC + NP)$$

$$NP = r \times K$$

Where:

RR	= Resource rent
TR	= Total revenue
IC	= Intermediate consumption
CE	= Compensation of employees
CFC	= Consumption of fixed capital/ devaluation
NP	= Normal profit
r	= the opportunity cost of capital
k	= the value of fixed capital stock invested in the industry for each fishery

Equation 2:

On the other hand, the license fee may be based on the following equation which puts emphasis on the cost of managing the fishery rather than the fishing income:

$$\text{License fee} = \frac{\text{Average cost (administrative, monitoring, \& enforcement costs)}}{N \text{ (total fishing effort [vessels and fishers])}}$$

B. RESEARCH OBJECTIVES, METHODOLOGIES, SCOPE & LIMITATIONS**1. Objectives**

1. Develop a set of policy critique and policy recommendations on the existing MFRL approach and implementation.

2. Methodologies

1. Secondary data were reviewed and gathered pertaining to national and local laws on municipal fishing registration and licensing.
2. Secondary data on resource assessments and on the status of local fishery resources were gathered which were necessary for estimating or computing the potential yield of a given resource. Where available, secondary data on fish catch were also gathered.
3. In the absence of secondary data on fish catch, primary data gathering through Focus Group Discussions (FGDs) was conducted, involving the local fishers using the major gear types per area, and the women-fishers in six coastal municipalities (the case study areas).
4. Primary data was also gathered through key informant interviews with officials of the Bureau of Fisheries and Aquatic Resources (BFAR) and the municipal officials involved in the implementation of the municipal fisheries registration and licensing.

(Please see **Annex A** for the set of guide questions for the FGDs with fishers and the interviews with key informants.)

3. Scope and Limitations

This research was primarily based on a case study involving six coastal municipalities in Luzon (San Fabian, Calatagan and Unisan), the Visayas (Badian) and Mindanao (Alabel and Cortes).

This research focused on the registration and licensing of capture fishing activities, including the taking, gathering and gleaning of fish with or without the aid of gears and use of boats, as opposed to other fisherfolk activities like fish culture, fish processing and fish trading. Majority of the six municipalities did not have secondary data on fish catch. In Alabel and Cortes, these were available but incomplete. In this situation, the fish catch was based on

estimates arrived at by means of FGDs with fishers using the most common types of fishing gears in each of the six areas. Surplus was computed from the difference between the estimated average income on the one hand, and the cost of operation and the cost of the gears on the other hand.

III. FINDINGS, OBSERVATIONS AND ANALYSIS (consolidated from the reports of the six areas)

A. FINDINGS ON REGISTRATION AND LICENSING

1. Registration Of Municipal Fisherfolk

The Fisheries Code mandates each local government unit (LGU) to maintain a registry of municipal fisherfolks for the purpose of determining access priorities, limiting entry in the municipal waters and monitoring fishing activities. LGUs are required to enact an enabling municipal fisheries ordinance that includes policy schemes for municipal fisherfolk registration and licensing.

In the six case study areas, five areas have already passed municipal fisheries ordinances (MFOs) that serve as the enabling local law with which to implement the municipal fisherfolk registration and licensing. These are the municipalities of Calatagan, Batangas; Cortes, Surigao del Sur; Unisan, Quezon; Alabel, Sarangani; and Badian, Cebu. On the other hand, San Fabian, Pangasinan still has a pending MFO awaiting approval. All the MFO, including the pending one in San Fabian, mandate the registration of the municipal fisherfolk, their fishing vessels and gears used in fishing.

Scope and Eligibility Criteria

For a person to be eligible for registration, (s)he must have the following qualifications:

- A Filipino citizen
- At least 18 years of age, a resident of the municipality for at least six months (for which a community tax certificate [CTC] is required as proof).
- Engaged in fishing as defined in the Fisheries Code

No uniform Registration Procedure

In Alabel, Calatagan and Unisan, members of the Municipal Fisheries & Aquatic Resource Management Councils (MFARMC) participated in the information and education campaign for the registration of fishers and fishing boats. It should be noted that the MFARMC is the co-management body created by the government to involve the fisherfolk and other sectors such as the women and youth in coastal resource management.

In Alabel, Calatagan and Unisan registration of fisherfolk and of fishing boats are two separate processes. Registration of fisherfolk comes first with the issuance of identification cards, followed by the registration of fishing boats.

In Cortes, registration of fisherfolk and of fishing vessels involves a single process only. A Certificate of Registration of a fishing boat is issued which is tantamount to permitting the owner to fish in the municipal waters.

The stage reached in actual implementation varies per case study area. The municipalities of Alabel, Calatagan and Cortes were the early birds, so to speak, because in these areas the registration of fisherfolk and fishing boats/vessels was implemented several years ago, the latest being four years ago and the earliest, nine years ago. Registration is continuing process.

Unisan started implementing in 2010 and the registration is still on-going. In Badian, an information and education campaign on registration was conducted in 2007, which was followed by the fisherfolk filling up and submitting the registration forms to the Office of the Municipal Agriculturist. However, up to the present the fisherfolk have not been given their Certificates of Registration (which would have served as proof of registration). On the other hand, San Fabian has not yet implemented registration because its municipal fisheries ordinance is not yet approved.

The process of registration also varies per case study area. Nevertheless, it usually involves the following local government units, offices or officials: Barangay Government, Municipal Agriculture Office, Municipal Treasurer and Mayor's Office. The MFARMCs participate in the information and education campaign and the authentication of the identities of fishers and of their fishing activities, particularly in Alabel, Unisan and Calatagan.

Below are the usual functions of the local government offices and MFARMC in cases where registration of fisherfolk and of fishing boats involves a single process only:

1. The Municipal Agriculture Office, together with the Barangay Government, conducts the information and education campaign (IEC). The MFARMC participates in the IEC, particularly in the Alabel, Unisan and Calatagan.
2. The Barangay Treasurer issues barangay clearance and CTC
3. The M/BFARMC verifies the list of fishers at the barangay level
4. The Municipal Agriculture Office assesses/verifies the information on the registration form, evaluates the fees and charges, recommends the issuance of vessel registration and of the Mayor's permit/license to fish
5. The Municipal Treasurer's Office takes charge of the payment of fees, fines and penalties
6. The Mayor's Office processes and issues the following:
 - Municipal fishing vessel license/certificate of vessel registration
 - Mayor's permit to fish
 - Fishing gear license permit

Period of Fisherfolk Registration

For first-time registrants, there are different periods of registration in the six case study areas. In Alabel, registration is open only on January 1-20 of the year, while in Calatagan and Unisan, a fisher can register any time of the year.

Fees for Fishers Registration

The charging of fees in the registration of fisherfolk also differs based on the approved MFOs. In the municipalities of Calatagan, Alabel, San Fabian, Cortes, and Unisan, no fees are imposed in fisherfolk registration. In Badian, however, the amount of twenty pesos (P20.00) is charged the first time a fisher registers, but not anymore in subsequent renewals of fisherfolk registration which takes place every two years.

It is worth noting that for the fisher, registration is essentially a pre-requisite to obtain a license/permit to operate a fishing boat, regardless of whether the latter is a separate process or not from the former.

Recording/Existing Registry

Maintaining a fisherfolk registry remains a challenge in some of the areas. In the municipalities of Cortes, Calatagan and Unisan have existing record and filing systems on registration which can be retrieved easily. In Alabel and Badian, however, there is difficulty in consolidating and retrieving data because the system is not yet in place.

2. Fishing Boat/Vessel Registration

Documentary Requirements

The (a) engine number and the (b) dimensions of fishing boats are required information from the fishers during the registration process.

Renewal of Permit/License to Operate a Fishing Boat

Renewal is on a yearly basis because it is linked up with the conduct of fishing boat registration (which is even regarded in some of the case study areas as one and the same process).

Cancellation of Registration

In their MFOs, the municipalities of Cortes, San Fabian and Calatagan have stipulated explicit grounds for the rejection of any application for renewal of registration of fishing boats. But in the ordinances of Alabel, Badian and Unisan, the grounds for cancellation of fishing boat registration/permit to operate are not clear, aside from the usual gear restrictions and prohibitions patterned after the prohibitions in the Fisheries Code.

3. License/Permit to Operate a Fishing Boat

R.A. 8550 defines Fishing Boat/Gear License as a permit to operate specific types of *fishing boat/gear for specific duration in areas beyond municipal* waters for demersal or pelagic fishery resources. However, many municipal ordinances interchangeably use the terms license and permit to mean one and the same thing which is to allow the use of fishing boats and gears owned by registered fisherfolks in the municipal waters. On the other hand, the implementing guidelines of Executive Order 305 defines “license/permit to fish” as the privilege to fish in its municipal waters granted to registered fisherfolks by the LGU.

In Calatagan, Alabel, and Unisan, the registration of fisherfolk and fishing boats are two separate processes. In Calatagan, a fisher is already allowed to fish after registering his fishing boat; hence, the registration of fishing boats is tantamount to, or regarded as, the permit to fish. Similarly, in Cortes, the registration of fishing boats and licensing involves a single process only. In Alabel, the fisherfolk registration process is separate or distinct from the process of securing the permit to operate fishing boats. In registering the fishing boat a permit to operate a fishing banca/boat is issued.

Of the six case study areas, only Calatagan has a provision in its MFO allowing a special permit system for small-scale commercial fishing to operate in the municipal waters, from 10.1 km-15 km from the shoreline (which is in accordance with the provision in the Fisheries Code allowing commercial fishers to fish in the said part of the municipal waters). However, implementation of this special provision has not started as most commercial fishing operators applying for the permit are not yet licensed by BFAR. A license by BFAR must be secured first by a commercial fisher.

There are no set limits as to the number of municipal fishing boats and types of gears allowed to operate in the municipal waters. However, there are specific restrictions and prohibitions on some types of gears and fishing methods which are patterned after the prohibitions found in the Fisheries Code.

Renewal of Permit

Based on their respective MFOs, the periods/dates of renewal of the permit for fishing boats, as well as the permits for the various types of fishing gears, are as follows:

- Alabel - January yearly, 25% is charged for late payments
- Calatagan - not specified
- Unisan - yearly, no specific dates set
- Cortes - yearly, 60 days prior to expiration
- Badian - January yearly
- San Fabian - none is set because the ordinance is not yet approved

Licensing/Permit to Operate Fishing Gears

Except San Fabian, the five other areas have set fees for the licensing/permitting of various types of fishing gears. In Calatagan and Unisan, however, the collection of the fees has not yet been implemented. In Calatagan, one problem is that the fees are not included in the MFO, which could present a legal problem once they are implemented. In Unisan, there are scheduled follow-up consultations with local fishers, who regard the fees to be too high compared to the income from the use of the gears.

Bases of Licensing/Permit Fees

In all six areas, the decision on the rates of the fees for the licenses/permits for fishing boats and various types of fishing gears are not based on scientific calculations of the surplus/income from fishing, let alone the resource rent. Based on the interview with the municipal officials concerned, it appears that the rates of the fees were initially based on the existing municipal tax codes, and they have been (or are still being) finalized through a process of public consultations with the fishers themselves.

Compliance Monitoring and Enforcement

Color-coding of fishing boats is mandated by the Fisheries Code and the MFOs, but it is not fully enforced in the six areas. Monitoring and enforcement of registration/licensing compliance in Calatagan, Unisan, Cortes, Badian are undertaken generally by the Bantay-Dagat (Deputy Fish Wardens) in coordination with the Philippine National Police-Maritime Group.

Compliance Rates

In all the areas where registration has been implemented, the LGUs and the fishers themselves have observed that there are still many fishers who have not yet registered and that there has been a declining interest to renew the registration of fishing boats. Below are the estimated rates of compliance per area:

- Unisan - 80 percent of estimated number of fishers
- Alabel - 40 percent of estimated number of fishers
- Calatagan - 68 per cent of estimated number of fishers
- Cortes - 80 percent of estimated number of fishers

There are no estimates in San Fabian which has not yet implemented its registration and in Badian which did not finish its registration process.

On the Gender Issue in Registration and Licensing

In all six MFOs (including that of San Fabian which is not yet approved), there are no clear provisions recognizing women's role in fishing activities, particularly fry gathering and shellfish gleaning. There are women fry gatherers and shell gleaners in all the areas, but they are

not included in the registration. However, women fish vendors and fish workers (in aquaculture and fish processing) are included in the registration. This situation can be explained by the fact that fish vending and work in aquaculture or fish processing are more economically gainful (and therefore regarded as taxable) activities than milkfish-fry gathering and shellfish gleaning.

4. Estimating the Income from Fishing Activities

There is difficulty in determining the maximum sustainable yield per fishing ground because there is the lack of reliable fish catch data in all the areas. In this situation, the potential yield valuation was used as basis for determining the maximum sustainable yield, which on its own required a resource assessment per ecosystem (i.e. mangrove, coral reef, sea grass beds, fishing ground). Based on the review of coastal environment profiles, the municipality of Cortes has the most recent and complete set of data on the status of its marine resources and is therefore used as a sample for the computation of the resource rent (see **Annex __** on resource rent computation).

As for the remaining four areas (excepting San Fabian which was not able to conduct the FGD on fish catch and income), estimates on the average income per fishing trip per fishing activity and gear type, which were gathered through the FGDs with fishers, were instead used as the bases for computing the possible rates for permit/license fees. These estimates were arrived at by multiplying the average fish catch per fishing trip by the prevailing price of the species of fish caught, and subtracting the cost of fishing operation per trip. Moreover, where applicable, data on the capitalization cost in the manufacture or purchase of a gear type are factored in, together with the total number of years that a gear type will remain useful, to be able to come up with a more realistic computation of the net income.

The gear types were selected for their perceived high number of users, including the number of crew members using a gear type per fishing trip. To determine the income on a monthly basis, the average income per fishing trip is multiplied by the average number of fishing trips per month. (Please see **Annex __ to Annex __** for the area-specific data pertaining to average fish catch and income which were gathered through the FGDs.)

In general, the data show that in Alabel, the average income per fishing trip using the most common fishing gear types ranges from Sixty Pesos (P60.00) to One Hundred Thirty Pesos (P130.00). Fish caught for household consumption is not taken into account in this estimate of the average income. Calatagan, Badian and Unisan show the same trend, but with slightly higher average income estimates ranging from One Hundred Fifty Pesos (P150.00) to Four Hundred Pesos (P400.00). It should be noted that of these amounts, only the highest (P400.00) is comparable to the minimum wages which are set at slightly differential rates by the government in the different regions of the country. The rest of the amounts are way below the minimum wages.

There are only a few fishing activities/gears that turn in relatively higher average income estimates and these are: eel fry gathering in Alabel, “sabinet” (a type of ring net) in Badian, “commercial purse seine” in Calatagan, and “pukot pang suasid” (ring net) in Cortes.

B. OBSERVATIONS AND ANALYSES

1. In all six areas, explaining the objectives of registration and licensing could have been improved by emphasizing the aspect of legitimization of the fisherfolk as a sector that deserves essential socio-economic services from the government.

In three of the case study areas, local fishers' bodies such as the Barangay and Municipal FARMCs participated in the information and education campaigns to explain the objectives of registration and licensing. However, the BFARMCs and MFARMCs should have also been involved in other phases of the registration and licensing process, such as the certification of local fishers in order to prevent cases of registration of non-residents or transient fishers from other municipalities.

2. There should have been more focus on the registration and licensing process, given the fact that it should have a definite timeframe in which most fishers, if not all of them, are registered and/or licensed, together with their fishing boats and implements. This has resulted in delay and unfinished implementation of registration and licensing in certain areas.

Thus it would be worth considering that a qualified point person/staff be assigned to manage and oversee the registration and licensing process and that this staff and the whole process needs sufficient budgetary allocation from the municipal government.

3. The registration of fishing vessels is in practice tantamount to a permit or license to fish in municipal waters. The limit to fishing effort is determined by the geo-political unit that is the municipality, which means that fishers residing in other municipalities are not allowed. Be that as it may, Badian allows a 10-percent allocation of fishers from adjacent municipalities who will be able to fish in the municipality.

In this context, registration and licensing was not really utilized, where appropriate, for the purpose of limiting fishing effort and fish catch based on the carrying capacity of the local fishing ground.

4. In three of the six areas (San Fabian, Calatagan and Unisan), the collection of the registration or license fees on fishing gears has not yet been implemented. There is a hesitance on the part of the local governments to collect the fees and this is partly due to the fact that fishers are complaining about the rates which they said were not based on their actual income from fishing. Another possible reason is that since most fishers use multiple types of gears depending on the season, requiring them to pay license fees for all those fishing gears could be too costly for them.

Another point of view, although not expressed in interviews, is the insufficient capacity and number of local government personnel compared to the numerous types of gears used by fishers that need to be inspected in the course of registration and licensing.

5. Shellfish gleaners who are mostly women are not registered in the six areas. This may be because the livelihood activities of shellfish gleaners are considered merely as “subsistence,” i.e. they could not be taxed. Although women fish vendors are registered, that owes less to the fact that they are women than to their “earning” status as vendors who can be taxed. This is indicative of the attitude of certain LGUs with regard to registration and licensing: that its purpose is primarily taxation. But in fact, shellfish gleaners should be registered for the purpose of management of their gleaning areas.

In Mindanao, milkfish-fry gatherers who were mostly women were registered, but since the price of wild milkfish fry fell sharply due to competition from fry hatcheries, the fees for milkfish-fry gatherers were no longer collected by the LGUs.

6. On the resource rent:
 - The fees for fishing boats and gears are not based on the resource rent; rather, they are negotiated in public consultations with fishers and other local stakeholders.
 - The estimated incomes of the most common fishing activities and gears in most of the areas can be considered subsistence in character, with low and very modest return of capital. Based on this situation, the appropriateness of using the resource rent (which is the above normal return to capital) as a basis for determining the permit/license fees for specific types of fishing activities is put in question. As it is, the normal return to capital makes for a more socially and politically acceptable basis for determining the permit/license fees.
 - At present, using the resource rent may also not be appropriate as a strategy in municipal fisheries management given the current undeveloped status of fisheries database and information management system of the LGUs in the six areas.
 - As discussed in the findings, there are fishing activities and gears that set them apart from the rest due to their higher estimated incomes/returns, namely eel fishing in Alabel, “sabinet” in Badian, “commercial purse seine” in Calatagan, and “pukot pang suasid” in Cortes. For these types of activities and gears, the resource rent may be more applicable.
 - There is a need to review the permit/license rates for milkfish-fry gathering which used to be a more profitable livelihood before it was displaced by milkfish fry hatcheries. In this and other instances, the LGU needs to have a policy review mechanism.

IV. RECOMMENDATIONS: TOWARD AN APPROPRIATE FRAMEWORK

In general, the process of municipal fisheries registration and licensing in the six case study areas is not accompanied by efforts to develop a fisheries database that can be utilized as basis for input and output control regulations including limiting the fishing effort precisely by means of an appropriate licensing system.

However, this is primarily a matter of framework where at present it appears that the LGUs are mainly guided by the purpose of taxation and driven by the demand or need of the fisher-applicant to be given a permit in order to be able to fish. In this context, registration and licensing is not linked for fisheries management.

Thus there is a need to develop an appropriate framework that consciously guides the LGUs to link up registration and licensing with a system of fisheries management involving fish catch monitoring and resource assessment to sustain the local fisheries industry. To be sure, developing this appropriate framework is not as simple as it looks. Given the current perspective of LGUs, a capability building program linking registration and licensing to fisheries management is a necessary step among other actions needed.

Above all, municipal fisheries registration and licensing should only be an integral part of a comprehensive plan for municipal fisheries development—in order for both local governments and fishers alike to see the bigger picture and long-term development direction, rather than the short-term view of revenue generation (for local governments) and of gaining access to the use of the local fisheries resources (for fishers).

With a municipal fisheries development plan, the bias is to make production, processing, and distribution of fish products more efficient, by establishing public and social infrastructures and employing post-harvest facilities and other technologies for value-addition. Moreover, such a plan for municipal fisheries development should have provisions for essential social services for the fisherfolk sector, including fisherfolk settlement.

The municipal fisheries development plan should be able to provide the basis for a package of incentives and disincentives for both local governments and fishers to comply with the demands of registration and licensing.

Likewise, it would be a good strategy to encourage local “ownership” of the fisheries development plan and enhance the capability of stakeholders to implement such a plan. Thus the capability building program should include the processes in building consensus on the objectives, strategies and implementation of municipal fisheries development that can be shared by both LGUs and fishers, together with other resource users.

In an appropriate framework, licensing and permitting access fees in municipal fisheries may not necessarily be tied up to the resource rent, particularly in fisheries where resource rents have been evidently decimated. Rates can either be based simply on the normal return of specific fishing activities, as well as the recovery of the administrative cost of managing the local fisheries. Consultations pertaining to the license rates with fishers and other resource users must be ensured in both policy and practice. Existing restrictions as stipulated in the Fisheries Code, plus other appropriate measures, can be applied as fishers and other resource users see fit.

However, fisherfolk registration, as well as boat and gear registration, should be done in the immediate term as a necessary strategy to formalize the municipal fisherfolk as a legitimate social and economic-sector and to identify the individual fishers who have the right to receive

essential social services from the government. In the same vein, the registration of women-fishers should be an integral part of the registration process in recognition of their legitimate and unique status as resource users. The capability program for an appropriate framework should therefore include a gender development component.

Municipal fisheries registration and licensing for the case study areas can make use of a “fishing ground based”⁷ approach in relation to fisheries management concerns involving common fishing grounds where municipal waters are shared and closely interrelated in terms of marine ecosystems and uses.

⁷ Fisheries ecosystems are very closely interrelated. Neglect or mismanagement in one municipal fisheries can deeply affect or even cancel-out fisheries management efforts of another municipality. Therefore, fisheries management and development should be closely coordinated among municipalities which share common fishing grounds.

ANNEX A. INTERVIEW GUIDE QUESTIONS and FOCUS GROUP DISCUSSION DESIGN

Interview Guide Questions

1. Is your LGU implementing Municipal Fisheries Registration and Licensing (MFRL)
2. Is there legal basis or enabling ordinance?
3. Is there a difference between registration and issuance of fishing permit/ license?

ON REGISTRATION: If there is a separate process

4. What are the objectives of registration
5. What is being registered? Fisherfolks? Boats/ vessels? Gears?
6. Is there a fee or charge for registration of fisherfolks, boats, gears?
7. How much per fishing activity? **Note:** Just validate if you can get a document for the rates/ fees schedule prior to the interview.
 - a. For motorized and non-motorized boats?
 - b. For each type of gear?
 - c. For fry concession areas?
 - d. For gleaning areas?
8. What are the bases for the charges, or, how are the charges computed?
9. How is the process of registration? What is required from someone who wants to register? What is the role/ participation of FARMCs in the process? Is there proof of registration? **Note:** Draw a flow chart/ diagram of the process, include the offices or agencies involved and what are the requirements. Get a copy of each form used for RL.

Example: This is just in matrix form but you can improve.

STEP 1 - Barangay FARMC	STEP 2 –Barangay LGU	STEP 3 - MAO	STEP 4 –Mun. Treasurer's Office
- Certification as a authentic fisherfolk	- CTC - Clearance	- Submit - Fill up application form - Inspection and tagging by FT of the boat and gears - Endorsement to MTO	- Computation and payment of fees - Issuance of official receipt - Issuance of fisherfolk registration ID

10. How many years does it take for the registration to expire? Requirements for renewal? How often do you update registration records? What are the grounds for rejection and cancellation? Is there a particular time set each year for registration?

11. How is the record keeping system for registration?
12. Do you have pre-and-post-registration activities?
13. How many fishers applied and how many were registered this year? Compliance in the past years (increasing/ decreasing)? What are the reasons for the increase / decrease in compliance rate? Compliance rates based on gender (gender disaggregated data)? Note: Get documents/ records.
14. What other concerns, issues, problems have you encountered with regard to registration?

ON ISSUANCE OF FISHING PERMITS/LICENSE (if there is a separate process from the registration)

15. What are the objectives of licensing?
16. Is there a fee or charge for the issuance of fishing permits? How much per fishing activity?
Note: Get a fee schedule/ list per type of gear). **Tip:** Just validate if you can get a document for the rates/ fees schedule prior to the interview.
 - a. For motorized and non-motorized boats?
 - b. For each type of gear?
 - c. For fry concession areas?
 - d. For gleaning areas?
17. What are the bases for the charges, or, how are the charges computed?
18. How is the process of issuance of fishing permit? What is required from someone who wants to apply for a fishing permit? What is the role/ participation of FARMCs in the process? **Note:** Draw a flow chart/ diagram of the process, include the offices or agencies involved and what are the requirements. Get a copy of each form used for RL. Is there proof of registration?
19. How many months/ years does it take for the permit to expire? Requirements for renewal? Grounds for rejection and cancellation?
20. How is the record keeping system?
21. Do you have post activities after issuance of the permits like monitoring, on the spot inspections?.
22. How many fishers applied and how many were issued fishing permits? Is there a particular time set each year for registration? Compliance in the past and present years

(increasing/ decreasing)? What are the reasons for the high/ low (increase / decrease) compliance rate? Compliance rates based on gender? Are minors (children) qualified or listed for registration? Note: Get documents/ records.

23. Are there restrictions per type of fishing activity as condition for the issuance (example: catch ceiling)?
24. How much is the municipal annual investment plan on fisheries and related activities (2005 to present)?
25. How much is the municipal revenue (income) from fisheries and related activities (2005 to present)?
26. What other concerns, issues, problems have you encountered with regard to issuance of fishing permits?

Focus Group Discussion for Fishers:

1. What kind of fishing activities do you do? How much is your initial investments in engaging in fishing? Total cost of banca, motor, gears?
2. How many hours/ days do you spend per fishing trip? How many kilograms do you usually catch per trip (current) ? How many trips per month? Make a matrix per fishing activity.

Gear type	Average number of hours spent per fishing trip	Average trips per week/ month/	Average Catch per trip (in kilograms)
Note: add more rows			

Other fishing Activities	hours spent in fishing	Income per day/	Average days/ month per year engage in this activity
Aquarium fish gathering			
Bangus fry gathering			
Lapu-lapu fry gathering			
Etc.			

3. How much is your usual expenses in one fishing trip?

Fishing Method	Expense Items			
	Food	Fuel	Fishing related Expenses (bait, nylon, etcetera)	Add other expense columns if needed
Sample: Hook and line				

4. Make a list of common fish species being caught per gear? Prevailing price per kilogram per fish species.

Gear Type	Species commonly caught	Price range per kilo in the landing area
Hook and line	1. Fish species A 2. Fish species B 3. Fish species C	
Gill Net		
Squid Jig		
Etc.		

5. Is your local government implementing municipal fisheries registration?
6. Are you a registered fisherfolk?
7. Make a flow chart of the registration process. Fishing permit application/ licensing process.
8. What benefits do you gain from registration? Benefits from licensing/ fishing permit?
9. How much did you spend in the registration process? In licensing/ fishing permit?
10. What are your concerns in the registration system? Licensing system?

ANNEX B. MATRIX OF ESTIMATION OF AVERAGE CATCH PER TRIP OF COMMON GEARS; COMMON SPECIES CAUGHT PER GEAR; AND PREVAILING PRICE PER KILOGRAM FOR EACH SPECIES

CALATAGAN

Fishing method	Average oras kada labas	Average labas kada buwan	Average na huli kada labas (kilogram)	Klase ng huli	Presyo ng Huli (Peso per kilogram)	Kita (di pa bawas ang gastos)
1.Pahila (panggabi)	7pm-4 am = 9 hrs.	• 10	• 7 kgs.	• Pusit	• 150 – 200	• P1050 – 1400
Pataraya	7 pm – 12 am = 5 hrs.	• 10 • 10	• 1 kg • 70 kg			• P150-200 • 10,500-14000
1.b. Pahila (pang-umaga)	(4 Am – 9 AM) = 5 hours	• 12	• 1kg	• Tulingan • Galungong	• 80-90 • 70-90	• P80-90 • P70-90
2. Lambat palutang sa gabi	7 pm to 6 am = 11 hrs.	• 21	• 5 kg – low • 15 kg –20 kg high	• Burador (flying fish)	• P50 -75	• P250 – 375 • P750 – 1,500
3. Aquarium	10 AM – 5 PM = 8 hrs.	• 21	• 50 – 100 pcs/ day (goby)	• Goby	• 6 – 7/ pc.	•
4. Lambat (danggit)	7 PM – 4 AM (seldom) 7 AM – 4 PM (frequent) = 9 hours	• 21-26	• 2 kg, - lowest • 5 – 10 kg	• Danggit – • Assorted	• 80 – 120 • 80-	• P160- 240 • P400-800
lambat sa pusit (scareline)	6 AM – 5 PM = 11 hours	• 21 -26	• 3 kg. low	• Pusit	• 150-200	• P450 – 600

			<ul style="list-style-type: none"> 10 – 15 kg, high 			<ul style="list-style-type: none"> P1,500 – 3,000
<p>COMMERCIAL</p> <ul style="list-style-type: none"> Pukot (uses light and FAD) <p>8 UNITS</p>	<ul style="list-style-type: none"> 1-2 hours (PM) 	<ul style="list-style-type: none"> 15-21 	<ul style="list-style-type: none"> 1 Banyera = 40 kgs 1 bodega = 60 banyera x 40 kgs = 2,400 kgs. 	<ul style="list-style-type: none"> small pelagic 	<ul style="list-style-type: none"> 60-80/ kg. 	<ul style="list-style-type: none"> P2,400 P144,000-192,000 (jackpot)

BADIAN

Fishing method	Average oras kada labas	Average na labas kada buwan	Average na huli kada labas (kilogram)	Klase ng huli	Presyo ng Huli (peso per kilogram)	Kita (di pa bawas gastos)
Sabinet	7 hrs	<ul style="list-style-type: none"> 15 	10 ka laton or 20litters)	<ul style="list-style-type: none"> Anchovies Lupoy 	<ul style="list-style-type: none"> 50 25 	<ul style="list-style-type: none"> P1,000 P500
Palundag	4 hrs	<ul style="list-style-type: none"> 30 	20	<ul style="list-style-type: none"> Pulag Ikog Anduhaw Hinok Lapis 	<ul style="list-style-type: none"> 50 100 120 150 	<ul style="list-style-type: none"> P1,000 P2,000 P2,400 P3,000
Padumog	5hrs	<ul style="list-style-type: none"> 30 	5	<ul style="list-style-type: none"> Molmol Katambak Nocos / squid Anduhaw 	<ul style="list-style-type: none"> 100 150 200 100 	<ul style="list-style-type: none"> P500 P750 P1,000 P500
Hook and Line	8 hrs	<ul style="list-style-type: none"> 30 	2	<ul style="list-style-type: none"> Gutob Anduhaw Pulag Ikog Lagaw 	<ul style="list-style-type: none"> 120 100 50 150 	<ul style="list-style-type: none"> P240 200 100 300
Paapong	10 hrs	<ul style="list-style-type: none"> 15 	20	<ul style="list-style-type: none"> Anchovies Lupoy 	<ul style="list-style-type: none"> 50 25 	<ul style="list-style-type: none"> P1,000 P500

Palaran	3 hrs	<ul style="list-style-type: none"> • 20 	1 to 10	<ul style="list-style-type: none"> • Anduhaw • Budloy • Gutob • Mangudlom 	<ul style="list-style-type: none"> • 100 • 100 • 120 • 100 	<ul style="list-style-type: none"> • P100-1,000
Pamana	5 hrs	<ul style="list-style-type: none"> • 25 	2 to 5	<ul style="list-style-type: none"> • Danggit • Hinok • Kubotan • Tabogok • Bakasi • Tikong • Kapinan /Abalone • Shells • Star fish 	<ul style="list-style-type: none"> • 50 (small) • 120 • 80 • 100 • 50 • 50 • 220 • Depends on the kind • 1/ pc. 	<ul style="list-style-type: none"> • P100-250 • P240-600 • 160-400 • 200-500 • P100-250 • 100-250 • 440-1100
Bahan	5 hrs	<ul style="list-style-type: none"> • 15 	3 to 10	<ul style="list-style-type: none"> • Tuna • Bakulan • Pandauan 	<ul style="list-style-type: none"> • 120 • 80 • 50 	<ul style="list-style-type: none"> • P360-1,200 • 240-800 • 150-500
Yabyab	3 hrs	<ul style="list-style-type: none"> • 15 for 5 months • Only 	5	<ul style="list-style-type: none"> • Gutob • Anduhaw • Pulag Ikog • Lagaw 	<ul style="list-style-type: none"> • 120 • 100 • 50 • 150 	<ul style="list-style-type: none"> • 600 • 500 • 250 • 750
Dumpil	1 hr	<ul style="list-style-type: none"> • 30 for 7 months • Only 	1.4	<ul style="list-style-type: none"> • Anchovies • Lupoy 	<ul style="list-style-type: none"> • 50 • 25 	<ul style="list-style-type: none"> • P70 • 35

UNISAN

Fishing method	Average oras kada labas	Average na labas kada buwan	Average na huli kada labas (kilogram)	Klase ng huli	Presyo ng huli (Peso per kilogram)	Kita (di pa bawas gastos)
Baklad -Pagpandaw (imbes na “pagpalaot” aplikable sa baklad):	Dalawang klase ng baklad: <ul style="list-style-type: none"> Mababaw: batay sa hibas, daily 2-3 hours, Malalim: AM or PM, 3-5 hours, 	<ul style="list-style-type: none"> 20 20 	<p>4-5 kgs.</p> <p>4 – 5 kgs.</p>	Kadalasan: <ul style="list-style-type: none"> Manabun Pusit Samaral Kanupin Danggit Flying Fish Madaang: <ul style="list-style-type: none"> Bagulan/Ba ngkulan (malaking klase ng isda) Patuna (maliliit na isda) Kalapato 	<ul style="list-style-type: none"> 40-50 120-150 80-100 70-80 60-80 40-50 50-60 50-60 60-70 	
Bubo sa pusit (1 square meter, 15 pieces ng ganitong size)	3 am- 6 am = 3 hrs.	<ul style="list-style-type: none"> 20 	1-2 kgs.	Pusit	120-150	
Bubo sa isda (16” x 22”, 22 pieces of this size)	7 am – 10 am = 3-5 hours	<ul style="list-style-type: none"> 20 	2-3 kgs.	<ul style="list-style-type: none"> Lapu-lapu (Liglig) Lapu-lapu (Banahan) Dalagang bukid Danggit Kanupin 	<ul style="list-style-type: none"> 120-180 420 --??-- 60-80 70-80 40-50 70-80 	<ul style="list-style-type: none">

				<ul style="list-style-type: none"> • Loro (Bunak) • Labahita 		
Pahila	5-6 hours,	<ul style="list-style-type: none"> • 20 	1 kg	<ul style="list-style-type: none"> • Pusit 	<ul style="list-style-type: none"> • 120-150 	<ul style="list-style-type: none"> •
Nagtatangkab	8 hrs.	<ul style="list-style-type: none"> • 20 	3 kg	<ul style="list-style-type: none"> • Pusit (pula) 	<ul style="list-style-type: none"> • 120-150 	<ul style="list-style-type: none"> •
Payanga sa isda	8 hrs.	<ul style="list-style-type: none"> • 20 	16 kg, (seldom) 1 pc :5-7 kg. (seldom) 1 pc:5-10 kg. (seldom)	<ul style="list-style-type: none"> • Pagi • Baracuda • Talakitok (Mansa) 	<ul style="list-style-type: none"> • 40 • 70 • 85 	<ul style="list-style-type: none"> •
Pana (w/ air compressor)	8 pm – 4 am = 8 hrs.	<ul style="list-style-type: none"> • 20 	10 kg	<ul style="list-style-type: none"> • Lahat halos ng isda (assorted) 	<ul style="list-style-type: none"> • 30 	<ul style="list-style-type: none"> •

ALABEL

Fishing method	Average oras kada labas	Average na labas kada buwan	Average na huli kada labas (kilogram)	Klase ng huli	Presyo nag nahuhuli (Peso per kilogram)	Kita (di pa bawas gastos)
Pukot (6"/ 60 meters)	2 hrs 2 trips per day	<ul style="list-style-type: none"> • 20 - for 6 months only 	<ul style="list-style-type: none"> • 2 kgs. 	<ul style="list-style-type: none"> • Bangus • Talakitok • Kikiro • Kitong • Bugaong • Salmonete • Gisaw • Lib-gaw • Lawayan (Sapsap) • Lambay 	<ul style="list-style-type: none"> • 80 • 80(s) – 120(b) • 130 – 160 • 130 – 160 • 70 – 90 • 70-80(s) – 100(b) • 40 – 50 • 100 • 80 -90 • 130 	<ul style="list-style-type: none"> •

Undak (Multiple Hook and Line)	5 hrs once a day	<ul style="list-style-type: none"> • 24 days • Non-motorized • motorized 	<ul style="list-style-type: none"> • 2 kgs. • 8.3 kgs. 	<ul style="list-style-type: none"> • Bilong-bilong • Caraballas • Malmal • Tulay • Pirit 	<ul style="list-style-type: none"> • 50-60 • 70-80 • 70-80 • 80 (s) – 100(b) • 50-60 	•
Palangre (Hook and Line)	3 hrs once a day	<ul style="list-style-type: none"> • 20 	<ul style="list-style-type: none"> • 3.5 kgs. 	<ul style="list-style-type: none"> • Sari • Timbungan • Mamsa • Maya-maya • Lagaw • Katambak • Lapu-lapu • Suno • Pagi 	<ul style="list-style-type: none"> • 150 • 150 • 150 • 150 • 150 • 150 • 180 • 150 • 30 	•
Tonton (Hook and Line with bait)	5 hrs once a day	<ul style="list-style-type: none"> • 20 	<ul style="list-style-type: none"> • 0.7 kgs. 	<ul style="list-style-type: none"> • Talakitok • Kikiro • Kitong • Bugaong • Salmonete • Lib-gaw • Lawayan (Sapsap) • Lambay • Asohos • Gung-gong 	<ul style="list-style-type: none"> • 80(s) – 120(b) • 130 – 160 • 130 – 160 • 70 – 90 • 70-80(s) – 100(b) • 100 • 80 -90 • 130 • 40-50 • 40-50 	•
Pangal (Crab Pot/ Trap)	1 hr once a day	<ul style="list-style-type: none"> • 30 - for 6months 	<ul style="list-style-type: none"> • 1.83 kgs. 	<ul style="list-style-type: none"> • Lambay 	<ul style="list-style-type: none"> • 100 	•

ALABEL

Other Fishing Methods	Length of fishing time (hrs)	Volume of Catch (per piece or kilogram)	No. of days/ month No. of months/year
Bangus fry gathering	6 AM – 6 PM = 9 hrs	3,000 – 4,000 pcs average: 4,000	whole month or 30 days 6 months
Elver (Eel fry) gathering	7 PM – 6 AM 9 hrs	300 grams/day (=P2,800/kg) = P840	whole month or 30 days for 6 months only

