AN EVALUATION OF THE COMMERCIAL FISHING LICENSE POLICY IN THE PHILIPPINES

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ABSTRACT

In the Philippines, the current licensing policy for commercial fishing does not significantly contribute to the general goals of fisheries management. It is a failure as a monitoring tool as evidenced by the absence of a comprehensive information system on fish catches, effort and area of operation. Fisheries licensing does not also contribute to revenue generation of the government because of the low and baseless fee system, i.e., a five-ton boat pays a total of P1,265 pesos or US$23 while a 500-ton boat pays US$ 128 to cover registration fee, vessel and gear license, and a cash bond covering a period of three years. The entire commercial fishing industry, excluding unregistered boats, contributed an average of US$40,000 or 1.2% of the national budget allocated to marine fisheries management. Comparing among fishing countries, data shows that the ratio of management costs to landings is estimated at US$1.9 for the Philippines compared to US$103 and US$143 for Japan and the United States, respectively. On a micro-level, studies show that licenses, when considered as part of operating costs, comprise less than 5% of total cost. The current licensing policy does not also contribute to access limitation because the government has not yet determined the total number of licenses that can be distributed; thus, anybody who can pay for the license is given one. Two techniques are being piloted by the ADB-JBIC funded-Fisheries Resource Management Project to rationalize current licensing policy mainly by revising the fee schedule: (i) economic rent and (ii) cost-recovery.

Keywords: licensing policy; economic rent; commercial fisheries; license fee; cost recovery

BACKGROUND ON COMMERCIAL FISHING LICENSING POLICY IN THE PHILIPPINES

As a policy instrument, the fishery licensing system should contribute to the goals of fisheries management. The Fisheries Code (Republic Act 8550) (FC) acknowledges the following as the objectives of the sector:

1. Conservation, protection and sustained management of the country's fishery and aquatic resources;
2. Poverty alleviation and the provision of supplementary livelihood among municipal fisherfolk;
3. Improvement of productivity of aquaculture within ecological limits;
4. Optimal utilization of offshore and deep-sea resources; and
5. Upgrading of post-harvest technology.

Of the four objectives, it is objective one for which the licensing policy contributes the most, mainly through monitoring of fishing activities, appropriate regulation, and revenue generation. In principle, the vessel and gear licensing system should provide adequate information on fish catch, number and characteristics of fishing vessels, area of operations, and violations, to name a few. A data collection, storage and retrieval system will allow the fishery manager, hereinafter identified as the Bureau of Fisheries and Aquatic Resources (BFAR) of the Philippines' Department of Agriculture (DA), to make critical decisions concerning a variety of management tools including fishing effort, output controls or production quotas, and fishing distribution / intensity. Current efforts of the Philippine government to set up a computerized licensing system to generate the type of information required are subsequently

discussed. The regulatory framework for commercial fishing is provided by the FC and several Fisheries Administrative Orders (FAOs) enacted to implement the law. FAO 198, series of 2000, provides for the basic rules and regulations for commercial fishing, with major features being:

- License requirements;
- Commensurate fee should be paid for boat and gear including a cash bond;
- Validity period of license;
- Rules for renewal and display of license;
- Rules for international fishing;
- Rules for importation; and,
- Submission of record book.

Regulatory instruments for commercial fishing are either found in various provisions of the Fisheries Code or relevant FAOs. For example, the FC generally limits the operation of commercial fishing boats in municipal waters[1] except for small and medium commercial boats which can operate in waters from 10.1 kilometers and farther. Specific FAOs which regulates commercial fishing operations, both directly and indirectly, are as follows:

FAO 204	Restricting the use of superlights in fishing
FAO 203	Banning fishing by means of *"muro-ami"* and the like destructive to coral reefs and other marine habitat
FAO 201	Ban of fishing with active gear
FAO 191	Employment of foreign crew members aboard highly specialized commercial fishing vessels
FAO 190	Regulations governing *"Pa-aling"* fishing operation in Philippine waters.
FAO 155	Regulating the use of fine-meshed nets in fishing.
FAO 155-1	Amending Section 2 of Fisheries Administrative Order (FAO) No. 155, regulating the use of fine meshed nets in fishing.

Outside of the gear and area limitations posed by the listed FAOs, there are no other mechanisms for the licensing system to affect level of effort. In fact, the gear and area limitations are not considered foolproof because when a particular gear is banned, the vessel operator merely changes gears, develops new ones, or shifts to other areas. In effect, the total number of operators is not affected. Everyone who seeks a license and can pay for it is granted one.

COMMERCIAL FISHING VESSEL LICENSE FEE AS A POLICY TOOL

Of the three objectives previously discussed, it is only the license fee which has the potential to control fishing effort and contribute to resource generation of the government. It is an instrument to control fishing because it is a cost to the fisher, and thus, a disincentive. It is also an instrument to generate revenue for the government and defray some, if not all, of its fishery management costs.

The succeeding discussion lays the groundwork for determining how effective the license fee can be as a policy tool by analyzing two perspectives. First is the payee or the agency who imposes the license. Second is the payor or the participant who pays for the license. The amount of license determined by the payee is dependent on many parameters one of which is the value attached by the agency to the resource. Naturally, the value would be directly proportional to the amount of license charged. A high resource value is translated to higher license rates and vice-versa. The value imputed on the fisheries may

[1] Defined as 15 kilometers from the shore; however, whether shore of mainland or coastal island is used as reckoning point is still under judicial review.

be based on total catch and catch value. Thus, if a fishery is still in the nascent stages of exploitation, it is possible to assess the fishery as having little value. Likewise, management costs would be lower because surveillance requirements and other forms of controls and regulations would be lower. Given this situation, the fisheries agency would encourage a faster pace of development by providing incentives to prospective entrants. This would translate into low license costs.

As the fishery becomes developed, the need for management increases. More controls are required and compliance monitoring becomes more important. The more restrictions there are, the more surveillance would be required. In Australia, for example, in the western lobster fishery, compliance costs have increased at a rate greater than inflation for the last ten years (Rose et al 2000) [1]. Enforcement also figures as a significant cost for both Thailand and Newfoundland (Willmann, Boonchuwong and Piumsombun 2000 [2]; Schrank and Skoda 2000 [3]). Budget allocation for fisheries enforcement in the Philippines is not as straightforward because there are many agencies sharing the enforcement function, i.e, BFAR, Maritime Police and local governments. Aside from enforcement, additional budget is also required for more research and regular resource assessments to determine limits such as total allowable catches. Thus, increasing management cost is one justification for increasing licenses.

Another rationale for increasing licenses is for the fisheries agency to capture economic rents. The Fisheries Code defines resource rent as "*the difference between the value of the products produced from harvesting a publicly owned resource less the cost of producing it, where cost includes the normal return to capital and normal return to labor.*" It is usually the objective of fisheries management to maximize economic rent but in practice, the best that can be attained is the MSY. This level still generates positive rents albeit less than the maximum possible at MEY level. In developing country fisheries, even MSY is hard to attain. In fact, more often than not, fisheries are exploited beyond economically sustainable levels; here, all resource rents are totally dissipated. Society, who is acknowledged as the resource owner, suffers enormous losses at this point (otherwise known as open-access equilibrium) because of the uneconomical use of capital and labor from the producers' standpoint and also high prices of fish from the consumers' standpoint. However, fisheries economic theory points out that even at open-access equilibrium, the participants still generate profit --- especially when opportunity costs are low or close to zero. A license fee increase imposed after a fishery reaches OAE not only appropriates for the fishery agency some "rents" but also has the effect of weaning out unprofitable operators.

From the payor's perspective, a license fee may assume the following character: a token payment to the fishery agency, a cost, or an exclusionary mechanism for those who do not want to or cannot afford to pay the license. The "tokenism" of fishery licensing is explained by the concept of public good. Given that perspective, a prospective fisher realizes that a license fee is paid merely to "be counted" (such as registration or being acknowledged in the statistics) because each individual has an ownership claim to the resource anyway. If such is the prevailing attitude, any increase in license fees would be severely contested by the existing operators especially if implemented abruptly and without consultations. This situation is aggravated when the license rate remains constant for long periods instead of being reviewed periodically. Both situations characterize the licensing policy in the Philippines not only for commercial fishing operators but also for fishpond leases. Efforts of the BFAR to implement a revised licensing policy for commercial fisheries as well as fishpond leases have met stiff opposition.

COMPUTATION OF FISHING LICENSE FEES

The current system for licensing commercial fishing is provided by FAO 198. An indicative computation of licenses paid for by the three categories of commercial fishing vessels is shown in Table 1. There are several payments made to the BFAR in order to engage in commercial fishing: an application and registration fee, a fishing vessel license, a gear license, and a cash bond. The application and

registration fee, both non-transferable and non-refundable, are flat rates, i.e., all categories of boats or gear types pay the same fixed amount. Thus, the application fee is greater than the sum of the fishing vessel license and the gear license (P410-420) for small commercial boats. In total, a commercial fishing boat pays, on the average, P1,265 (US$ 23) to about P10,000 (US$ 182) over a range of 5 to 1,000 tons, per year[2].

Table 1. Indicative expenditures of commercial fishing vessels according to type of expense and tonnage category

Category	Assumed Tonnage	Application and Registration Fee[3] (pesos)	Fishing vessel license[4] (pesos)	Gear license (pesos)	Cash bond (pesos)	TOTAL (pesos)
Small	5	600	210	200	250	1265
	10	600	220	200	250	1280
Medium	25	600	300	400	350	1675
	50	600	350	400	350	1750
	100	600	500	400	650	2250
Large	200	600	2100	600	750	4250
	500	600	4500	600	850	7050
	1000	600	6500	600	950	9650

Licenses are considered as fixed costs. In the Philippines, studies show that fixed cost, comprising of licenses, fees, permits and insurance, account for a very small portion of total operating cost. License fees, which are lumped with other indirect costs such as taxes, franchise fees, BIR stamps, etc., comprise only 1.9% of total cost according to the NSO Survey of Fishing Establishments (Development Academy of the Philippines (DAP) unpublished reports a and b [4]; [5]). This finding is consistent with revenue data generated by the BFAR which shows that annual revenues earned by the BFAR from fisheries licenses (CFBL, gear registration and cash bond) for the years 2000 up to 2003 averaged around P2.2 million (US$ 40,000 at P55:US$1) (Table 2). Earnings for 2004 reached less than P1 million as of the month of June.

Table 2. Revenues from Commercial fishing vessel/gear licenses, cash bonds, etc. for the years 2000, 2001, and 2002 in Pesos

Month	Years				
	2000	**2001**	**2002**	**2003**	**2004**
Jan	63519	176176	8390	108420	130508
Feb	85614	555246	29272	86559	240014
Mar	142907	355642	97014	699880	87226
Apr	56798	144271	111621	110014	258240
May	116167	206417	28700	35821	82750
Jun	57701	130193	29376	145343	182441
Jul	168142	163421	37974	489783	
Aug	421515	224015	319401	416869	

[2] Peso 55.00 = US$ 1.00
[3] Based on section 8 of FAO 198. Application for Commercial Fishing Vessel License (CFVL) is Four Hundred (P400.00) and the registration for the fishing gear is Two Hundred (P200.00). Both are non-transferable and non-refundable fees payable to the BFAR
[4] Based on section 9 of FAO 198

Sept	345766	132295	111463	282724	
Oct	428523	80460	93906	429442	
Nov	194489	25637	50864	266266	
Dec	203769	85942	36052	165349	
TOTAL	2,286,910	2,281,716	954,033	3,236,480	*981,219*

Source: BFAR Licensing Division

COST OF FISHERY MANAGEMENT: PHILIPPINES VIS-À-VIS OTHER FISHING COUNTRIES

One model considered for estimation of license fees is the cost-recovery technique. As the name implies, the cost of managing the fishery is recouped by the revenues coming from licenses, fees and other payments made by resource users. In such situations, the participants who pay the cost are able to internalize the benefits of fishery management through direct (such as sustained catches) and indirect (good water quality, enhanced habitat and good ambiance) benefits. The success of a cost recovery model depends on the efficiency of management such that the expected benefits of those who pay the licenses are assured. Such a situation approximates a “private property” model where those who pay the license have full access to the resource (for as long as the payments are made) while those who do not have the right need to pay an expensive “joining fee”.

On the contrary, a model where most of the management costs come from the national budget such as the Philippines, the quality of management is expected to be substandard. Those who pay the fees are cognizant of this situation, i.e., they are not assured of any benefits accruing from the license fee revenues. They are also aware that because of this poor management, many participants, have in fact, managed to escape paying any amount of fees but still get the same “quality” of service. In such a situation, management costs are usually low and the fishery management agency is perpetually beset with budget problems. Justifying a higher level of license fee becomes very difficult for the agency.

In the US, there are slight variations among fisheries states on the maximum contribution of licenses to total management costs depending on whether or not some monies are forthcoming from the federal government and/or general state revenues. In the state of Indiana, license fees are the primary source for Department of Natural Resources (DNR) programs such as: enforcement of wildlife, fishing and environmental laws; 300 public access sites (boat ramps) and 18 public fishing areas; stocking of 20 million fish into public waters each year; wildlife habitat development on more than 76,000 acres of private land across the state. In 2001, the DNR realized that the revenues derived from licenses outpace the costs of managing. Thus, after maintaining the license rates at their levels for fourteen years, the state legislature authorized a US$5.50 increase in license rates. This new fee, according to some observers, may be higher but it is equivalent only to the cost of a movie for two adults.

In the State of Illinois, the DNR operates a $10 million annual budget -- 90 percent of which comes directly from sportsman's fees. This is used for raising fish at hatcheries to testing lakes for water quality. Fishing license sales account for roughly 70 percent of the fisheries budget, with federal funding 20 percent and (Illinois) General Revenues 10 percent. In the state of Wisconsin, funding to finance resource management comes from a variety of sources with the mainstay for nearly 100 years being the sale of licenses. Licenses are fixed by the state legislature on a four year cycle but last 1995, an adjustment year, the scheduled increase did not materialize. The shortfall in revenues had significant impacts on the activities of the DNR such as: reduced trout stocking on inland streams by 50 percent; suspension of efforts to improve habitat for fish and game on 300,000 acres; and elimination of 75 percent of the fish population surveys on inland lakes that were not affected by Indian treaty fishing rights. Quite

interestingly, the license payers are helping the Department of Natural Resources get legislative approval for a modest increase in license fees.

In the Philippines the budget of BFAR is disaggregated as: a) general administration; b) support to operations and c) operations. Since BFAR's budget reflects other fisheries management functions which may not be relevant to this study, example aquaculture and general administration, some weights were introduced to extract the amount used for marine fisheries management. These weights ranged from 10%, for general administrative functions, to 60% for support functions pertaining to technology, policy and legal, and monitoring, control and surveillance (Table 3). The average budget of BFAR for the years 2001-2002 is P446 million while the amount estimated for marine fisheries management is roughly P176 million. Comparing this with the amount generated from licenses, it is obvious that licenses do not contribute significantly to BFAR's budget.

As a caveat, in order to fully determine the public sector budget for fisheries management, expenditures of local government units for MCS and other forms of technical assistance should be added to the existing BFAR budget. This goes to say that considering only the budget of national government will severely understate what is in fact allocated by the public sector for fisheries management.

Table 3. Budget of BFAR broken into major components and estimated amount devoted to marine fisheries, in thousand pesos

Budget components			Assumed weight given to marine fisheries	Estimated budget for marine fisheries	
	2001	2002		2001	2002
General administration					
Personnel	22459	29983	0.1	2246	2998
Maintenance and other operating expenses	96351	87521	0.1	9635	8752
Support to operations					
• Legal, advisory, technical support on aquaculture, fish tech, post harvest, and fisheries resource studies and mgmt	7817	7630	0.6	4690	4578
• Economic studies, policy formulation, and planning services	5014	5027	0.6	3008	3016
• Fishery scholarship	2848	2847	0.1	285	285
• Fish conservation week	516	240	0.5	258	120
• BFAR field units	20991	20655	0.5	10496	10328
Operations					
• Development t of fisheries & aquatic resources	120675	124142	0.5	60338	62071
• Conservation, regulation and protection of fisheries and aquatic resources	8628	8781	0.5	4314	4391
• BFAR field units	163513	157086	0.5	81757	78543
TOTAL	**448812**	**443912**		**177026**	**175081**

Source: General Appropriations Act 2001 and 2002.

A study on fisheries management costs for OECD countries shows the main expenditure items compared with total catch, in volume and value terms (Table 4). The United States and Japan attained the highest expenditure levels for fisheries management at US$ 661 and 628 million, respectively, with the bulk of the costs spent on enforcement. There were also a number of countries which spent more on

research than on administration and enforcement, namely, Denmark, Finland and the Netherlands. The expenditure on enforcement appears to be a function of geography, i.e., countries with longer coastlines and larger EEZ area are spending more on enforcement. Comparing management costs with total landed value yielded interesting results as well. Finland, for example, spends as much as 70% of its landed value on management compared with Japan (4%) and Spain (1%). As distant fishing nations, it is not clear if payments made by Japan and Spain to fish in other countries are included as management costs.

A separate study by Willmann et al. (2000) [2] shows total government expenditures for fisheries management in Thailand was estimated at 468 million baht (US $ 12.8 million) in 1999. This was spent mostly on fisheries enforcement (e.g. patrol vessels) which accounted for more than half of total costs, fishery research and resource rehabilitation. In total, fisheries management costs equal about one and a half percent (1.64 %) of the total gross revenues of marine fish landings estimated at B 28.5 billion (US $ 780 million).

The Philippines registered one of the lowest management costs. However, the landed value of fishery products indicates that the Philippines is still an important fishing country in the world (although the data is more recent). The same is true for Thailand except that management costs is almost four times more than that of the Philippines. The last column in Table 4, ratio of total cost to landings, indicates how much money is spent to land a ton of fish. This includes enforcement, research and administrative costs incurred by the fisheries agency relative to fish landings. Thus, the ratio may be high because costs are high relative to landings or vice-versa. This ranges from a low of US $2.6 for Korea, mainly because costs and landings are low, to a high of US $408 for Australia, which had higher costs relative to landings. The average for all OECD countries is US$71.43 per ton. However, the ratio for the Philippines is the lowest at US$1.94 per ton of fish landed.

These values would be a logical basis for determining licenses fees. However, the question of charging all costs to commercial fishers is an issue here, for it is not only the commercial fishers who are seen to benefit from fisheries management but consumers and municipal fishers as well.

Table 4. Estimates of OECD Countries' Expenditure on Managing Fisheries: 1997

Countries	Research US$ million	Mgmt US$ million	Enforce-ment US$ million	Total Costs US$ million	Landed Value US$ million	Total Costs/ Landed Value	Landings (000 tons)	Ratio Total cost/ Landings US$/ton
Australia	9.50	19.45	---	28.95	259	11%	71	407.79
Canada	40.84	95.60		136.44	1,621	8%	894	152.63
EU 15 Total	181.65	137.77	272.91	592.34	9,324	6%	6,377	87.22
Belgium	1.33	•••	0.41	1.74	99	2%	27	64.71
Denmark	27.18	7.92	14.30	49.40	521	9%	1,813	27.25
Finland	14.46	4.26	1.80	20.52	29	70%	119	172.70
France	14.14	59.62		73.76	756	10%	358	206.12
Germany	19.32	5.03	21.17	45.52	194	23%	260	175.36
Greece	6.47	4.79	24.85	36.11	387	9%	153	236.33
Ireland	9.63	0.77	81.74	92.14	220	42%	309	298.53
Italy	7.04	5.73	48.74	61.50	1,749	4%	441	139.32
Netherlands	16.40	2.72	5.45	24.56	466	5%	448	54.84
Portugal	8.79	9.50	6.65	24.95	319	8%	206	120.89
Spain	11.61	17.06	8.38	37.05	3,443	1%	1,007	36.81

Sweden	20.17	8.96	12.87	42.00	129	32%	350	120.14
United Kingdom	25.11	11.41	46.56	83.08	1,012	8%	888	93.61
Iceland	9.45	3.59	7.56	20.59	877	2%	2224	9.26
Japan	115.70	512.40	•••	628.10	14,117	4%	6067	103.53
Korea	5.10	1.26	•••	6.36	4,929	0%	2423	2.63
Mexico	10.80	5.40	0.60	16.80	1,017	2%	1222	13.75
New Zealand	11.90	15.20	13.22	40.32	4,754	8%	•••	•••
Norway	23.53	16.95	57.64	98.12	1,343	7%	2856	34.35
Poland	3.05	4.88	•••	7.93	215	4%	381	20.83
United States	95.44	165.73	400.00	661.17	3,644	18%	4635	142.66
TOTAL OECD	506.96	978.24	751.92	2237.12	38,032	6%	33610	71.43
Philippines[5]				3.521	1,406	0.5%	1,810	1.94
Thailand[6]				12.8	780	1.64%	2,923	4.38

Source: OECD (2000a) [6]and OECD (2000b) [7]
• • • Information not available.

OPTIONS FOR COMPUTING LICENSE OF COMMERCIAL FISHING BOATS

Two methods are presented here as alternatives for computing fishing licenses. These are broad concepts which are shown to apply to fishing boats but it can likewise be used to compute for gear license fees. Option A is a total or partial recovery of dissipated economic rent while Option B is a cost recovery technique. Option A is based on the estimation of producers' surplus or quasi rent based on financial and economic analysis. This was the approach utilized by the Development Academy of the Philippines (DAP unpublished) in its study of the commercial fisheries licensing for the Fisheries Sector Project. The computation of producer's surplus is based on financial analysis with opportunity costs of labor and capital subtracted from net profit. Owner's pure profit (OPP) is computed by subtracting from net earnings the opportunity cost of labor and capital. Labor's pure profit (LPP) is computed similarly. The study goes further by proposing a "fair rate of return" which allows for the operation to retain some of the rents because of efficient management and risk taking (Table 5). The resulting licenses were significantly higher (up to 500%) for all vessel categories.

Table 5. "Fair rate of return" based on retention of Management Skills and Risk associated with commercial fishing

Tonnage category	Management Skills	Risk	Total
Less than 5 gt	6	55	61
5.01 to 15 gt	8	60	68
15.01 to 25 gt	10	55	65
25.01 to 150 gt	12	63	75
150.01 to 500 gt	14	40	54

Source: DAP unpublished

Option B, or the Cost Recovery Approach, is a system where direct costs of fisheries management are first computed and thereafter, determining how much of this cost is to be charged to a particular sector. The main fisheries management costs as determined by Arnason, Hannesson and Shrank (1999) [8] are

[5] Source: Bureau of Agricultural Statistics

[6] Source: Willmann et. al. unpublished

research, management and administration, and enforcement. Determining how much of the cost is to be charged to a particular sector becomes more complicated as the number of stakeholders increase. One approach can be evaluating the contributions of each sector to total landed value. Such can also be the approach within the commercial sector where vessels can be categorized according to type of gear, tonnage, engine or other technological parameters. The costs can then be pro-rated among the different participants. In highly simplified cases where only one sector is exploiting the fishery, the computation is straightforward. The license fee is computed as the summation of all costs incurred as part of "managing the fishery" divided by the total number of participants in the fishery. Of course this assumes that every participant requires the same level of management.

CURRENT EFFORTS

Current efforts are underway to systematize the commercial fishing licensing policy. The approaches discussed here focus only on the data management aspect of licensing. The first initiative is the issuance of FAO 223, Moratorium on the Issuance of new Commercial Fishing Vessel and Gear License (CFVGL) as part of a precautionary approach to fisheries management, and activities of the BFAR's Fisheries Resource Management Project on establishment of licensing systems within a larger database system. FAO 223 temporarily suspends the issuance of new CFVGLs to facilitate an inventory of licensed and unlicensed commercial fishing vessels and gears. Prior to the one-year moratorium, a six month period running from January 21,2004 to July 21,2004 will be allotted to allow for registration of all commercial vessels and gears whether or not licenses by the Maritime Industry Authority (MARINA) or with the BFAR. Thereafter, a one-year moratorium on the issuance of new licenses shall be in effect from July 22, 2004 to July 22, 2005 to maintain the current level of fishing effort and facilitate the establishment of a computerized commercial fishing vessel and gear register. Fishing vessels operating in distant or international waters, those that have been sold or replaced but were registered during the 6 month registration period, and new applications for long line vessels are exempted from this policy.

The second initiative, which supports FAO 223, is the establishment of the Philippine Fisheries Information System or PhilFIS, a national database system which consists of various databases, including: (i) catch and effort; (ii) GIS; (iii) resource and ecological assessment; (iv) socio-economic assessment; (v) bibliographic collection; (vi) document database; (vii) fisherfolk registration; and, (viii) licensing and violations database. PhilFIS was developed under the auspices of the Fisheries Resource Management Project, a loan of the government from the Asian Development Bank and Japan Bank for International Cooperation. The Licensing Database system seeks to automate the issuance of all licenses at the national and municipal level by providing accurate records of current fishing effort, identification of vessels and gears used, and areas of operation using a web-based program. The project has already pilot tested the licensing system in several municipalities and an infrastructure (consisting of computer hardware, software and personnel) to manage PhilFIS already exists.

CONCLUSION

The discussions indicate that commercial fishing licenses do not significantly contribute to the goals of fisheries management. As a form of control, it has little effect on discouraging entry of fishing effort. As an economic disincentive, the low rates have very minimal impact on profitability. Furthermore, the premise on which the licensing policy was formulated, i.e., the fishery is a public good with virtual open access, has far outlived its purpose. Even though the resource base has deteriorated severely, the attitudes of both the payor and the payee of the license remain unchanged thus finding no rationale to amend the licensing policy, as a whole, or in part, through the fee system. As such there is a huge time lag between the present state of the resource and the appropriate policy response.

On a micro perspective, license rates account for a very small percentage of total operating costs. Thus, any increases should not have a great impact on profitability. However, the consistent decline in catch rates have seen many commercial fishing operations posting precarious financial standings that a slight increase in any of the fixed costs would have disastrous effects. The hesitance of government to resort to attrition, especially using economic instruments within the purview of the law, is indicative of the continuing protection granted to the sector. From a macro perspective, license rates contribute an insignificant amount to the budget of BFAR and the data indicates a declining trend. This is in stark comparison to other countries where licenses account for the bulk of management costs. Government spending for the fisheries sector is also very minimal, especially when compared to other countries, despite the fact that the sector ranks high in terms of volume and value of landings. Government's apparent neglect of the sector is inconsistent with the view of the fishery as state property and is symptomatic of the value imputed to the resource.

Current efforts of the government to systematize and computerize the licensing procedure are a step in the right direction. If successful, the government will be equipped with critical information to manage the fishery. The objective of effort reduction and generation of resource rents can only be fulfilled if such information is available and utilized.

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