



Fixing the broken net: Improving enforcement of laws regulating cyanide fishing in the Calamianes Group of Islands, Philippines

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"... in any society, many people will not comply with the law unless there are consequences of noncompliance."
(Wasserman 1994:31)

Abstract

Recent studies indicate a progressive degradation of the marine habitat in the Calamianes Group of Islands, Philippines, which is one of the most important sources of live food and aquarium fish in the country. A number of empirical studies have shown that the proximate cause of the degradation is the use of destructive fishing techniques, chiefly the use of sodium cyanide.

In theory, law enforcement is an effective means of curbing destructive and illegal fishing practices and can thereby help to regenerate degraded marine habitats. If effective, law enforcement mechanisms deter, persuade or punish violators, correct non-compliant conditions and create a norm of expected behavior (Eichbaum 1992). This is not occurring in the Calamianes. In the last four years, there has been no case in which a cyanide fisher was convicted. Clearly, changes are needed in order to make it prohibitively costly for fishers to conduct destructive fishing practices.

This study examines the socioeconomic context and the legal and political milieu in which the problems of cyanide fishing take root. Specifically, the study examines the infrastructure and logistical problems of detecting cyanide fishing activities and arresting violators and discusses the bureaucratic, procedural and other barriers to the prosecution and imposition of penalties. It concludes by proposing a law enforcement structure that would put the police agencies and the local government units in a better position to address the issue of cyanide fishing.

Introduction

The Calamianes Group of Islands is in the northern part of Palawan in the Philippines and comprises the municipalities of Coron, Busuanga, Culion and Linapacan (Fig. 1). The group's biophysical characteristics make it one of the most important sources of live fish in Palawan province, accounting for 55% of live fish exported from the country. Recent studies, however, point to a progressive decline in fisheries production in this area. The formerly large stocks of commercial species that sustained fisheries in the area are now in a severely depleted state (Werner and Allen 2000). Ingles (2000) estimated that coastal fisheries production in 1997 was only 50% of the 1991 level. Further declines are anticipated unless drastic action is taken.

A recent study by the World Wildlife Fund attributed the worsening condition of fishing

grounds in the Calamianes to serious overfishing, as evidenced by biological and economic indicators. For example, fishers go farther out and spend more time at sea than they did previously, and there has been a diminishing rate of return on capital and labour (Padilla et al. 2003).

The brisk market demand for live food and aquarium fish and the lack of effective law enforcement have fuelled the cyanide-fishing business (Barber and Pratt 1998). The present rate of extraction and consequent depletion of fish stocks, however, has driven the fishing industry, and the live fish trade in particular, to the brink of collapse. Padilla et al. (2003) argue that if fishers in the area choose to continue fishing, it is not because of the profitability of fishing so much as the absence of non-fishing alternatives. Given this stark reality, decision-makers cannot continue to turn a blind eye to the disastrous consequences of cyanide fishing.

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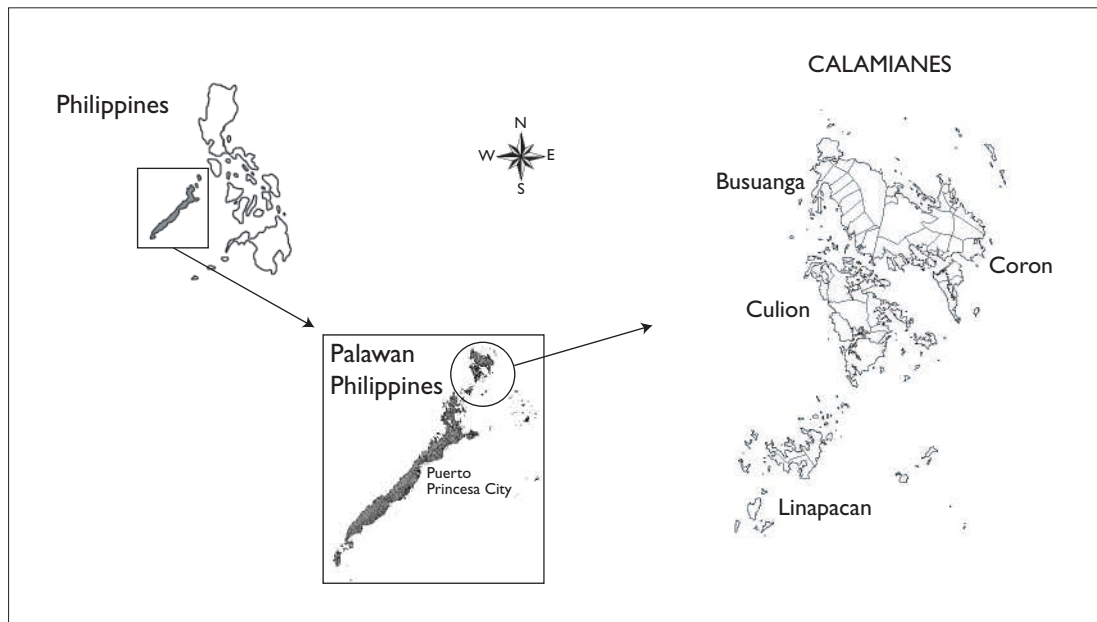


Figure 1. The Calamianes Group of Islands, Palawan Province, Philippines.

Legal framework for live fish and cyanide fishing

The response of both the national and local governments to the cyanide fishing problem has been tentative and ambivalent at best. In 1993, the provincial local government unit (LGU) of Palawan passed Provincial Ordinance (PO) No. 1993-02 banning the gathering, buying, selling and shipment of live fish in Palawan. The following year, the provincial legislative council bowed down to the strong lobbying efforts of live fish traders by passing PO No. 1994-29, which exempted all species from the ban other than Napoleon wrasse, or *mameng* (*Cheilinus undulatus*), panther grouper (*Cromileptes altivelis*) and aquarium fish in the Balistidae, or triggerfish, family. Later, the provincial council amended PO 1994-29 through the passage of PO No. 1998-332, providing further exemptions and installing a complicated certification system for shippers, traders, and catchers of live fish.² Given how weak these laws are, it is not surprising that in the last four years there have been no cases filed by law enforcement agencies in the Calamianes for violation of these provincial ordinances. Furthermore, the law is so confusing that some believe it was not intended to be enforced in the first place.

In 1998, the Philippine Congress enacted the New Philippine Fisheries Code, which explicitly provided, among other things, that “exportation of live fish shall be prohibited except those which are hatched or propagated in accredited hatcheries and ponds” (Sec. 61 [a], Republic Act 8550). This legal proviso has not impeded live fish catchers, traders and shippers, because according to them the



Figure 2. A fisherman squirts cyanide solution on corals while another waits for stunned fish to come out. Photo by Ferdinand Cruz of East Asia Seas Initiatives.

2. Provincial Ordinance No. 1998-332 further amended the previous ordinance by exempting the following from the ban: ornamental and aquarium fish of the families Pomacanthidae, Pomacentridae and Chaetodontidae. The law also allows the collection of *Cheilinus undulatus* provided that they: 1) weigh 50 to 300 grams or are between 3 and 7 inches in length, and 2) are subsequently cultured in pen or cages for at least eight months.

Bureau of Fisheries and Aquatic Resources has not passed an Administrative Order to implement the said prohibition. In 2000, the Palawan Council for Sustainable Development (PCSD), the legal body that exercises the “governance, implementation and policy direction of the Strategic Environmental Plan for Palawan,” passed Administrative Order No. 2000-05, providing an intricate accreditation system for culturing, catching, trading and transporting live fish species. According to Winston Arzaga, PCSD Staff Executive Director, the recurring problem of cyanide fishing prompted the Council in May 2002 to issue a moratorium on the award of live fish permits (Arzaga and Pontillas 2003).

Penalties for violations of regulations related to cyanide fishing in Palawan are considered severe by Philippine standards. Table 1 lists various applicable laws and prohibitions and the corresponding penalties. In addition to government actions, other concerned groups have also attempted to curtail the worsening problem of cyanide fishing. Their efforts include training fishers in environmentally-friendly methods of catching live food and aquarium fish and developing a certification system to guarantee that only fish caught using sustainable catching methods are available in the market.

Table 1. Prohibitions and penalties related to cyanide fishing.

Categories of prohibitions	Specific prohibitions	Penalties
Prohibition on the use of noxious substances (<i>Section 88, Republic Act 8550; Fisheries Administrative Order No. 2001-206</i>)	Actual use of noxious substances	<ul style="list-style-type: none"> • Imprisonment ranging from five to ten years • Forfeiture of noxious substances, fishing vessels, fishing equipment and catch
	Mere possession of explosive, noxious or poisonous substances or electro-fishing devices (<i>Section 88</i>)	<ul style="list-style-type: none"> • Imprisonment ranging from six months to two years • Forfeiture of explosives, noxious or poisonous substances and electro-fishing devices
	Dealing in, selling or disposing of, for profit, illegally caught or gathered fish species (<i>Section 88</i>)	<ul style="list-style-type: none"> • Imprisonment ranging from six months to two years • Forfeiture of fish catch
Regulation of trade and exportation	Prohibition on the export of live fish except those which are hatched or propagated in accredited hatcheries and ponds (<i>Sec. 61 (a), Sec 100, Republic Act 8550</i>)	<ul style="list-style-type: none"> • Fine of 80,000 pesos (PHP) and imprisonment of eight years • Destruction of live fish and forfeiture of non-live fish • Violator banned from being member or stockholder of companies engaged in fisheries
	Prohibition on gathering, buying, selling or shipment of <i>Cheilinus undulatus</i> , ³ <i>Cromileptes altivelis</i> and ornamental or aquarium fishes in the family <i>Balistidae</i> (<i>PO No. 1993-02 as amended by PO No. 1998-332</i>)	<ul style="list-style-type: none"> • Fine of PHP 5000 and imprisonment of six months to two years • Forfeiture of paraphernalia and equipment used in fishing
	Prohibition on the culturing, catching, trading or transport of live fish without accreditation from the Palawan Council for Sustainable Development (PCSD) (<i>PCSD Administrative Order No. 2000-05</i>)	Fines: <ul style="list-style-type: none"> • Catcher (PHP 5000–100,000) • Trader (PHP 50,000–100,000) • Carrier (PHP 100,000–500,000)
Regulation of the use of paraphernalia identified with cyanide fishing	Prohibition on the use and mere possession of hookah compressor, the breathing apparatus used in cyanide fishing (<i>PCSD Resolution No. 2002-197, Department of Interior and Local Government Memorandum Circular No. 2002-129</i>)	Depends on the municipal ordinance of concerned municipality

3. Provincial Ordinance No. 1994-29 erroneously identified *Cheilinus undulatus* as belonging to the family Scaridae.

Table 2. Fishery law enforcement institutions and their legal bases.

National government	Local government	Civil society
<ul style="list-style-type: none"> • Municipal Philippine National Police (PNP) (<i>Republic Act (RA) 6975, RA 8550</i>) • PNP Maritime Group (<i>RA 6975, RA 8550</i>) • Philippine Coast Guard (<i>Presidential Decree (PD) 601, RA 8550</i>) • Department of Agriculture, Bureau of Fisheries and Aquatic Resources (DA-BFAR) (<i>Administrative Code of 1987, RA 8550</i>) • Palawan Council for Sustainable Development (PCSD) (<i>RA 7611; PCSD Administrative Order (AO) 2000-05</i>) • Presidential Commission on Anti-Illegal Fishing and Marine Conservation (PCAIFMC) (<i>Executive Order 114, (1989)</i>) • Inter-agency Task Force on Coastal Environment Protection (IATFEP) (<i>Executive Order 117 91993</i>) 	<ul style="list-style-type: none"> • All Barangay officials (<i>PD 1160, Letter of Instruction No. 550 (1977), RA 8550</i>) • Sangguniang Bayan or municipal councils (<i>Sec. 17 (b) (2) (i); Sec. 149 (b), RA 7160</i>) 	<ul style="list-style-type: none"> • Citizens' Arrest (<i>Rule 113, Sec. 9 of the Revised Rules of Court</i>) • The use of tribal justice systems, conflict resolution institutions, customary laws and practices (<i>Sec. 15, RA 8371</i>) • Barangay and Municipal Fisheries and Aquarium Council members (<i>RA 8550, EO 240, Joint Department of Agriculture, Department of Interior and Local Government, Department of Environment and Natural Resources and Department of Justice Administrative Order No. 2, Series of 1996</i>)

The government is not lacking in enforcement institutions to implement the laws and regulations related to cyanide fishing. Table 2 shows the institutions responsible for enforcing laws related to cyanide fishing at each of three jurisdictional levels, along with their legal bases.

Despite this plethora of laws and regulations and institutions charged with implementing the pertinent laws, cyanide fishing continues. Using the analytical tool and field data of Mayo-Anda et al. (2003) and the field data of Dalabajan et al. (2002), this paper traces the socioeconomic and political milieu in which cyanide fishing in the Calamianes Group of Islands continues to flourish. The paper proposes a law enforcement structure that is relevant to the area.

263,092 cyanide fishing incidents

It is easy to see that the laws and regulations described above have completely failed to achieve their objectives simply by looking at the data on the intensity of cyanide fishing. Mayo-Anda et al. (2003) provide an estimate of the intensity of cyanide fishing both for live food fish and aquarium fish in the Calamianes. According to Lasmarías (2002), cyanide fishers typically conduct about eight fishing trips per month during northeast monsoon months, which make up about seven months of the year, on average. During southeast monsoon months, which make up about five months of the year, the number of cyanide fishing trips per fisher increases to about

Table 3. Estimated numbers of cyanide fishers and cyanide fishing trips in three municipalities of the Calamianes Group of Islands, 1999 through 2002 (see text for estimates of the number of trips per fisher per year).

Municipality and year	Number of fishers engaged in cyanide fishing	Number of cyanide fishing trips
Coron		
1999	316	33,496
2000	328	34,768
2001	340	36,040
2002	353	37,418
Subtotal		141,722
Busuanga		
1999	113	11,978
2000	121	12,826
2001	130	13,780
2002	139	14,734
Subtotal		53,318
Culion		
1999	153	16,218
2000	158	16,748
2001	163	17,278
2002	168	17,808
Subtotal		68,052
TOTAL		263,092

ten per month. On average, therefore, each cyanide fisher makes about 106 trips per year. Using that rate, along with estimates provided by Lasmarias (2002) on the number of fishers engaged in cyanide fishing in each of three municipalities, Mayo-Anda et al. (2003) estimated the total number of cyanide fishing trips per year (Table 3). The study concluded that there were approximately 263,000 cyanide fishing trips in the Calamianes from 1999 through 2002. Astonishing as this figure is, it is likely an underestimation for the Calamianes Group as a whole, since the study did not cover the Municipality of Linapacan, which has the greater number of accredited live-fish catchers among the Calamianes's four municipalities (the numbers of accredited fish catchers, as provided by the PCSD, are not accurate measures of the numbers of fishers actually engaged in cyanide fishing). Linapacan's 800 accredited catchers can be compared with the 400 in Coron, 300 in Busuanga, and 600 in Culion (De Sagun 2003). Moreover, the Mayo-Anda et al. (2003) study leaves out cyanide fishing by seasonal fishers and fishing boats from neighbouring provinces, which will also lead to an underestimation.

Based on focus group discussions and key informant interviews conducted in January 2003 in 13 villages around the Calamianes, community members detected approximately 8102 cyanide fishing trips from 1999 through 2002 (Mayo-Anda et al. 2003). While some may contest the accuracy of this

figure due to the possibility of double-counting by community members (i.e. cases where more than one respondent observed the same incident), other evidence suggests that the number of incidents was in fact greater. This estimate covers all the Calamianes municipalities except Linapacan, where cyanide fishing is believed to be especially frequent. More importantly, the interviewed community members did not, generally, have the capacity to detect fishing activity in the offshore areas, where cyanide fishing activities are more pronounced.

While Barber and Pratt (1998) were correct when they argued that cyanide fishers are driven by both monetary and non-monetary inducements, the two experts may have grossly miscalculated the number of cyanide fishers when they described them to be a fairly small and discrete group.

Arrests

Among the 8102 incidents of cyanide-fishing detected by community members, police records show that only 15 arrests were made — a flabbergasting batting average of 0.002. One plausible reason why there were so few arrests despite the astronomical number of cyanide fishing incidents and despite the numerous law enforcement institutions is the limited number of law enforcement personnel on the ground. Table 4 lists the number of personnel in each of the relevant law enforcement agencies.

Table 4. Number of law enforcement personnel, by agency and municipality (January 2003).

Agencies	Number of personnel, by municipality			
	Coron	Busuanga	Culion	Linapacan
Coast Guard	6	2	2	unknown
Philippine National Police (PNP)	20 (only 4 to 6 are involved in at-sea patrolling)	12	8	unknown
PNP-Maritime Group	7			
Bureau of Fisheries and Aquatic Resources (BFAR)	2			
Palawan Council for Sustainable Development (PCSD)	4 (all office-based)			
Kilusan Sagip Kalikasan (KSK)	3			
Municipal Agriculture Offices (MAO)	8 (only 2 are involved in fishery law enforcement)	4 (primarily in charge of permitting and licensing)	unknown	unknown

Law enforcement agents also cite the lack of equipment (e.g. patrol boats and an efficient communication system) and the absence of public support as reasons for their inability to actually arrest violators.

Even granting the paucity of the manpower and other resources available to law enforcement agencies, one still wonders why there is such a scandalously huge gap between the putative number of cyanide fishing offences and the number of arrests made. In fact, respondents in key informant interviews and focus group discussions are in agreement in saying that numbers of arrests are actually far higher than what the police records reflect. They allege that bribery occurs immediately upon arrest, in which case the said arrests do not appear in police records. An indication of this is the significant number of incidents in which cyanide tablets and boats were confiscated but no individuals arrested. The supposed inability of police officers to identify perpetrators is highly suspect considering that it is easy to trace the ownership of the confiscated boats through interviews, the municipal registry, and Coast Guard records.

The public prosecutors filed complaints for only 12 of the 15 arrests related to cyanide fishing made from 1999 through 2002. Court records show that among those 12 cases for which complaints were filed, one was dismissed, nine are pending and two were archived. Cases are typically archived when the police fail to serve the warrants of arrest issued by the judge: when the police finally file the case and the judge issues a warrant of arrest, the offender usually cannot be located, forcing the judge to shelve the case.

The police also face the daunting task of prosecuting the cases at the Municipal Circuit Trial Courts (MCTC) because no public prosecutor can attend to them. It bears noting that Chiefs of Police have no formal training in prosecution. In fact, many people consider the MCTC proceedings to be farcical because the judge dictates to the Chief of Police the questions to ask, which objections to raise and the oral motions to file in open court. Because of the police chiefs' lack of experience in litigation, they cannot prove that the accused is guilty beyond reasonable doubt, which is what the law requires for a conviction.



Figure 3. Philippine National Police – Maritime Group (PNP-Maritime) seizes a boat at Delian Island, Coron, Palawan, loaded with live groupers and assorted aquarium fish.

Photo by Edward Lorenzo of Environmental Legal Assistance Center

No convictions, no jail time!

Even if numerous arrests were made, it does not necessarily mean that there would be a high number of cases filed. Cases are considered formally filed if the Office of the Provincial Prosecutor has established that “probable cause” exists and the prosecutor assigned to the case has filed the complaint in the trial court. In reality, there seem to be a lot of barriers, both practical and procedural, to filing complaints.

Another recurring problem in prosecuting cases is the waning interest of complainants and witnesses. The government does not provide financial support to complainants and witnesses for attending court proceedings. When a case drags on, especially when a favourable judgment does not appear to be forthcoming, complainants and witnesses tend to avoid the proceedings. This is also the case when a law enforcement officer who is directly involved in the case has been assigned to other

In rare cases in which the police successfully make an arrest, the court system poses another hurdle. The current system makes it very difficult to file cases. For example, the police need to file the criminal case in Puerto Princesa City, where the Office of the Prosecutor is situated. The case could actually be filed at the MCTC in Coron or Culion if the judge were present. However, the judge is in the area for only two weeks per year. This is because the judge assigned to the MCTCs of Coron/Busuanga and Culion concurrently sits on five other trial courts (the Municipal Trial Courts of Puerto Princesa City, Roxas/ Dumarán, Cuyo/Agutaya, Aborlan/Narra, and Brookes Point).

areas, making him or her unavailable when the case is called. In situations like these, the accused invokes his or her right to a speedy trial, consequently prompting the judge to dismiss the case.

The problems cited above illustrate why in four years there were no convictions, and consequently, no jail time served for violating the prohibitions on cyanide fishing.

Compliance and deterrence

There is a growing body of literature on enforcement that links compliance behaviour and deterrence to certain economic factors and the probability and weight of sanctions. For example, Becker (1968) postulated that an individual will commit a crime if the expected utility of committing the crime exceeds the utility of engaging in legitimate activity. Kuperan and Sutinen (1998) label this the instrumental perspective, as opposed to the normative perspective, which is the view that fairness of regulations and the legitimacy of institutions, not economic incentives or disincentives, are what drive individuals to comply. Following Becker (1968), Sutinen and Gauvin (1987) argued that:

The incidence of compliance is directly related to the perceived probability of detection and conviction and the penalty for non-compliance, and inversely related to the expected gain from violating a regulation. The perceived probability of detection and conviction, in turn, is directly related to the resources and practices of the enforcement program.

More recently, Nielsen and Mathiesen (1999) asserted that:

...the individual fisher primarily responds to the immediate benefits and deficits of compliance or non-compliance. Such behavior is assumed to be based on the fishers' calculations of the economic gain to be obtained from by-passing the regulation compared to the likelihood of detection and the severity of sanctions.

Inspired by Becker and his cohort's model, Mayo-Anda et al. (2003) assessed the estimated value of enforcement disincentives for cyanide and dynamite fishing activities in Palawan by applying the probabilities of detection, arrest, case-filing, prose-

cution and conviction. The replacement costs of forfeited fish catch and fishing paraphernalia (e.g. fishing boats, nets, compressors and other materials confiscated at the time of arrest) of four decided cases were computed and added to the expected loss of fishing income of offenders during the minimum incarceration period. The authors arrived at the figure of 223,166 Philippine pesos (PHP) as the average value of the effective penalty per case, equivalent to 4463 US dollars (USD) (based on an exchange rate of USD 1 to PHP 50). Using the average time elapsed from detection to conviction of 0.58 years, or about 7 months, and a 12 per cent annual discount rate, the value of the penalty in present value terms is about PHP 206,807, or USD 4136.

When the probability of being convicted upon detection was factored in, the present value of the enforcement disincentive was estimated to amount to a meagre PHP 461, or approximately USD 9. Contrast this with the expected net income from cyanide and dynamite fishing per fishing trip, which in 2002 were about PHP 4084 (USD 82) and PHP 2973 (USD 59), respectively, and it is apparent that the net enforcement disincentive is negative (i.e. the illegal fisher gains a large net benefit from destructive fishing practices). Following the theories of Becker (1968), Sutinen and Gauvin (1987), Kuperan and Sutinen (1998) and Nielsen and Mathiesen (1999), a fisher in the Calamianes would naturally use either cyanide or dynamite in his or her fishing activity for the simple reason that the net value of the deterrent to commit the crime is negative.



Figure 4.
Philippine Coast Guard (PCG) seizes 25 kg of cyanide tablets at Malapuso Island, Busuanga, Palawan.
Photo by Evan delos Santos of PCG

It is significant to note that the four decided cases that Mayo-Anda et al. (2003) used to determine the enforcement disincentive all related to dynamite fishing. The logic behind the enforcement disincentive is that the lower the probability of occurrence of any of the elements of the chain, the lower would be the value of the disincentive to commit a crime. Applying the logic to cyanide fishing cases, the enforcement disincentive would be equal to zero because some elements of the enforcement chain (conviction and value of the penalty) appear, at least based on the experience in the Calamianes from 1999 through 2002, to have zero value.

If the objectives of law enforcement are to deter, persuade or punish violators, correct non-compliant conditions and create a norm of expected behaviour, as Eichbaum (1992) has argued, then the preceding discussion clearly shows that there is no way that the present law enforcement structure in the Calamianes could achieve these objectives.

To ban or not to ban: That is not the question

For many years now, decision-makers have had the mistaken notion that the live fish trade and the accompanying problem of cyanide fishing are basically policy issues. Consequently, they vacillate between imposing a blanket ban on trading live fish and establishing severe restrictions through accreditation, monitoring and cyanide testing. Surprisingly, there is little critical reflection on the capacity of institutions to enforce either of these approaches. To this, the words of Wasserman (1994:31) in addressing the 1994 International Conference on Environmental Enforcement are very relevant: "... in any society, many people will not comply with the law unless there are consequences of noncompliance."

Whether there is a ban or restriction, the government and key stakeholders are faced with the same question: How do they enforce the law, given the stark and obvious failure of the entire law enforcement structure? The Fisheries and Aquatic Resources Management Councils (FARMCs) of both barangays (BFARMCs) and municipalities (MFARMCs) fail to live up to the task assigned to them because there is no equipment, (practically) no budget for patrolling, and nothing to compensate for the huge enforcement responsibilities. Some citizens' groups, as revealed during focus group discussions and interviews, are not keen on performing enforcement functions because of the persistent corruption and lack of governmental support.

Fixing the broken net

Law enforcement in the Calamianes is like a broken fish net: it fails to serve its fundamental pur-

pose because its targets are able to escape from the net. Given the practical problems in the Calamianes, this broken net needs fundamental changes. Police and court records vividly depict a law enforcement system that is miserably flawed. It is unable to detect and arrest cyanide fishers and it fails to prosecute and convict offenders on the rare occasions that arrests are made. While the government grapples with the question of banning or putting severe restrictions on the live fish industry, it fails to give equal attention to law enforcement — the vital link in an effective public policy.

The first step needed to strengthen law enforcement is to put in place a detection mechanism such that cyanide fishing would be detected outright and arrests can be made where and when violations are committed. To this end, the government needs to mobilize citizens' groups (e.g. B/MFARMCs and the *barangay tanod*, a quasi-police force composed of village residents), because formal law enforcement institutions cannot undertake this enormous task alone. Citizens' groups have extensive knowledge about the area and can pinpoint the location of cyanide fishers. They can help in profiling destructive fishing practices (i.e. where and when they tend to happen, which social groups commit them, and their monetary and non-monetary motivations for doing so). This information can be fed into a database to better understand the dynamics of illegal fishing so that appropriate enforcement strategies can be established. In addition, the government must address corruption, which breeds cynicism and reluctance among citizens' groups.

The second step is to increase the technical and logistical capacity of law enforcement institutions. Police agencies are visibly lacking in the facilities and legal skills that are needed in order to translate detection into actual arrest. Law enforcement agencies should also settle among themselves the jurisdictional overlaps that exist between their respective units, which will prevent duplication of efforts in certain areas, and thereby minimize operating costs. Ideally, geographical assignments should be agreed upon by different agencies so as to allow for coherent and comprehensive enforcement coverage. The law enforcement agencies must also be equipped with communication and transportation devices to increase their response rates and speed up response times.

The third step is to install an administrative adjudication mechanism in lieu of criminal courts, which would hear cases on cyanide fishing and other destructive fishing practices. An administrative adjudication body is perfectly legal but is a largely untapped tool. The Local Government

Code (LGC), for example, allows LGUs to pass "...ordinances for the protection of coastal and marine resources and imposition of appropriate penalties for dynamite fishing and other activities which result to ... ecological imbalance" (Sec. 447 (a) (1) (vi), Republic Act 7160). Moreover, the Fisheries Code mandates LGUs to manage municipal waters (Sec. 16, Republic Act 8550) and such management functions are similar in nature to national executive agencies carrying out functions established by congress. Hence, the LGC and the Fisheries Code confer upon LGUs broad and extensive powers, including the imposition of administrative sanctions.

Ruling on the authority of the LGUs, the Philippines Supreme Court found that:

... under the general welfare clause of the LGC, local government units have the power, inter alia, to enact ordinances to enhance the right of the people to a balanced ecology... (It imposes upon the Sangguniang Bayan, the Sangguniang Panlungsod, and the Sangguniang Panlalawigan the duty to enact ordinances to protect the environment and impose appropriate penalties for acts which endanger the environment [underscoring added].⁴

This ordinance-making power is broad enough to include administrative procedures for meting out administrative penalties. In determining and imposing administrative sanctions, LGUs can be as creative as needed in order to ensure effective enforcement of their ordinances. One important caveat is that assigning penalties that involve jail time is beyond the authority of the LGUs. Moreover, LGUs can impose a maximum penalty of only PHP 2500 (USD 50) for each offence. However, the LGUs can impose sanctions such as the confiscation of fishing paraphernalia related to the offence and require the offender to repair and/or rehabilitate the affected area of the coastal environment to offset the damage done.

Finally, the government needs to establish an on-site cyanide detection testing (CDT) laboratory in the Calamianes Group (in the municipality of Coron) so that the municipal administrative body (MCTC) can easily procure a copy of test results. One of the most frustrating experiences for law enforcement agencies since 2002 has been the difficulty in putting together a strong case against cyanide fishers. In many instances, a suspected seller or buyer of cyanide-caught live fish was asked for fish samples, which were sent to the Bureau of Fisheries and Aquatic Resources CDT

laboratory in Manila for testing. When the result turned out positive for cyanide a few days later, the buyer/seller had disappeared. A laboratory examination is not a be-all-end-all solution, but it is the best technical tool available to identify fish caught using cyanide and dynamite, and provides hard evidence with which to prosecute cyanide and blast fishers.

Closing notes

The fishing industry, and the live food fish and aquarium fish industries in particular, depend on law enforcement for their survival in the same way that ordinary fishers depend on their fishnets for daily survival. Signs of a collapsing fishing industry are becoming evident to everyone. Unless something drastic is done to make law enforcement more effective, the cyanide fishing problem will inevitably kill the fishing industry.

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