NATIONAL PLAN OF ACTION FOR THE MANAGEMENT OF FISHING CAPACITY (NPOA-FISHING CAPACITY)

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I. BACKGROUND

The Philippines is undeniably rich in aquatic resources, which accounts for its prominence as a producer of aquatic products globally. It was eighth in the world in terms of the output of many aquatic commodities in 2018, including seaweed (BFAR 2021). Despite this situation, overfishing is a concern in many fisheries causing declines in the nation's production, with production trends in municipal and commercial marine fisheries were noticeably declining from 2010 to 2021 (PSA, 2021).

- 11 Overfishing is the removal of a species of fish (i.e. fishing) from a body of water at a rate greater than that the species can replenish its population. Stock indicators based on assessments made by the 12 13 National Stock Assessment Program (NSAP) suggests overfishing for many stocks in various fishing grounds (Guanco et al. 2009; Belga et al. 2017; Bendaño et al. 2017; De Guzman et al. 2017; Gaerlan 14 et al. 2017; Mesa et al. 2017; Ramos et al. 2017; Villanueva 2017; Calicdan et al. 2017; Francisco et al. 15 2017). However, it is also recognized the need to strengthen capacity in stock assessment, improve 16 awareness in order to buy-in and build confidence and consensus among the stakeholders in 17 18 managing fishing capacity.
- The country's archipelagic geography, the characteristics of fleets, the extent of stakeholders' 19 20 participation and collaboration, potential loopholes in current fisheries and national legislation, and 21 lax law enforcement in some regions make overfishing a significant issue that requires an immediate 22 response. Similarly, the prevalence of poverty and overpopulation may encourage individuals to engage in illegal fishing activities. In 2020, the extent of Illegal, Unreported, and Unregulated (IUU) 23 fishing in the country was estimated indicating 27-40% of the captured fisheries from the 24 25 commercial and municipal are produced from illegal fishing (BFAR and USAid Fishright, 2021). It was also found that 30%-47% (80,000 -125,000) of the municipal fishing vessels are unregistered 26 27 and about 20-33% (1,600-2,700) of the commercial fishing vessels are unregistered or incorrectly 28 registered (Miraflor 2021).
- Based on FishR, there are 2,078,913 registered municipal fisherfolk, about 49.54% are involved in capture fisheries. Other livelihoods include gleaning (11.88%), aquaculture (11.24%), fish vending (6.25%), and fish processing (1.88%) (BFAR 2022). FishR is a type of registration system govern by BFAR in close coordination with the LGU. By looking at the nature, percent share, and impact of the types of livelihoods on fisheries, capture fisheries have the greatest impact concerning fishing capacity. Capture fisheries refer to the harvest of aquatic organisms from the aquatic environment with the aid of fishing gears and fishing vessels.
- Fishing in the country is categorized as municipal or commercial. Municipal fishing refers to fishing within municipal waters using fishing vessels of three (3) gross tons or less, or fishing not requiring the use of fishing vessels while commercial fishing refers to fishing with passive or active gear utilizing fishing vessels more than 3 GT, further classified as small-scale (3.1 to 20 GT), medium scale (20.1 to 150 GT), and large-scale (> 150 GT).

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There are 336,780 registered municipal fishing boats, about 71% of which are motorized while 29% are non-motorized. The major fishing gears used are gill net (24%), simple handline (17%), bottom

- set gill net (12%), and multiple handline (10%) (BFAR-BoatR 2022). There are however challenges
- in the program, including connectivity in the system and recognized that there are still a significant
- 46 number of municipal fishing boats that are yet to be registered.
- 47 Meanwhile, there are 8,050 registered commercial fishing vessels (CFV). The small-scale CFVs forms
- 48 the bulk at 53%, medium-scale 43% and large-scale (5%). The major fishing gears of CFVs are hook
- 49 and line/handline/long line, ring net, and purse seine (BFAR-FRLD 2022). Technically speaking, CFVs
- are comprised of catcher vessels and support boats, which is why they are referred to as fleets. The
- 51 number of support vessels, such as fish carriers, lightboats, escort boats, sonar boats, skiff boats, and
- 52 ranger boats generally increases as the gross tonnage of the CFV increase. It also recognized that a
- 53 number of CFVs remain to be unregistered and unauthorized to fish that should be addressed in order
- 54 to manage fishing capacity.
- 55 The National Plan of Action (NPOA) for the Management of Fishing Capacity aims to consolidate and
- 56 harmonize all actions for the guidance of all concerned stakeholders in order to formulate and
- 57 implement measures to achieve the multi-objectives of fisheries management. It is designed using
- 58 the Ecosystem Approach to Fisheries Management (EAFM) and Fisheries Management Area
- framework which is a science-based, an all-inclusive approach that values the participation and
- 60 cooperation of stakeholders to address pressing issues in fisheries and fishing capacity.

61 II. LEGAL BASIS

- The development of the NPOA-fishing capacity was guided by the principles of the International Plan
- of Action for the Management of Fishing Capacity (IPOA-Fishing Capacity), FAO Code of Conduct for
- 64 Responsible Fisheries (CCRF), Regional Plan of Action for the Management of Fishing Capacity
- 65 (RPOA-Fishing Capacity) and the Amended Fisheries Code (Republic Act No. 8550 as amended by the
- 66 Republic Act 10654).

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III. DEFINITION AND MEASUREMENT OF FISHING CAPACITY

The following definitions and measurements are considered:

- 1) **Fishing capacity** is the ability of a vessel or fleet of vessels to catch fish. Fishing capacity **(capacity output)** can be expressed more specifically as the maximum amount of fish over a period of time (year, season) that can be produced by a fishing fleet if fully utilized, given the biomass and age structure of the fish stock and the present state of the technology.
- 2) **Capacity utilization** can be defined in this context as the ratio of actual output (catch, landings) to some measure of potential output (capacity output) for a given fleet and biomass level. It is essentially a short-run concept.
- 3) **Target fishing capacity** is the maximum amount of fish over a period of time (year, season) that can be produced by a fishing fleet if fully utilized while satisfying fishery management objectives designed to ensure sustainable fisheries. It follows that excess capacity can be expressed by comparing current and target capacity output.
- 4) Optimal capacity
- 5) **Overcapacity** a situation where capacity output is greater than target output.

6) **Limit capacity** is the maximum amount of fish that can be produced on a sustainable basis by a fully-utilized fleet, corresponding to MSY.

IV. INDICATORS OF CAPACITY AND OVERCAPACITY

87 1) Elements

- a. number of vessels in each fleet exploiting a stock
- b. mean catch rates for each fleet, and the amount of time actually spent fishing
- 2) Target capacity (long-term), specify a target stock biomass.
- 3) Start with a TAC (either current or a long-term projection). The maximum that a given fleet could potentially catch (capacity output) divided by the target TAC is a measure of excess (or under) capacity. Target fishing capacity can be evaluated in reference to both the current and long-term target biomass.
- 4) The potential catch in the fishery is the sum of potential catches by all fleets. The potential catch by each fleet under current stock conditions can be estimated as the product of number of vessels and mean catch rate, scaled up to a full-time equivalent based on the ratio of maximum time available to the actual time fished.

The sum of potential catches can be compared to the TAC to give an indication of overcapacity by the current fleet. The indicator can be calculated under current stock conditions (TAC and CPUE corresponding to current biomass) and for long-term target conditions (TAC and CPUE corresponding to target biomass).

Another measure is based on calculating, using the same information, the minimum number of vessels needed to take the TAC. This approach may be particularly useful when there are several fleets that cannot meaningfully be aggregated into a single measure. The minimum fleet size required to take the entire TAC is calculated for each fleet. These minima can be compared to the actual size of each fleet to provide perspective on overcapacity. If any of the actual fleet size is close or higher than the minimum required, there will be strong evidence of overcapacity. Otherwise, further assessment would require calculating a composite index of boats needed by using a fishery-wide average catch rate. The method can be applied to current and long-term target conditions.

V. MANAGEMENT OF FISHING CAPACITY

The management of fishing capacity in the country shall adhere to the provisions of the Amended Fisheries Code (RA 8550 as amended by RA 10654) including the principles of Ecosystem Approach to Fisheries Management (EAFM), as provided in the Philippine Fisheries legislation.

- **A. VISION**. *Vision describes the future situation of fisheries in 10 years.*
 - To be crafted during the consultation

120		Example:
121 122		"A progressive and resilient Philippine fishery that is sustainably managed using Ecosystem Approach to Fisheries Management."
123	В.	ISSUES AND CHALLENGES IN MANAGING FISHING CAPACITY
124		To be identified/validated in the consultation
125		Possible areas of discussions :
126		1) Overcapacity and overfishing
127		i. Status of fish stocks
128		ii. Inventory of effort/fleet
129		2) Illegal, Unreported, Unregulated Fishing (IUUF)
130		3) Overlapping Multiple Species and Fleets
131 132		4) Resource Use Competition Due to the Absence of Legal Guidelines on the Delineation of Municipal Waters
133		5) Lack or insufficient safety net to the sectors affected by fishing regulation.
134	C.	THE GOALS & OBJECTIVES OF MANAGING FISHING CAPACITY
135 136 137 138 139		The goals are classified into short-term and medium-term. The short-term goal is aimed to be achieved in 1-2 years while the medium-term is within 3-5 years. Since the National Plan of Action for the Management of Fishing Capacity (NPOA-Fishing Capacity) will be reviewed and amended after five years, most of the management actions and benchmarks are aimed to be achieved within five years only. See Annex 2.
140		Goals and Objectives will be crafted during the consultation
141	D.	GENERAL PRINCIPLES AND STRATEGIES
142		Principles and strategies shall be validated during the consultation
143		The marine fisheries resources in the country can be generally categorized according to
144		species group as demersal, small pelagic and oceanic/straddling/highly migratory fish.
145 146		The management of fishing capacity include measures to manage number and size of fishing vessels according to fisheries and relative to these species/group species.
147		As a guiding principle, Reference Points (RP) such as Maximum sustainable Yield (MSY),
148		Maximum Economic Yield (MEY), Total Allowable Catch (TAC) and Total Allowable Effort
149		(TAE), or other measurements and indicators as maybe determined in setting up the
150		target capacity.

151 The RPs that can be considered are Limit Reference Point (LRP) or the level that should 152 be avoided, which shall be determined by scientists, and the Target Reference Point 153 (TRP) the level based on multi-objectives of fisheries management with considerations 154 on conservation and sustainable fish production, food security, and social and economic 155 conditions of fisherfolks and industry. The TRP shall be a decision by fisheries managers 156 through the process of consultation with stakeholders. 157 The Amended Fisheries Code also prescribes specific actions in Rule 8.2 when the LRP is 158 met. Likewise, as indicated in FAO 263, the management of fishing capacity can be taken at 159 FMA level, however as also provided in Section 2 of the said FAO, the management of 160 straddling and highly migratory fish stock under the RFMOs shall be considered as 161 national level. 162 ASSESSMENT OF FISHING CAPACITY 163 164 1) Inventory of effort / fleet 165 i) Domestic by FMA (Municipal & Commercial) 166 167 **Municipal** Promote the improvement of the Improve of BoatR coverage and 168 169 Promote the improvement of the Improve BoatR database system 170 (access) in collaboration with LGU. 171 172 Commercial Establish historical CFV capacity (vessel and gear type; number 173 174 and tonnage) Update on current valid licenses 175 176 Update of pending applications for renewal Estimate of unlicensed vessels 177 Validation of vessel size (Re-admeasurements) 178 179 ii) Distant water Other coastal states 180 High seas 181 Establish historical CFV capacity (vessel and gear type; number 182 183 and tonnage) • Update on current valid licenses 184 • Update of pending applications for renewal 185 186 Estimate of unlicensed vessels 187

188 189	 Establish Harvest Strategies/Management Procedure (Reference Points (RPs) & Harvest Control Rules (HCRs))
190	i) Tropical tunas/highly migratory and straddling fish stocks at various
191	scale
192	 Western and Central Pacific Ocean
193	National
194	 Fisheries Management Areas (FMA)
195	ii) Small Pelagic
196	 Fisheries Management Areas (FMA)
197	iii) Demersal
198	Fisheries Management Areas (FMA)
199	• Sub/FMAs
200	3) Establish Reference Points and Harvest Control Rules
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202	F. MANAGEMENT OF CAPACITY FOLLOWING FMA FRAMEWORK (FMA-based
203	licensing)
204	
205	1) Tropical Tuna and other Highly Migratory and Straddling Fish Stocks
206	(National Level). These stocks which are under RFMOs shall be manage according
207	to scale as follows:
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209	i) Western and Central Pacific Ocean (WCPO) -the management measures
210	shall be based on the harvest strategies, Reference Points (RPs), and
211	Harvest Control Rules (HCRs) promulgated by the Western and Central
212	Pacific Fisheries Commission (WCPFC), Indian Ocean Tuna Commission
213	(IOTC) and International Convention Conservation of Atlantic Tuna
214	(ICCAT).
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216	ii) National- the stocks shall be manage at the National level consistent with
217	the Section 2 of FAO 263 s. 2019. Consequently, in managing the capacity
218	at national level, the national interest shall be considered subject to the
219	agreed allocations or limits (Harvest strategies and Harvest Control Rules)
220	as provided in the Conservation and Management Measures
221	(CMMs)/Resolutions of relevant Regional Fisheries Management
222	Organization (RFMOs) in the following areas:
223	
224	 Beyond National jurisdictions (High Seas and other coastal states)
225	 Philippine Exclusive Economic Zone (EEZ)
226	Archipelagic, Territorial Seas and Municipal Waters
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228 For this purpose, the RPs and HCRs of the above areas shall be based on the agreed allocations or limits (Harvest strategies and HCRs), and NSAP assessment. 229 230 2) Small pelagic (FMA level) FMA SAG Review and recommend RPs and HCRs 231 232 FMA MB Formulate and adopt relevant HCMs 233 Implement at FMA/Municipal level. 3) Demersal by (FMA/Sub-FMA level) 234 235 FMA/Sub-FMA SAG Review and recommend RPs and HCRs FMA/Sub-FMA MB Formulate and adopt relevant HCMs 236

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VI. ISSUES, OBJECTIVES, BENCHMARKS, MANAGEMENT ACTIONS AND TIMELINE

Table 1. The issues, objectives, benchmarks and management actions in managing fishing capacity

Implement at FMA/Sub-FMA/Municipal level.

including the timeline

ISSUES	OBJECTIVES	BENCHMARKS	MANAGEMENT ACTIONS	TIMELINES
Example	Example		Example	Example
Overcapacity and overfishing	Adopt a national Harvest Strategy (RPs); Establish a target fishing		1) Establish & adopt status of major fish stocks	
	capacity by end of 2023		2) Establish and adopt current level of effort	End of 2022
			3) Adopt measures/limits for tropical tunas by	
	-Interim tropical tuna HS by end of 2023		fisheries - Purse seine/ ringnet - Longline - Handline (large fish) - Hook & line	
	-Small pelagics, % of FMAs by 2023% in 3 yrs, 100% in 5 yrs.		4) Determine target fishing capacity and adopt measu:	
	-Demersal, , % of FMAs by 2023% in 3		4) mplement measure to manage fishing capacity at target fi	

	yrs, 100% in 5 yrs.	Conduct inventory by fleet/gear @ national, @ FMA@Region@LGU	
Illegal, Unreported and Unregulated Fishing (IUUF)			
Overlapping Multiple Species and Fleets			
Resource Use Competition			
Lack or insufficient safety net			

242 VII. MONITORING AND EVALUATION PLAN

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The monitoring and evaluation strategies are based on short-term and medium-term goals. The identified methods include assessment, survey, reporting, and stakeholder consultation. Moreover, the determined frequency of monitoring is yearly. The goals and objectives are only limited to five years to give just enough time to evaluate their strength and weaknesses and possible amendment or revision of the plan if there is a need to do so.

248 Table 2. Monitoring and Evaluation Plan

INDICATOR	MONITORING	MONITORING	EVALUATION (NOTES	
	FREQUENCY	METHOD	ON PROGRESS)	

VIII. COMMUNICATION AND INFORMATION STRATEGY/PLAN

Communication and information strategy/plan will be drafted during the consultation

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333 X. ANNEXES

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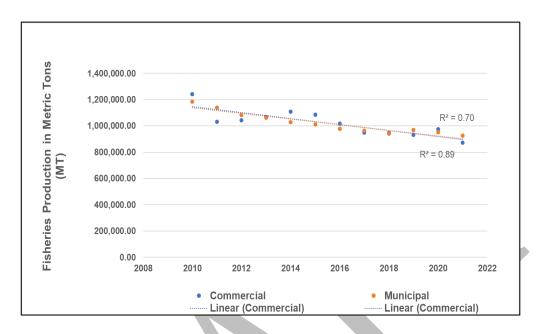
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Annex 1. The trend of marine fisheries production from CY 2010 to 2021 in the Philippines (PSA 2022).

Annex 2. The goal in managing fishing capacity.

Time Frame	Goals
Short-term (1 year)	A harmonized fishing capacity management system that is comprehensive, reliable, and responsive.
Medium-term (2-5 years)	A slowly recovering fishery that is managed using science-based information and participatory governance.

Annex 3. Current Measures To Regulate Fishing Capacity

341 A. GENERAL

The following are the current measures to regulate the fishing capacity:

1. **FAO 263 s. 2019.** Establishment of Fisheries Management Areas (FMA) for the Conservation and Management of Fisheries in Philippine Waters.

- Section 12. FMA Management System, Reference Points (RPs), Harvest Control Rules (HCRs). In establishing a management system, RPs, and HCRs for the FMA, the MB may consider established management models, among others for example Framework for Integrated Stock and Habitat Evaluation (FISHE), Harvest Strategies (HS), and Management Procedures (MP), depending on the best available scientific data and needs of the FMA.
- 2. FAO 244 s. 2012. National Tuna Fish Aggregating Device (FAD) Management Policy
- 3. **FAO 201 s. 2000.** Ban on fishing with active gear in municipal waters, bays and Fishery Management Areas
- 4. **Republic Act No. 10654.** The Philippines Fisheries Code of 1998 as amended by Republic Act No. 10654, entitled "An Act to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated Fishing."
 - Sec. 7. Access to Fishery Resources. The Department of Agriculture shall issue such number of licenses and permits for the conduct of fishery activities subject to harvest control rules and reference points as determined by scientific studies or best available evidence. Preference shall be given to resource users in the local communities adjacent or nearest to the municipal waters.
 - SEC. 8. Harvest Control Rules and Reference Points. The Secretary of the Department of Agriculture may establish reference points and harvest control rules in a fishery management area or for a fishery: Provided, however, That in municipal waters and fishery management areas, and waters under the jurisdiction of special agencies, Harvest Control Rules and Reference Points may be established upon the concurrence and approval or recommendation of such special agency and the concerned LGU in consultation with the FARMC for conservation or ecological purposes.
 - Chapter VI. Prohibitions and Penalties.
 - Sec. 86. *Unauthorized Fishing*. (a) It shall be unlawful for any person to capture or gather or to cause the capture or gathering of fish, fry or fingerlings of any fishery species or fishery products without license or permit from the Department or LGU. Except in cases specified under this Code, it shall also be unlawful for any commercial fishing vessel to fish in municipal waters. (b) It shall be unlawful for any person not listed in the registry of municipal fisherfolk to engage in any commercial fishing activity in municipal waters.

- Sec. 89. *Unreported Fishing*. It shall be unlawful for any person to engage in unreported fishing or to fail to comply with the reportorial requirements in Section 38 (commercial fishing vessels shall keep a daily record of fish catch and spoilage, landing points, and quantity and value) of this Code.
- Sec. 90. Unregulated Fishing. It shall be unlawful for any person to engage in unregulated fishing in waters within and beyond national jurisdiction.
- Sec. 93. *Use of Fine Mesh Net.* It shall be unlawful to engage in fishing using nets with mesh smaller than that which may be determined by the Department: *Provided,* That the prohibition on the use of fine mesh net shall not apply to the gathering of fry, glass eels, elvers, tabios, and *alamang* and other species that by their nature are small but already mature, as identified in the implementing rules and regulations by the Department of Agriculture.
- Sec. 94. Fishing in Overexploited Fishery Management Areas. It shall be unlawful for any person to fish in fishery management areas declared as overexploited.
- Section 97. Ban on Muro-ami, Other Methods and Gear Destructive to Coral Reefs and Other Marine Habitat. It shall be unlawful for any person, natural or juridical, to fish with gear or method that destroys coral reefs, seagrass beds, and other fishery marine life habitat as may be determined by the Department. 'Muro-ami' and any of its variation, and such similar gears and methods that require diving, other physical or mechanical acts to pound the coral reefs and other habitat to entrap, gather or catch fish and other fishery species are also prohibited.
- Sec. 100. Fishing During Closed Season. It shall be unlawful to fish during closed season.
- Sec. 101. Fishing in Marine Protected Areas, Fishery Reserves, Refuge and Sanctuaries. It shall be unlawful to fish in marine protected areas, fishery reserves, refuge, or fish sanctuaries as declared by the Department or the LGUs.
- Sec. 106. *Violation of Harvest Control Rules*. It shall be unlawful for any person to fish in violation of harvest control rules as determined by the Department.
- Sec. 119. Noncompliance with Vessel Monitoring Measures. No municipal, commercial or distant water fishing vessel shall engage in fishing activity without complying with the vessel monitoring measures promulgated by

B. COMMERCIAL 441 442 1. FAO 266 s. 2020. Rules and regulations on the implementation of Vessel Monitoring 443 Measures (VMM) and Electronic Reporting System (ERS) for commercial Philippine 444 flagged fishing vessel amending FAO 260 series of 2018. 445 446 2. BFAR Administrative Circular (BAC) No. 255 s. 2014. Closed-season for the 447 conservation of Sardines in East Sulu Sea, Basilan Strait, Sibuguey Bay. 448 449 3. DA-DILG JAO No. 1 s. 2015. Closed fishing season for galunggong in Northeastern 450 Palawan. 451 452 453 4. **FAO 167-3 s. 2013.** Visayan Sea Closed season 454 5. **DA-DILG JAO No. 2 s. 2014.** Establishing a Closed Season for the Conservation of Small 455 456 Pelagic in Davao Gulf 457 6. BFAR Administrative Circular (BAC) No. 253-1 s. 2018. Moratorium on the Issuance 458 of Commercial Fishing Vessel and Gear License and Other Clearances 459 460 7. **FAO 246-1 s. 2018.** Amending FAO No. 246 on the Banning of the operation of Danish 461 Seine and Modified Danish Seine in Philippine Waters 462 463 8. FAO 245-4 s. 2018. Regulations and Implementing Guidelines on Group Tuna Purse 464 Seine Operations in High Seas Pocket Number 1 as a Special Management Area 465 466 Section 2. Scope and Application. The Administrative Order covers the 36 467 468 Philippine registered traditional group seine fishing vessels granted access to the HSP1-SMA, having gross tonnage of not more than 250 GT issued with the 469 International Fishing Permits, and listed in the WCPFC record of fishing 470 vessels. 471 9. **FAO 236-3 s. 2014.** Extension of FAO 236-2 Series of 2013 on the Rules and Regulations 472 on the Operation of Purse Seine and Ring Net Vessels Using Fish Aggregating Devices 473 474 (FADs) locally known as Payaos during the FAD Closure Period as Compatible Measures to WCPFC CMM 2013-01. 475 476 477 10. **FAO 232 s. 2010.** Limiting Commercial Fishing in Manila Bay 478 479 11. FAO 198-1 s. 2018. Amended Rules and Regulations on Registration and Licensing of Commercial Fishing Vessels, Fishing Gears and Fish workers. 480 481

the Department in coordination with the LGUs: *Provided*, that for vessels operating in Philippine waters, only the catcher vessel shall be covered

by this requirement. It shall also be unlawful to intentionally tamper with,

switch off or disable the vessel monitoring system.

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12. **Republic Act No. 10654.** The Philippines Fisheries Code of 1998 as amended by Republic Act No. 10654, entitled "An Act to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated Fishing."

Rule 95.2. Exceptions. Active gears such as purse seine or "pangulong", ring net or "taksay" and such other gears that do not touch the sea bottom, used by small and medium commercial fishing vessels authorized by the LGU pursuant to Section 18 of this Code and pertinent rules,3 to fish in the 10.1 to 15 km. of municipal waters only, as reckoned from the general coastline.

13. **FAO 237 s. 2010.** Regulations Requiring the Installment of Juvenile and Trash fish Excluder Device (JTED) in Trawls in Philippine Waters.

C. MUNICIPAL

b) **Republic Act No. 10654.** The Philippines Fisheries Code of 1998 as amended by Republic Act No. 10654, entitled "An Act to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated Fishing."

Sec. 95. *Use of Active Gear in Municipal Waters, Bays and Other Fishery Management Areas.* It shall be unlawful to engage in fishing in municipal waters and in all bays as well as other fishery management areas using active fishing gears as defined in this Code.

- Rule 4.1. Additional Terms. Drift gillnet as provided for in Item 45 (a) of Section 4, refers to a large-scale drift gill net which is more than 500 meters in length and has an impact on the by-catch of threatened, protected and endangered species.
- Rule 95.2. Exceptions.
 - o Gill nets, other than bottom-set gill nets, not more than 500 meters in length per boat used by registered municipal fisherfolk, which shall be regulated by the LGU.
 - o "Sudsud" or push net used to catch *Acetes* sp. "alamang" and *Stolephorus* sp. "dilis," which is operated by a registered municipal fisherfolk/fisherfolk cooperative/association, either manually or by the use of a registered and licensed municipal motorized boat with single piston engine of not more than sixteen (16) horsepower, during approved fishing season for the species, and covered by a management plan duly approved by the LGU.

Sec. 19. *Registry of Municipal Fisherfolk.* The LGU shall maintain a registry of municipal fisherfolk, who are fishing or may desire to fish in municipal waters for the purpose of determining priorities among them, of limiting entry into the municipal waters, and of monitoring fishing activities and/or other related purposes. Likewise, the LGU shall

maintain a registry of municipal fishing vessels by type of gear and other boat particular with the assistance of the FARMC.

- Rule 19.1. National Registration Program. The DA-BFAR, in coordination with the M/CFARMC, shall continue to assist the LGUs in implementing the national program for the registration of municipal fishing vessels, gears, fisherfolk, and fishery operators.
 - Development of database on fishers and fishing boats (FishR and BoatR). FishR database is designed for municipal fisherfolk registry while BoatR database is designed for municipal fishing vessels and gear registration system.
- c) **DA-DILG Joint Memorandum Circular (JMC) No. 03, 2018.** Guidelines on Strengthening the Implementation of the Ban on Bottom Trawl Operations Within Municipal Waters.

