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**MANAGEMENT OF FISH AGGREGATING DEVICE (FAD) FOR THE TUNA FISHERY IN PAPUA
NEW GUINEA AND REFERENCE POINTS ANNEXURES**

**CREATED IN ACCORDANCE WITH THE NATIONAL TUNA FISHERY MANAGEMENT AND
DEVELOPMENT PLAN - PART 1 TUNA FISHERY MANAGEMENT**

NOTE: Certain provisions of this Policy are already in place and shall continue to apply. New provisions shall apply from 1 January 2016 to align with the licensing year.

1. SCOPE

1. This policy sets out the mechanisms and procedures that the National Fisheries Authority (NFA) will use to regulate the development, tracking and use of Fish Aggregating Devices (FADs) for various purposes including to limit fishing mortality on species such as juvenile bigeye and yellowfin tuna.
2. This policy applies to all domestic and bilateral licensed vessels operating in the fisheries waters of Papua New Guinea (PNG), including those domestic vessels endorsed for regional access, or to operate in the high seas. This Policy is only relevant to the purse seine fishery.
3. Unless otherwise specified, references to fishing or fishing vessels means purse seine fishing vessels, group purse seine fishing vessels, and their support vessels, including tankers and carriers.

1.1 INSHORE FISH AGGREGATING DEVICE (IFAD)

1. The NFA IFAD programme promotes deployment of non-commercial anchored inshore FADs, typically between 3-4 nautical miles from shore, to enhance fishing opportunities for artisanal and small scale fishers. IFADs are encouraged to be used without restriction by artisanal, small scale handline, and game fishermen.
2. The regulation of IFADs currently falls outside the scope of this Policy. As catches grow from the use of IFADs, appropriate management measures may be developed as part of this Policy.

Management of Fish Aggregating Device (FAD) for the Tuna Fishery in Papua New Guinea and Reference Points Annexures—*continued*

2. LEGAL STATUS

1. This Policy is for the implementation of Fish Aggregating Device (FAD) for the Tuna Fishery in PNG and represents a policy decision of the National Fisheries Authority Board. It is an annexure of the National Tuna Fishery Management and Development Plan (the Plan) made in accordance with the provisions of the PNG *Fisheries Management Act 1998* (the Act).
2. This Policy will be reviewed from time to time according to further developments and will be informed by the best available scientific and economic data, including data related to the broader Western and Central Pacific region.
3. This Policy applies irrespective of any regional or sub-regional measures to which PNG is a party, other than where the contrary intention is stated.

3. FAD TYPES

1. The following definition of a FAD is provided in the *Fisheries Management Act 1998*:
 - a. “Fish aggregating device” (FAD) means a man-made or partially man-made floating, semi-submerged or submerged device, whether anchored or not, intended to aggregate fish, and includes any natural floating object on which a device has been placed to facilitate its location.
 - b. In addition to the definition in section 3(1)(a) and for the purposes of this annexure the definition of FAD includes any device used to record and/or report data on fish, plankton, weather, or oceanic conditions whether or not attached to a FAD or free floating. Such devices may not operated if fully submerged.
2. “Anchored FAD” (AFAD) means a FAD attached by a mooring line to an anchor weight in a fixed position.
3. “Drifting FAD” (DFAD) means a FAD other than an anchored FAD.

4. FAD MANAGEMENT PROVISIONS

4.1 APPLICABLE AREA OF THIS POLICY

1. This section of the Policy describes the arrangements that will be applied to PNG licensed vessels fishing:
 - a. in the exclusive economic zone (EEZ) of PNG, or
 - b. in another EEZ, or
 - c. under any regional arrangement, or
 - d. in the high seas within the area of competence of the Western and Central Pacific Fisheries Commission (WCPFC).
2. Anchored FADs may only be used in archipelagic waters of PNG north of 5° South latitude.
3. Drifting FADs may only be deployed in the EEZ and on the high seas as permitted.
4. No PNG licensed vessel shall deploy anchored FADs in the PNG EEZ or on the high seas.

4.2 FAD FISHING CLOSURE PERIOD

1. Under this Policy PNG shall apply the provisions of WCPFC Conservation and Management Measure (CMM) 2013-01. to all purse seine vessels fishing in the areas detailed in paragraph 4.1(1)
2. CMM 2014-01 requires the application of FAD fishing closure from 30th June (00:00hrs UTC) to 31st October (00:00hrs UTC) each year.
3. In the event WCPFC CMM 2014-01 is rescinded or ceases to have effect the provisions shall continue to apply until this Policy is amended by further notification in the *National Gazette*.
4. In the event WCPFC CMM 2014-01 is updated, amended or revised by a further CMM, the provisions of such further CMM shall apply under this Policy immediately following/after that updated, amended or revised CMM is published by notification in the Gazette in accordance with section 40B of the *Fisheries Management Act 1998*.

**Management of Fish Aggregating Device (FAD) for the Tuna Fishery in Papua New Guinea and
References Points Annexures—*continued***

4.2.1 GEAR RESTRICTIONS DURING THE FAD FISHING CLOSURE PERIOD

1. During the FAD fishing closure period specified, no PNG licensed purse seine vessel shall conduct any part of a set within one nautical mile of a FAD. That is, at no time may the vessel or any of its fishing gear or tenders be located within one nautical mile of a FAD while fishing.
2. During the FAD fishing closure period specified, the operator of a vessel shall not allow the vessel to be used to aggregate fish, or to move aggregated fish including using underwater lights, water spray, or chumming.
3. The use of water sprays to hold free schools is permitted during the FAD closure.
4. A FAD and/or associated electronic equipment shall not be retrieved by a vessel during the period of a FAD closure unless:
 - a. the FAD and/or associated electronic equipment are retrieved and kept on board the vessel until landed or until the end of the closure; and
 - b. the date, time and location of any retrieval are recorded and notified to NFA within 24 hours; and
 - c. the vessel does not conduct any set either for a period of seven (7) days after retrieval or within a fifty (50) mile radius of the point of retrieval of any FAD.
5. No vessel (licensed vessel, support vessel, or any other vessel) shall:
 - a. be operated in any manner in cooperation with each other in order to aggregate or catch aggregated fish, or
 - b. deploy or cause to be deployed any FAD in any EEZ or High seas areas during the closure, or
 - c. tamper with, repair or otherwise interact with any FAD during the closure other than in accordance with a provision of this Policy unless in accordance with 4.2.1 – 4
 - d. conduct any set during any prohibition period within one nautical mile of any point where a FAD has been retrieved by any other vessel within twenty four hours of that FAD being retrieved.

4.2.2 AREA CLOSURES FOR FAD FISHING

1. The territorial seas are closed to all purse seine fishing including the use of all FADs, other than in the territorial seas extending from the archipelagic base line where beyond 12 nautical miles from any point of land or declared reef.
2. Areas of the archipelagic waters and the exclusive economic zone that are South of the latitude 5° South shall be closed to anchored FAD deployment and use.

4.3 CATCH RETENTION

1. Where the operator of a vessel determines that fish should not be retained on board for reasons related to the size, marketability, or species composition, the fish may only be released before the net is fully pursed and/or less than one half of the net has been retrieved.
2. Where the operator of a vessel determines that fish should not be retained on board because they are “unfit for human consumption”, the following definitions shall be applied:
 - a. “unfit for human consumption” includes, but is not limited to fish that:
 - i. is meshed or crushed in the purse seine net; or
 - ii. is damaged due to shark or whale depredation; or
 - iii. has died and spoiled in the net where a gear failure has prevented both the normal retrieval of the net and catch and efforts to release the fish alive; and
 - b. “unfit for human consumption” does not include fish that:
 - i. is considered undesirable in terms of size, marketability, or species composition; or
 - ii. is spoiled or contaminated as the result of an act or omission of the crew of the fishing vessel.
3. Where the operator of a vessel determines that fish should not be retained on board because it was caught during the final set of a trip when there is insufficient well space to accommodate all fish caught in that set, the fish may only be discarded if:

Management of Fish Aggregating Device (FAD) for the Tuna Fishery in Papua New Guinea and Reference Points Annexures—*continued*

4.3 Catch Retention—*continued*

- a.* the vessel master and crew attempt to release the fish alive as soon as possible; and,
 - b.* no further fishing is undertaken after the discard until the fish on board the vessel has been landed or transshipped.
4. Fish shall not be discarded from the vessel until after an observer has been provided an opportunity to assess the species composition and weight of the fish to be discarded.
5. The operator of the vessel shall submit to the Managing Director of the NFA a report that includes the following information within forty-eight 48 hours after any discard containing such details and in the form as are required by NFA.

4.4 FAD LIMITS

1. The use of FADs in archipelagic waters is limited to PNG flagged and licensed vessels associated with PNG companies with substantial onshore investment in processing, and only where that catch is to be landed in PNG.
2. Foreign flagged PNG licensed vessels are prohibited from deploying, setting and fishing on FADs in the archipelagic waters of PNG.
3. Both PNG and foreign flagged licensed vessels may use drifting FADs in PNG's EEZ.
4. The total number of anchored FADS deployed for the purse seine fishery in archipelagic waters shall not exceed 2,000.
5. The maximum number of anchored FADs allocated by NFA per licensed purse-seine vessel shall not exceed 20 for a single licensing period without replacement.
6. Group purse seine operations shall be allocated a maximum of 20 anchored FADs for any purse seine vessel transshipping (operating in tandem with a mothership) fish to a mothership for a single licensing period without replacement.
7. The maximum number of drifting FADs allocated by NFA per licensed purse seine vessel shall not exceed 100 for a single licensing period without replacement. These may be deployed regionally and shall report to NFA /PNA FIMS
8. The number of anchored FADs allocated to each vessel shall be proportionally reduced across the fleet once all applications have been received should the total exceed 2000.
9. The total number of drifting FADs that may be used shall be determined from time to time
10. The total number of drifting FADs that may be used in any fisheries waters and the high seas may be determined by variation to this annexure or any regional measure.

4.5 FAD MARKING

1. All FADs must be clearly marked with the name and registration number of the vessel that has deployed it. This information shall be fixed in such a way that it will remain fixed to the FAD for the life of the FAD.
2. The information must be in lettering at least 30cm high and of a colour that contrasts with the colour of the back plate. The plate must be attached to a point on the FAD where in normal circumstances it is visible from opposing directions.
3. Unique identification number from satellite buoys attached to FADs shall be linked to the FAD and a unique FAD registration number allocated by NFA.

4.6 FAD DESIGN AND CONSTRUCTION

1. All deployed FADs must meet the following minimum criteria:
 - i. The FAD must have a section that remains above the water line at all times (the raft section). The raft section must be painted with reflective paint and large enough to be clearly visible from a distance of 1km.
 - ii. Any data buoy or other equipment used in conjunction with any FAD shall not be operated fully submerged at any time.
 - iii. A radar reflector must be attached to the raft section at least 2m above the water line to ensure that it is detectable from a reasonable distance.

This may include the satellite buoy unique identification number.

Management of Fish Aggregating Device (FAD) for the Tuna Fishery in Papua New Guinea and Reference Points Annexures—*continued*

4.6 FAD Design and Construction—*continued*

- iv. A satellite transmitting buoy must be attached registered on FIMs and reporting in approved format.
 - v. FAD materials must be attached to the raft section (or each other) in a way that, as far as possible, prevents parts of the FAD from becoming detached from each other.
 - vi. Where old netting is attached it shall be bound up in a way so that it cannot ghost fish, i.e. result in the capture and mortality of turtles, fish and other species.
2. The use of any form of submersible FAD is prohibited.

4.7 FAD DEPLOYMENT

1. No FAD shall be deployed during the FAD closure period described above. At other times, deployment must be conducted in accordance with the following requirements;
 - i. All PNG licensed vessels are subject to 100% observer coverage. It is mandatory for any PNG licensed vessel that Observers monitor and record the details of the deployment and use all FADs.
 - ii. FADs shall not be deployed from a non licensed vessel.
 - iii. No FAD shall be deployed unless it is registered, and a unique FAD registration number has been allocated by NFA.
 - iv. NFA may publish criteria, by notification in the National Gazette and notified to license holders, concerning the allocation and deployment of FADs.
 - v. All FAD deployments shall be notified to the NFA in the form required by the NFA, within 24 hours of their deployment.

4.8 REQUIREMENTS FOR RETRIEVING FADS

1. The NFA is to be given notice of, and the opportunity to place an observer to monitor, all FAD retrievals.
2. The vessel master must provide FAD retrieval information to the NFA in the form required by NFA, within 24 hours of retrieval.

4.9 FAD MONITORING

1. Satellite tracking buoys shall be assigned a unique identification number and linked to the registered FAD and the vessel that deployed the FAD.
2. The FAD operator shall provide NFA with a direct feed of all data (including but not limited to location, time, ID, associated vessel and sonar data) being transmitted from all buoys affixed to a FAD, whether that satellite buoy is registered with NFA or not.

4.10 BYCATCH MONITORING

1. All by-catch taken during purse seine fishing shall be notified to NFA through the regionally approved logsheet forms.

4.11 FOUND FAD

1. If a FAD, whether natural or artificial is found by a vessel, and a set is made, it is mandatory for a vessel to attach a registered satellite buoy to that FAD.

5. ADMINISTRATION

5.1 FAD REGISTRATION

1. It is a requirement that each vessel operator or company must register each FAD, and each satellite buoy, including the make, model, and unique identification number.
2. Vessel owners must apply to NFA for the registration of each FAD and satellite buoy in the form required by NFA, including any required fee.

Management of Fish Aggregating Device (FAD) for the Tuna Fishery in Papua New Guinea
Reference Points annexures—*continued*

5.1 FAD Registration—*continued*

3. In assessing applications for FAD registration NFA may give consideration to the allocation of FADs having regard to any limits on FAD numbers set under or in accordance with this policy.
4. The NFA shall keep a register of FADs deployed or tracked by any vessel licensed to fish in PNG waters in order to manage the number of deployed FADs, both anchored and drifting, and may use this data for fishery management, science, and compliance purposes, including sharing that data with other states, and regional organizations.
5. Due to the largely aimless movement of drifting FADs the PNG registry and tracking requirement for FADs for any vessel licensed to fish in PNG includes national waters, other countries EEZs, and the high seas.
6. It is a requirement that the vessel operator or company notify NFA of any proposal to turn off satellite monitoring services for a buoy and provide the NFA seven7 working days to respond.
7. If a response has not been received within that 7 day period the service may be turned off.
8. A response within that 7 day period may, under this Policy, may be to the effect:
 - a. that the vessel operator or company be required to maintain satellite monitoring services fro a period of up to 60 days;
 - b. that NFA be given the opportunity to take on responsibility for satellite monitoring services;
 - c. that the vessel operator or company be required to remove and FAD if it is grounded, or recover a buoy if it has moved into an area where FAD fishing is not permitted.
9. Where additional buoys are introduced during the year whether they are newly approved buoys or to replace lost buoys they must be registered before or upon their first report.
10. Each person or company seeking to use a FAD in the regions waters must register a satellite buoy and undertakes that to meet the requirement of this Policy, they shall authorize and require each buoy service provider to parallel report to NFA in the prescribed format.
11. A list of type approved satellite buoy manufacturers will be made available by NFA upon request.

5.2 FAD REGISTRY AND MANAGEMENT FEES

1. The NFA will levy an annual fee for the registration and monitoring of FADs sufficient to cover the costs involved in providing this service.
2. Those costs will cover FAD management, including:
 - a. data analysis and reporting,
 - b. registration and approval of FADs,
 - c. monitoring of deployment, use, and retrievals,
 - d. and may include satellite tracking outside of Papua New Guinea once disowned by the deploying vessel .
3. The vessel operator or owner shall pay all costs for FAD and satellite hardware, and all associated communications and reporting costs necessary to meet the requirements of this policy.

5.3 REPLACING LOST FADS

1. A vessel master shall notify the NFA that a FAD has been permanently lost by providing the following information:
 - a. The date and position of last reported position or sighting of the FAD;
 - b. The location (latitude and longitude) recorded in degrees and minutes of last known position
 - c. The FAD number, satellite buoy identification number; and
 - d. FAD Construction material.
2. The NFA will review this information and may give approval to deploy a replacement FAD depending on the circumstances.

Management of Fish Aggregating Device (FAD) for the Tuna Fishery in Papua New Guinea and Reference Points Annexures—*continued*

5.3 Replacing Lost FADS—*continued*

3. Where a FAD is found to be beached or on a reef, the company who deployed it may be required to remove the debris or ensure the debris is removed, or may be required to reimburse any costs associated with the removal.
4. Industry is strongly encouraged, and may be required under this Policy, to recover and recycle FADs and components to avoid marine debris.

5.4 FAD OWNERSHIP

1. This Policy does not create any property right over FADs, or their use, or their area of operation, or any fish that may be aggregated in their vicinity. No exclusivity of access is enjoyed by any vessel, nor any right to be able to use a FAD in the future, that registers, deploys or tracks a FAD in accordance with this Policy.
2. Whilst NFA require the ability for tracking the FADS, NFA does not assume responsibility over the responsibility for the FAD or any interactions it becomes involved in.

5.5 COMMUNICATION WITH NFA

1. All matters related to the management of FADs shall be communicated to the NFA Tuna Manager.
2. All matters related to the administration and registration of FADs and satellite buoys shall be communicated to the NFA Licensing Manager.
3. The location of anchored FAD zones shall be provided to the Marine Division of the Department of Transport for inclusion in Notices to Mariners information as it relates to navigational safety requirements.

5.6 NUMBER OF TENDER VESSELS PER CATCHER VESSEL

1. For vessels licensed to operate in PNG and authorized to deploy anchored FADs the maximum number of tender vessels to be used per catcher vessel shall be two light boats and one ranger boat.

5.7 LIABILITY AND DAMAGES

1. Any vessel or company operating FADs under the authority of this Policy shall be taken to have indemnified the NFA and the PNG Government against all liabilities arising from their deployment or use, and against all damages.

6. OBSERVER RESPONSIBILITY

1. All FADS constructed, deployed, used, or removed from the water shall be recorded, photographed and reported by the Observer to the NFA, including the relevant satellite buoy number, through the standard observer report.
2. It is a serious offence to interfere with an observer in the course of their duties, or to attempt to influence or bribe an observer.

7. REVIEW

This Policy shall be reviewed as necessary and may be amended from time to time through publication in the *National Gazette*. Any review shall take into account the best available data, including scientific and economic, as well as developmental and social considerations.

8. CONFLICT WITH REGIONAL ARRANGEMENTS

1. In the event of any conflict or inconsistency between this annexure and any relevant regional agreement to which PNG is both a party, and has given legal effect, the regional agreement shall prevail for the EEZ.
2. Unless stated to the contrary within either that agreement or otherwise in a legal instrument of PNG, the regional arrangement shall not apply to the archipelagic waters.

9. COMPLIANCE WITH THIS ANNEXURE

Any vessel, person or company who fails to comply with any provision of this annexure when so required to do shall be taken to have committed a breach of a provision of the Tuna management Plan, which constitutes a breach of license condition under that plan.

Approved on the 5th day of August, 2015.

Hon. M. ZEMING,
Minister for Fisheries and Marine Resources.

REFERENCE POINTS ANNEXURE

CREATED IN ACCORDANCE WITH THE NATIONAL TUNA FISHERY MANAGEMENT AND DEVELOPMENT PLAN - PART 1 TUNA FISHERY MANAGEMENT

MANAGEMENT POLICY FOR THE IMPLEMENTATION OF REFERENCE POINTS FOR THE TUNA FISHERY IN PAPUA NEW GUINEA

1. SCOPE

1. This policy sets out the mechanisms and procedures that the Papua New Guinea National Fisheries Authority will use to monitor reference points to assist in the management of tuna stocks.
2. This policy applies to the fishery waters of Papua New Guinea (PNG) as described in the National tuna Fishery Management and Development Plan, Part 1, Tuna Fishery Management (the Plan).
3. This policy aims to maintain fish stocks, on average, and over time, at a level that aims to preserve a stock biomass point that optimizes economic yield.

2. LEGAL STATUS

1. This Policy is for the implementation of reference points for the Tuna Fishery in PNG and represents a policy decision of the National Fisheries Authority Board. It is an annexure of the National Tuna Fishery Management and Development Plan (the Plan) made in accordance with the provisions of the *PNG Fisheries Management Act 1998* (the Act).

3. TYPES OF REFERENCE POINTS

1. Reference points are set in accordance with section 20 of the Plan to provide benchmarks against which to assess the performance of conservation and management in achieving operational objectives.
2. Under the Plan PNG shall observe any reference points established under any regional or sub regional arrangement or agreement, for fishing operations within its EEZ, and shall have regard to such reference points when establishing any reference points for other parts of the fishery management area.
3. For the purposes of this policy, Papua New Guinea uses the following definitions for Reference Points:
 - i. "Fishery Reference Point" is a benchmark against which to assess the performance of management in achieving an operational objective;
 - ii. "Target reference points" means an indicator of the stock status or condition that is a desirable target for management to achieve agreed targets for stock status or condition;
 - iii. "Limit reference points" means a minimum stock status or condition that is undesirable for management to achieve or sustain and at which point a pre-determined management response is triggered.

4. GENERAL PROVISIONS

1. The aim of this annexure is to support the tuna fishery being optimally managed within safe biological limits.
2. The plan (section 20(3) (e)) aims to ensure that fish stocks are managed to stay above the limit biomass at least 90% of the time.
3. The acceptable level of risk of exceeding the limit reference point shall be 10% with due consideration for the timing, frequency, accuracy, and currency of scientific data, and any other relevant consideration.
4. Target reference points shall be separated from limit reference points with an appropriate buffer reflecting no less than double the confidence limits used at 90% probability.

4.1 THE APPROACH

1. The approach to reference points is consistent with:
 - a. the adoption by WCPFC of:
 - i. the hierarchical approach to the identification of reference points; and,
 - ii. a biomass-based limit reference point for skipjack tuna of 20% of estimated recent average spawning biomass in the absence of fishing.

Management Policy for the Implementation of Reference Points for the Tuna Fishery in Papua New Guinea—*continued*

4.1 The Approach—*continued*

- b.* the adoption by the PNA of:
 - i.* an interim target reference point of 50% SB, $F=0$, (spawning/adult biomass without fishing).
- 2. Taking into account any regional obligations, any target reference point aims to meet a range of objectives identified for the management of tuna stocks, including:
 - I. resource sustainability, noting that the TRP is sufficiently distant from the LRP to ensure a minimal likelihood the population does not fall below the LRP and aims to be well above Maximum Sustainable Yield (MSY).
 - II. economic and social goals, noting the recent history of profitable performance of the major tuna fisheries, and that this target reference point aims to support the volume, size composition, employment, social aspects and value of catches in real terms;
 - III. noting the substantial uncertainty about projected outcomes from changes in effort levels significantly distant from current effort levels, because of the limited understanding of the relationship between CPUE and abundance; and
 - IV. avoiding undesirable impacts on PNG's artisanal fisheries.
- 3. The adoption of target and limit reference points provides a basis for the ongoing development of harvest control rules.

5. BIOLOGICAL REFERENCE POINTS, TRIGGERS, AND PERFORMANCE CRITERIA

- 1. Consistent with the interim target reference point adopted by the Parties to the Nauru Agreement (PNA) the target reference point for skipjack tuna for Papua New Guinea's Exclusive Economic Zone is 50% of spawning biomass.
 - a.* The management strategies for the fishery will be reviewed and revised by the Board if the spawning biomass falls below 40% in two consecutive annual reporting periods.
- 2. The target reference point for skipjack tuna for Papua New Guinea's archipelagic waters will be initially set at 40% of spawning biomass.
 - a.* The management strategies for the fishery will be reviewed and revised by the Board if the spawning biomass falls below 30% in two consecutive annual reporting periods.
- 3. The aim of any revised management strategies will be to return the fishery to the applicable target reference point within five years.
- 4. The limit reference point for skipjack in the fisheries waters (EEZ and AW) of Papua New Guinea is 20% of spawning stock biomass in line with the applicable WCPFC CMM.
 - a.* The management strategies for the fishery will be reviewed by the Board immediately following two consecutive reporting periods when the spawning biomass is reported at below 25%, and the second of those reports shows the spawning biomass to be below the level of the first of those reports.
 - b.* The Board shall take immediate steps and shall implement such management strategies as are within its powers and are necessary to prevent the biomass from reaching 20% and to return the fishery to the applicable target reference point within ten years.
 - c.* In considering an appropriate management response the Board shall consider any regional initiatives, and shall in addition seek independent expert advice on the stock assessment, stock status, and management options.
 - d.* In the event that the spawning biomass for any skipjack tuna is reported at 20% or below on two consecutive occasions the Board shall immediately take steps in line with 3(b) and 3(c) but in addition shall immediately, and based on the best available information, implement such fishery closures as are necessary to encourage and facilitate successful spawning.

Management Policy for the Implementation of Reference Points for the Tuna Fishery in Papua New Guinea—*continued*

5. Biological Reference Points, Triggers and Performance Criteria—*continued*

5. In considering all management responses to reference points the Board shall have regard to any regional reference points established for the purpose of monitoring tuna stocks, and any broader regional response either proposed or implemented. Any measures taken by PNG shall be complementary to any regional measures.
6. Where scientific advice is such that any management response by PNG is unlikely to achieve the stated objectives without the cooperation of other States, and that those other States are not fully cooperating in a combined management response, the Board shall make every endeavour to ensure that at a diplomatic level those other States are fully aware, engaged, and encouraged to participate in and implement complementary responses to ensure the sustainability of tuna stocks.
7. In the event of a management response triggered under this Part, the Board shall ensure the Minister is fully briefed on the situation, and of any proposed management response, and in particular is advised of the consequences of not taking prompt action on the long term sustainability of the tuna resource and on the potential economic impacts.
8. In the event of a management response triggered under paragraph 3 the Board shall ensure the Minister, Prime Minister, and the Executive Council are fully briefed on the situation, and any proposed management response, and in particular are advised of the consequences of not taking prompt action on the long term sustainability of the tuna resource and on the potential economic impacts.
9. Any decision of the Board in respect of any matter relating to any review of data related to reference points and any consequential management plan review shall be published on the NFA website within 90 days of that decision.
10. Reference points for other tuna species are being addressed through ongoing regional discussions, and scientific advice is being sought as a part of that process.

6. OPERATIONAL REFERENCE POINTS, TRIGGERS, AND PERFORMANCE CRITERIA

1. A party allowable effort (PAE) is set by the Parties to the Nauru Agreement for the Vessel Day Scheme (VDS) as PNG's portion of the VDS total allowable effort (TAE).
2. The target reference point for fishing effort in each allocation year shall be PNG's PAE.
3. A PAE under the VDS allows for the trading of days between Parties to the Palau Arrangement within the boundaries of the TAE.
4. A fishing company fleet shall be notified when it has reached 80% of its VDS allocation. The notification shall be conveyed by the PNA Office as the administrator.
5. On receipt of the notification, companies shall notify the administrator, within 72 hours, of their intent:
 - I. To cease fishing when the remaining 20% of their VDS allocation is utilized. In doing so they must advise which vessels in their fleet shall use the remaining allocation and shall direct all other vessels:
 - a. For Foreign Flagged Vessel: To exit the waters of Papua New Guinea, or
 - b. For domestic, and locally based foreign vessels: To return to their designated port.
 - II. To purchase additional vessel days from Papua New Guinea's PAE allocation, subject to availability.
 - III. To request the Authority to seek additional days to be purchased from the other Parties, subject to availability and agreement on price.
6. A notification shall be sent to fishing companies when their VDS allocations have been fully utilized. Those fishing companies are required to cease fishing operations and to exit the waters of Papua New Guinea (for foreign flagged vessels), or to either return to their designated port or seek regional access (for domestic and locally based foreign flagged vessels).
7. To assist with planning, a notification shall be sent to all fishing companies when PNG's PAE has reached 80% fished.

Management Policy for the Implementation of Reference Points for the Tuna Fishery in Papua New Guinea—*continued*

6. Operational Reference Points, Triggers, and Performance Criteria—*continued*

8. The PNG Archipelagic Waters Days Scheme (AWDS) shall operate in accordance with the above rules, but with the NFA as the administrator.

7. TOTAL CATCH LEVELS, TRIGGERS, AND PERFORMANCE CRITERIA

1. This annexure establishes a mechanism to set a trigger total catch level for skipjack tuna, yellowfin tuna, and bigeye tuna in the fisheries waters of Papua New Guinea.
2. The trigger total catch level shall be set at the average of the last 5 years available catch data for each species, plus 10%.
3. The trigger total catch level shall be revised each year based on the latest available data.
4. The Board shall review the fishery management strategies in the event that:
 - a. either the total catch in any fishery period (calendar year) exceeds the trigger catch level, or
 - b. the trigger catch level either rises or falls for three consecutive fishery periods by greater than 10% in total.
5. In reviewing the fishery management strategies the Board shall have regard to regional initiatives, changes in traded days into or out of PNG waters, as well as the levels of effective effort over time, the most recent stock assessment, fisheries economics, industry developments, and any other information relevant or necessary to ensure the sustainability of tuna stocks.

8. FISHING EFFICIENCY, TRIGGERS, AND PERFORMANCE CRITERIA

1. The Board shall arrange to be established an indices of fishing efficiency for the purse seine fishery that takes into account changes to vessel characteristics (e.g. size and storage capacity), changes to fishing practices (e.g. gear and FADs), emerging technology (e.g. electronic systems).
2. The aim of the indices is to monitor operational effort creep from fishing and fishing related activity.
3. Sample data shall be collected on a continual basis, and the indices shall be updated each year.
4. The Board shall review the fishery management strategies and in particular levels of fishing effort when the indices shows an increase in three consecutive years.
5. In reviewing the fishery management strategies and levels of fishing effort the Board shall have regard to any regional initiatives, current stock assessments, and any other information relevant or necessary to ensure the sustainability of tuna stocks.
6. PNG will provide such data and information regionally and urge the region to adopt adjustments to fishing effort arrangements as required to maintain effort at a sustainable level.

9. MANAGEMENT INITIATED REVIEW OF FISHERY MANAGEMENT STRATEGIES

1. The Managing Director of the National Fisheries Authority may request the Board to review the fishery management strategies for all or any species of tuna where the Managing Director is satisfied that data is available that indicates action is required to prevent damage to the sustainability or economic performance of the fishery.
2. The aim of this provision is to ensure that a precautionary approach is taken to the management of tuna stocks using the best available data in real time, irrespective of the triggers contained elsewhere in this annexure.
3. In the event that the Managing Director seeks a review by the Board, the Board must undertake the review, and in the event that no action is proposed to be taken, must document its reasons in detail and provide those reasons to the Managing Director and the Minister.

Management Policy for the Implementation of Reference Points for the Tuna Fishery in Papua New Guinea—*continued*

7. REVIEW

This Policy shall be reviewed as necessary and may be amended from time to time through publication in the National Gazette. Any review shall take into account the best available data, including scientific and economic, as well as developmental and social considerations.

10. CONFLICT WITH REGIONAL ARRANGEMENTS

1. In the event of any conflict or inconsistency between this annexure and any relevant regional agreement to which PNG is both a party, and has given legal effect, the regional agreement shall prevail for the EEZ.
2. Unless stated to the contrary within either that agreement or otherwise in a legal instrument of PNG, the regional arrangement shall not apply in the archipelagic waters.

11. COMPLIANCE WITH THIS ANNEXURE

Any vessel, person or company who fails to comply with any provision of this annexure when so required to do shall be taken to have committed a breach of a provision of the Tuna Management Plan, which constitutes a breach of licence condition under that plan.

Approved on the 5th day of August, 2015.

Hon. M. ZEMING,
Minister for Fisheries and Marine Resources.

Fisheries Management (Amendment) Act 2015

Notice by Minister Pursuant to Section 40B (3) of *Fisheries Management (Amendment) Act 2015*. Schedule of CMMs and Resolutions passed by the Western and Central Pacific Fisheries Commission that are applicable to Papua New Guinea, including those applicable to fisheries operating in Papua New Guinea's Exclusive Economic Zone.

SCHEDULE

Resolution/CMM	Title
CMM 2004-03	Specifications for the Marking and Identification of Fishing Vessels.
Resolution 2004-04	Resolution on Conservation and Management Measures.
Resolution 2005-03	Resolution on Non-Target Fish Species.
CMM 2006-07	Conservation and Management Measure for the Regional Observer Programme.
CMM 2006-08	Western and Central Pacific Fisheries Commission Boarding and Inspection Procedures.
CMM 2007-01	Conservation and Management Measure for the Regional Observer Programme.
Resolution 2008-01	Resolution on Aspirations of SIDS and Territories.
CMM 2008-03	Conservation And Management of Sea Turtles.
CMM 2009-02	Conservation and Management Measure on the Application of High Seas FAD Closures and Catch Retention.
CMM 2009-05	Conservation and Management Measure Prohibiting Fishing on Data Buoys AND information Package on Data Buoys as at 18 May 2010.
CMM 2009-06	Conservation and Management Measure on the Regulation of Transshipment.
CMM 2009-09	Conservation and Management Measure for Vessels without nationality.
CMM 2009-10	Conservation and Management Measure to Monitor Landings of Purse Seine Vessels at Ports so as to ensure reliable catch data by species.
CMM 2010-01	Conservation and Management Measure for North Pacific Striped Marlin.
CMM 2010-02	Conservation and Management Measure for the Eastern High Seas Pocket Special Management Area.

Schedule—*continued*

Resolution/CMM	Title
CMM 2010-06	Conservation and Management Measure to Establish a List of Vessels Presumed to have carried out Illegal, Unreported and Unregulated Fishing activities in the WCPO.
CMM 2010-07	Conservation and Management Measure for Sharks
CMM 2011-03	Conservation and Management Measure to address impact of purse seine fishing activity on cetaceans.
CMM 2011-04	Conservation and Management Measure for Oceanic Whitetip Sharks.
Resolution 2012-01	Resolution on the best available science.
CMM 2012-05	Conservation and Management Measure for Charter Notification Scheme.
CMM 2013-04	Conservation and Management Measure for WCPFC Implementation of a Unique Vessel Identifier (UVI).
CMM 2013-05	Conservation and Management Measure on daily catch and effort reporting.
CMM 2013-06	Conservation and Management Measure on the criteria for the consideration of conservation and management proposals.
CMM 2013-07	Conservation and Management Measure on the special requirements of Small Island Developing States and Territories.
CMM 2013-08	Conservation and Management Measure for Silky Sharks.
CMM 2013-10	WCPFC Record of Fishing Vessels and Authorization to Fish.
CMM 2014-01	Conservation and Management Measure for bigeye, yellowfin and skipjack tuna in the Western and Central Pacific Ocean.
CMM 2014-02	Conservation and Management Measure Commission VMS.
CMM 2014-03	Standards, specifications and procedures for the Western and Central Pacific Fisheries Commission Record of Fishing Vessels.
CMM 2014-05	Conservation and Management Measures for Sharks.
CMM 2014-06	Conservation and Management Measures to develop and implement a harvest strategy approach for key fisheries and stocks in the WCPO.
CMM 2014-07	Conservation and Management Measure for the Compliance Monitoring Scheme.

The full text of applicable resolutions and CMMs is available on the website of the Western and Central Pacific Fisheries Commission at the following *link*: www.wcpfc.int/conservation-and-management-measures.

Approved on the 5th day of August, 2015

Hon. MAO ZEMING,
Minister for Fisheries and Marine Resources.