



NATIONAL FISHERIES AUTHORITY

THE NATIONAL FISH AGGREGATING DEVICE MANAGEMENT POLICY

Policy endorsed by National Fisheries Board
during **Special Meeting No. 2/2002**
outlined through **Decision No. 105/2002**



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BACKGROUND

The Fish Aggregating Device

The behaviour of aggregating under floating objects as shown by schools of tuna has long been observed by fishermen who have over the years constructed imitations of these floating objects to aggregate the fish and thus improve their catch. These man-made imitations, termed "Fish Aggregating Devices" (FADs), are deployed on the fishing grounds. The FADs vary in shape and size but they are either anchored or drifting. In some cases, fishermen have tied together floating natural logs to act as FADs.

Anchored FADs are secured to fixed positions by anchors. They have mooring lines that connect the anchor to the float section of the FAD. The fish that aggregates under the FAD are monitored by tender vessels. Drifting FADs, on the other hand, are deployed without mooring lines; they may be fitted with radio beacons, call-up buoys and even have sensors that can give information on the aggregations beneath the FAD via satellite transmission. FADs are set on by purse seine vessels at night or early morning, depending on the size and state of the aggregations and the fish. FAD catches are often high, with very high purse seine set success rate, compared to sets on free swimming schools.

FADs have been in use in PNG waters since the commencement of the purse-seine fishing by mostly Philippine fleets, but little information has been gathered until recently from the operation of some major projects such as RD Fishing and the associated cannery. There is still however limited information on the use of drifting

FADs in PNG waters even though their use in PNG waters is extensive.

Issues with FADs

FADs are an essential part of purse-seine fishing. There are however concerns that relate mainly to issues of resource sustainability, gear interaction and access to the resource. In the first instance, FADs are said to contribute to the depletion of the tuna populations, as catches of juvenile tuna are observed to be higher in FAD-associated sets than any other forms of set. In this regard there are concerns relating to the number of FADs used (both anchored and drifting) and there are moves to reduce the fishing effort on the FADs. The second and third issues are exclusive to anchored FADs and may be a particular problem in Papua New Guinea where FAD usage is high in certain areas. The issue is that the longline gear may tangle with the mooring ropes of detached FADs. This then leads to the loss of gear and/or fishing time which may discourage longline operators from fishing in areas where FADs are deployed, therefore restricting access to the resource available in the area.

Terms used

In this Policy, unless the contrary intention applies;

Fish Aggregating Device

As defined in the Fisheries Management Act 1998

Payao

Fish aggregating device, in Philippine language

Mooring rope

The anchor line that extends from the anchor to the float section of the FAD

Morgado Square

The area of sea bounded by the following coordinates 00 29.5'S latitude, 1480 6'E longitude then east

to 00 29.8'S latitude, 1520 0.6'E longitude and then south to 30 29.3'S latitude, 1520 6'E then west to 30 29.9' S latitude, 1480 0.6' E longitude and then back north to 00 29.5' S latitude, 1480 59.9' E longitude.

PREAMBLE

Following the FAO Code of Conduct for Responsible Fishing, the management objectives of the Fisheries Management Act 1998, and in line with the objectives of the National Tuna Fishery Management Plan Management Framework, the following policies set out the management arrangements by which the National Fisheries Authority (NFA) will monitor and control the use of anchored Fish Aggregating Devices (FADs) or payaos in the purse-seine fishery for tunas in Papua New Guinea Declared Fishing Zone (PNGDFZ). These policies have been drawn up following a series of consultative meetings with the locally based purse-seine operators, longline operators and NFA since 1998.

LIMITS ON THE NUMBER OF LICENSED FADS

- a) Only companies whose purse seine vessels and support vessels are licensed to fish under the Fisheries Management Act 1998 may deploy and use anchored FADs. The total number of anchored FADs allowed to be deployed in the PNG DFZ for the commercial surface fishery shall not exceed 1,000. NFA may allocate to individual fishing companies permission to deploy up to 30 FADs per licensed purse-seine vessel and up to 40 FADs per vessel for companies processing at least 75% of their FAD - associated catch onshore in PNG.

- b) The total number can be reviewed in accordance with provisions in the National Tuna Fishery Management Plan Management Framework.
- c) FADs deployed for the purpose of game fishing and artisanal fisheries are outside the restrictions imposed by this Management Plan.
 - iii) whether new or replacement FAD, and
 - iv) FAD number assigned
- b) All FAD deployment exercises, be they for new or replacement FADs, shall be witnessed by a Fisheries Officer or an observer from the NFA.

LOCATION OF FADS AND REPORTING

Companies operating FADs in the purse-seine tuna fishery in PNG should submit quarterly lists of FADs deployed in the fishery waters of PNG. The list should provide position of each FAD in terms of latitude and longitude, date of deployment, and identification of lost FADS. The quarterly list shall be submitted to NFA within 30 days of the quarter concerned.

MARKING OF FADS

- a) All markings of FADs shall be in accordance with the Fisheries Management Regulations 2001 and specifically as described in paragraph b, hereunder.
- b) All FADs will be suitably marked, with the raft section clearly painted with reflecting paint so that the raft can be seen from a distance of one kilometre. In addition, the raft section should support a radar reflector that must be suspended at least two meters above the waterline of the raft such that at all times, the raft registers on radar at a reasonable distance. Electronic devices such as transponders and radio beacons which automatically and continuously indicate their position by means of signals may be used in addition to other devices, but must not be operated

at radio frequencies that would conflict with other devices used for navigation and search and rescue purposes. The FAD number must be on a detachable plate on each FAD so that in the event that the original FAD is moved to a new location a new number plate is attached to the new FAD ensuring that the same FAD number corresponds to the same location in terms of latitude and longitude.

THE DESIGN, OPERATION AND MAINTENANCE OF FADS

NFA will apply certain minimum design standards for FADs as follows:

- i) They should be constructed such that they can be readily located at their place of deployment.
- ii) The design should include an appropriate number of counter weights along the synthetic rope to ensure that the rope sinks to the bottom in the event that the raft has become detached and drifted away.
- iii) The design, operation and maintenance of FADs will be the responsibility of the companies deploying the FADs.

APPLICATION PROCESS FOR DEPLOYMENT OF FADS

- a) The companies shall give prior notice and information to NFA of their intention to deploy FADs. The information to be provided shall include:
 - i) location in terms of latitude and longitude, to the nearest second
 - ii) date of deployment,

LOCATION IN RELATION TO NAVIGATIONAL ROUTES AND SHIPPING

FADs shall not be set at locations of known high volume of sea traffic. General areas where FADs are deployed shall be reported to the Department of Transport to be published as a Notice to Mariners. NFA reserves the right to refuse FAD deployment in areas of known high volume of sea traffic.

CLOSED AREAS

FADs deployed for the purpose of purse seine fishing shall be prohibited from all waters inside the 12-mile limit from any land or island. Other closed areas shall include the Torres Strait Protected Zone, the Morgado Square, the whole Solomon Sea, the Coral Sea and any other areas that may from time to time be declared to be prohibited areas.

DEPLOYMENT OF FADS IN ARCHIPELAGIC WATERS

Foreign licensed vessels are prohibited from setting and fishing on FADs in the Archipelagic Waters of PNG.

THE EFFECT OF FAD FISHING BY PURSE-SEINE VESSELS ON TUNA LONGLINE FISHING

In relation to possible conflict between purse-seine fishing and tuna longlining arising from the widespread use of FADs in the purse-seine fishery, the situation will be monitored. In particular, information will be collected on the performance of the tuna longline fishery as it expands into the northern parts of the PNG zone. Adverse impacts as a result of FADs or parts of FADs having interfered with the operation of longline fishing will cause this policy to be reviewed should such impacts be unequivocally established.

MONITORING OF THE FAD FISHERY

Catch data may be collected from the developing PNG purse seine tuna fishery based on the use of FADs, to monitor the species composition of tunas and other details of the FAD-associated catches.

THE EFFECT OF FAD FISHING ON SIZES OF TUNA TAKEN

NFA may make best efforts to monitor the size of tuna in the fish catches of this fleet to ascertain the extent to which the taking of small tuna in the catches occur.

THE EFFECT OF FAD FISHING ON BY-CATCH SPECIES

NFA will through the observer and port sampling programme, monitor the by-catch in both the anchored and drifting FAD tuna purse-seine fishery in PNG with a view to

establishing the average weight of the by-catch component in the sets, and the species composition of the by-catch. The programme will also record the fate of the by-catch.

REPORTING REQUIREMENTS FOR FAD FISHING

Operators in the purse-seine tuna fishery who use FADs, as with other fisheries, are to comply with requirement under the Fisheries Management Act and submit information on their catches to NFA. The information should also include information on the numbered FAD involved in each set.

REPORT OF CATCH AND THE UTILISATION OF BY-CATCH

- a) Fishers in the tuna purse-seine fishery using FADs are required to submit information on the catch including by-catch as required. This shall be done through the logsheets to the extent possible.
- b) FAD fishers are encouraged to land by-catch and where this occurs, monthly summaries of the by-catch landings are required to be reported to NFA.

CONFLICT RESOLUTION IN RELATION TO FADS

Any conflict arising between the operators in the purse-seine FAD fishery, or between the purse-seine FAD fishery and the midwater fishery shall be referred to the Fishing Industry Association in event the conflicting parties are unable to resolve the conflict in the first instance.

LICENCE STATUS OF VESSELS IN RELATION TO AREAS OF FAD DEPLOYMENT

NFA will avoid designating areas within which FADs are deployed that attempts to separate areas of operation of different companies.

REPLACING LOST FADS

The company shall notify the NFA before lost FADs are to be replaced and an observer may be required to witness the replacement of the FADs. Replacement FADs should be deployed within the same general position and will have the same number as the previous one.

ACCESS TO FAD AREAS

Each FAD and its surrounding area shall not be regarded as an exclusive fishing area for the company that deploys FADs in the area.

NOTIFICATION OF FAD POSITION INFORMATION

The location of FAD zones will be forwarded to the Marine Division of the Department of Transport as a one-off "Notice to Mariners" information as it relates to navigational safety requirements. FAD zones will generally be located north of five (5) degrees South latitude.

NUMBER OF TENDER VESSELS PER CATCHER VESSEL

The maximum number of tender vessels to be used per catcher vessel shall be three.



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P.O. Box 2106 Port Moresby,
National Capital District, Papua New Guinea