

Movement behaviour of skipjack (



The pole and line tuna fishery in the Maldives relies heavily on an array of 45 anchored fish aggregating devices (FADs) making it one of the largest anchored FAD-based tuna fisheries in the world. We examined the behaviour of skipjack (*Katsuwonus pelamis*) and yellowfin (*Thunnus albacares*) tuna around anchored FADs (1 000 to 2 000 m deep) in the Maldives using passive acoustic telemetry. Eight neighbouring FADs (distance range: 30 to 95 km, average: 50 km) were equipped with automated acoustic receivers in January 2009, for a period of 13 months. A total of 40 skipjack (37–54 cm FL) and 21 yellowfin (35–53 cm FL) tuna were tagged with Vemco V13 transmitters in January (start of the northeast monsoon, dry season) and November (end of the southwest monsoon, wet season) 2009 and released at the two central FADs within this instrumented array. No movement between FADs was observed for any acoustically-tagged tuna in the instrumented FAD array. These results suggest that FADs in the Maldives may act independently.

The maximum time a tagged skipjack remained associated with a FAD was 12.8 days in January but only one day in November. In addition, residence times at FADs were found to differ with time (month) and space (FAD location) for skipjack tuna, suggesting that external biotic factors (e.g., prey, conspecifics or predators) might influence the time this species spends at FADs. In November, the residence times of yellowfin tuna (maximum observed time: 2.8 days) were three times greater than those of skipjack tuna at the same FADs. This specific difference could be explained either by the two species responding to different factors or by the species' responses being dependent on the same factor but with different thresholds. No particular preference for time of departure from the FADs was observed. Some monospecific and multispecific pairs of acoustically-tagged individuals were observed leaving the FADs simultaneously. Thus, this study indicates a high degree of complexity in the behavioural processes driving FAD associations.

Auteurs du document : Rodney Govinden, Riyaz Jauhary, John Filmlalter, Fabien Forget, Marc Soria, Shiham Adam, Laurent Dagorn

Obtenir le document : EDP Sciences

Mots clés : Behaviour, Fish Aggregating Devices, Passive acoustic telemetry, Skipjack tuna, Yellowfin tuna, Indian Ocean

Thème (issu du Text Mining) : MILIEU NATUREL

Date : 2012-09-03

Format : text/xml

Source : <https://doi.org/10.1051/alr/2012022>

Langue : Anglais

Télécharger les documents : <https://www.alr-journal.org/10.1051/alr/2012022/pdf>

Permalien : <https://www.documentation.eauetbiodiversite.fr/notice/movement-behaviour-of-skipjack0>

Evaluer cette notice: