

## Size variation in neritic tuna landings at Male' fish market

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### Abstract

Only two species of neritic tuna – *Euthynnus affinis* and *Auxis thazard* – are caught in the Maldives and is popular among local communities throughout Maldives. Male' fish market is one of the sites across Maldives where large quantities of fish including the two species of neritic tuna are landed and sold for local consumption. This study was conducted over 2012 and 2013 to understand the seasonal variation in size of the two species of neritic tuna landed at the Male' fish market. Regular visits were made to the fish market and the fork lengths of the two species were measured. Analysis of these measurements indicated that both species of neritic tuna landed at the Male' market varies seasonally. Larger *Euthynnus affinis* are common at the market during the northeast monsoon (December to March). There was no clear size variation with monsoons in the *Auxis thazard* at the market.

### Introduction

Neritic tuna are caught throughout Maldives using pole-and-line and troll lines. They are caught from both inside and outside the atolls. The two species of neritic tuna *Euthynnus affinis* and *Auxis thazard* are also caught around anchored FADs deployed about 15 miles from the outer edge of the atolls.



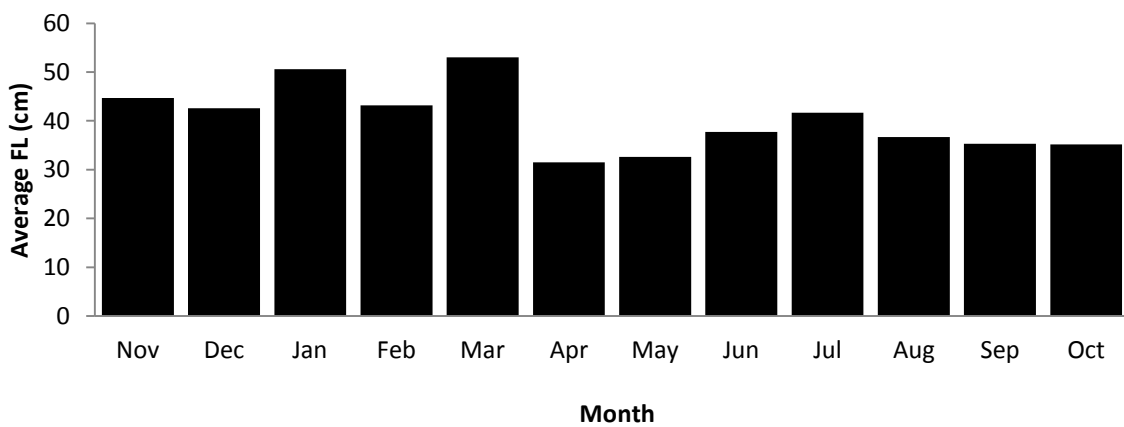
Both species are popular among Maldivians and are consumed by communities across the Maldives. In addition these dried neritic tuna are also exported to Sri Lanka. Male' fish market is the largest fish market in Maldives from where nearly hundred thousand people living in Male' and the nearby islands buy their fish. Many different fish species are sold at this market including the tuna species.

## Method

This study was conducted at Male' fish market from February 2012 to 2013. Regular visits were made to the market between 2 and 4 pm. Fork lengths of all the Kawakawa displayed at the market were measure and recorded. Photographs of all the fish displayed at the market were also taken.

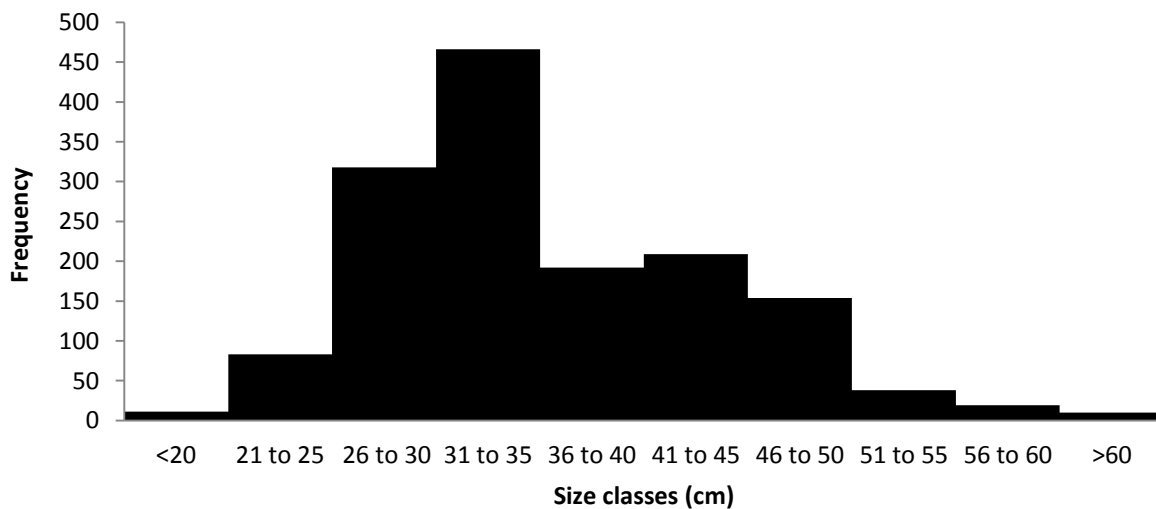
## Results

Over a period of 1 year (from April 2012 to March 2013) 48 visits were made to Male' market. Fork length (FL) of 1536 Kawakawa was measured during the 48 days. The smallest fish were 19cm while the largest measured 61cm (figure 1).



**Figure 1: Average fork length (FL) of the kawakawa landed at the Male' market.**

The average size of the kawakawa landed at the market is bigger during the period November to March but most kawakawa landed at the market are 25 to 35cm range (figure 2).



**Figure 2: Most of the kawakawa landed at the Male' market is between 25 and 35cm.**

## **Discussion**

The average size of the kawakawa at the Male' market is between 25 and 35cm. These fish can be seen throughout the year. The larger kawakawa, above 50cm, are more common at the market during the period November to March which is the northeast monsoon period in the Maldives. Although a lot of kawakawa are caught by pole-and-line gear the larger kawakawa are frequently caught using the trolling gear along the outer edge of the atolls. Both individuals and small schools of kawakawa are often seen chasing the small fish like sprats on the reefs.

To fully understand the seasonal variation in kawakawa landings at the Male' market data collection needs to continue and additional weather data such as wind, sea surface temperature and changes in current information would be useful. In addition kawakawa movement across the coastal regions (through tagging) would also be useful.