MIGRATION PATTERNS OF NERITIC TUNA (*EUTHYNNUS AFFINIS* AND *THUNNUS TONGGOL*) IN THE SOUTH CHINA SEA

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Lihat sebelah

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By

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Thesis Submitted in Fulfilment of the Requirement for the
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DEDICATION

TO MY LOVING
WIFE NORAINAH AND
SONS R M ZHARIF, R M FARIS
AND R M HANIF

Abstract of thesis presented to the Senate of Kolej Universiti Sains dan Teknologi Malaysia in fulfillment of the requirement for the degree of Master of Science

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Neritic tuna is a group of pelagic fish which constantly migrated from one habitat to another habitat upon time series. Its migration pattern in the South China Sea is not well defined and attempt was made to identify its movement through tuna tagging project in this area. Five series of tuna tagging programme were conducted in between May 1990 and October 1998 by the Marine Fishery Resources Development and Management Department, SEAFDEC. A total of 23,794 neritic tuna were tagged with tip-pointed plastic dart tags, comprising 14,858 (62.44%) *Euthynnus affinis*, 8,842 (37.16%) *Thunnus tonggol* and 94 (0.40%) *Auxis thazard*. By the end of December 1998 a total of 1,044 recoveries had been received, which was 4.39 % of releases. There were 1,024 (98.08%) *Euthynnus affinis* recoveries, 19 *Thunnus tonggol* (1.82%) and only 1 *Auxis thazard* (0.10%). Most of the tags were recovered within the Malaysian waters. Only 8 tags were recovered from the area between the surrounding waters of Malaysia and Thailand. The migration pattern for *Euthynnus affinis* and *Thunnus tonggol* did not correlate well with surface water currents or monsoon seasons. *Euthynnus affinis* has indicated more

homing behaviour than *Thunnus tonggol* which has the potential to migrate further offshore. Both species are more likely to come from a common stock shared between the coastal states of the South China Sea. They also have showed fast growth during their juvenile stage and slower as they became older. Their Von Bertalanffy growth parameters obtained during this study, $L\infty$ and K were not significantly different with other researchers in this region.