NUTRIENT (NITROGEN AND PHOSPHORUS) DISCHARGES FROM KERTEH RIVER AT SELECTEC TIDE, TERENGGANU

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FACULTY OF MARITIME STUDIES AND MARINE SCIENCE
UNIVERSITI MALAYSIA TERENGGANU

2011

NUTRIENT (NITROGEN AND PHOSPHORUS) DISCHARGES FROM KERTEH RIVER AT SELECTED TIDE, TERENGGANU

By

MOHD AIZUZAAIN MOHD ZOL

Research Report submitted in partial fulfillment of the requirements for the degree of Bachelor of Science (Marine Science)

Department of Marine Science
Faculty of Maritime Studies and Marine Science
UNIVERSITI MALAYSIA TERENGGANU
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DEPARTMENT OF MARINE SCIENCE
FACULTY OF MARITIME STUDIES AND MARINE SCIENCE
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DECLARATION AND VERIFICATION REPORT

FINAL YEAR RESEARCH PROJECT

It is hereby declared and verified that this research report entitled:

Nutrient (nitrogen and phosphorus) flux at Kerteh River, Kemaman, Terengganu, by Mohd Aizuzaain b. Mohd Zol, Matric No. UK 18382 has been examined and all errors identified have been corrected. This report is submitted to the Department of Marine Science as partial fulfillment towards obtaining the **Degree of Science (Marine Science),** Faculty of Maritime Studies and Marine Science, University Malaysia Terengganu.

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%	-	percentage
^{o}C	-	degree Celsius
µg/ml	-	microgram per milliliter
µm	-	micrometer
µM	-	micromolarity
cm	-	centimeter
CO_2	-	carbon dioxide
DNA	-	deoxyribonucleic acid
DO	-	dissolve oxygen
EPA	-	Environmental Protection Agency
g	-	gram
H_2O	-	water
L	-	liter
m	-	meter
mg/l	-	milligram per liter
mg/m^3	-	milligram per meter cubic
ml	-	milliliter
O_2	-	oxygen gas
ppm	-	part per million
ppt	-	part per thousand
v/v	-	volume per volume
w/v	-	weigh per volume

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ABSTRACT

The study was carried out to determine nutrient distribution in the estuarine and riverine water of Kerteh, Kemaman. Two samplings were conducted on the 27th April 2010 and on the 28th October 2010. Ten sampling stations were covered during the first sampling at estuarine and riverine water while also ten sampling stations during the second sampling. The mean nitrite concentrations during the first sampling were 0.04 m/L while during the second sampling were 0.03 mg/L. Mean nitrate concentrations during the first sampling were 0.64 mg/L while during the second sampling were 0.58 mg/L. Mean ammonia concentrations during the first sampling were 0.045 mg/L and while during the second sampling were 0.014 mg/L. Mean orthophosphate concentrations during the first sampling were 0.007 mg/L while during the second sampling were 0.009 mg/L. Mean of total nitrogen concentrations during the first sampling were 10.5 mg/L while during the second sampling were 10.45 mg?L. Mean total phosphorus concentrations during the first sampling were 5.46 mg/L while during the second sampling were 5.06 mg/L.

ABSTRAK

Kajian yang dijalankan adalah bertujuan untuk menentukan taburan nutrien di muara dan pesisiran pantai Kerteh, Kemaman. Dua penyampelan telah dijalankan pada 27th April 2010 dan 28th October 2010 (monsun). Penyampelan merangkumi sepuluh stesyen di muara dan pesisiran sungai semasa penyampelan pertama manakala sepuluh stesyen semasa penyampelan kedua. Purata kepekatan nitrit semasa penyampelan pertama masing-masing adalah 0.04mg/L manakala semasa penyampelan kedua masing-masing adalah 0.03 mg?L. Purata kepekatan nitrat semasa penyampelan pertama masing-masing adalah 0.64 mg/L manakala semasa penyampelan kedua masing-masing adalah 0.58 mg/L. Purata kepekatan ammonia semasa penyampelan pertama masing-masing adalah 0,.045 mg/L manakala semasa penyampelan kedua masing-masing adalah 0.014 mg/L. Purata kepekatan ortofosfat semasa penyampelan pertama masing-masing adalah 0.007 manakala semasa penyampelan kedua masing-masing adalah 0.009 mg/L.. Purata kepekatan total nitrogen semasa penyampelan pertama adalah 10.5 mg/L manakala semasa penyampelan kedua masing-masing adalah 10.45 mg/L.. Purata kepekatan total phosphorus semasa penyampelan pertama adalah 5.46 mg/L manakala semasa penyampelan kedua adalah 5.06 mg/L.