

A COMPARATIVE ASSESSMENT OF CORAL REEF TRANSECT
SURVEY METHODS

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**A COMPARATIVE ASSESSMENT OF CORAL REEF TRANSECT SURVEY
METHODS**

By

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

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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:

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LIST OF ABBREVIATIONS

MPAs	Marine Protected Areas
Ppt	Part per thousand
°C	Degrees Celcius
m	Meter
cm	Centimeter
%	Percent
LIT	Line intercept transect
PIT	Point intercept transect
UDiP	Underwater digital photography
VTM	Video transect method
LTMP	Long-term Monitoring Program
AIMS	Australian Institute of Marine Science
GCRMN	Global Coral Reef Monitoring Network
ICRAN	International Coral Reef Action Network
α	Alpha
df	Degree of freedom
χ^2	Chi square value
p	Calculated distribution value
H ₀	Hypothesis null
H ₁	Hypothesis alternative

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ABSTRACT

There are advantages and disadvantages in every coral reef transect survey methods that were used in this study. The accuracy in most of the methods used in this study showed the significant difference in all transects. The major life form categories used in LIT and PIT is more favorable due to the lack of dive time for detail coral identification and expertise in identification. Meanwhile, underwater digital photography and video transect are able to identify the coral taxonomy due to the storable recorded data or images and sufficient of time. However, the underwater digital photography method is more favorable because of its cheaper cost than the video transect method. In other words, the cost affordable underwater digital photography method will become more and more popular in the future and will replace the traditional and the expensive video transect method.

ABKSTRAK

Didapati bahawa setiap kaedah peninjauan transect terumbu karang yang digunapakaikan di dalam kajian ini mengandungi kelebihan dan kelemahan mereka masing-masing. Tahap ketepatan dan kejituan semua kaedah yang digunakan dalam kajian ini menunjukkan pembezaan yang ketara atau signifikan dalam kesemua transect. Kategori-kategori bentuk utama yang digunakan dalam LIT dan PIT adalah lebih digemari disebabkan oleh kekurangan dan kesempitan masa menyelam untuk mengenalpastian dan identifikasi batu karang yang terperinci serta kekurangan kepakaran taksonomi. Di samping itu, penggambaran digital dan transect video dapat mengenalpasti taksonomi batu karang kerana data atau imejnya dapat disimpan serta masa yang mencukupi. Akan tetapi, kaedah penggambaran digital adalah lebih digemari kerana kos yang lebih murah berbanding dengan kaedah transect video. Dengan kata lain, kos penggambaran digital yang berpatutan akan menjadi lebih popular lagi pada masa depan dan akan menggantikan kaedah tradisional dan transect video yang mahal.