CETACEAN STRANDINGS IN PENINSULAR MALAYSIA: PAST AND PRESENT

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SCHOOL OF MARINE SCIENCE AND ENVIRONMENT
UNIVERSITI MALAYSIA TERENGGANU

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Cetacean stranding in penisular Malaysia : past and present / byMuhammad Ruhaizzad Rusli.

Lihat Sebelah

CETACEAN STRANDINGS IN PENINSULAR MALAYSIA: PAST AND PRESENT

By

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DECLARATION AND VERIFICATION REPORT

FINAL YEAR RESEARCH PROJECT

It is hereby declared and verified that this research report entitled Cetacean Strandings in Peninsular Malaysia: Past and Present by Muhammad Ruhaizzad B. Rusdi, Matric No. UK 26471 have been examined and all errors identified have been corrected. This report is submitted to the School of Marine Science and Environment as partial fulfillment towards obtaining the Degree in Bachelor of Science (Marine Biology), School of Marine Science and Environment, Universiti Malaysia Terengganu.

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LIST OF ABBREVIATIONS

D	-	Diameter
DoF	-	Department of Fisheries Malaysia
EEZ	-	Exclusive Economic Zone
kg	-	Kilogram
km	-	Kilometer
L	-	Length
m	-	Meter
n	-	Frequency
NE	-	Northeast monsoon
SW	-	Southwest monsoon
TUMEC	-	Turtle and Marine Ecosystem Centre
W	-	Weight

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ABSTRACT

A well-maintained marine mammal stranding database can be an invaluable tool in understanding not only stranding but also changes in the marine environment. This study aimed to examine the following aspects of marine mammal stranding in the Peninsular Malaysia: species composition, temporal (i.e., frequency of stranding per year and seasonality) and spatial (i.e., frequency of stranding per region and state) variation and stranding hotspots. This study is done in collaboration with Turtle and Marine Ecosystem Centre (TUMEC) under the Department of Fisheries Malaysia which acted as the sole provider of the cetacean stranding dataset recorded from 2004 to 2013 in Peninsular Malaysia waters. A total of 48 stranding occasions were recorded which all of them were classified as single stranding, with an average of five observed stranding occasions annually. Ten of the 16 confirmed species of cetacean in the Peninsular Malaysia were recorded to strand. The top three most frequent species to strand included finless porpoise (*Neophocaena phoceoenoides*) (n = 17), common bottlenose dolphin (*Tursiops truncatus*) (n = 9) and Indo-Pacific humpback dolphin (*Sousa chinensis*) (n = 5). Stranding occasions did vary temporally although there was no clear pattern on annual stranding occasions. Statistical analysis revealed insignificant in seasonall variation with frequency peaking during the northeast (NE) monsoon (November to March) season. Overall, North region of Peninsular Malaysia had the highest number of stranding (n = 22) with Pulau Pinang had the most frequent stranding cases (n = 17) recorded in North region state. Pulau Pinang and the shorelines of Johor were considered as hotspots based on high number of stranding and species stranded. The consideration might be linked to level of awareness among these local people and intense fisheries activities along Strait of Malacca.

KEDAMPARAN SETASEAN DI PENINSULAR MALAYSIA: DAHULU DAN SEKARANG

ABSTRAK

Sesebuah pangkalan data mamalia marin yang diselenggarakan dengan efektif mampu menjadi satu alat yang sangat bernilai dalam memahami bukan sahaja kes kedamparan malah perubahan yang berlaku dalam persekitaran marin. Kajian ini bertujuan untuk mengkaji aspek-aspek berikut yang berkaitan dengan kedamparan mamalia marin di perairan Semenanjung Mamalysia: komposisi spesies, variasi masa (cth., frekuensi kedamparan tahunan dan musim) dan tempat (cth., frekuensi kedamparan kawasan dan negeri) dan 'hotspot' kedamparan. Kajian ini telah dijalankan dengan kerjasama Pusat Penyu dan Ekosistem Marin (TUMEC) di bawah Jabatan Perikanan Malaysia (DoF) yang bertindak sebagai penyumbang solo data kedamparan setasean yang direkodkan dari tahun 2004 hingga 2013 dalam perairan Semenanjung Malaysia. Sejumlah 48 kes kedamparan telah direkodkan yang mana kesemua daripadanya telah diklassifikasikan sebagai kedamparan tunggal (single stranding), dengan purata tahunan lima kes kedamparan. Sepuluh daripada 16 spesies yang telah dikenalpasti mendiami Semenanjung Malaysia telah direkodkan terdampar. Tiga spesies tertinggi yang sering terdampar termasuklah Porpois Ambu (*Neophocaena phoceoenoides*) (n = 17), Lumba-Lumba Hidung Botol (*Tursiops truncatus*) (n = 9) and Lumba-Lumba Putih (*Sousa chinensis*) (n = 5). Kes kedamparan menampakkan kelainan dalam variasi masa walaupun tiada corak yang jelas dalam kes kedamparan tahunan. Analisis statistik menunjukkan variasi musim tidak signifikan dengan frekuensi tertinggi pada musim monsun timur laut (November

hingga Mac). Secara keseluruhannya, kawasan Utara Semenanjung Malaysia mempunyai kes kedamparan yang paling tinggi (n = 22) dengan Pulau Pinang menjadi negeri di kawasan Utara yang paling banyak merekodkan kes kedamparan (n = 17). Pulau Pinang dan kawasan pesisiran pantai Johor telah dikenalpasti sebagai 'hotspots' berdasarkan bilangan kes kedamparan dan spesies terdampar. Pengenalpastian ini mungkin boleh dikaitkan dengan kadar kesedaran di antara masyarakat setempat dan aktivit perikanan yang pesat sepanjang Selat Melaka.