

RESEARCH ACTIVITIES OF CETACEAN IN INDONESIA

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CETACEAN MANAGEMENT WORKS BY SOME INDONESIAN INSTITUTIONS

1. WWF (World Wide Foundation)
2. TNC (The Nature Conservancy)
3. CI (Conservation International)
4. RASI Foundation
5. APEX ENVIRONMENT

Cetacean Species Positively Identified to Date in Indonesia

Species identification (ID)	Scientific ID	Status ¹
1. Sperm whale	<i>Physeter macrocephalus</i>	V
2. Dwarf sperm whale	<i>Kogia simus</i>	K
3. Pygmy sperm whale	<i>Kogia breviceps</i>	K
4. Short-finned pilot whale	<i>Globicephala macrorhynchus</i>	K
5. Orca	<i>Orcinus orca</i>	L
6. False killer whale	<i>Pseudorca crassidens</i>	K
7. Pygmy killer whale	<i>Feresa attenuata</i>	K
8. Melon-headed whale	<i>Peponocephala electra</i>	K
9. Spinner dolphin	<i>Stenella longirostris</i>	L
10. Pantropical spotted dolphin	<i>Stenella attenuata</i>	L
11. Striped dolphin	<i>Stenella coeruleoalba</i>	L
12. Rough-toothed dolphin	<i>Steno bredanensis</i>	K
13. Risso's dolphin	<i>Grampus griseus</i>	K
14. Bottlenose dolphin	<i>Tursiops truncatus</i>	K
15. Short-beaked common dolphin	<i>Delphinus delphis</i>	K

Status - IUCN status categories of threat. (Ex-Extinct; E-Endangered; V-Vulnerable; R-Rare: L-Lower Risk; I-Intermediate; K-Insufficiently Known; as defined in IUCN, 1996) . Reported by Rudolph *et al.* (1997).

Continued

16. Long-beaked common dolphin	<i>Delphinus capensis</i>	K
17. Fraser's dolphin	<i>Lagenodelphis hosei</i>	K
18. Indo-Pacific humpback dolphin	<i>Sousa chinensis</i>	K
19. Irrawaddy dolphin	<i>Orcaella brevirostris</i>	K
20. Finless porpoise	<i>Neophocaena phocaenoides</i>	K
21. Beaked whales	<i>Mesoplodon sp.</i>	K
22. Cuvier's beaked whale	<i>Ziphius cavirostris</i>	K
23. Bottlenose whales	<i>Hyperoodon sp.</i>	K
24. Minke whale	<i>Balaenoptera acutorostrata</i>	L
25. Bryde's whale	<i>Balaenoptera brydei</i>	K
26. Pygmy Bryde's whale	<i>Balaenoptera edeni</i>	K
27. Sei whale	<i>Balaenoptera borealis</i>	E
28. Fin whale	<i>Balaenoptera physalus</i>	E
29. Blue whale	<i>Balaenoptera musculus</i>	E
30. Humpback whale	<i>Megaptera novaeangliae</i>	V

V = 2 species K = 20 species L = 5 species E = 3 species

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Research locations of cetacean in Indonesia



WWF - TNC:

720 dolphins & 156 whales (2004)
383 dolphins & 14 whales (2005)

756 dolphins, 5 whales & 56 manta-rays (2006)
188 dolphins & 1 whale (2008)

RASI F. :

856 ind cetaceans : toothed whales & dolphins (2003)

WWF - TNC-Wakatobi National Park

1125 dolphins & 4526 whales (2006)
2245 dolphins & 310 whales (2007)
813 dolphins & 82 whales (2008)

CI - APEX ENV.

647 ind. cetaceans (common bottlenose dolphins & Spinner dolphins) (2007)

10-13 species : dolphins & whales (2003)

(Sperm whales most often sighted)

APEX ENV. :

TNC :

9 species : 5 dolphins & 4 species whales (2005)

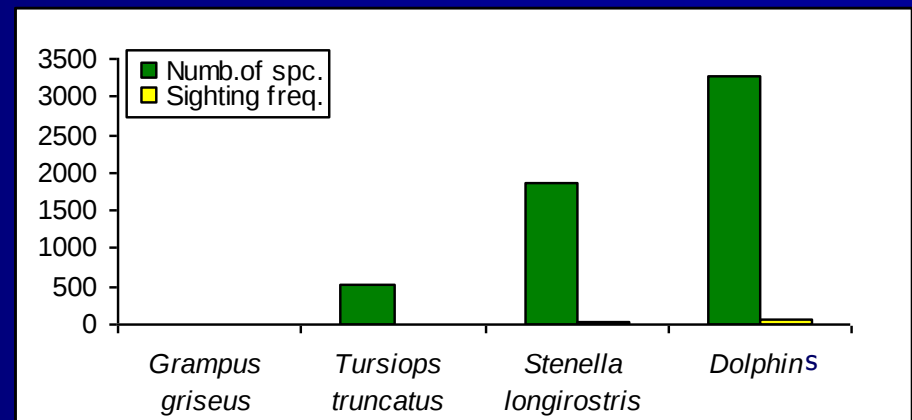
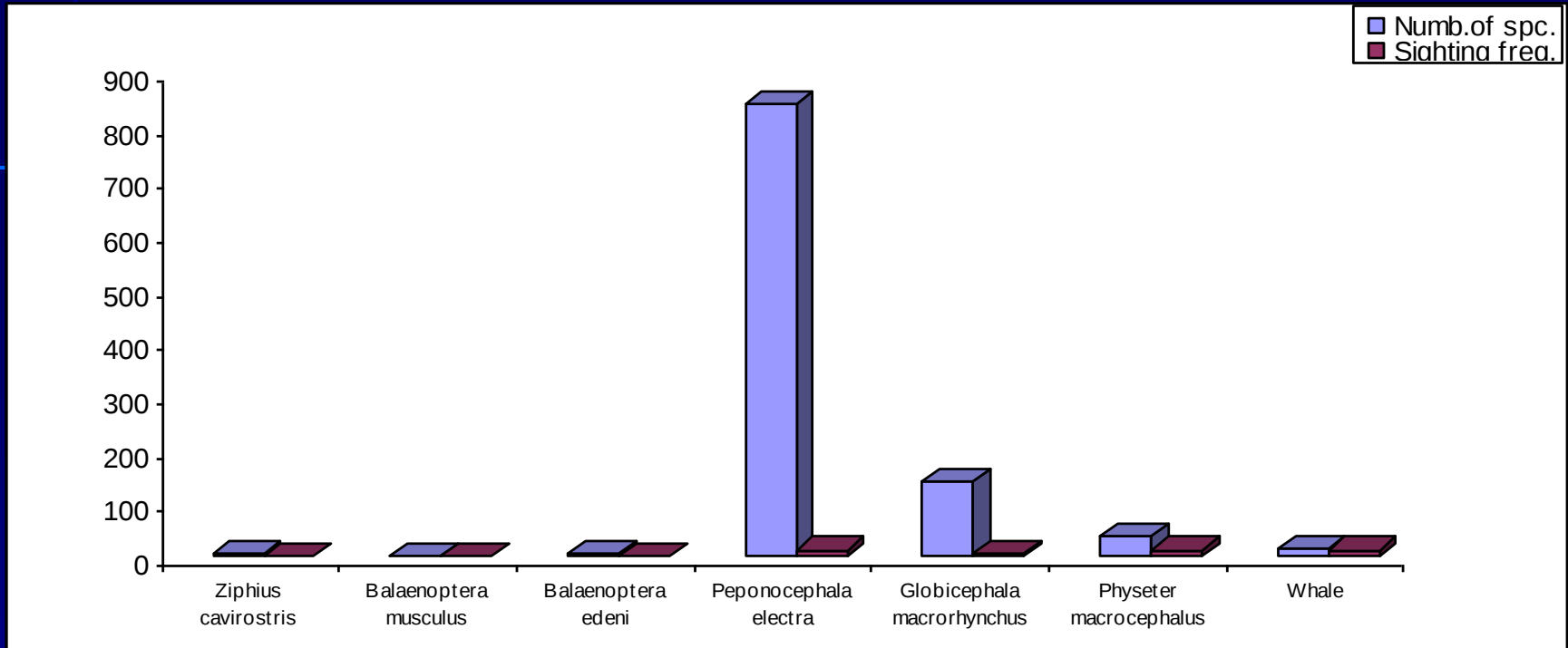
(Total ind. count : 2054)

17 species : 2 dolphins & 15 species whales (1999-2001)

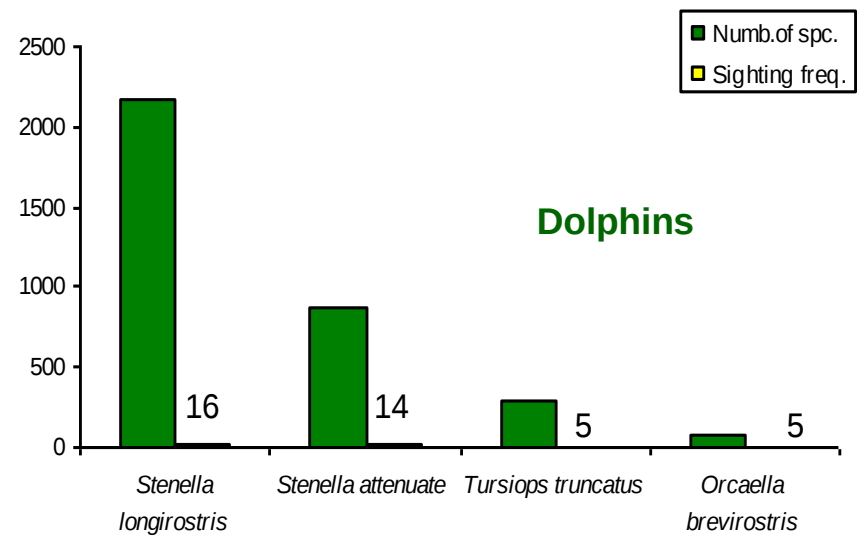
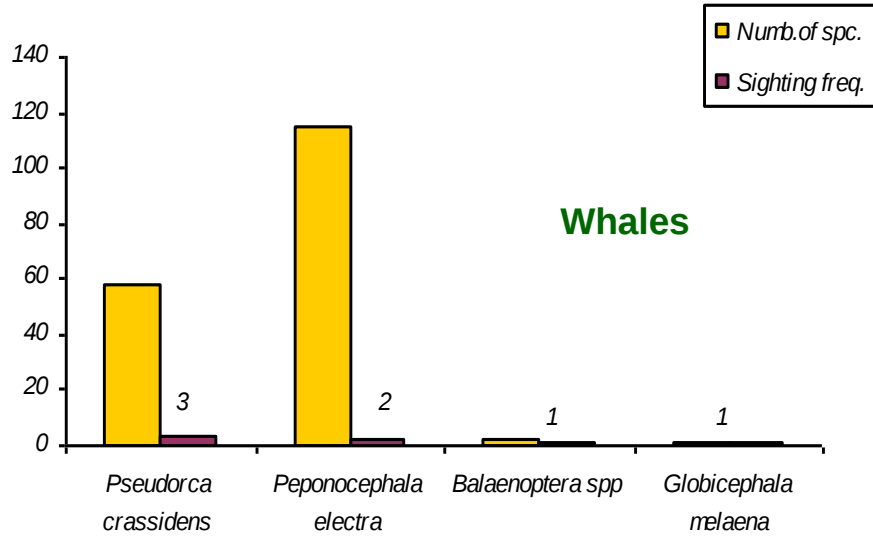
(*Stenella longirostris*, *S. attenuata*)

Migration way for Blue whale (May-August 2009)

Species number, whale & dolphin sighting frequency during 2006-2009 in Sulawesi (WWF-TNC-Wakatobi National Park Institute)



Species number, whale & dolphin sighting frequency during 2004-2008 in East Kalimantan (WWF-TNC)



Species number of whale and dolphin sighting frequency during the observation (2004-2008) in Kalimantan Region (WWF – TNC and KKL Berau Cooperation)

No.	Name of species	Scientific name	Number of species	Sighting frequency
1	False Killer Whale	<i>Pseudorca crassidens</i>	58	3
2	Melon – Headed Whale	<i>Peponocephala electra</i>	115	2
3	Fin Whale	<i>Balaenoptera spp</i>	2	1
4	Pilot Whale	<i>Globicephala melaena</i>	1	1
		Total	176	7
5	Spinner Dolphin	<i>Stenella longirostris</i>	2180	16
6	Common Bottlenose	<i>Tursiops truncates</i>	863	14
7	Dolphin Pantropical	<i>Stenella attenuate</i>	300	5
8	Spotted Dolphin Irrawady Dolphin	<i>Orcaella brevirostris</i>	69	5
		Total	3412	40

**Species number of whale and dolphin sighting frequency during the observation
(July 2006 to March 2009) in Sulawesi Region (WWF – TNC and KKL Berau
Cooperation)**

No	Name of species	Number of species	Sighting frequency
1	Beaked whale	3	2
2	Blue whale	1	1
3	Bryde's whale	4	1
4	Melon head whale	840	12
5	Pilot whale	140	3
6	Sperm whale	39	12
7	Whale	16	12
	Total	1043	43
1	Risso dolphin	5	1
2	Bottlenose dolphin	530	10
3	Spinner dolphin	1860	23
4	Dolphins	3255	60
	Total	5650	94

Number of sighting and encounter of cetacean on difference depth
in East Kalimantan (2009-2010)

Depth	Area (km)	Sighting (n)	Num.ind.of cetacean	Everage sigthing (sight/km)	Average encounter (dolphin/km)
	May-09 / May-10	May-09/May-10	May-09/May-10	May-09/May-10	May-09/May-10
< 100 m	484 / 295	8 / 4	96 / 49	0.0165 / 0.014	0.198 / 0.166
100 – 200 m	72 / 43	3 / 5	450 / 56	0.0417 / 0.116	6.25 / 1.302
> 200 m	194 / 231	7 / 6	419 / 211	0.0361 / 0.026	2.16 / 0.913
Total	750 / 569	18 / 13	965 / 304	0.024 / 0.023	1.287 / 0.534

Kreb, *et al.*, (2010)

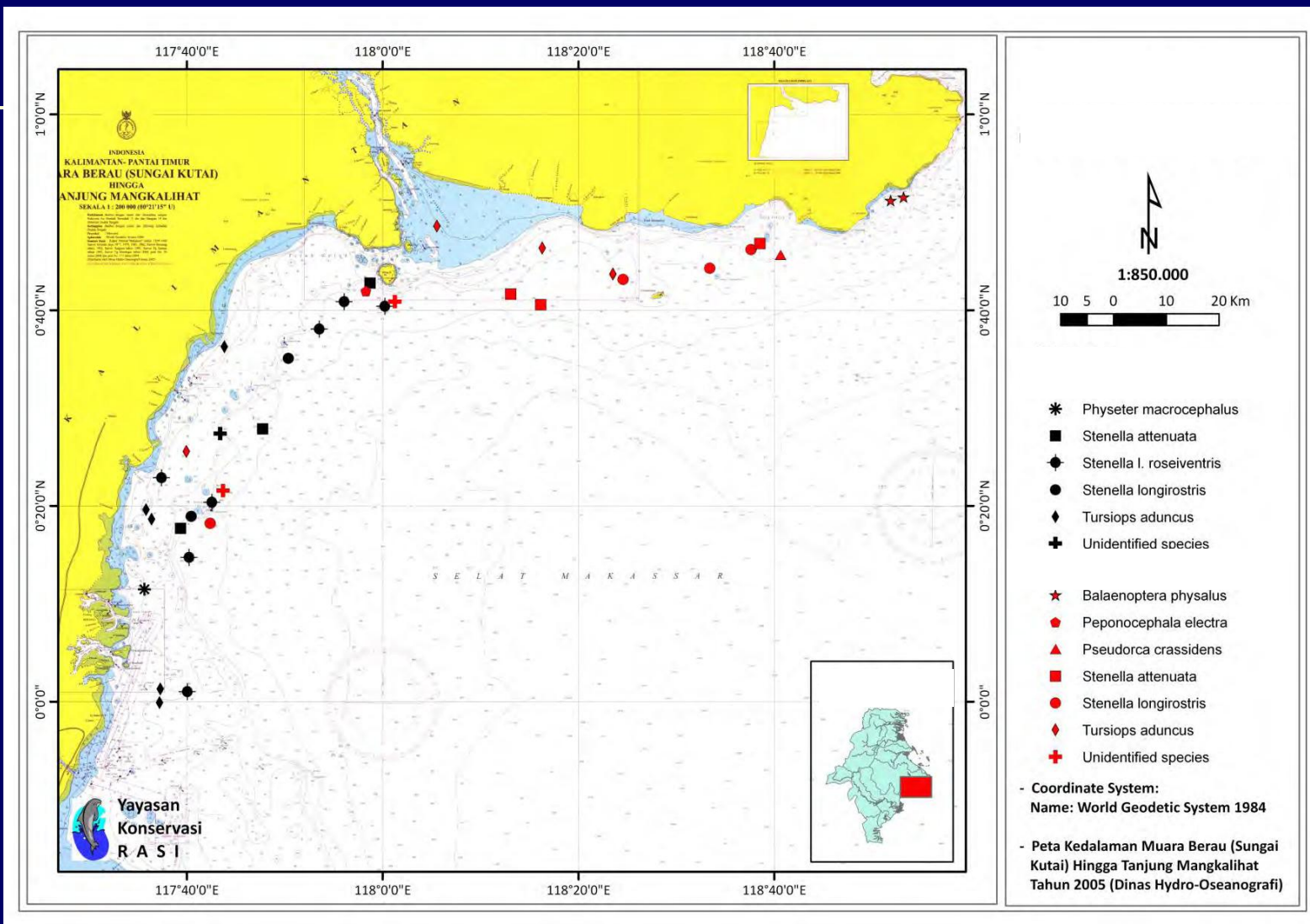
Average encounter of cetacean individual based on habitat type in East Kalimantan (2009-1010)

2009				
Species	Habitat sighting	Numb. of group found	Ave. encounter per habitat (Dolphin/km)	Area observation (km)
<i>Stenella attenuata</i>	Shelf	2	0.54	556
<i>Stenella I. roseiventris</i>	Shelf	3	0.10	556
<i>Stenella longirostris</i>	Shelf	1	0.12	556
<i>Tursiops aduncus</i>	Shelf	6	0.10	556
<i>Physeter macrocephalus</i>	Shelf	1	0.002	556

Kreb, et al., (2010)

2010				
Species	Habitat sighting	Numb. of group found	Ave. encounter per habitat (Dolphin/km)	Area observation (km)
<i>Stenella longirostris</i>	Shelf	2	0.09	339
<i>Peponocephala electra</i>	Slope	1	0.259	231
<i>Stenella attenuata</i>	Shelf	1	0.07	339
<i>Tursiops aduncus</i>	Shelf	3	0.09	339
<i>Pseudorca crassidens</i>	Shelf	1	0.04	339
<i>Balaenoptera physalus</i>	Shelf	1	0.01	339

Map observation of cetacean in East Kalimantan (May 2009 – May 2010)



Thank you for your attention