

KOREA (Rep. of) PROGRESS REPORT ON CETACEAN RESEARCH, 2004 WITH STATISTICAL DATA FOR THE CALENDAR YEAR 2004

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This report summarises information obtained from Cetacean Research Centre (CRC), National Fisheries Research & Development Institute (NFRDI).

1. Species and stocks studied

A tabular format may be most appropriate. It might be helpful to indicate where in the report the species is mentioned. Please use IWC recommended names (see IWC, 1994, pp.70-1). For subsequent items, common names are preferred. e.g.:

Common name	Scientific name	Area/stock(s)	Items referred to
Fin whale	<i>Balaenoptera physalus</i>	Korea Strait	4.2,6.2
Humpback whale	<i>Megaptera novaeangliae</i>	East Sea	4.2, 6.2, 6.2.1
Bryde's whale	<i>Balaenoptera edeni</i>	Korea Strait	4.3, 6.2.1
Gray whale	<i>Eschrichtius robustus</i>	East Sea	9
Minke whale	<i>Balaenoptera acutorostrata</i>	East, South and Yellow Sea	2.1.1, 4.2, 4.3, 6.2, 6.2.1, 6.2.2, 8
Stejneger's beaked whale	<i>Mesoplodon stejnegeri</i>	East Sea	6.2.1
Killer whale	<i>Orcinus orca</i>	East Sea	4.2, 7.1
False killer whale	<i>Pseudorca crassidens</i>	East Sea	2.1.1
Risso's dolphin	<i>Grampus griseus</i>	South Sea	8
Bottlenose dolphin	<i>Tursiops truncatus</i>	Korea Strait, East Sea	7.1, 9
Common dolphin	<i>Delphinus delphis</i>	East and South Sea	2.1.1, 4.2, 8
Pacific white-sided dolphin	<i>Lagenorhynchus obliquidens</i>	East Sea	7.1, 8
Dall's porpoise	<i>Phocoenoides dalli</i>	East Sea	7.1
Harbour porpoise	<i>Phocoena phocoena</i>	East Sea	7.1
Finless porpoise	<i>Neophocaena phocaenoides</i>	East, South and Yellow Sea	2.1.1, 4.2, 7.1, 8, 9

2. Sightings data

2.1 Field work

2.1.1 SYSTEMATIC

Systematic sightings survey was conducted using research vessel, Tamgu 3 (360G/T), in the East Sea off Korea from late April to May in this year (2005). The survey vessel cruised 1,040.6 n.m. and completed only 46% of total planned line transects set in the survey area due to weather conditions and time constraints. During the survey 32 animals in 31 schools of minke whales on primary sighting crowded in the middle part of the East Sea. In the northern part of coastal area 17 Dall's porpoises in 3 schools and 3 Pacific white-sided dolphins in a group were sighted. And many other cetacean animals such as false killer whales, bottlenose dolphins, Risso's dolphins and common dolphins were observed in the water of southern part of the East Sea. There was an unidentified large whale off-effort sighting on the first day of the survey.

Date	Sighting Distance (n.m.)	Minke whale		Common dolphin		False killer whale	Bottlenose dolphin	Risso's dolphin	Dall's porpoise	Pacific white-sided dolphin	Unidentified large whale	
		Pri.	Sec.	Pri.	Off.						Pri.	Off.
26-Apr					1-1							1-1
03-May	56.6				1-1							
04-May	127.7	16-16	1-1									
08-May	81.0								3-17			
10-May	106.5	1-1			4-4						1-3	
15-May	46.3											
16-May	75.4				2-1,500							
17-May	108.5				1-500							
19-May	33.4					1-1,000	1-500	1-300				
20-May	106.6	5-6					2-200	2-130	1-10			

21-May	146.9	5-5										
22-May	35.0		2-2									
24-May	56.1	1-1			1-700							
25-May	60.6	1-1										
Total	1,040.6	31-32	1-1	8-8	3-2,000	3-2,200	3-700	3-330	1-10	3-17	1-3	1-1

Pri.: Primary sight; Sec.: Secondary sight; Off.: Off-effort

3. Marking data

No Marking data.

4. Tissue/biological samples collected

4.2 Samples from directed catches or bycatches

Species	Area/stock	Calendar year/ season total	Archived (Y/N)	Tissue type(s)*	Contact person/institute
Fin	Korea strait	1	Y	Skin, blubber, etc.	Org.: CRC, NFRDI Contact: Z. G. Kim Tel. +82-51-720-2180 E-mail. zgkim@nfrdi.re.kr
Humpback	East Sea	1	Y	"	
Minke	East Sea, Yellow Sea, Korea Strait	55	Y	"	
Killer whale	East Sea	1	Y	"	
Bottlenose dolphin		2	Y	"	
Risso's dolphin	East Sea	1	Y	"	
Common dolphin	East Sea	18	Y	"	
Harbour porpoise	East Sea	1	Y	"	

*e.g. liver, skin, blubber etc.

4.3 Samples from stranded animals

Species	Area/stock	Calendar year/ season total	Archived (Y/N)	Tissue type(s)*	Contact person/institute
Bryde's	Korea strait	1	Y	Muscle	Org.: CRC, NFRDI Contact: Z. G. Kim Tel. +82-51-720-2180 E-mail. zgkim@nfrdi.re.kr
Minke	East Sea, Korea Strait	5	Y	Skin, Blubber, etc.	
Common dolphin	East Sea	1	Y	"	

*e.g. liver, skin, blubber etc.

4.4 Analyses/development of techniques

Give brief details of any analyses of data carried out, with references where appropriate.

5. Pollution studies

Concentration of 6 trace metals (As, Cd, Cu, Hg, Pb and Zn) were measured in the liver and muscle tissues of a minke whales (*B. acutorostrata*) in the Korean Coast. Sequence of metal concentrations was Zn > Cu > As > Hg > Pb > Cd in the liver of minke whale and Zn > Cu > As > Pb > Cd > Hg in the muscle. Metal concentrations in the liver were about an order of magnitude higher than those of the muscle except Pb. Cd and Hg concentration in tissue of male had significantly higher than female, and East-sea higher than West-sea in the liver. No significant differences were observed between whale size and metal concentration of liver and muscle.

Reference

Kim, S.G. J.D. Kim, H.G. Jin and J.S. Park. 2005. Distribution of As, Cd, Cu, Hg, Pb and Zn in the liver and muscle of minke whales in the Korean Coast. Document SC/57/E/xx will submit to 57th IWC SC.

6. Statistics for large cetaceans

6.1 Direct catches

No direct catches in Korea.

6.2 Non-natural mortality for the calendar year 2004

All bycatch and shipstrike informations come from Korea Coast Guard (former Maritime Police) and ferry company, respectively.

Species	Area/stock	Males	Females	Total	Cause	Methodology
Fin	Korea Strait		1	1	Bycatch/FPN	Port mortem

Humpback	East Sea			1	Bycatch/FPN	“
Minke	East Sea	1		1	Bycatch/SV	“
		3	3	9	Bycatch/GND	
		2	2	5	Bycatch/GN	
		1		1	Bycatch/TX	
		3	7	11	Bycatch/FPN	
		10	5	15	Bycatch/FPO	
	Yellow Sea	2		2	Bycatch/Unidentified	
		1		1	Bycatch/FSN	“
	Korea Strait	4		4	Bycatch/FPO	
		1	1	1	Bycatch/FSN	“
1			1	Bycatch/SV		
		1	1	Bycatch/GND		
2		2	4	Bycatch/TX		
2			2	Bycatch/FPN		
	1	1	Bycatch/FPO			
			1	Bycatch/Unidentified Shipstrike		

6.2.1 STRANDINGS OR DEAD WHALES ENCOUNTERED AT SEA

This section presents stranding and drifting information.

Whale species	Sex	Location	Cause of death	Det.	Source or contact institution, contact name and telephone and/or e-mail
Bryde's	U	Beached on Jeju Is.	U	U	Org.: CRC, NFRDI Contact: Z. G. Kim Tel. +82-51-720-2180 E-mail. zgkim@nfrdi.re.kr “ “ “
Minke	F	Drifting; 10n.m. Southeast from Jeju Is.	U	U	
	F	“	U	U	
	M	Beached on Ulleung Is.	U	U	
	F	Drifting; 20 n.m. South from Ulsan	U	U	
	M	Drifting; around Jaeun Is.	U	U	
	M	Drifting; around Chilbal Is.	U	U	
F	Drifting; around Yeongheung Is	U	U		
U	Drifting; 55 n.m. Northwest from .Heuksan Is.	U	U		
Humpback	U	Beached on Namhae Is.	U	U	
Stejneger's beaked	F	Beached on Yangyang-Gun	U	U	

6.2.2 OBSERVED OR REPORTED SHIP STRIKES

Whale species	Sex	Date	Location	Vessel type	Speed	Fate	Source or contact
Minke	U	16 Dec.	34-33N, 129-44E	HSF	41kts	D	Org.: CRC, NFRDI Contact: Z. G. Kim Tel. +82-51-720-2180 E-mail. zgkim@nfrdi.re.kr
Comments: CRC was submitted some flesh remained on the screw and identified with DNA analysis as minke whale. Since this incident, the companies have cooperated with the CRC and recorded encounter of cetacean species when cruising.							

6.2.3 FISHERY BYCATCH

Fishing gear type caused the bycatch and sex are shown in '6.2'. The fate of bycaught whales are 'K'. Korea Coast Guard is the source of information.

Whale species	Sex	Date	Location	Fate	Targeted fish species	Gear	How observed?	Source or contact
See 6.2	See 6.2	Available in CRC	See 6.2	See the explanation	No data	See 6.2	See the explanation	Org.: CRC, NFRDI Contact: Z. G. Kim Tel. +82-51-720-2180 E-mail. zgkim@nfrdi.re.kr

6.3 Earlier years' statistics

This would be a place to include any corrections to statistics presented in earlier years. It may also be appropriate to include references to studies that utilise time series of data here.

7. Statistics for small cetaceans

7.1 For the calendar year 2004

Species	Area/stock	Directed catch		Incidental mortality			Live-capture Reported
		Reported	Est. total	Reported	Est. total	Source*	
Killer whale	East Sea			1		GND	
Bottlenose dolphin	Korea strait			1		GND	
	East Sea			2		TX	
					1		GND
Risso's dolphin	East Sea			1		Aquaculture rope	
				1		GND	
				1		Unidentified	
Common dolphin	Korea Strait East Sea	3		1		FPN	
				1		SV	
				2		LL	
				18		GND	
				8		GN	
				44		FPN	
				14		FPO	
1		TX					
Pacific White-sided dolphin	East Sea			1		SV	
				6		GND	
				8		GN	
				3		FPN	
				2		FPO	
Dall's porpoise	East Sea			1		GN	
Finless porpoise	Korea Strait			2		FSN	
				1		LL	
				1		GN	
	East Sea			3		GND	
				2		GN	
	Yellow Sea			2		FPN	
				1		FSN	
			1		GND		
Harbour porpoise	East Sea			10		GN	
				12		FPN	
Unidentified dolphin	East Sea			1		GND	

*e.g. fishery type

7.2 Earlier years' statistics

Park et al. (2005) collected specimens of finless porpoises that were entangled and not reported to the Korea Coast Guard for the study along the west coast of Korea. These figures are to be added in the earlier year's statistics.

Species	Year	No. of Bycatch	Area	Fishing Gear	Reference
Finless porpoise	2001	100	Yellow Sea	No data	See Section 9. Reference
	2002	53			
	2003	50			
	2004	24			

Reference

Park, K.J., C.I. Zhang, H. Sohn, Z.G. Kim. 2005. Feeding habits of finless porpoise (*Neophocaena phocaenoides*) in the west coast of Korea. Document SC/57/SM/xx will submit to 57th IWC SC.

8. Strandings

If included, this section should only provide information on focal institutions/individuals who can be contacted.

Species	Area/stock	Stranding		Contact
		Source	No.	
Risso's dolphin	East Sea	Drift	1	Org.: CRC, NFRDI Contact: Z. G. Kim Tel. +82-51-720-2180 E-mail. zgkim@nfrdi.re.kr
Common dolphin	East Sea	Stranding	4	
		Drift	2	
Pacific White-sided dolphin	East Sea	Stranding	1	
		Drift	1	

Finless porpoise	Korea Strait	Stranding	12	
		Drift	3	
	East Sea	Stranding	3	
	Drift	3		
Yellow Sea	Drift	2		
Unidentified dolphin	East Sea	Stranding	1	

9. Other studies and analyses

CRC has conducted studies cetacean acoustics and ecological study of finless porpoises under contract with Pukyong National University. Progress of the studies will be present 57th meeting.

Reference

- Shin, H.I., Y.W. Lee, D.J. Lee, Z. G. Kim and H. Sohn. 2005. Trial manufacture of dual frequency acoustical pinger to minimize cetacean bycatch. Document SC/57/E/xx will submit to 57th IWC SC.
- Zhang, C.I., K.J. Park, Z.G. Kim and H. Sohn. 2005. Abundance estimation of finless porpoise, *Neophocaena phocaenoides*, from ship surveys in the west coast of Korea. Document SC/57/SM/xx will submit to 57th IWC SC.
- Park, K.J., C.I. Zhang, H. Sohn, Z.G. Kim. 2005. Feeding habits of finless porpoise (*Neophocaena phocaenoides*) in the west coast of Korea. Document SC/57/SM/xx will submit to 57th IWC SC.
- Park, K.J., C.I. Zhang, H. Sohn, Z.G. Kim. 2005. Age and growth of finless porpoise (*Neophocaena phocaenoides*) in the west coast of Korea. Document SC/57/SM/xx will submit to 57th IWC SC.

NFRDI executed land based Gray Whale sighting survey at Sunrising Park (36-25N, 129-26E) in YeongDeok-Gun, from 21st to 31st of December 2004. There was no gray whale sighting.

10. Literature cited

All cited references are present in each section.