

APPENDIX I. Estimated serious injury and mortality (SI&M) of Western North Atlantic marine mammals listed by U.S. observed fisheries - 1996-2000.

Fishery	Species	Yrs. observed	Total annual estimated SI&M(CV)	Ave est. SI&M (CV)	PBR
<b>CATEGORY I</b>					
<b>Gillnet Fisheries:</b>					
Northeast sink gillnet	Harbor porpoise	1996-1998	1200 (.25), 782 (.22), 332 (.46)	771	747
	Harbor porpoise - after Take Reduction Plan	1999-2000	270(.28), 507 (.37)	420 (.27)	747
	White sided dolphin	1996-2000	114 (.61), 140 (.61), 34 (.92), 69 (.70), 26 (1.0)	77 (.33)	364
	Comm on dolphin	1996-2000	63 (1.39), 0, 0, 146 (.97), 0	42 (.78)	227
	Risso's dolphin	1996-2000	0, 0, 0, 0, 15 (1.06)	3 (1.06)	220
	Bottlenose dolphin (offshore)	1996-2000	0, 0, 0, 0, 132 (1.16)	26 (1.16)	249
	Long and short-finned pilot whale	1996-2000	0, 0, 0, 0, 0		108
	<sup>1</sup> No. Atl. Right whale	1996-2000	0, 0, 0, 0, 0		0
	<sup>2</sup> Humpback whale	1996-2000	0, 0, 0, 0, 0		1.3
	Sperm W hale	1996-2000	0, 0, 0, 0, 0		7
	Pygmy sper m whale	1996-2000	0, 0, 0, 0, 0		3.7
	Fin whale	1996-2000	0, 0, 0, 0, 0		4.7
	Sei whale	1996-2000	0, 0, 0, 0, 0		n/a
	Blue whale	1996-2000	0, 0, 0, 0, 0		n/a
	<sup>4</sup> Minke whale	1996-2000	0, 0, 0, 0, 0		35
	Cuvier's beaked whale	1996-2000	0, 0, 0, 0, 0		n/a
	<i>Mesoplodon</i> beaked whale	1996-2000	0, 0, 0, 0, 0		n/a
	Harbor seal	1996-2000	911(.27), 598(.26), 332(.33), 1446(.34), 917(.43)	841 (.17)	1859
Gray seal	1996-2000	49(.49), 131(.50), 61(.98), 155(.51), 193(.55)	118 (.35)	n/a	
Harp seal	1996-2000	89(.55), 269(.50), 78(.48), 81(.78), 24(1.57)	108 (.30)	n/a	
<b>Longline Fisheries:</b>					
Large pelagics longline	Harbor porpoise	1996-2000	0, 0, 0, 0, 0		747
	White-sided do lphin	1996-2000	0, 0, 0, 0, 0		364
	Comm on dolphin	1996-2000	0, 0, 0, 0, 0		227
	Risso's dolphin	1996-2000	99 (1.0), 0, 57 (1.0), 22 (1.0), 64 (1.0)	48 (.55)	220
	Long and short-finned pilot whale	1996-2000	0, 0, 0, 381 (.79), 133 (.88)	103 (.63)	108
	<sup>1</sup> No. Atl. Right whale	1996-2000	0, 0, 0, 0, 0		0

Fishery	Species	Yrs. observed	Total annual estimated SI&M(CV)	Ave est. SI&M (CV)	PBR
	<sup>2</sup> Humpback w hale	1996-2000	0, 0, 0, 0, 0		1.3
	Sperm W hale	1996-2000	0, 0, 0, 0, 0		7
	<sup>5</sup> Pygmy S perm Whale	1996-2000	0, 0, 0, 0, 28(1.0)	6 (1.0)	3.7
	Fin whale	1996-2000	0, 0, 0, 0, 0		4.7
	Sei whale	1996-2000	0, 0, 0, 0, 0		n/a
	Blue whale	1996-2000	0, 0, 0, 0, 0		n/a
	<sup>4</sup> Minke whale	1996-2000	0, 0, 0, 0, 0		35
	Cuvier's beaked wha le	1996-2000	0, 0, 0, 0, 0		n/a
	<i>Mesoplodon</i> beaked w hale	1996-2000	0, 0, 0, 0, 0		n/a
<b>Trap/Pot Fisheries:</b>					
American lobster trap/pot	Har bor por poise	1996-2000	0, 0, 0, 0, 0		747
	White-sided do lphin	1996-2000	0, 0, 0, 0, 0		364
	Comm on dolphin	1996-2000	0, 0, 0, 0, 0		227
	Risso's dolphin	1996-2000	0, 0, 0, 0, 0		220
	Long an d short-finned pilot wha le	1996-2000	0, 0, 0, 0, 0		108
	<sup>1</sup> No. Atl. R ight whale	1996-2000	0, 0, 0, 0, 0		0
	<sup>2</sup> Humpback	1996-2000	0, 0, 1, 0, 0		1.3
	Sperm W hale	1996-2000	0, 0, 0, 0, 0		7
	Fin whale	1996-2000	0, 0, 0, 0, 0		4.7
	Sei whale	1996-2000	0, 0, 0, 0, 0		n/a
	Blue whale	1996-2000	0, 0, 0, 0, 0		n/a
	<sup>4</sup> Minke whale	1996-2000	0, 1, 0, 0, 0	0.2 (0)	35
	Cuvier's beaked wha le	1996-2000	0, 0, 0, 0, 0		n/a
	<i>Mesoplodon</i> beaked w hale	1996-2000	0, 0, 0, 0, 0		n/a
<b>Trawl Fisheries:</b>					
Atlantic squid, m ackerel, butter fish	Har bor por poise	1996-2000	0, 0, 0, 0, 0		747
	White-sided do lphin	1996-2000	0, 16 1(1.5 8), 0, 0, 0	32 (1.58)	364
	Comm on dolphin	1996-2000	940 (.75), 161 (.49), 0, 49 (.78), 273 (.57)	285 (.51)	227
	Risso's dolphin	1996-2000	0, 0, 0, 0, 0		220
	Long an d short-finned pilot wha le	1996-2000	45 (1.27), 0, 85 (.65), 49 (.97), 17 (.53)	39 (.47)	108

Fishery	Species	Yrs. observed	Total annual estimated SI&M(CV)	Ave est. SI&M (CV)	PBR
	<sup>1</sup> No. Atl. Right whale	1996-2000	0, 0, 0, 0, 0		0
	<sup>2</sup> Humpback	1996-2000	0, 0, 0, 0, 0		1.3
	Sperm Whale	1996-2000	0, 0, 0, 0, 0		7
	Fin whale	1996-2000	0, 0, 0, 0, 0		4.7
	Sei whale	1996-2000	0, 0, 0, 0, 0		n/a
	Blue whale	1996-2000	0, 0, 0, 0, 0		n/a
	<sup>4</sup> Minke whale	1996-2000	0, 0, 0, 0, 0		35
	Cuvier's beaked whale	1996-2000	0, 0, 0, 0, 0		n/a
	<i>Mesoplodon</i> beaked whale	1996-2000	0, 0, 0, 0, 0		n/a
<b>CATEGORY II</b>					
SE U.S. Atlantic shark gillnet	<sup>3</sup> Bottlenose dolphin (coastal)	1999-2000	No. Florida 0, 0, Central Florida 43 (.78), 4 (1)	24 (0.89)	n/a
US Mid-Atlantic coastal sink gillnet	Harbor porpoise	1996-1998	311(.31), 572 (.35), 446 (.36)	443	747
	Harbor porpoise - after Take Reduction Plan	1999-2000	53 (.49), 21 (.76)	37 (.41)	747
	White-sided dolphin	1996-2000	0, 45 (.82), 0, 0, 0	9 (.82)	364
	Common dolphin	1996-2000	43 (.79), 16 (.53), 0, 0, 0	12 (.59)	227
	Risso's dolphin	1996-2000	0, 0, 0, 0, 0		220
	Bottlenose dolphin (offshore)	1996-2000	0, 0, 4 (0.7), 0, 0	1 (0.7)	249
	<sup>3</sup> Bottlenose dolphin (coastal)	1996-2000	see footnote 3 below	233 (0.16)	<b>footnote</b>
	Long and short-finned pilot whale	1996-2000	0, 0, 7 (1.1), 0, 0	1 (1.1)	108
	<sup>1</sup> No. Atl. Right whale	1996-2000	0, 0, 0, 0, 0		0
	<sup>2</sup> Humpback whale	1996-2000	0, 0, 1, 0, 0		1.3
	Sperm Whale	1996-2000	0, 0, 0, 0, 0		7
	Pygmy sperm whale	1996-2000	0, 0, 0, 0, 0		3.7
	Fin whale	1996-2000	0, 0, 0, 0, 0		4.7
	Sei whale	1996-2000	0, 0, 0, 0, 0		n/a
Blue whale	1996-2000	0, 0, 0, 0, 0		n/a	
<sup>4</sup> Minke whale	1996-2000	0, 0, 1, 0, 0	0.2 (n/a)	35	
Cuvier's beaked whale	1996-2000	0, 0, 0, 0, 0		n/a	
<i>Mesoplodon</i> beaked whale	1996-2000	0, 0, 0, 0, 0		n/a	

Fishery	Species	Yrs. observed	Total annual estimated SI&M(CV)	Ave est. SI&M (CV)	PBR
	Harbor seal	1996-2000	0, 0, 11(.77), 0, 0	2 (.77)	1859
	Gray seal	1996-2000	0, 0, 0, 0, 0		n/a
	Harp seal	1996-2000	0, 0, 17(1.02), 0, 0	3 (1.02)	n/a
<b>CATEGORY III</b>					
<b>Trawl Fisheries:</b>					
North Atlantic bottom trawl	Harbor porpoise	1996-2000	0, 0, 0, 0, 0		747
	White-sided dolphin	1996-2000	0, 0, 0, 0, 0		364
	Common dolphin	1996-2000	0, 93 (1.06), 0, 0, 0	19 (1.06)	227
	Risso's dolphin	1996-2000	0, 0, 0, 0, 0		220
	Long and short-finned pilot whales	1996-2000	0, 0, 0, 228 (1.03), 0	46 (1.03)	108
	<sup>1</sup> No. Atl. Right whale	1996-2000	0, 0, 0, 0, 0		0
	<sup>2</sup> Humpback	1996-2000	0, 0, 0, 0, 0		1.3
	Sperm Whale	1996-2000	0, 0, 0, 0, 0		7
	Pygmy sperm whale	1996-2000	0, 0, 0, 0, 0		3.7
	Fin whale	1996-2000	0, 0, 0, 0, 0		4.7
	Sei whale	1996-2000	0, 0, 0, 0, 0		n/a
	Blue whale	1996-2000	0, 0, 0, 0, 0		n/a
	<sup>4</sup> Minke whale	1996-2000	0, 0, 0, 0, 0		35
	Cuvier's beaked whale	1996-2000	0, 0, 0, 0, 0		n/a
	<i>Mesoplodon</i> beaked whale	1996-2000	0, 0, 0, 0, 0		n/a

Notes: Beginning with the 2001 Stock Assessment Report, Canadian records were incorporated into the mortality and serious injury rates to reflect the effective range of this stock. It is also important to stress that serious injury determinations are made based upon the best available information; these determinations may change with the availability of new information. Several factors must be considered: 1) a ship strike or entanglement may occur at some distance from the reported location; 2) the mortality or injury may involve multiple factors; for example, whales that have been both ship struck and entangled are not uncommon; 3) the actual vessel or gear type/source is often uncertain; and 4) in entanglements, several types of gear may be involved. For the purposes of this report, discussion is primarily limited to those records considered confirmed human-caused mortalities or serious injuries.

<sup>1</sup> No. Atlantic Right Whales - Between 1996-2000, five of nine records of mortality or serious injury (including both U.S. and Canada) involved entanglement or fishery interaction. There were three reported serious injuries from unknown gear: 1 southeast of Gloucester, MA, 1 east of Manomet, MA and 1 in Bay of Fundy, Canada. There was 1 serious injury from ingestion of unknown gear in Bay of Fundy and 1 offshore mortality from sink gillnet gear 80 mi. east of Cape Cod. The other 4 were mortalities from injuries indicating ship strike (one record described a 3.3m gash, a broken skull, and Canadian lobster gear wrapped through mouth and a round tail. Primary cause of death was ship strike). The total estimated annual average human-induced mortality and serious injury incurred by this stock was 1.8 right whales per year (USA waters 1.2; Canadian waters, 0.6). This is derived from two components: 1) non-observed fishery entanglement records at 1.0 per year (USA waters, 0.6; Canadian waters, 0.4), and 2) ship strike records at 0.8 per year (USA waters, 0.6; Canadian waters, 0.2). As with entanglements, some injury or mortality due to ship strikes almost certainly passes undetected, particularly in offshore waters. Decomposed and/or unexamined animals (e.g., carcasses

reported but not retrieved or necropsied) represent 'lost data', some of which may relate to human impacts. For these reasons, the figure of 1.8 right whales per year must be regarded as a minimum estimate.

<sup>2</sup> Humpback Whales - For the period 1996 through 2000, 19 of 23 records indicated entanglement or fishery interaction and the remaining 4 records were mortalities from ship strikes. Eleven serious injuries and three mortalities were from unknown gear; 2 serious injuries from gillnet gear in Bay of Fundy; 1 serious injury from offshore lobster gear at Montauk Point, NY, 1 serious injury from sea trout sink gillnet gear east of Cape Lookout, NC and 1 mortality from croaker gillnet gear at Ocracoke Island, NC. Of these 23 animals, 15 were counted from the Gulf of Maine stock (14 fishery interactions, 1 ship strike). The total estimated human-caused mortality and serious injury to the Gulf of Maine humpback whale stock is estimated as 3.0 per year (USA waters, 2.4; Canadian waters, 0.6). This average is derived from two components: 1) incidental fishery interaction records, **2.8 (USA waters, 2.2; Canadian waters, 0.6);** and 2) records of vessel collisions, **0.2 (USA waters, 0.2; Canadian waters, 0)**. Additional humpback mortalities and serious injuries that occurred in the southeastern and mid-Atlantic states could not be confirmed as involving members of the Gulf of Maine stock. These records represent an additional minimum annual average of 1.6 human-caused mortalities and serious injuries to humpbacks over the time period, of which 1.0 per year are attributable to incidental fishery interactions and 0.6 per year are attributable to vessel collisions.

<sup>3</sup> Coastal Bottlenose Dolphins - As an interim measure, pending additional results, several "management units" of the coastal morphotype of bottlenose dolphin along the U.S. Atlantic coast have been defined. Annual estimated mortality/serious injury and PBR for each management unit can be found in the Coastal Bottlenose Dolphin section (Tables 2 and 3) of this report.

<sup>4</sup> Minke Whales - There was 1 reported mortality in the mid-Atlantic coastal gillnet fishery in 1998. Confirmed mortalities that were likely a result of a fishery interaction with an unknown fishery included 3 in 1997, 5 in 1999, 2 in 2000 and 0 in other years. The examination of the minke entanglement records from 1997 indicate that 4 out of 4 confirmed records of mortality were likely a result of fishery interactions, one attributed to the lobster pot fishery, and three not attributed to any particular fishery because the reports do not contain the necessary details. Of the 5 mortalities in 1999, 2 were attributed to an unknown trawl fishery and 3 to some other fishery. One of the interactions with an unknown fishery in 2000 was a mortality and one was a serious injury.

<sup>5</sup> Pygmy Sperm Whales - Twenty-eight seriously injured pygmy sperm whales were reported in 2000 in the pelagic longline fishery. The 2000 mortality estimates were taken from Table 10 in Yeung 2001 (NMFS Miami Laboratory PRD 00/01-17). There have been no observed mortalities or serious injuries by NMFS Sea Samplers in the pelagic drift gillnet, pelagic longline, pelagic pair trawl, Northeast multispecies sink gillnet, mid-Atlantic coastal sink gillnet, nor North Atlantic bottom trawl fisheries.