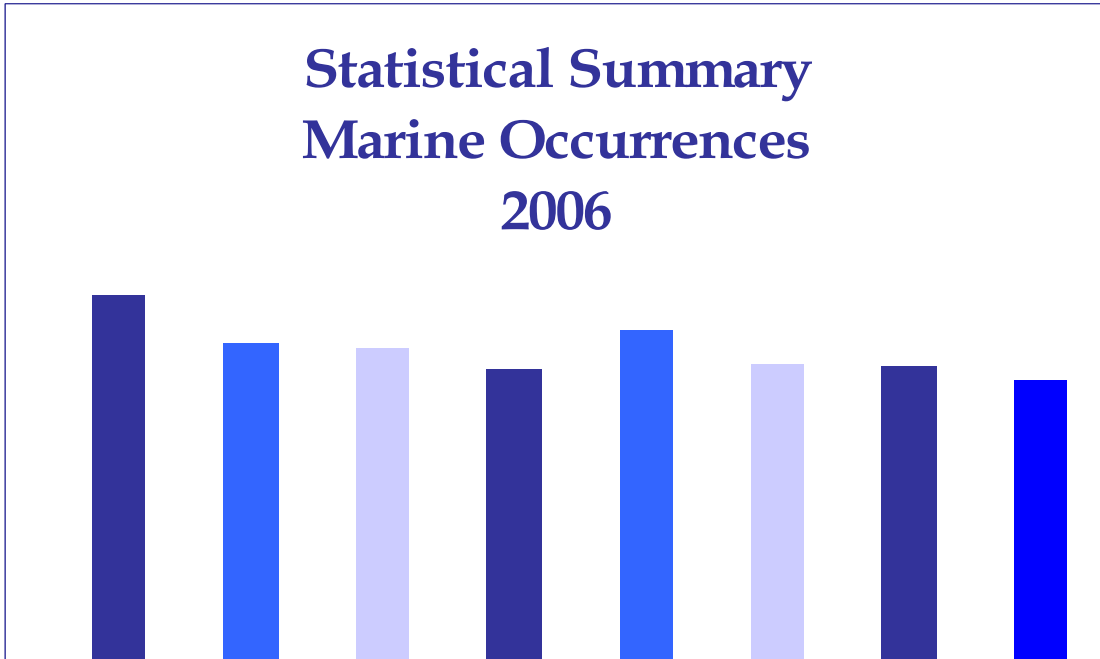




## Statistical Summary Marine Occurrences 2006



## Foreword

This document provides users of Canadian maritime safety data with an annual summary of selected statistics on marine occurrences. It covers commercial vessels, which include all vessels registered or licensed to operate commercially. Pleasure craft occurrences are not normally included unless they also involve a commercial vessel. Information in this summary is also posted on the Transportation Safety Board of Canada (TSB) web site at [www.tsb.gc.ca](http://www.tsb.gc.ca).

Users of these statistics are advised that, in a live database, the occurrence data are constantly being updated. Consequently, the statistics can change slightly over time. Further, as many occurrences are not formally investigated, information recorded on some occurrences may not have been verified. Therefore, caution should be used when using these statistics. The 2006 statistics presented here reflect the TSB database updated as of 10 April 2007.

To enhance awareness and increase the safety value of the material presented in the *Statistical Summary, Marine Occurrences 2006*, readers are encouraged to copy or reprint the data presented, in whole or in part, for further distribution (with acknowledgements of the source).

The TSB is an independent agency operating under its own Act of Parliament. Its sole aim is the advancement of transportation safety.

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# MARINE OCCURRENCES IN 2006

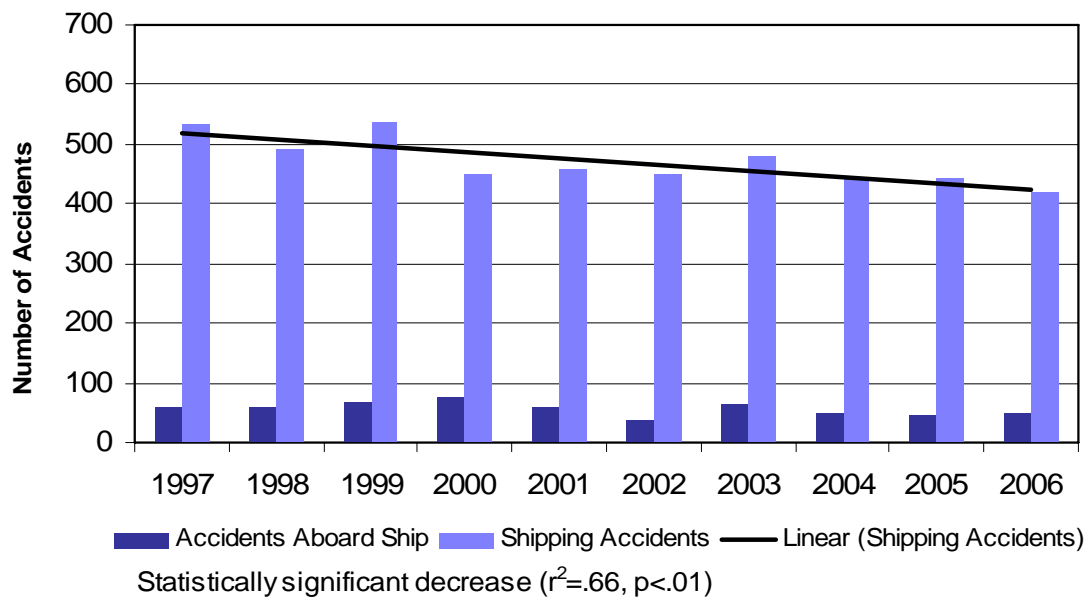
## ACCIDENTS

### *Overview of Accidents and Casualties (Tables 1 and 8)*

In 2006, 467 marine accidents were reported to the TSB, down from the 2005 total of 489 and the 2001–2005 average of 506. Over the past 10 years, nearly 90% of marine accidents have been shipping accidents, while the remainder were accidents aboard ship (see Appendix B – Definitions).

Shipping accidents reached a 30-year low of 419 in 2006, a 6% decrease from the 2005 total of 444 and an 8% decrease from the 2001–2005 average of 455. Statistical analysis using linear regression indicates that there has been a significant downward trend<sup>1</sup> in the number of shipping accidents since 1997 ( $p < .01$ ) (Figure 1). In 2006, there were 48 accidents aboard ship, up from 45 in 2005 but down from the 2001–2005 average of 51. The majority of accidents aboard ship occurred on fishing vessels (42%) or cargo/bulk carrier/OBO<sup>2</sup> vessels (27%).

Figure 1 – Accidents Aboard Ship and Shipping Accidents, 1997–2006

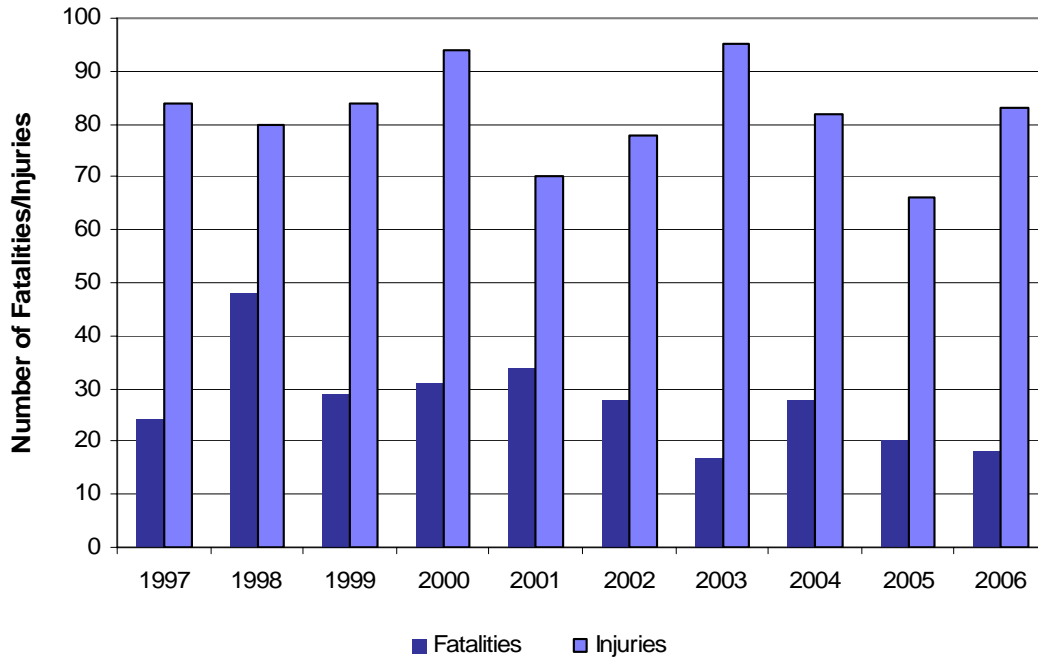


<sup>1</sup> It is agreed by convention that, for a result to be considered statistically significant, its probability must be lower than 1 in 20 (that is,  $p < .05$ ).

<sup>2</sup> Oil/bulk/ore carrier (OBO), see Appendix B

Marine-related fatalities totalled 18 in 2006 (Figure 2), down from the 2005 total of 20 and the 2001–2005 average of 25. Of these 18 marine-related fatalities, 12 resulted from shipping accidents. Eight of the 12 shipping accident fatalities resulted from fishing vessel accidents. Injuries in 2006 numbered 83, up from 66 in 2005 and the 2001–2005 average of 78. Of these 83 injuries, 58 were serious, and of those, all but 7 resulted from accidents aboard ship.

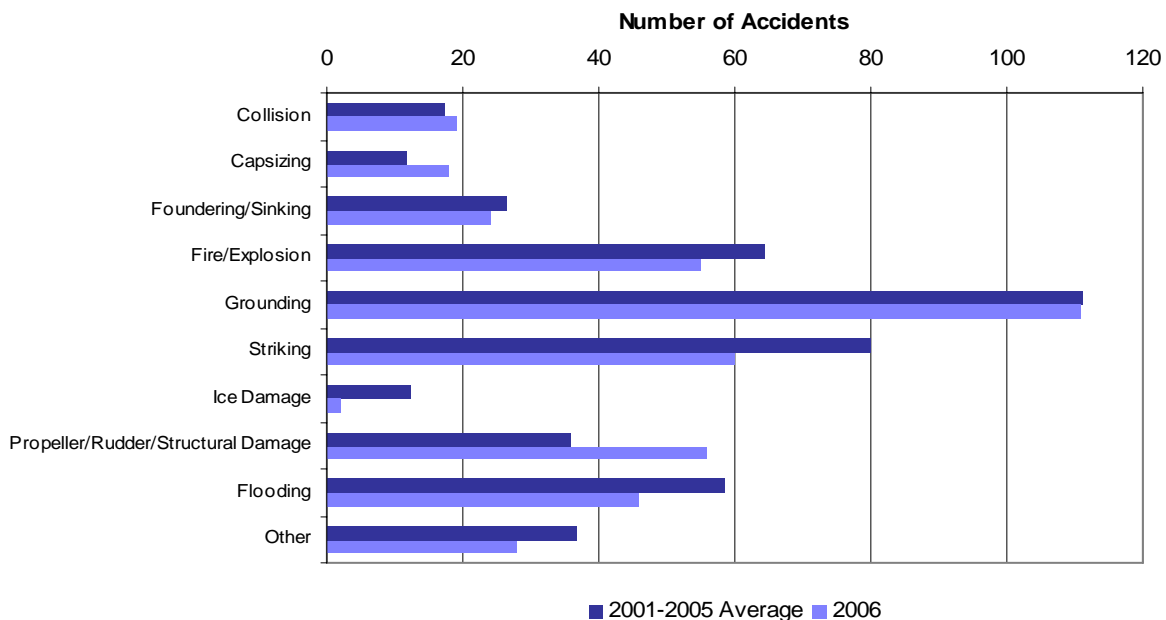
**Figure 2 – Marine Fatalities and Injuries, 1997–2006**



### Shipping Accidents

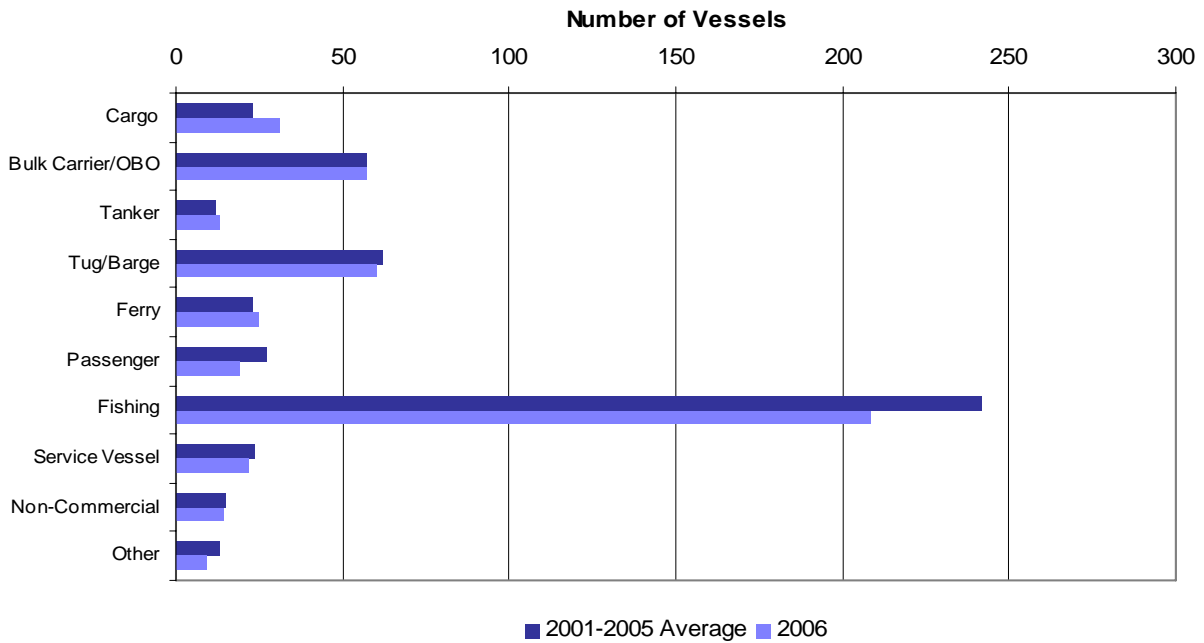
**Type of Accidents (Table 1):** As illustrated in Figure 3, the most frequent type of shipping accidents in 2006 was groundings (26%). Groundings were unchanged from the five-year average, while propeller/rudder/structural damage accidents showed a 56% increase, and striking, flooding, and fire/explosion accidents decreased by 25%, 22%, and 15% respectively.

**Figure 3 – Shipping Accidents by Accident Type**



**Type of Vessels (Table 1):** In 2006, there were 20 036 fishing vessels in Canada, representing 74% of all registered vessels excluding pleasure craft (source: Transport Canada). Since 1997, approximately 50% of the vessels involved in shipping accidents have been fishing vessels. In 2006, there were 208 fishing vessels involved in shipping accidents (Figure 4), compared to 237 in 2005 and the 2001–2005 average of 242. After fishing vessels, tugs/barges (13%) and bulk carrier/OBO vessels (12%) were involved most often in shipping accidents.

**Figure 4 – Shipping Accidents by Vessel Type**

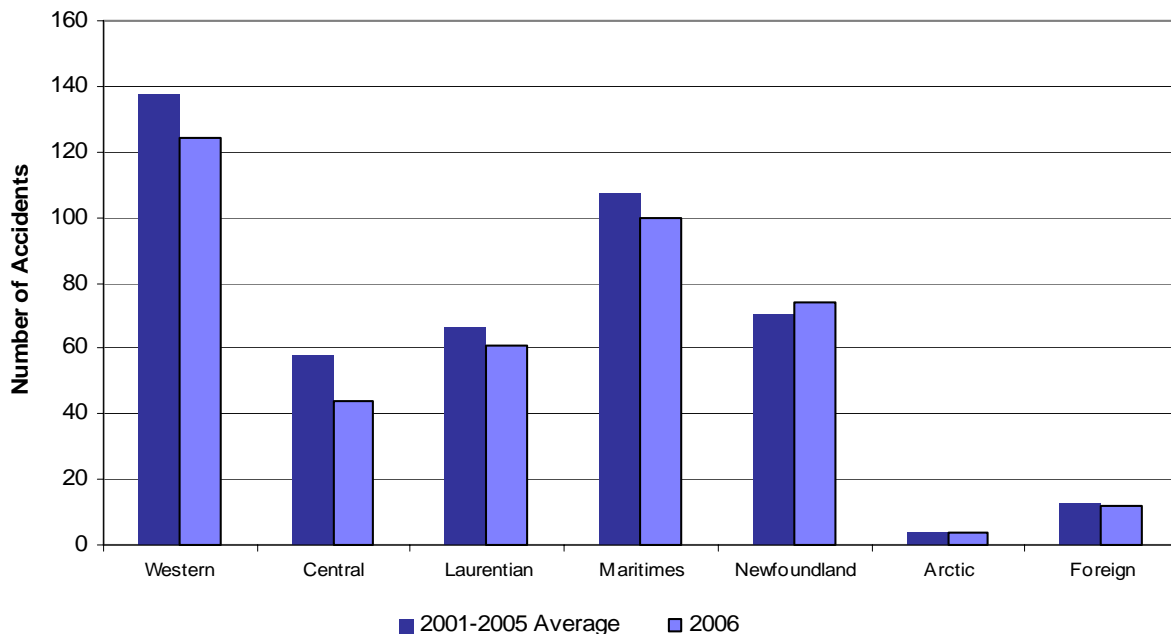


**Geographical Region (Tables 2a and 2b):** In 2006, 71% of shipping accidents occurred in 3 of the 7 geographical regions (Figure 5): the Western region (30%), the Maritimes region (24%) and the Newfoundland region (18%). Shipping accidents in the Central region decreased by 24% from the 2001–2005 average.

Fishing vessel accidents continue to dominate the accident record in coastal waters. However, compared to the 2001–2005 average, fishing vessels involved in shipping accidents decreased by 34% in the Western region and decreased by 9% in the Maritimes region. The number of fishing vessels involved in shipping accidents in the Newfoundland region (60) is comparable to the five-year average of 61.

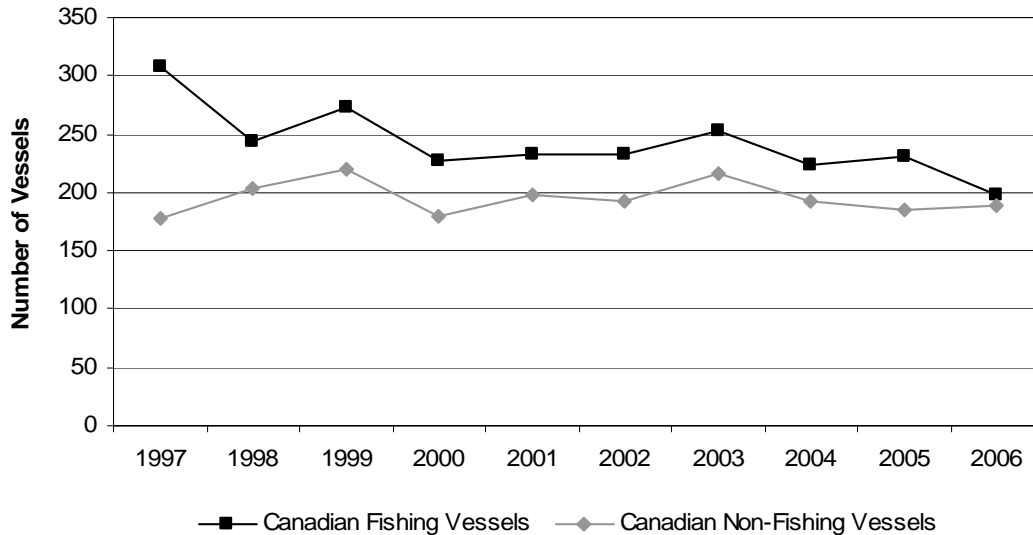
The Laurentian and Central regions accounted for 15% and 11% of shipping accidents respectively. Bulk carrier/OBO vessels comprised 48% of vessels involved in accidents within the narrower waterways of the Central region, and 26% of vessels involved in accidents in the Laurentian region.

**Figure 5 – Shipping Accidents by Region**



**Vessel Flag (Tables 1, 3 and 4):** In 2006, 84% of vessels involved in shipping accidents reported to the TSB were Canadian-flag vessels. In all, 51% of these were fishing vessels, 37% were commercial non-fishing vessels and the remaining 11% were non-commercial/pleasure craft or service vessels (Figure 6).

**Figure 6 – Canadian-Flag Vessels Involved in Shipping Accidents, 1997-2006**



Over the past 10 years, Canadian-flag fishing vessels were involved mostly in groundings (27%), floodings (19%) or fires/explosions (15%). For the same period, Canadian-flag commercial non-fishing vessels were mostly involved in strikings (27%), groundings (23%) or fires/explosions (12%). Although marine activity for Canadian commercial non-fishing vessels (excluding passenger vessels and cruise ships) increased by 1% from the 2001–2005 average, the accident rate decreased by 7% to 3.3 accidents per 1000 movements from the five-year average rate of 3.6 accidents per 1000 movements.

In 2006, 73 foreign-flag vessels were involved in shipping accidents in Canadian waters. Of those, 84% were commercial non-fishing vessels and were involved mainly in strikings (31%) or groundings (30%). Marine activity for foreign commercial non-fishing vessels remained relatively unchanged compared to the 2001–2005 average, and the accident rate increased by 11% to 1.8 accidents per 1000 movements from the five-year average rate of 1.6 accidents per 1000 movements.

**Vessels Lost (Tables 1 and 6):** In 2006, 31 vessels were reported lost, 5 more than were reported lost in 2005, but 3 less than the five-year average of 36. During the past 10 years, small fishing vessels (less than 15 in gross tonnage [grt])<sup>3</sup> have accounted for 43% of vessels lost. Of the vessels lost in 2006, 22 were fishing vessels and 8 were commercial non-fishing vessels. Nearly half of vessels lost in 2006 were less than 15 grt, and nearly one-third were 30 years old or more.

<sup>3</sup>

The majority of vessels classified under unknown tonnage were vessels of 15 tons or less in gross tonnage.

# INCIDENTS

## Overview of Incidents (Tables 1, 2a and 2b)

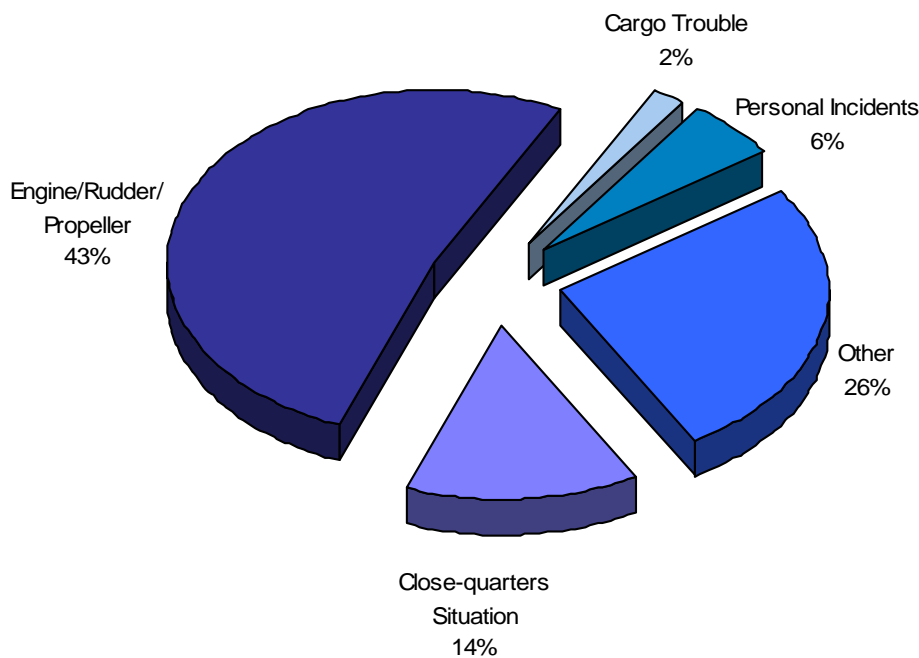
Pursuant to mandatory reporting requirements, 213 marine incidents were reported to the TSB in 2006, down from the 2005 total of 227 and the 2001–2005 average of 222.

In 2006, incidents in the Western region represented 39% of all marine incidents, lower than the 2001–2005 proportion of 44%. The proportion of marine incidents that took place in other regions was as follows: Laurentian 28%, Central 15%, the Maritimes 10% and Newfoundland 5%. Five reported incidents took place in foreign waters and two in the Arctic region.

Engine/rudder/propeller failures comprised just over half of all reportable incidents in 2006, and increased by 31% from 2005 and 29% from the five-year average. The Western and Laurentian regions had the majority of engine/rudder/propeller incidents (35% and 28% respectively).

Close-quarters situations decreased by 46% from 2005 and 45% from the five-year average. In all, 60% of close-quarters situations occurred in the Western region.

Figure 7 – Marine Incidents by Type, 2006



# APPENDIX A – MARINE OCCURRENCE TABLES

**Table 1**  
**Total Marine Occurrences**  
**Types, Vessels and Losses Involved**  
**1997–2006**

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Shipping Accidents by Type</b>	<b>534</b>	<b>491</b>	<b>536</b>	<b>450</b>	<b>459</b>	<b>449</b>	<b>481</b>	<b>442</b>	<b>444</b>	<b>419</b>
Collision	15	15	22	16	16	15	24	12	20	19
Capsizing	21	13	6	15	6	14	11	18	10	18
Foundering/Sinking	36	28	32	38	37	26	30	18	21	24
Fire/Explosion	73	65	70	64	84	53	65	51	69	55
Grounding	126	128	146	123	114	129	118	108	87	111
Striking	88	85	85	68	89	72	76	82	81	60
Ice Damage	23	11	10	6	4	2	28	17	11	2
Propeller/Rudder/Structural Damage	30	25	40	31	19	43	39	36	43	56
Flooding	69	69	65	51	70	52	49	63	59	46
Other	53	52	60	38	20	43	41	37	43	28
<b>Accidents Aboard Ship</b>	<b>60</b>	<b>59</b>	<b>69</b>	<b>77</b>	<b>59</b>	<b>36</b>	<b>66</b>	<b>50</b>	<b>45</b>	<b>48</b>
<b>Vessels Involved in Shipping Accidents</b>										
<b>By Type of Vessel</b>	<b>576</b>	<b>534</b>	<b>581</b>	<b>492</b>	<b>507</b>	<b>483</b>	<b>526</b>	<b>471</b>	<b>491</b>	<b>458</b>
Cargo	21	26	26	25	31	23	18	21	21	31
Bulk Carrier/OBO	61	68	73	59	58	57	48	52	68	57
Tanker	13	18	14	14	12	9	15	7	15	13
Tug	38	42	42	33	39	24	34	32	30	27
Barge	31	25	35	30	28	32	31	34	27	33
Ferry	17	23	22	26	24	21	25	20	26	25
Passenger	16	27	20	19	16	27	41	29	20	19
Fishing	319	251	280	238	246	238	260	227	237	208
Service Vessel	30	27	35	23	27	19	27	25	19	22
Non-Commercial	13	19	14	13	18	19	14	11	11	14
Other	17	8	20	12	8	14	13	13	17	9
<b>By Vessel Flag</b>	<b>576</b>	<b>534</b>	<b>581</b>	<b>492</b>	<b>507</b>	<b>483</b>	<b>526</b>	<b>471</b>	<b>491</b>	<b>458</b>
Canadian (Non-Fishing)	178	204	220	179	197	192	216	193	185	188
Canadian (Fishing)	308	243	273	227	232	232	253	223	230	197
Foreign	90	87	88	86	78	59	57	55	76	73
<b>Vessels Lost by Gross Tonnage</b>	<b>60</b>	<b>49</b>	<b>45</b>	<b>37</b>	<b>51</b>	<b>32</b>	<b>38</b>	<b>22</b>	<b>26</b>	<b>31</b>
1600 grt and over	0	1	1	0	1	2	2	0	0	3
150 to 1599 grt	5	2	3	2	3	1	2	0	0	2
60 to 149 grt	6	6	5	3	8	4	8	5	6	6
15 to 59 grt	16	14	7	13	15	7	12	8	7	4
Less than 15 grt	21	16	21	16	18	12	12	3	9	11
Unknown Tonnage	12	10	8	3	6	6	2	6	4	5
<b>Fatalities</b>	<b>24</b>	<b>48</b>	<b>29</b>	<b>31</b>	<b>34</b>	<b>28</b>	<b>17</b>	<b>28</b>	<b>20</b>	<b>18</b>
Shipping Accidents	12	38	14	16	17	19	9	22	13	12
Accidents Aboard Ship	12	10	15	15	17	9	8	6	7	6
<b>Injuries</b>	<b>84</b>	<b>80</b>	<b>84</b>	<b>94</b>	<b>70</b>	<b>78</b>	<b>95</b>	<b>82</b>	<b>66</b>	<b>83</b>
Shipping Accidents	25	22	23	23	18	42	35	37	25	26
Accidents Aboard Ship	59	58	61	71	52	36	60	45	41	57
<b>Reportable Incidents by Type</b>	<b>155</b>	<b>165</b>	<b>178</b>	<b>248</b>	<b>239</b>	<b>174</b>	<b>224</b>	<b>248</b>	<b>227</b>	<b>213</b>
Close-quarters Situation	36	38	34	57	60	29	60	67	56	30
Engine/Rudder/Propeller	64	66	74	105	99	57	83	106	85	111
Cargo Trouble	6	9	1	5	4	5	3	1	4	4
Personal Incidents	4	3	5	6	8	8	14	9	4	12
Other	45	49	64	75	68	75	64	65	78	56

**Table 2a**  
**Marine Occurrences by Region**  
**Occurrences, Vessels and Losses Involved**  
**1997–2006**

Western Region  
 Central Region  
 Laurentian Region  
 Maritimes Region

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Western Region</b>										
Shipping Accidents	183	196	168	166	158	139	141	125	125	124
Accidents Aboard Ship	18	14	18	32	29	15	19	15	13	15
Vessels Involved in Shipping Accidents										
By Type of Vessel	202	213	181	177	179	155	159	135	145	142
Cargo	6	5	4	3	8	2	5	3	2	9
Bulk Carrier/OBO	5	3	6	6	2	1	4	7	3	3
Tanker	2	2	1	0	0	0	0	0	0	0
Ferry/Passenger	12	14	10	18	15	19	26	19	26	25
Tug/Barge	29	44	40	44	39	33	31	31	34	38
Fishing	133	128	102	93	98	78	76	65	69	51
Other	15	17	18	13	17	22	17	10	11	16
Vessels Lost	20	25	19	14	22	13	11	6	8	12
Fatalities	7	6	10	10	12	10	4	8	6	6
Incidents	41	54	57	110	122	86	95	98	87	84
<b>Central Region</b>										
Shipping Accidents	59	64	54	46	68	57	53	59	52	44
Accidents Aboard Ship	5	8	5	7	3	3	2	7	3	4
Vessels Involved in Shipping Accidents										
By Type of Vessel	65	67	59	54	79	63	59	62	55	48
Cargo	3	2	1	5	5	6	2	11	4	4
Bulk Carrier/OBO	28	30	33	22	32	25	15	22	28	23
Tanker	3	3	4	6	6	2	4	1	4	2
Ferry/Passenger	5	13	7	7	13	13	14	7	3	6
Tug/Barge	14	10	8	3	11	12	15	10	9	6
Fishing	7	1	1	1	2	2	1	2	1	2
Other	5	8	5	10	10	3	8	9	6	5
Vessels Lost	3	0	1	0	0	2	0	0	0	1
Fatalities	0	1	2	2	9	10	2	4	1	0
Incidents	21	24	16	32	26	28	23	25	32	32
<b>Laurentian Region</b>										
Shipping Accidents	63	64	72	60	59	60	56	62	94	61
Accidents Aboard Ship	9	8	12	7	9	6	17	8	13	11
Vessels Involved in Shipping Accidents										
By Type of Vessel	66	73	78	66	63	62	60	66	107	66
Cargo	5	9	12	8	12	7	3	5	11	11
Bulk Carrier/OBO	19	23	20	21	12	21	19	17	32	17
Tanker	5	5	6	4	4	4	5	4	11	7
Ferry/Passenger	5	10	11	8	5	7	10	11	7	3
Tug/Barge	11	6	14	4	9	5	5	7	7	8
Fishing	15	12	9	14	13	13	13	15	25	15
Other	6	8	6	7	8	5	5	7	14	5
Vessels Lost	5	2	4	2	2	3	6	1	2	0
Fatalities	3	9	5	1	2	2	2	4	2	2
Incidents	48	53	29	51	39	23	50	67	82	59
<b>Maritimes Region</b>										
Shipping Accidents	107	87	118	85	90	121	129	101	95	100
Accidents Aboard Ship	9	12	17	10	10	5	13	8	7	10
Vessels Involved in Shipping Accidents										
By Type of Vessel	114	95	128	95	97	128	138	108	104	107
Cargo	6	5	5	3	4	3	3	0	3	1
Bulk Carrier/OBO	1	3	0	0	0	2	1	0	0	3
Tanker	2	3	0	2	0	2	3	0	0	2
Ferry/Passenger	9	7	6	5	3	5	11	7	7	5
Tug/Barge	7	5	8	3	4	3	6	4	4	4
Fishing	77	59	92	73	75	96	99	80	79	78
Other	12	13	17	9	11	17	15	17	11	14
Vessels Lost	16	8	11	10	12	12	14	9	9	11
Fatalities	7	8	9	4	6	1	7	8	2	3
Incidents	19	17	35	35	33	26	35	28	16	21

**Table 2b**  
**Marine Occurrences by Region**  
**Occurrences, Vessels and Losses Involved**  
**1997–2006**

Newfoundland Region  
 Arctic Region  
 Foreign Waters

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Newfoundland Region</b>										
Shipping Accidents	105	59	94	73	69	58	80	73	70	74
Accidents Aboard Ship	15	11	11	20	5	5	9	10	8	3
Vessels Involved in Shipping Accidents										
By Type of Vessel	110	59	101	76	72	60	86	73	71	76
Cargo	1	2	3	2	1	3	0	1	1	6
Bulk Carrier/OBO	1	1	2	1	2	2	3	1	1	1
Tanker	1	3	2	2	1	1	0	0	0	2
Ferry/Passenger	1	3	5	5	4	4	5	5	2	3
Tug/Barge	3	0	3	3	0	0	2	2	0	0
Fishing	84	48	76	56	58	48	71	64	62	60
Other	19	2	10	7	6	2	5	0	5	4
Vessels Lost	15	13	10	9	15	1	7	6	6	6
Fatalities	7	24	1	9	4	5	0	3	9	6
Incidents	24	12	33	15	12	5	17	20	9	10
<b>Arctic Region</b>										
Shipping Accidents	2	5	15	8	4	2	7	6	0	4
Accidents Aboard Ship	0	2	3	0	0	0	5	1	0	3
Vessels Involved in Shipping Accidents										
By Type of Vessel	2	5	17	8	4	2	7	8	0	4
Cargo	0	2	1	3	1	0	3	0	0	0
Bulk Carrier/OBO	0	0	2	2	2	0	0	0	0	0
Tanker	0	0	0	0	0	0	1	1	0	0
Ferry/Passenger	1	1	3	1	0	0	0	0	0	2
Tug/Barge	0	0	2	0	1	2	0	2	0	1
Fishing	1	0	0	1	0	0	0	0	0	0
Other	0	2	9	1	0	0	3	5	0	1
Vessels Lost	0	0	0	2	0	1	0	0	0	1
Fatalities	0	0	0	4	0	0	2	1	0	1
Incidents	0	1	1	2	1	1	1	5	0	2
<b>Foreign Waters</b>										
Shipping Accidents	15	16	15	12	11	12	15	16	8	12
Accidents Aboard Ship	4	4	3	1	3	2	1	1	1	2
Vessels Involved in Shipping Accidents										
By Type of Vessel	17	22	17	16	13	13	17	19	9	15
Cargo	0	1	0	1	0	2	2	1	0	0
Bulk Carrier/OBO	7	8	10	7	8	6	6	5	4	10
Tanker	0	2	1	0	1	0	2	1	0	0
Ferry/Passenger	0	2	0	1	0	0	0	0	1	0
Tug/Barge	5	2	2	6	3	2	6	10	3	3
Fishing	2	3	0	0	0	1	0	1	1	2
Other	3	4	4	1	1	2	1	1	0	0
Vessels Lost	1	1	0	0	0	0	0	0	1	0
Fatalities	0	0	2	1	1	0	0	0	0	0
Incidents	2	4	7	3	6	5	3	5	1	5

**Table 3**  
**Canadian-Flag Vessels Involved in Shipping Accidents by**  
**Vessel Category and Type of Accident (Including Commercial Accident Rate)**  
**1997–2006**

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Commercial Vessels</b>	<b>127</b>	<b>156</b>	<b>157</b>	<b>135</b>	<b>146</b>	<b>143</b>	<b>165</b>	<b>147</b>	<b>140</b>	<b>144</b>
Collision	9	13	11	7	8	8	20	8	15	13
Capsizing	8	2	2	6	1	3	7	4	3	8
Foundering/Sinking	5	13	8	9	14	11	6	3	6	8
Fire/Explosion	19	17	16	17	15	14	20	17	24	18
Grounding	26	43	40	32	31	42	35	31	20	34
Striking	33	32	40	36	43	37	44	46	46	35
Ice Damage	4	2	3	1	2	0	4	2	4	0
Propeller/Rudder/Structural Damage	4	1	4	2	7	9	8	10	3	5
Flooding	4	12	4	9	7	5	4	9	7	11
Other	15	21	29	16	18	14	17	17	12	12
Movements*	35 658	35 885	31 315	40 081	34 843	37 619	39 786	36 175	36 700	37 400
Accident Rate**	3.5	3.5	4.9	3.1	3.9	3.3	3.3	3.8	3.7	3.3
<b>Fishing Vessels</b>	<b>308</b>	<b>243</b>	<b>273</b>	<b>227</b>	<b>232</b>	<b>232</b>	<b>253</b>	<b>223</b>	<b>230</b>	<b>197</b>
Collision	12	8	21	15	11	19	15	7	17	11
Capsizing	10	8	3	5	3	5	5	8	5	7
Foundering/Sinking	27	12	22	23	21	11	19	12	17	15
Fire/Explosion	48	33	37	32	57	28	38	28	31	22
Grounding	73	63	74	71	60	70	67	67	54	48
Striking	23	30	15	8	12	12	15	8	13	4
Ice Damage	17	9	6	3	2	1	21	14	5	2
Propeller/Rudder/Structural Damage	25	13	30	20	7	29	24	20	30	48
Flooding	58	52	55	42	56	41	39	50	46	31
Other	15	15	10	8	3	16	10	9	12	9
<b>Other Vessels</b>	<b>51</b>	<b>48</b>	<b>63</b>	<b>44</b>	<b>51</b>	<b>49</b>	<b>51</b>	<b>46</b>	<b>45</b>	<b>44</b>
Collision	6	3	9	3	7	3	7	6	4	7
Capsizing	1	3	1	4	0	6	0	4	2	3
Foundering/Sinking	2	2	1	6	3	3	5	2	0	1
Fire/Explosion	4	6	10	8	8	7	7	4	9	8
Grounding	9	8	13	5	9	4	8	3	7	9
Striking	10	11	12	12	18	14	13	7	10	8
Ice Damage	2	0	0	0	0	0	2	0	1	0
Propeller/Rudder/Structural Damage	1	3	2	1	1	1	1	2	2	1
Flooding	4	2	3	0	4	3	2	3	2	2
Other	12	10	12	5	1	8	6	15	8	5
<b>Total</b>	<b>486</b>	<b>447</b>	<b>493</b>	<b>406</b>	<b>429</b>	<b>424</b>	<b>469</b>	<b>416</b>	<b>415</b>	<b>385</b>

\* Based on data from Transport Canada (2005 and 2006 data are estimated). Note that Statistics Canada changed the method of recording tug and barge movements in 2000.

\*\* The accident rate is the number of Canadian-flag commercial vessels of 15 grt or more (excluding passenger vessels and fishing vessels) involved in shipping accidents per 1000 vessel movements.

**Table 4**  
**Foreign-Flag Vessels Involved in Shipping Accidents by**  
**Vessel Category and Type of Accident (Including Commercial Accident Rate)**  
**1997–2006**

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Commercial Vessels</b>	<b>70</b>	<b>73</b>	<b>75</b>	<b>71</b>	<b>62</b>	<b>51</b>	<b>47</b>	<b>48</b>	<b>67</b>	<b>61</b>
Collision	3	3	2	5	5	1	5	3	4	6
Capsizing	3	0	0	0	0	0	0	2	0	0
Foundering/Sinking	1	1	0	0	0	0	0	0	0	0
Fire/Explosion	5	7	6	6	6	4	0	2	5	7
Grounding	14	16	16	12	14	12	8	6	3	18
Striking	27	27	31	27	29	19	18	26	31	19
Ice Damage	0	0	1	2	0	1	1	1	1	0
Propeller/Rudder/Structural Damage	0	8	4	7	4	4	5	4	7	2
Flooding	2	2	2	0	1	2	2	0	2	1
Other	15	9	13	12	3	8	8	4	14	8
Movements*	32 146	32 532	32 352	32 946	31 696	31 442	30 899	31 575	32 055	32 380
Accident Rate**	2.1	2.2	2.3	2.0	1.8	1.6	1.4	1.3	2.1	1.8
<b>Fishing Vessels</b>	<b>11</b>	<b>8</b>	<b>7</b>	<b>11</b>	<b>14</b>	<b>6</b>	<b>7</b>	<b>4</b>	<b>7</b>	<b>11</b>
Collision	0	1	0	1	1	0	1	0	1	4
Capsizing	0	0	0	0	1	0	0	0	0	1
Foundering/Sinking	1	0	1	0	1	0	0	1	0	0
Fire/Explosion	1	2	0	1	1	0	1	0	0	0
Grounding	6	2	3	5	3	4	1	1	3	5
Striking	1	2	2	1	4	1	0	1	0	0
Ice Damage	0	0	0	0	0	0	0	0	0	0
Propeller/Rudder/Structural Damage	0	0	0	1	0	0	1	0	1	0
Flooding	1	1	1	0	2	1	2	1	2	1
Other	1	0	0	2	1	0	1	0	0	0
<b>Other Vessels</b>	<b>9</b>	<b>6</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>1</b>
Collision	0	0	1	1	0	0	1	0	0	0
Capsizing	0	0	0	0	1	0	0	0	0	0
Foundering/Sinking	0	0	0	0	1	1	0	0	0	0
Fire/Explosion	1	0	1	0	0	0	0	0	0	0
Grounding	0	1	2	1	0	0	1	2	2	1
Striking	5	4	0	1	0	0	0	0	0	0
Ice Damage	0	0	0	0	0	0	0	0	0	0
Propeller/Rudder/Structural Damage	0	0	0	0	0	0	0	0	0	0
Flooding	0	0	0	0	0	0	0	0	0	0
Other	3	1	2	1	0	1	1	1	0	0
<b>Total</b>	<b>90</b>	<b>87</b>	<b>88</b>	<b>86</b>	<b>78</b>	<b>59</b>	<b>57</b>	<b>55</b>	<b>76</b>	<b>73</b>

\* Based on data from Transport Canada (2005 and 2006 data are estimated). Note that Statistics Canada changed the method of recording tug and barge movements in 2000.

\*\* The accident rate is the number of foreign-flag commercial vessels of 15 grt or more (excluding passenger vessels and fishing vessels) involved in shipping accidents per 1000 vessel movements.

**Table 5**  
**Masters, Skippers and Operators Involved in Shipping Accidents**  
**by Vessel Flag and Crew Qualification**  
**1997–2006**

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Canadian-Flag Vessels</b>										
<b>Commercial Vessels</b>	<b>127</b>	<b>156</b>	<b>157</b>	<b>135</b>	<b>146</b>	<b>143</b>	<b>165</b>	<b>147</b>	<b>140</b>	<b>144</b>
Master Foreign-Going	15	13	11	8	13	12	12	14	11	11
ON1	10	16	10	13	8	12	9	8	15	9
ON2	1	0	0	1	0	0	0	1	1	1
CN1	9	16	2	4	6	11	14	8	6	5
CN2	8	9	8	4	6	1	2	9	5	2
Master – Ferry	1	2	1	2	1	3	4	1	2	0
Watchkeeping Mate	7	10	12	7	6	8	11	10	8	8
Other	15	17	38	24	24	29	22	29	11	15
Unknown	60	71	74	72	80	67	89	64	79	93
No Certificate	1	2	1	0	2	0	2	3	2	0
<b>Fishing Vessels</b>	<b>308</b>	<b>243</b>	<b>273</b>	<b>227</b>	<b>232</b>	<b>232</b>	<b>253</b>	<b>223</b>	<b>230</b>	<b>197</b>
Fishing Master – Class 1	1	3	2	3	4	2	3	1	2	0
Fishing Master – Class 2	10	1	3	3	3	8	3	4	9	3
Fishing Master – Class 3	15	8	10	11	9	17	16	9	14	10
Fishing Master – Class 4	18	9	13	12	22	19	19	19	23	16
Fishing – Other Certificate	2	1	0	5	1	4	5	2	3	5
Watchkeeping Mate	1	1	0	1	4	3	1	2	0	0
Other	5	0	2	2	1	1	0	1	3	0
Unknown	240	198	238	182	160	126	154	147	133	144
No Certificate	16	22	5	8	28	52	52	38	43	19
<b>Other Vessels</b>	<b>51</b>	<b>48</b>	<b>63</b>	<b>44</b>	<b>51</b>	<b>49</b>	<b>51</b>	<b>46</b>	<b>45</b>	<b>44</b>
Master Foreign-Going	5	3	13	4	10	9	7	6	6	5
ON1	7	4	3	5	1	2	4	4	3	4
ON2	1	1	1	0	1	0	1	1	1	0
CN1	1	1	1	1	2	0	0	0	2	2
CN2	1	0	0	0	1	0	0	3	0	0
Watchkeeping Mate	7	5	0	4	8	6	2	6	2	3
Other	11	12	14	7	4	5	10	10	9	4
Unknown	17	20	30	23	24	25	27	16	21	26
No Certificate	1	2	1	0	0	2	0	0	1	0
<b>Foreign-Flag Vessels</b>										
<b>Commercial Vessels</b>	<b>70</b>	<b>73</b>	<b>75</b>	<b>71</b>	<b>62</b>	<b>51</b>	<b>47</b>	<b>48</b>	<b>67</b>	<b>61</b>
Master Foreign-Going	31	38	36	46	33	26	17	19	20	26
CN1	0	1	0	0	0	0	0	0	0	0
CN2	1	0	0	1	0	1	0	0	1	0
Other	17	9	6	3	2	0	0	0	0	1
Unknown	21	25	33	21	27	24	30	29	46	34
<b>Fishing Vessels</b>	<b>11</b>	<b>8</b>	<b>7</b>	<b>11</b>	<b>14</b>	<b>6</b>	<b>7</b>	<b>4</b>	<b>7</b>	<b>11</b>
Certificate	1	1	0	4	2	1	2	1	0	0
Unknown	10	7	7	7	12	5	5	3	7	11
No Certificate	0	0	0	0	0	0	0	0	0	0
<b>Other Vessels</b>	<b>9</b>	<b>6</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>1</b>
Master Foreign-Going	0	0	1	0	0	0	0	0	1	0
Other	4	1	0	0	0	0	0	0	0	0
Unknown	4	5	4	4	2	2	3	3	1	1
No Certificate	1	0	1	0	0	0	0	0	0	0

**Table 6**  
**Vessels Lost by Vessel Category and Age**  
**1997–2006**

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Commercial Vessels</b>	<b>7</b>	<b>8</b>	<b>5</b>	<b>4</b>	<b>7</b>	<b>8</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>8</b>
Unknown	0	0	1	0	0	4	2	0	1	2
0–4 years	0	0	1	0	1	1	0	0	0	0
5–9 years	0	1	0	0	1	0	0	0	0	0
10–14 years	0	0	0	0	0	0	0	0	0	0
15–19 years	1	0	0	0	0	0	0	0	0	0
20–24 years	0	0	1	1	1	0	0	0	0	0
25–29 years	0	2	0	0	0	0	0	0	0	0
30+ years	6	5	2	3	4	3	2	1	1	6
<b>Fishing Vessels</b>	<b>51</b>	<b>41</b>	<b>39</b>	<b>30</b>	<b>44</b>	<b>20</b>	<b>32</b>	<b>19</b>	<b>24</b>	<b>22</b>
Unknown	11	8	4	4	7	4	2	5	3	4
0–4 years	0	2	1	0	2	0	2	2	2	1
5–9 years	6	6	3	4	1	4	2	2	1	4
10–14 years	4	3	5	6	9	3	4	0	2	2
15–19 years	10	5	7	4	3	1	5	3	7	3
20–24 years	5	4	5	4	7	2	5	3	3	3
25–29 years	3	5	2	2	2	3	5	1	4	1
30+ years	12	8	12	6	13	3	7	3	2	4
<b>Other Vessels</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>1</b>
Unknown	1	0	0	2	0	1	1	2	0	1
0–4 years	0	0	0	0	0	0	0	0	0	0
5–9 years	0	0	0	0	0	0	0	0	0	0
10–14 years	0	0	1	0	0	0	0	0	0	0
15–19 years	1	0	0	0	0	0	0	0	0	0
20–24 years	0	0	0	0	0	0	0	0	0	0
25–29 years	0	0	0	1	0	0	0	0	0	0
30+ years	0	0	0	0	0	3	1	0	0	0
<b>All Vessels</b>	<b>60</b>	<b>49</b>	<b>45</b>	<b>37</b>	<b>51</b>	<b>32</b>	<b>38</b>	<b>22</b>	<b>26</b>	<b>31</b>
Unknown	12	8	5	6	7	9	5	7	4	7
0–4 years	0	2	2	0	3	1	2	2	2	1
5–9 years	6	7	3	4	2	4	2	2	1	4
10–14 years	4	3	6	6	9	3	4	0	2	2
15–19 years	12	5	7	4	3	1	5	3	7	3
20–24 years	5	4	6	5	8	2	5	3	3	3
25–29 years	3	7	2	3	2	3	5	1	4	1
30+ years	18	13	14	9	17	9	10	4	3	10

**Table 7**  
**Accidents, Fatalities and Injuries by Type of Accident**  
**1997–2006**

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Shipping Accidents</b>										
<b>with Fatalities or Injuries</b>										
Collision	1	2	3	1	2	4	2	1	4	0
Capsizing	6	5	2	6	3	4	3	7	6	6
Sinking/Foundering	0	5	4	7	5	3	2	7	1	1
Fire/Explosion	4	1	2	1	2	5	4	2	1	4
Grounding	3	0	3	2	2	4	2	0	0	3
Striking	6	1	2	3	4	4	5	2	5	2
Other	1	2	4	2	1	1	1	2	0	0
<b>Total</b>	<b>21</b>	<b>16</b>	<b>20</b>	<b>22</b>	<b>19</b>	<b>25</b>	<b>19</b>	<b>21</b>	<b>17</b>	<b>16</b>
<b>Fatalities*</b>										
Collision	1	2	5	2	1	0	1	2	0	0
Capsizing	8	6	2	6	3	10	5	9	10	6
Sinking/Foundering	0	28	5	7	10	7	2	11	3	1
Fire/Explosion	3	0	1	0	0	1	1	0	0	2
Grounding	0	0	0	0	0	1	0	0	0	3
Striking	0	0	1	1	0	0	0	0	0	0
Other	0	2	0	0	3	0	0	0	0	0
<b>Total</b>	<b>12</b>	<b>38</b>	<b>14</b>	<b>16</b>	<b>17</b>	<b>19</b>	<b>9</b>	<b>22</b>	<b>13</b>	<b>12</b>
<b>Injuries</b>										
Collision	0	0	3	0	1	4	1	2	7	0
Capsizing	2	5	0	5	1	0	2	7	4	1
Sinking/Foundering	0	14	5	5	6	4	2	4	0	0
Fire/Explosion	4	1	1	3	2	7	4	6	1	6
Grounding	4	0	3	3	3	10	3	0	0	3
Striking	12	1	4	5	5	16	22	15	13	16
Other	3	1	7	2	0	1	1	3	0	0
<b>Total</b>	<b>25</b>	<b>22</b>	<b>23</b>	<b>23</b>	<b>18</b>	<b>42</b>	<b>35</b>	<b>37</b>	<b>25</b>	<b>26</b>
<b>Accidents Aboard Ship</b>										
<b>Fatalities*</b>										
Carried Overboard	0	0	0	1	2	0	3	0	0	0
Caught by Cargo/Machinery	3	1	5	1	3	1	2	1	1	0
Fell Overboard	4	4	6	7	8	3	2	2	3	2
Fell into Tank/Hold	0	0	1	0	0	0	0	0	0	0
Fell on Deck or off Quay	0	2	0	0	2	0	0	0	2	0
Heavy Weather	0	0	0	0	0	0	0	0	0	0
Suicide (Suspected)	0	1	0	1	0	0	1	1	1	0
Other	5	2	3	5	2	5	0	2	0	4
<b>Total</b>	<b>12</b>	<b>10</b>	<b>15</b>	<b>15</b>	<b>17</b>	<b>9</b>	<b>8</b>	<b>6</b>	<b>7</b>	<b>6</b>
<b>Injuries</b>										
Carried Overboard	2	1	0	1	3	2	2	2	3	1
Caught by Cargo/Machinery	28	24	17	33	16	11	25	16	17	21
Fell Overboard	3	3	5	4	2	2	1	2	1	1
Fell into Tank/Hold	1	2	3	2	1	1	3	0	0	3
Fell on Deck or off Quay	10	4	9	12	8	7	9	4	8	5
Heavy Weather	1	2	0	0	2	0	2	1	0	0
Suicide (Suspected)	0	1	0	0	0	0	0	0	0	0
Other	14	21	27	19	20	13	18	20	12	26
<b>Total</b>	<b>59</b>	<b>58</b>	<b>61</b>	<b>71</b>	<b>52</b>	<b>36</b>	<b>60</b>	<b>45</b>	<b>41</b>	<b>57</b>

\* The total number of fatalities includes missing persons.

**Table 8**  
**Accidents, Fatalities and Injuries by Type of Vessel**  
**1997–2006**

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Shipping Accidents with Fatalities or Injuries</b>										
Cargo/Bulk Carrier/OBO	0	1	1	1	1	0	0	0	0	0
Tanker	1	0	0	0	0	0	0	0	0	2
Tug/Barge	2	1	2	5	3	2	0	2	1	0
Fishing	10	10	10	9	10	13	11	10	9	9
Passenger	1	1	1	1	0	2	3	1	1	1
Ferry	3	0	0	1	0	2	4	2	3	2
Other	4	3	6	5	5	6	1	6	3	2
<b>Total</b>	<b>21</b>	<b>16</b>	<b>20</b>	<b>22</b>	<b>19</b>	<b>25</b>	<b>19</b>	<b>21</b>	<b>17</b>	<b>16</b>
<b>Fatalities*</b>										
Cargo/Bulk Carrier/OBO	0	21	1	4	0	0	0	0	0	0
Tanker	2	0	0	0	0	0	0	0	0	1
Tug/Barge	0	0	0	1	4	1	0	3	0	0
Fishing	9	14	7	5	10	9	8	13	11	8
Passenger	0	2	0	2	0	4	0	0	0	0
Ferry	0	0	0	0	0	0	0	0	0	2
Other	1	1	6	4	3	5	1	6	2	1
<b>Total</b>	<b>12</b>	<b>38</b>	<b>14</b>	<b>16</b>	<b>17</b>	<b>19</b>	<b>9</b>	<b>22</b>	<b>13</b>	<b>12</b>
<b>Injuries</b>										
Cargo/Bulk Carrier/OBO	0	4	0	0	2	0	0	0	0	0
Tanker	2	0	0	0	0	0	0	0	0	2
Tug/Barge	4	2	4	7	2	5	0	0	3	0
Fishing	4	11	10	7	10	18	10	8	8	5
Passenger	1	2	3	0	0	1	8	10	4	8
Ferry	8	0	0	1	0	14	17	7	9	8
Other	6	3	6	8	4	4	0	12	1	3
<b>Total</b>	<b>25</b>	<b>22</b>	<b>23</b>	<b>23</b>	<b>18</b>	<b>42</b>	<b>35</b>	<b>37</b>	<b>25</b>	<b>26</b>
<b>Accidents Aboard Ship</b>										
Cargo/Bulk Carrier/OBO	13	16	14	15	16	9	16	15	6	13
Tanker	1	1	2	2	3	0	3	1	2	4
Tug/Barge	3	7	3	3	7	4	4	3	5	4
Fishing	27	19	28	34	23	13	27	26	15	20
Passenger	5	6	6	5	2	2	0	0	5	2
Ferry	3	1	2	4	0	4	4	3	3	1
Other	8	9	14	14	8	4	12	2	9	4
<b>Total</b>	<b>60</b>	<b>59</b>	<b>69</b>	<b>77</b>	<b>59</b>	<b>36</b>	<b>66</b>	<b>50</b>	<b>45</b>	<b>48</b>
<b>Fatalities*</b>										
Cargo/Bulk Carrier/OBO	1	3	4	3	3	1	0	1	1	2
Tanker	0	0	0	0	1	0	0	0	0	1
Tug/Barge	0	1	1	2	4	0	2	0	0	1
Fishing	7	4	8	8	8	5	4	3	3	2
Passenger	2	1	0	1	0	0	0	0	1	0
Ferry	0	0	1	1	0	1	2	1	1	0
Other	2	1	1	0	1	2	0	1	1	0
<b>Total</b>	<b>12</b>	<b>10</b>	<b>15</b>	<b>15</b>	<b>17</b>	<b>9</b>	<b>8</b>	<b>6</b>	<b>7</b>	<b>6</b>
<b>Injuries</b>										
Cargo/Bulk Carrier/OBO	13	19	10	15	14	9	18	14	5	19
Tanker	1	1	2	2	2	0	3	1	2	3
Tug/Barge	12	6	2	3	8	5	2	4	5	5
Fishing	20	16	25	29	16	14	23	23	13	18
Passenger	3	7	8	4	3	2	0	0	4	6
Ferry	4	1	1	4	0	4	2	2	3	1
Other	6	8	13	14	9	2	12	1	9	5
<b>Total</b>	<b>59</b>	<b>58</b>	<b>61</b>	<b>71</b>	<b>52</b>	<b>36</b>	<b>60</b>	<b>45</b>	<b>41</b>	<b>57</b>

\* The total number of fatalities includes missing persons.

## APPENDIX B – DEFINITIONS

The following definitions apply to marine occurrences that are required to be reported pursuant to the *Canadian Transportation Accident Investigation and Safety Board Act* and the associated regulations.

### *Marine Occurrence*

- a) any accident or incident associated with the operation of a ship<sup>4</sup> and
- b) any situation or condition that the Board has reasonable grounds to believe could, if left unattended, induce an accident or incident described in paragraph a) above.

### *The Act applies*

- a) in Canada; and
- b) in any other place, including waters described in paragraph c), if
  - i) Canada is requested to investigate the marine occurrence by an appropriate authority,
  - ii) the marine occurrence involves a ship registered or licensed in Canada, or
  - iii) a competent witness to, or person having information concerning a matter that may have contributed to, the marine occurrence arrives or is found at any place in Canada.
- c) This Act also applies in respect of marine occurrences related to an activity concerning the exploration or exploitation of the continental shelf.

### *Reportable Marine Accident*

An accident resulting directly from the operation of a ship other than a pleasure craft,<sup>5</sup> where

- a) a person sustains a serious injury or is killed as a result of
  - i) being on board the ship or falling overboard from the ship, or
  - ii) coming into contact with any part of the ship or its contents, or
- b) the ship
  - i) sinks, founders or capsizes,
  - ii) is involved in a collision (which includes collisions, strikings and contacts),
  - iii) sustains a fire or an explosion,
  - iv) goes aground,
  - v) sustains damage that affects its seaworthiness or renders it unfit for its purpose, or
  - vi) is missing or abandoned.

For statistical purposes, accidents defined in paragraph a) are classified as “Accidents Aboard Ship” and accidents defined in paragraph b) are classified as “Shipping Accidents.”

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<sup>4</sup> Ship includes:

- a) every description of vessel, boat or craft designed, used or capable of being used solely or partly for marine navigation without regard to method or lack of propulsion, and
- b) a dynamically supported craft.

<sup>5</sup> Pleasure craft means a ship that is used for pleasure or recreation and does not carry goods or passengers for hire or reward.

## *Reportable Marine Incident*

An incident resulting directly from the operation of a ship, other than a pleasure craft, where

- a) a person falls overboard from the ship;
- b) the ship, of 100 gross tons or more, unintentionally makes contact with the bottom without going aground;
- c) the ship fouls a utility cable or pipe, or underwater pipeline;
- d) the ship is involved in a risk of collision;
- e) the ship sustains a total failure of any machinery;
- f) the ship sustains a shifting of cargo or a loss of cargo overboard;
- g) the ship is intentionally grounded or beached to avoid an accident;
- h) any crew member whose duties are directly related to the safe operation of the ship is unable to perform the crew member's duties as a result of a physical incapacitation that poses a threat to the safety of any person, property or the environment; or
- i) any dangerous goods are released on board or from the ship.

## *Vessels Covered*

This report covers commercial vessels that include all vessels either registered or licensed to operate commercially. Pleasure craft occurrences are not normally included unless they also involved a commercial vessel.

## *Vessel Categories*

- **Commercial Vessels:** include cargo vessels, ferries, tankers, passenger vessels, tugs and barges.
- **Fishing Vessels:** include vessels involved in commercial fishing.
- **Other Vessels:** include research vessels, oil exploration, exploitation and support vessels, government vessels and pleasure craft.

## *Type of Vessel*

**Cargo:** Ships designed for the carriage of various types and forms of cargo and the combined carriage of general cargo and passengers with 12 or less fare-paying passengers.

**Bulk Carrier:** Ships specifically designed for bulk carriage of ore or other dry cargo.

**OBO (Oil/Bulk/Ore Carrier):** Ships specifically designed for bulk carriage of ore with additional facilities for alternative, but not simultaneous, carriage of oil or loose dry cargo.

**Tanker:** Propelled ships designed and constructed for the bulk carriage of liquids.

**Tug:** Vessels designed for the towing and pushing of ships or other floating structures. Additional activity may include salvage, fire-fighting and work duties of a general nature.

**Barge:** Vessels designed as non-propelled units for the carriage of cargo in holds or in tanks or weather deck cargo space only for the carriage of non-perishable cargo, or specially outfitted for specific operations.

**Ferry:** Ships that follow a regular scheduled service of relatively short duration, designed for the carriage of passengers and vehicles. There is usually no cabin accommodation for passengers or not all passengers are accommodated in cabins where cabins are provided.

**Passenger:** Vessels designed for the carriage of passengers.

**Fishing:** Vessels designed for fishing operations and support.

**Service:** Vessels designed for supporting marine transportation such as icebreakers, buoy tenders, search and rescue vessels, pilot boats and fireboats.

**Non-Commercial:** Vessels designed to conduct non-commercial activities such as pleasure craft, seaplanes and naval vessels.

**Other:** Vessels designed for other functions such as laying and repair of sea-bed cables, dredging, training, patrolling as well as ships and platforms designed for the extraction, processing, and storage of oil/gas from offshore wells; ships designed for the carriage of stores and cargo to offshore installations; ships outfitted for support activities related to offshore oil and gas exploration; and vessels designed for research work such as seismic research, oceanic and hydrographic survey.

### *Type of Accident*

**Collision:** An impact between two or more vessels under way.

**Capsizing:** To turn over.

**Foundering:** To fill from above the waterline and sink.

**Sinking:** To become submerged from water intake below the waterline and settle to the bottom.

**Fire:** Where a fire is the first event reported.

**Explosion:** Where an explosion is the first event reported.

**Grounding:** To touch bottom and remain stranded.

**Striking:** A hard impact with a stationary object or a vessel not under way.

**Ice Damage:** Damage sustained as a consequence of contact with ice.

**Propeller Damage:** Damage to a vessel propeller, propeller portion or propeller adjoining parts affecting a vessel's seaworthiness or rendering the vessel unfit for its purpose.

**Rudder Damage:** Damage to a vessel rudder or rudder adjoining parts affecting a vessel's seaworthiness or rendering the vessel unfit for its purpose.

**Structural Damage:** Hull damage, such as cracks and fractures, sustained by a vessel affecting its seaworthiness or rendering the vessel unfit for its purpose.

**Flooding:** To fill a compartment below the waterline with water admitted from the sea.

**Other:** Vessels lost or damaged for other reasons, including contact defined as a lateral/light impact with another vessel or an object (that is, bottom contact affecting a vessel's seaworthiness or rendering the vessel unfit for its purpose).

### *Miscellaneous*

**Gross tons (grt):** A measure of vessel capacity in cubic feet of the spaces within the hull, and of enclosed spaces above deck available for cargo, stores, fuel, passengers and crew, with certain exclusions. One hundred cubic feet is equivalent to one gross ton.

**Movement:** A vessel's travel segment between ports with at least one port being a domestic port.

**Under way:** Vessel not at anchor or made fast to shore or aground.

# APPENDIX C – REGIONAL LIMITS

