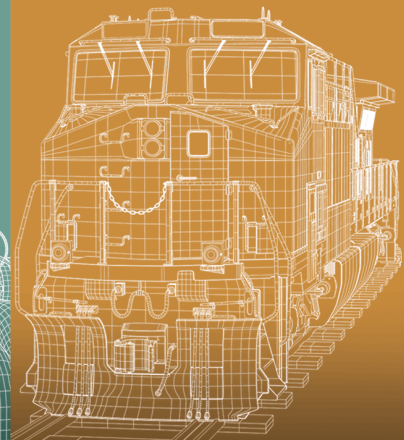
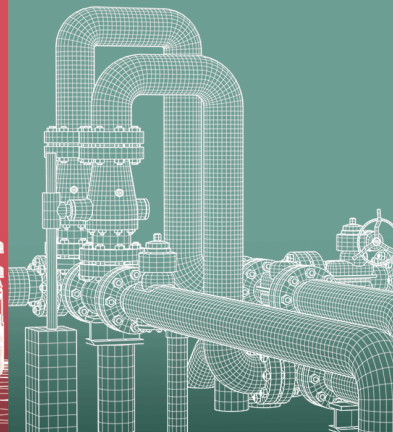




Transportation
Safety Board
of Canada

Bureau de la sécurité
des transports
du Canada



STATISTICAL SUMMARY

Marine Transportation Occurrences in 2024

Canada

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Statistical summary: marine transportation occurrences in 2024

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Le présent rapport est également disponible en français.

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Statistical Summary

Marine Transportation Occurrences in 2024

Please note that the tables and figures in the [HTML version](#) are fully accessible.

The TSB gathers and uses transportation occurrence data during the course of its investigations to analyze safety deficiencies and identify risks in the Canadian marine transportation system.

It should be noted that certain characteristics of the data constrain statistical analysis and identification of emerging trends. These include the small totals of accidents and incidents, the large variability in the data from year to year, and changes to regulations and definitions. The reader is cautioned to keep these limitations in mind when viewing this summary to avoid drawing conclusions that cannot be supported by statistical analysis.

The 2024 data were collected according to the reporting requirements described in the *Transportation Safety Board Regulations* in force during that calendar year.

The statistics presented here reflect the TSB Marine Safety Information System (MARSIS) database at 24 February 2025. Since the occurrence data are constantly being updated in the live database, the statistics may change slightly over time.

Also, as many occurrences are not formally investigated, information recorded on some occurrences may not have been verified.

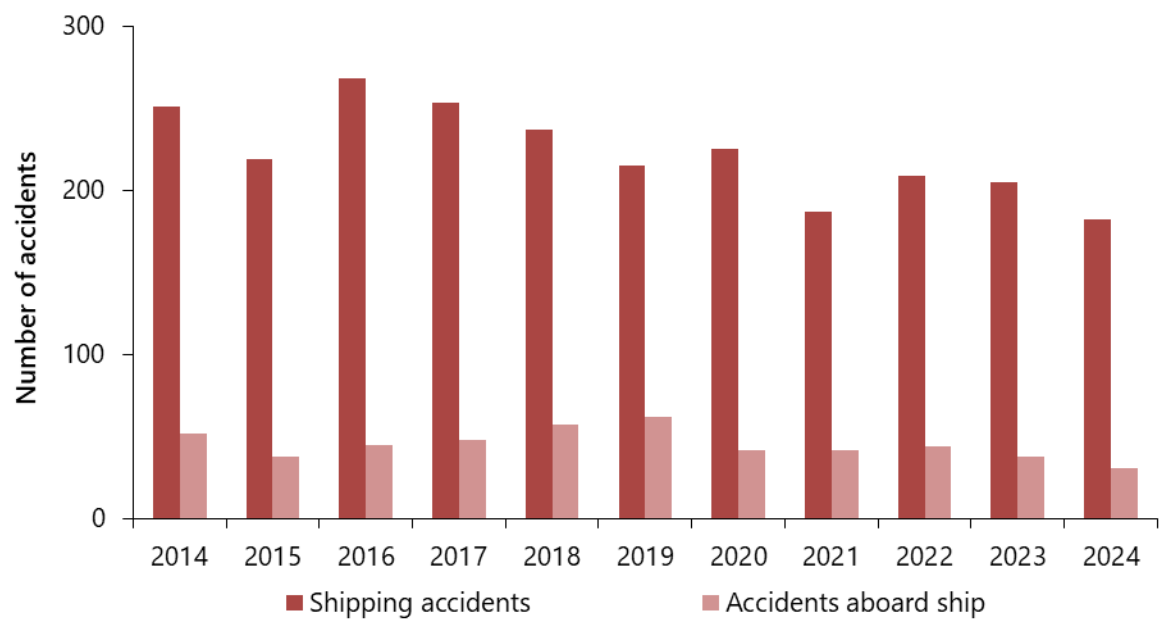
Accidents

Overview of accidents and casualties

In 2024, 213 marine accidents¹ were reported to the TSB, below the 2023 total of 243 and below the 10-year (2014 to 2023) average of 274 (Figure 1). In 2024 the proportion of shipping accidents (as opposed to accidents aboard ship) was 85% of all marine accidents, slightly higher than the previous 10-year average proportion (83%).

There were 182 shipping accidents in 2024, below the 2023 total of 205 and 20% down from the 2014 to 2023 average of 227. Fishing vessels were involved in 29% of all shipping accidents, which is the highest proportion among vessel types, followed by solid cargo vessels, involved in 18% of shipping accidents (data not shown).

Figure 1. Shipping accidents and accidents aboard ship, 2014 to 2024



In 2024, 31 accidents aboard ship were reported to the TSB, compared to 38 in 2023 and also down from the 2014 to 2023 average of 47. Fishing vessels were involved in 48% of all accidents aboard ship, which is the highest proportion among vessel types, followed by solid cargo vessels, involved in 23% of accidents aboard ship (data not shown).

Casualties (tables 1, 6 and 7)

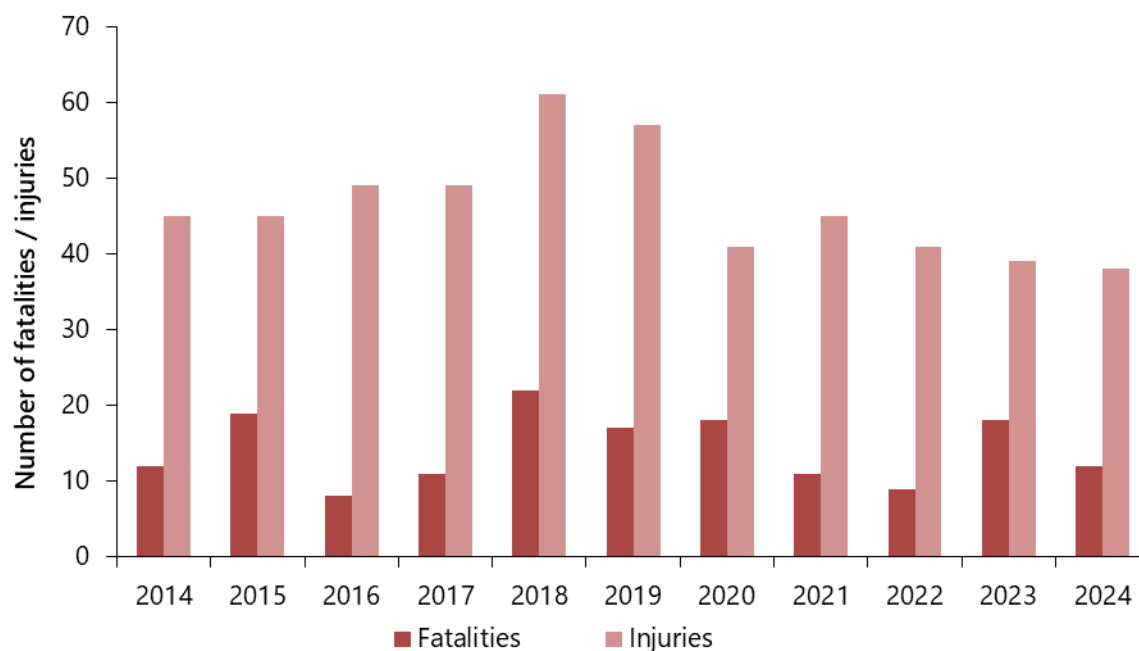
In 2024, 12 marine fatalities were reported, down from the 18 fatalities reported in 2023, and below the annual average of 14.5 in the 2014 to 2023 time period. Of the 12 fatalities in 2024, 8 were the result of 4 shipping accidents, while the remaining 4 fatalities resulted from 4 accidents aboard ship.

¹ See the Definitions section.

Of note, 6 shipping accident fatalities in 2024 involved commercial fishing vessels, and all 4 of the fatalities that ensued from accidents aboard ship occurred aboard commercial fishing vessels. These data indicate that more still needs to be done to improve safety in the commercial fishing industry.

Serious injuries in 2024 totalled 38, slightly down from 39 in 2023 and below the annual average of 47 from 2014 to 2023. Thirty of the 38 serious injuries (79%) resulted from accidents aboard ship, and 8 resulted from shipping accidents (Figure 2).

Figure 2. Marine fatalities and serious injuries, 2014 to 2024

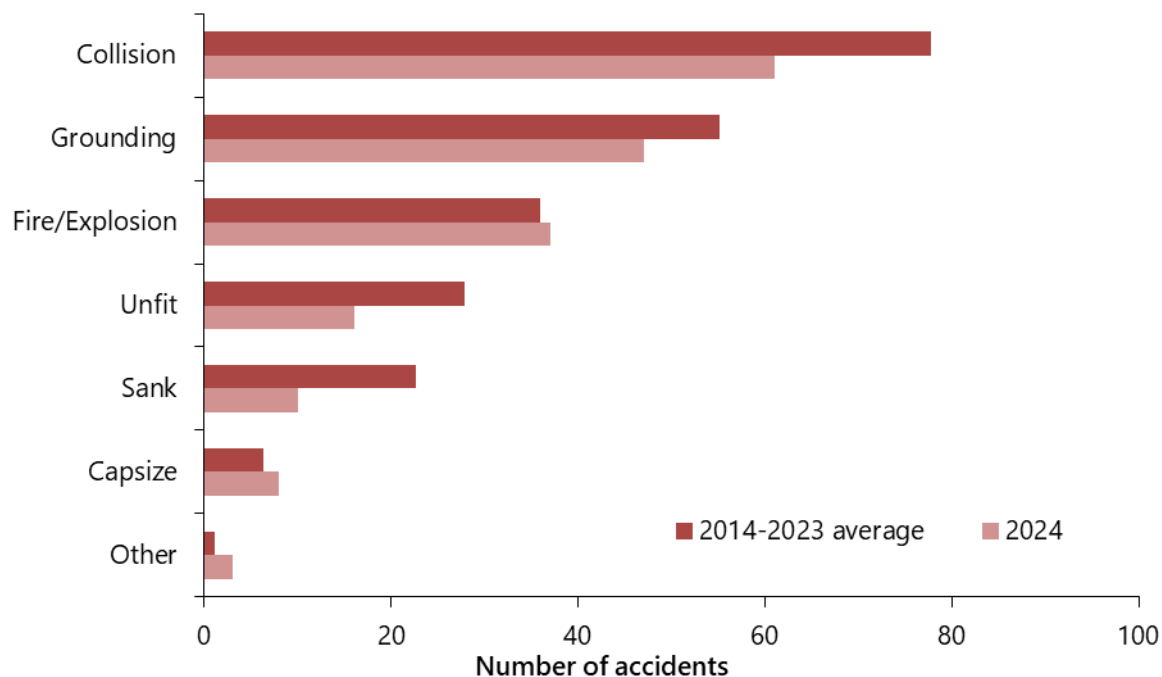


Shipping accidents

Type of accident (Table 1)

As illustrated in Figure 3, the most frequent types of shipping accidents in 2024 were collision (34% of all accident types reported), grounding (26%) and fire/explosion (20%). The total number of collisions (61) was 22% below the 10-year (2014-2023) average of 78, the number of groundings (47) was 15% below the 10-year average of 55, while the number of fire/explosion accidents (37) was 3% above the 10-year average of 36.

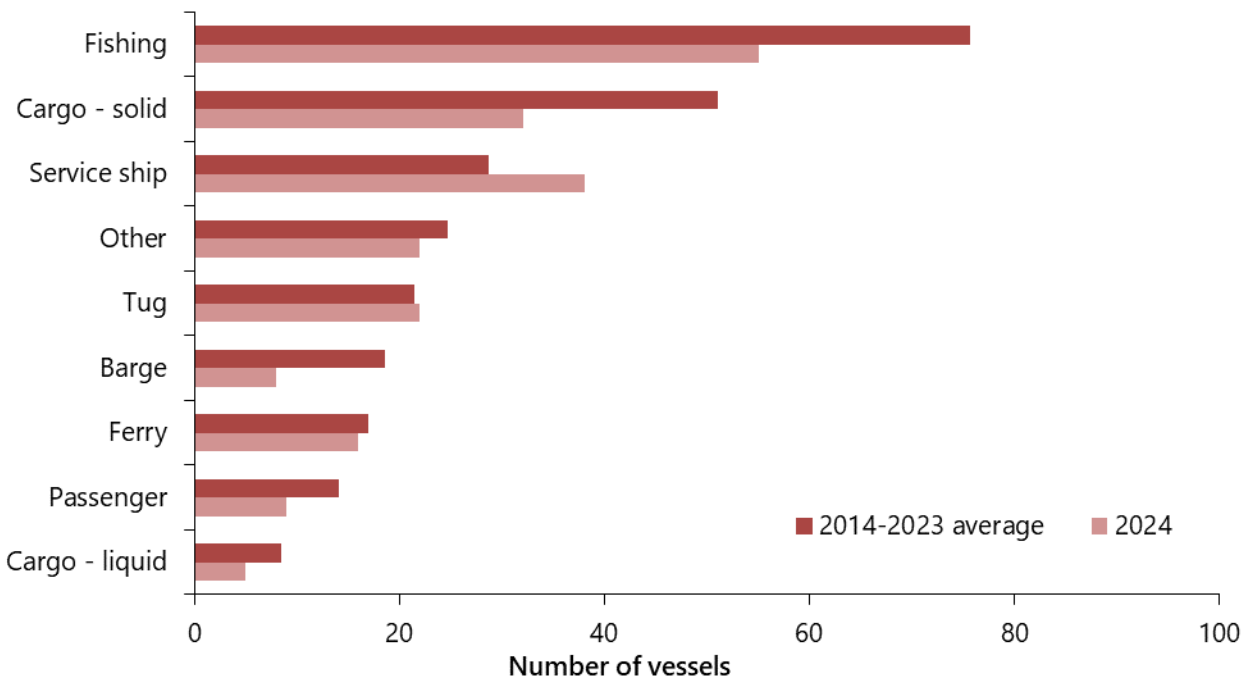
Figure 3. Shipping accidents, by accident type, in 2024 compared with the 2014-2023 average



Type of vessel (Table 1)

Fifty-five fishing vessels were involved in shipping accidents in 2024, slightly down from 57 in 2023 and down from the 2014-2023 average of 76 (Figure 4). Of the total number of vessels involved in shipping accidents, 26% were fishing vessels.

Figure 4. Shipping accidents, by vessel type, in 2024 compared with the 2014-2023 average

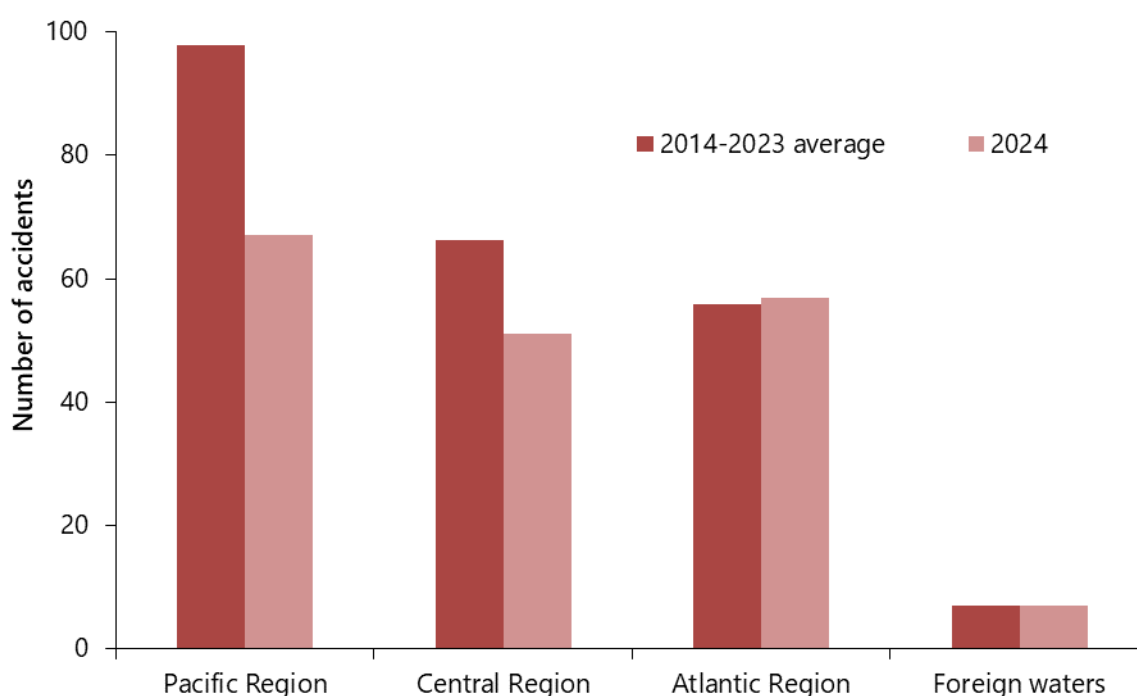


Geographical region (Table 2)

In 2024, 37% of shipping accidents occurred in the Pacific region, 31% in the Atlantic region, and 28% in the Central region. Less than 4% of shipping accidents were in foreign waters.² In the Pacific region in 2024, the number of shipping accidents (67) dropped 31% below the 2014-2023 average of 98. In the Central region shipping accidents (51) were 23% below the 2014-2023 average of 66, while In the Atlantic region the number of shipping accidents (57) was close to the 2014-2023 average of 56 (Figure 5).

In 2024, fishing vessels were more often involved in shipping accidents than other vessel types in the Atlantic region (31 fishing vessels, down from the 2014-2023 average of 38), and in the Pacific region (22 fishing vessels, below the 2014-2023 average of 31. As for the Central region, most of the vessels involved in shipping accidents were of cargo/tanker vessel type (22 cargo/tankers, below the 2014-2023 average of 37 (Table 2).

Figure 5. Shipping accidents, by geographical region, in 2024 compared with the 2014-2023 average



Vessel flag (tables 1, 3, and 4)

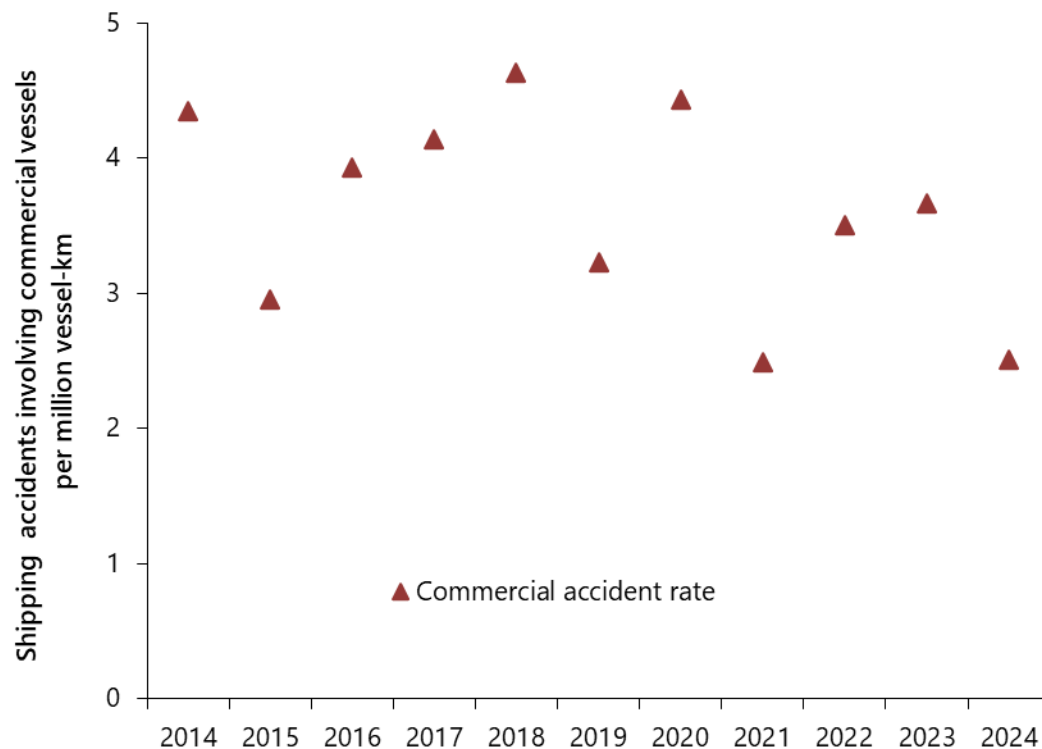
In 2024, 78% of the 207 vessels involved in shipping accidents reported to the TSB were Canadian-flag vessels. Of these 161 Canadian-flag vessels, 41% were commercial non-fishing vessels and 34% were fishing vessels; the remaining 25% were service vessels (38), survey/research vessels (2) or sailing vessels (1).

² See the Definitions section.

Accident rates

In 2024, Canadian-flag commercial non-fishing vessels were most often involved in collisions (45%), groundings (21%), or fire/explosions (17%) (Table 3). According to information provided by Transport Canada³ and TSB estimates⁴, marine activity for Canadian commercial non-fishing vessels over 15 gross tons (GT) (excluding passenger vessels and cruise ships) was 13.971 million commercial vessel-km in 2024, unchanged from the 2014-2023 average. This yields a rate of 2.5 shipping accidents per million commercial vessel-km in 2024, lower than the prior 10-year average of 3.7.

Figure 6. Shipping accident rate for Canadian-flag commercial non-fishing vessels, 2014 to 2024



³ TC combines terrestrial automatic identification system (AIS) data from the Canadian Coast Guard and satellite AIS data from the Government of Canada Satellite AIS provider to yield a comprehensive and detailed distance-based metric of Canadian-flag commercial marine activity in Canadian waters. (Source 1. An introduction to automatic identification system (AIS) data & how it's used at TC (OPP). Transport Canada. December, 2019. Source 2. Transport Canada, Transportation and Economic Analysis – Policy Group, email communication 20 March 2025.)

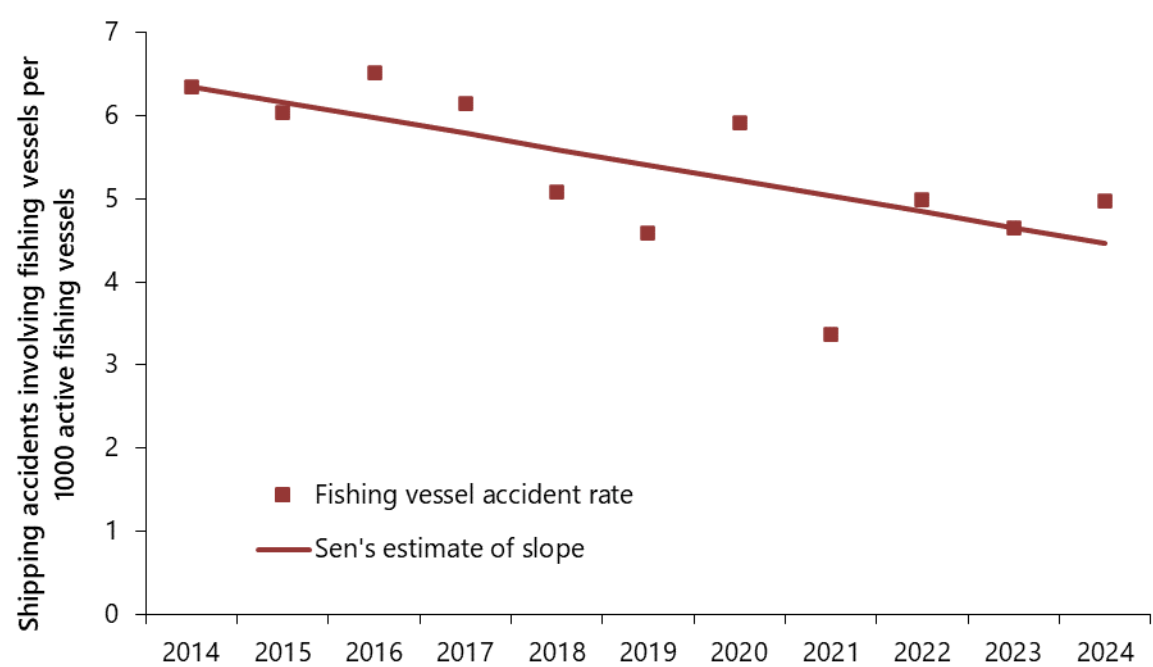
⁴ The provided TC data does not capture activity of all commercial vessels below 300 GT, which are not required to be AIS-equipped. Therefore, the TSB estimated vessel-km for all commercial vessels under 300 GT by applying the results of a 2015-2017 aerial survey of AIS-equipped (or not) vessels (Serra-Sogas et al, 2021) to the AIS-based activity data provided by TC.

(Source: Serra-Sogas, N., O'Hara, P., Pearce, K., Smallshaw, L., and Canessa, R. (2021). Using aerial surveys to fill gaps in AIS vessel traffic data to inform threat assessments, vessel management and planning. *Marine Policy* 133. <https://doi.org/10.1016/j.marpol.2021.104765>)

For Canadian-flag fishing vessels, the most frequently reported shipping accident types in 2024 were grounding (44%), fire/explosion (17%) and collision (15%) (Table 3). According to information provided by the Department of Fisheries and Oceans, there were 10 668 active fishing vessels in Canada in 2024⁵. The shipping accident rate for Canadian-flag fishing vessels (Figure 7) was 5.0 shipping accidents per 1000 active fishing vessels in 2024, above the rate of 4.7 in 2023, but below the 2014-2023 average of 5.4.

Kendall's tau-b (τ_b) correlation and Sen's estimate of slope were used to quantify the trend in the fishing vessel accident rate shown in Figure 7. Kendall's τ_b correlation coefficient is a nonparametric measure of the strength and direction of association that exists between two variables. Kendall's τ_b was calculated on the 11-year series of accident rate values by year from 2014 to 2024. There was a moderately strong, negative correlation that indicates a downward trend in the Canadian fishing vessel shipping accident rate over the period ($\tau_b = -0.564$, $p = 0.016$). Sen's estimate of slope, the amount of downward rate change per year, was -0.188 accidents per thousand Canadian-flag fishing vessels.

Figure 7. Shipping accident rate, for Canadian-flag fishing vessels, 2014 to 2024



In 2024, 27 foreign-flag vessels were involved in shipping accidents in Canadian waters, 26 of which were commercial non-fishing vessels (Table 4). According to information provided by Transport Canada,⁶ marine activity for foreign commercial non-fishing vessels over 15 GT was 25.519 million commercial vessel-km in 2024, above the 2014-2023 average of 19.131 million commercial vessel-km. This yields an

⁵ Source: Department of Fisheries and Oceans (DFO), email communications 20 March 2025, 1 April 2025. Active fishing vessels are defined as commercial fishing vessels landing at least one catch in that calendar year.

⁶ Source: Transport Canada, Transportation and Economic Analysis – Policy Group, email communication 20 March 2025.

accident rate of 0.9 shipping accidents involving commercial foreign-flag vessels over 15 GT per million commercial vessel-km, below the 2014-2023 average of 1.8.

Vessels lost (tables 1 and 5)

In 2024, 18 vessels were reported lost,⁷ more than in 2023 (13) and above the 2014-2023 average of 16. Eleven of the 18 vessels lost in 2024 were fishing vessels. Seven of the 18 vessels lost were less than 15 GT and for 3 vessels the tonnage was not known. In the past 10 years (2015 to 2024), fishing vessels under 60 GT have accounted for 51% of Canadian vessels lost (tables 1 and 5, some data not shown).

⁷ The final outcome of each occurrence is not always reported to the TSB; these totals reflect reported data.

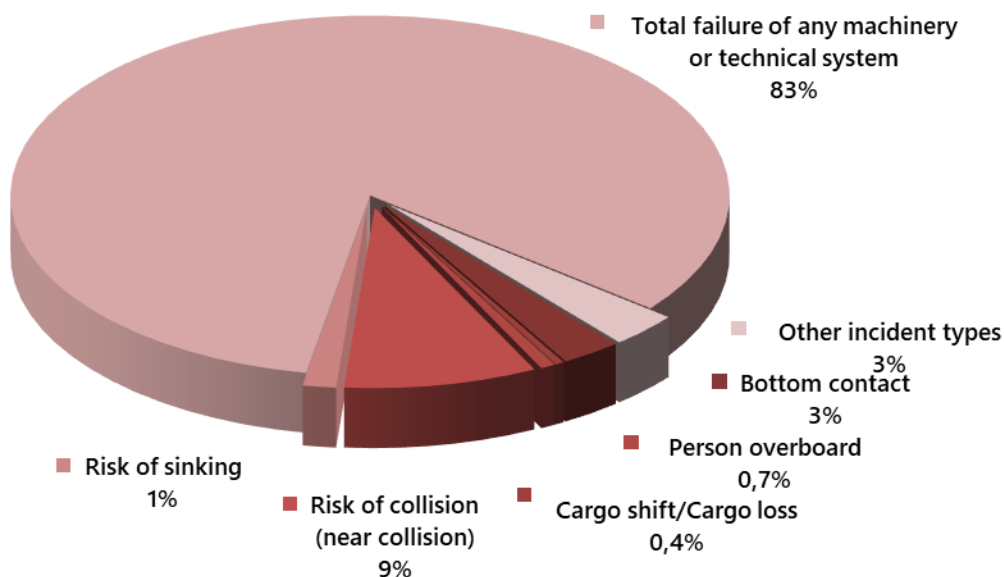
Incidents

Overview of incidents

In 2024, 738 marine incidents were reported to the TSB, down from the total of 784 in 2023 and below the annual 10-year (2014-2023) average of 845. Incidents in the Atlantic region (345) represented 47% of all marine incidents, followed by 29% (211) in the Central region, and 23% (171) in the Pacific region. The remaining 1% (11) of reported incidents occurred in foreign waters (Table 2).

The majority (83%) of reportable incidents involved the total failure of any machinery or technical system (Figure 8). The largest proportion of these incidents (313 of 612, or 51%) occurred in the Atlantic region, while 43 of 64 incidents involving risk of collision (67%) occurred in the Central region (data not shown). The types of vessel most often involved in total failure of any machinery or technical systems incidents in 2024 were fishing vessels (59%) and solid cargo vessels (19%) (data not shown).

Figure 8. Marine incidents, by type, 2024*



* Due to rounding of percentages in category labels, additions across incident types should be calculated from Table 1 data rather than by adding percentages shown in Figure 8.

Data tables

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Table 1. Marine transportation occurrences, vessels, losses, and casualties, 2014 to 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Accidents¹	303	257	313	301	294	277	267	229	253	243	213
Shipping accidents by type	251	219	268	253	237	215	225	187	209	205	182
Capsize	3	10	7	6	10	9	2	4	9	3	8
Collision	88	57	90	92	83	75	97	58	67	71	61
Fire/Explosion	30	33	44	37	36	32	36	46	33	33	37
Grounding	62	61	66	59	58	54	49	39	55	49	47
Sank	26	17	27	22	27	18	21	23	29	16	10
Sustains damage rendering vessel unseaworthy/unfit for purpose	41	39	33	36	23	27	19	14	16	31	16
Other shipping accident types	1	2	1	1	0	0	1	3	0	2	3
Accidents aboard ship	52	38	45	48	57	62	42	42	44	38	31
Vessels involved in shipping accidents	283	247	315	289	272	240	261	211	241	236	207
Barge	12	13	24	20	29	18	25	14	18	13	8
Cargo - liquid	14	12	8	13	9	7	6	5	5	5	5
Cargo - solid	69	37	40	42	48	58	64	43	49	60	32
Ferry	20	18	20	12	10	18	15	19	23	15	16
Fishing	92	84	94	96	77	62	79	51	64	57	55
Passenger	13	18	15	17	15	21	12	9	12	9	9
Service ship	21	29	50	39	28	22	20	18	28	32	38
Tug	23	19	26	28	25	9	22	24	19	19	22
Other vessel types	19	17	38	22	31	25	18	28	23	26	22
Vessels involved in shipping accidents	283	247	315	289	272	240	261	211	241	236	207
Canadian non-fishing vessels	145	131	186	155	158	131	142	123	140	130	126
Canadian fishing vessels	92	83	93	90	72	59	76	48	63	55	54
Foreign vessels	46	33	36	44	42	50	43	40	38	51	27
Vessels lost	20	24	19	14	15	9	14	16	16	13	18
1600 GT and over	0	0	0	0	1	0	0	0	1	0	1
150 to 1599 GT	1	2	1	0	0	0	0	2	0	1	1
60 to 149 GT	4	6	5	2	4	1	3	0	1	2	1
15 to 59 GT	4	6	2	4	3	1	3	4	4	1	5
Less than 15 GT	8	9	7	5	6	7	7	6	6	3	7
Unknown tonnage	3	1	4	3	1	0	1	4	4	6	3
Persons fatally injured	12	19	8	11	22	17	18	11	9	18	12
Shipping accidents	4	13	6	4	14	9	14	9	4	10	8
Accidents aboard ship	8	6	2	7	8	8	4	2	5	8	4
Persons seriously injured	45	45	49	49	61	57	41	45	41	39	38
Shipping accidents	1	12	5	7	8	10	2	9	7	6	8
Accidents aboard ship	44	33	44	42	53	47	39	36	34	33	30
Occurrences with a dangerous good release¹	0	5	6	7	8	2	4	1	12	3	1
Reportable incidents	745	700	762	863	927	939	922	848	960	784	738
Bottom contact	23	32	22	38	33	30	14	20	31	34	20
Cargo shift/Cargo loss	1	5	4	6	7	3	3	4	2	2	3
Person overboard	7	10	8	9	11	14	5	5	13	5	5
Risk of collision (near collision)	35	31	45	52	67	54	66	35	63	63	64
Risk of sinking	0	10	20	14	34	14	31	30	27	24	11
Total failure of any machinery or technical system	674	589	635	704	730	794	754	724	785	628	612
Other incident types	5	23	28	40	45	30	49	30	39	28	23

Data extracted 24 March 2025

¹ The reporting requirement in the 2014 TSB Regulations concerning the release of dangerous goods has been harmonized with Part 8 of the *Transportation of Dangerous Goods Regulations*. The TSB did not collect detailed data on the release of dangerous goods prior to 1 July 2014.

Table 2. Marine transportation occurrences, vessels, losses and casualties, by region¹, 2014 to 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Pacific region											
Shipping accidents	96	92	138	117	102	84	87	84	98	80	67
Accidents aboard ship	23	14	20	9	12	14	15	13	8	13	6
Vessels involved in shipping accidents	109	108	164	136	120	97	103	98	112	91	76
Barge/Tug	24	23	39	35	37	18	30	24	21	19	19
Cargo/Tanker	15	6	14	9	8	13	16	11	12	11	6
Ferry/Passenger	10	15	17	13	13	16	10	17	17	12	8
Fishing	36	35	43	38	31	25	25	20	33	23	22
Other vessel types	24	29	51	41	31	25	22	26	29	26	21
Vessels lost	9	12	9	9	3	3	5	6	7	3	4
Fatalities	5	12	0	6	7	8	4	2	3	5	4
Reportable incidents	148	257	289	276	253	230	256	248	270	224	171
Central region											
Shipping accidents	75	66	58	66	65	69	72	59	62	70	51
Accidents aboard ship	17	10	11	16	21	20	17	15	21	12	11
Vessels involved in shipping accidents	86	74	68	73	73	76	83	66	75	84	59
Barge/Tug	8	9	9	9	8	7	10	12	13	10	6
Cargo/Tanker	56	35	25	31	36	38	41	28	37	43	22
Ferry/Passenger	14	13	9	11	10	18	10	10	11	9	10
Fishing	3	6	6	14	8	1	14	3	3	7	2
Other vessel types	5	11	19	8	11	12	8	13	11	15	19
Vessels lost	2	2	2	0	2	0	1	2	1	4	5
Fatalities	2	2	0	3	1	3	1	2	2	3	0
Reportable incidents	136	114	124	196	272	283	283	239	334	241	211
Atlantic region											
Shipping accidents	72	56	65	63	55	54	55	43	46	50	57
Accidents aboard ship	12	14	14	19	22	24	9	12	14	11	14
Vessels involved in shipping accidents	80	59	74	71	63	59	62	46	51	55	64
Barge/Tug	3	0	1	1	5	2	4	2	3	3	3
Cargo/Tanker	6	2	3	11	4	6	4	8	3	7	4
Ferry/Passenger	9	8	9	5	2	5	7	1	7	2	7
Fishing	52	43	45	43	36	36	40	28	28	26	31
Other vessel types	10	6	16	11	16	10	7	7	10	17	19
Vessels lost	9	10	8	5	10	6	8	8	8	5	9
Fatalities	5	5	8	2	13	6	13	7	4	10	8
Reportable incidents	450	317	335	378	390	409	372	352	347	303	345
Foreign waters											
Shipping accidents	8	5	7	7	15	8	11	1	3	5	7
Accidents aboard ship	0	0	0	4	2	4	1	2	1	2	0
Vessels involved in shipping accidents	8	6	9	9	16	8	13	1	3	6	8
Barge/Tug	0	0	1	3	4	0	3	0	0	0	2
Cargo/Tanker	6	6	6	4	9	8	9	1	2	4	5
Ferry/Passenger	0	0	0	0	0	0	0	0	0	1	0
Fishing	1	0	0	1	2	0	0	0	0	1	0
Other vessel types	1	0	2	1	1	0	1	0	1	0	1
Vessels lost	0	0	0	0	0	0	0	0	0	1	0
Fatalities	0	0	0	0	1	0	0	0	0	0	0
Reportable incidents	11	12	14	13	12	17	11	9	9	16	11

Data extracted 24 March 2025

¹ See the map of the regions in the Definitions section of the statistical summary.

Table 3. Canadian-flag vessels involved in shipping accidents, by category of vessel and type of accident, and commercial accident rates, 2014 to 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Canadian-flag vessels involved	226	199	246	222	198	170	203	144	182	160	161
Commercial vessels	108	87	101	95	100	84	103	76	89	71	66
Capsize	0	3	2	1	2	1	1	1	2	0	1
Collision	53	34	49	45	49	44	64	37	47	40	30
Fire/Explosion	13	11	14	9	14	13	7	13	14	9	11
Grounding	16	16	21	20	16	14	15	14	16	10	14
Sank	6	10	5	5	5	3	6	7	4	2	2
Sustains damage rendering vessel unseaworthy/unfit for purpose	20	13	10	15	14	9	10	4	6	9	8
Other shipping accident types	0	0	0	0	0	0	0	0	0	1	0
Commercial vessel-km (thousands) ¹	14,268	13,875	12,201	14,024	14,669	14,545	13,998	14,856	13,982	13,364	13,971
Commercial accidents per million vessel-km ²	4.3	3.0	3.9	4.1	4.6	3.2	4.4	2.5	3.5	3.7	2.5
Fishing vessels	91	81	91	86	70	59	76	45	61	55	54
Capsize	1	5	3	2	4	2	1	2	2	1	6
Collision	15	4	12	19	12	7	17	4	3	6	8
Fire/Explosion	9	14	16	16	6	10	19	16	10	13	9
Grounding	32	34	32	29	33	27	26	13	25	21	24
Sank	19	10	17	8	9	7	10	5	17	6	4
Sustains damage rendering vessel unseaworthy/unfit for purpose	14	12	10	11	6	6	2	3	4	8	1
Other shipping accident types	1	2	1	1	0	0	1	2	0	0	2
Active fishing vessels ³	13,696	13,264	13,362	13,171	13,180	12,850	12,348	13,076	11,843	11,813	10,668
Fishing vessel accident rate ⁴	6.4	6.0	6.5	6.1	5.1	4.6	5.9	3.4	5.0	4.7	5.0
Other vessels	27	31	54	41	28	27	24	23	32	34	41
Capsize	0	1	1	1	1	1	0	1	1	0	1
Collision	14	15	25	25	14	13	8	4	16	13	19
Fire/Explosion	7	3	14	4	11	2	9	9	6	8	11
Grounding	3	8	7	2	1	3	4	3	6	9	5
Sank	1	0	3	6	1	5	2	3	3	2	3
Sustains damage rendering vessel unseaworthy/unfit for purpose	2	4	4	3	0	3	1	3	0	2	1
Other shipping accident types	0	0	0	0	0	0	0	0	0	0	1

Data extracted 24 March 2025

¹ Transport Canada (TC) has updated its methodology for measuring commercial marine activity. Beginning from 2013, TC combines terrestrial automatic identification system (AIS) data from the Canadian Coast Guard and satellite AIS data from the Government of Canada Satellite AIS provider to yield a comprehensive and detailed distance-based metric of commercial activity in Canadian waters. However, not all vessels are equipped with AIS transponders. The TSB estimates total vessel-km based on data received from TC. (Sources: TC email communications 15 April 2021, 20 March 2025).

² This commercial accident rate is the number of shipping accidents involving Canadian-flag commercial vessels of 15 gross tonnage or more (excluding passenger vessels and fishing vessels) per million vessel-km.

³ Commercial fishing vessels landing at least one catch in that calendar year (Source: Department of Fisheries and Oceans email communication 1 April 2025). The TSB estimated some missing 2024 regional data by extrapolating from earlier years.

⁴ The fishing vessel accident rate is the number of shipping accidents involving Canadian-flag commercial fishing vessels per 1000 active fishing vessels.

Table 4. Foreign-flag vessels involved in shipping accidents, by category of vessel and type of accident, and commercial accident rates, 2014 to 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Foreign-flag vessels involved	46	33	36	44	42	50	43	40	38	51	27
Commercial vessels	42	30	32	37	32	45	40	37	37	48	26
Capsize	0	0	0	0	0	0	0	0	0	0	0
Collision	29	11	17	21	24	25	30	21	21	27	14
Fire/Explosion	0	5	0	4	3	6	0	6	2	3	5
Grounding	8	4	8	6	2	6	4	7	7	6	3
Sank	0	0	1	0	0	0	0	0	1	0	0
Sustains damage render unseaworthy/unfit for purpose	5	10	6	6	3	8	6	3	6	12	4
Other shipping accident types	0	0	0	0	0	0	0	0	0	0	0
Commercial vessel-km (thousands) ¹	18,974	17,340	15,557	18,615	20,069	19,291	19,569	20,871	20,258	20,764	25,519
Commercial accidents per million vessel-kms ²	2.3	1.5	1.8	1.8	1.4	1.9	1.8	1.7	1.7	2.2	0.9
Fishing vessels	0	1	1	6	5	3	3	3	1	2	1
Capsize	0	0	0	0	0	0	0	0	0	0	0
Collision	0	0	0	2	1	0	2	0	1	1	1
Fire/Explosion	0	0	0	1	1	1	0	1	0	0	0
Grounding	0	1	1	2	2	1	1	0	0	0	0
Sank	0	0	0	0	1	0	0	2	0	0	0
Sustains damage render unseaworthy/unfit for purpose	0	0	0	1	0	1	0	0	0	0	0
Other shipping accident types	0	0	0	0	0	0	0	0	0	1	0
Other vessels	4	2	3	1	5	2	0	0	0	1	0
Capsize	1	1	0	0	1	0	0	0	0	0	0
Collision	1	1	2	0	2	2	0	0	0	1	0
Fire/Explosion	0	0	0	1	1	0	0	0	0	0	0
Grounding	2	0	1	0	0	0	0	0	0	0	0
Sank	0	0	0	0	0	0	0	0	0	0	0
Sustains damage render unseaworthy/unfit for purpose	0	0	0	0	1	0	0	0	0	0	0
Other shipping accident types	0	0	0	0	0	0	0	0	0	0	0

Data extracted 24 March 2025

¹ Transport Canada (TC) has updated its methodology for measuring commercial marine activity. Beginning from 2013, TC combines terrestrial automatic identification system (AIS) data from the Canadian Coast Guard and satellite AIS data from the Government of Canada Satellite AIS provider to yield a comprehensive and detailed distance-based metric of commercial activity in Canadian waters. However, not all vessels are equipped with AIS transponders. The TSB estimates total vessel-km based on data received from TC. (Sources: TC email communications 15 April 2021, 20 March 2025).

² This commercial accident rate is the number of shipping accidents involving foreign-flag commercial vessels of 15 gross tons or more (excluding passenger vessels and fishing vessels) per million vessel-km.

Table 5. Vessels lost by category and age of vessel, 2014 to 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Vessels lost	20	24	19	14	15	9	14	16	16	13	18
0-4 years	0	1	0	0	0	1	0	1	0	0	0
5-9 years	0	0	0	0	1	0	0	0	0	0	0
10-14 years	0	3	0	0	2	0	0	1	0	1	2
15-19 years	2	1	3	2	2	1	2	1	2	0	0
20-24 years	1	1	0	0	1	1	0	2	1	1	7
25-29 years	5	5	1	0	3	0	0	1	1	0	1
30+ years	4	10	7	7	3	1	6	5	5	3	2
Unknown	8	3	8	5	3	5	6	5	7	8	6
Commercial vessels	2	8	4	2	3	0	1	3	3	2	2
0-4 years	0	0	0	0	0	0	0	1	0	0	0
5-9 years	0	0	0	0	1	0	0	0	0	0	0
10-14 years	0	0	0	0	0	0	0	0	0	0	0
15-19 years	0	0	1	0	0	0	0	0	1	0	0
20-24 years	0	1	0	0	0	0	0	0	0	0	0
25-29 years	1	2	0	0	0	0	0	0	0	0	1
30+ years	1	4	2	1	1	0	0	2	1	1	1
Unknown	0	1	1	1	1	0	1	0	1	1	0
Fishing vessels	17	16	14	9	12	6	12	11	11	5	11
0-4 years	0	1	0	0	0	0	0	0	0	0	0
5-9 years	0	0	0	0	0	0	0	0	0	0	0
10-14 years	0	3	0	0	2	0	0	0	0	1	2
15-19 years	2	1	2	2	2	1	2	1	1	0	0
20-24 years	1	0	0	0	1	1	0	2	1	1	7
25-29 years	4	3	1	0	3	0	0	1	1	0	0
30+ years	3	6	5	6	2	0	6	3	4	2	1
Unknown	7	2	6	1	2	4	4	4	4	1	1
Other vessels	1	0	1	3	0	3	1	2	2	6	5
0-4 years	0	0	0	0	0	1	0	0	0	0	0
5-9 years	0	0	0	0	0	0	0	0	0	0	0
10-14 years	0	0	0	0	0	0	0	1	0	0	0
15-19 years	0	0	0	0	0	0	0	0	0	0	0
20-24 years	0	0	0	0	0	0	0	0	0	0	0
25-29 years	0	0	0	0	0	0	0	0	0	0	0
30+ years	0	0	0	0	0	1	0	0	0	0	0
Unknown	1	0	1	3	0	1	1	1	2	6	5

Data extracted 24 March 2025

Table 6. Accidents and persons fatally¹ or seriously injured, by type of accident, 2014 to 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Shipping accidents with fatalities¹ or serious injuries	4	7	5	8	12	9	7	9	7	8	9
Capsize	0	2	1	1	5	3	0	3	0	2	2
Collision	1	2	2	4	1	2	2	1	2	3	3
Fire/Explosion	0	1	1	1	1	1	0	2	0	0	0
Grounding	0	1	0	0	3	1	1	0	2	0	2
Sank	3	1	1	2	2	2	3	2	3	2	0
Sustains damage rendering unseaworthy/ unfit for purpose	0	0	0	0	0	0	0	0	0	0	0
Other shipping accident types	0	0	0	0	0	0	1	1	0	1	2
Persons fatally injured in shipping accidents	4	13	6	4	14	9	14	9	4	10	8
Capsize	0	9	2	1	7	7	0	4	0	2	3
Collision	0	1	0	0	2	1	0	0	0	1	0
Fire/Explosion	0	0	0	0	0	0	0	0	0	0	0
Grounding	0	0	0	0	1	0	1	0	0	0	0
Sank	4	3	4	3	4	1	9	3	4	6	0
Sustains damage rendering unseaworthy/ unfit for purpose	0	0	0	0	0	0	0	0	0	0	0
Other shipping accident types	0	0	0	0	0	0	4	2	0	1	5
Persons seriously injured in shipping accidents	1	12	5	7	8	10	2	9	7	6	8
Capsize	0	0	0	0	1	0	0	2	0	0	0
Collision	1	9	4	6	0	4	2	1	2	3	6
Fire/Explosion	0	1	1	1	5	1	0	5	0	0	0
Grounding	0	2	0	0	2	4	0	0	5	0	2
Sank	0	0	0	0	0	1	0	1	0	3	0
Sustains damage rendering unseaworthy/ unfit for purpose	0	0	0	0	0	0	0	0	0	0	0
Other shipping accident types	0	0	0	0	0	0	0	0	0	0	0
Accidents aboard ship	52	38	45	48	57	62	42	42	44	38	31
Persons fatally injured in accidents aboard ship	8	6	2	7	8	8	4	2	5	8	4
Boarding, being on board, falling overboard from the ship	5	6	1	5	7	7	4	2	4	7	1
In contact with any part of the ship or its contents	3	0	1	2	1	1	0	0	1	1	3
Persons seriously injured in accidents aboard ship	44	33	44	42	53	47	39	36	34	33	30
Boarding, being on board, falling overboard from the ship	10	7	6	7	7	2	7	4	5	6	5
In contact with any part of the ship or its contents	34	26	38	35	46	45	32	32	29	27	25

Data extracted 24 March 2025

¹ Fatalities include missing persons.

Table 7. Vessels involved in accidents with fatalities or serious injuries and persons fatally¹ or seriously injured, by type of vessel, 2014 to 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Vessels in shipping accidents with fatalities¹ or serious injuries	4	7	5	8	12	9	7	9	7	8	10
Barge/Tug	0	0	0	0	1	0	0	1	0	0	0
Cargo/Tanker	1	0	0	1	1	0	0	1	0	0	0
Ferry/Passenger	0	2	2	2	1	0	2	0	2	1	4
Fishing	3	3	2	3	8	3	5	5	3	3	3
Other	0	2	1	2	1	6	0	2	2	4	3
Persons fatally injured in shipping accidents	4	13	6	4	14	9	14	9	4	10	8
Barge/Tug	0	0	0	0	0	0	0	2	0	0	0
Cargo/Tanker	2	0	0	0	0	0	0	0	0	0	0
Ferry/Passenger	0	6	0	2	1	0	0	0	0	0	0
Fishing	2	6	6	1	13	4	14	6	3	5	6
Other	0	1	0	1	0	5	0	1	1	5	2
Persons seriously injured in shipping accidents	1	12	5	7	8	10	2	9	7	6	8
Barge/Tug	0	0	0	0	1	0	0	1	0	0	0
Cargo/Tanker	0	0	0	1	5	0	0	4	0	0	0
Ferry/Passenger	0	2	4	2	0	0	2	0	5	1	5
Fishing	1	1	0	3	1	2	0	1	1	3	0
Other	0	9	1	1	1	8	0	3	1	2	3
Vessels in accidents aboard ship with fatalities¹ or serious injuries	52	38	45	48	58	62	42	42	44	38	31
Barge/Tug	4	0	4	2	3	5	3	2	2	4	1
Cargo/Tanker	21	5	12	19	22	24	15	12	14	10	8
Ferry/Passenger	5	9	6	5	8	8	3	4	8	8	7
Fishing	18	23	19	16	21	23	14	23	15	11	15
Other	4	1	4	6	4	2	7	1	5	5	0
Persons fatally injured in accidents aboard ship	8	6	2	7	8	7	4	2	5	8	4
Barge/Tug	0	0	0	0	0	0	0	0	0	0	0
Cargo/Tanker	1	0	0	2	2	2	0	0	0	0	0
Ferry/Passenger	0	1	0	2	0	1	2	0	2	0	0
Fishing	6	5	1	2	4	4	2	2	2	3	4
Other	1	0	1	1	2	0	0	0	1	5	0
Persons seriously injured in accidents aboard ship	42	33	44	42	53	47	39	36	34	32	30
Barge/Tug	4	0	4	3	2	4	2	2	2	3	1
Cargo/Tanker	18	5	12	16	21	16	16	11	12	9	9
Ferry/Passenger	5	8	6	4	10	7	1	4	4	7	7
Fishing	12	19	19	14	17	19	12	19	12	9	13
Other	3	1	3	5	3	1	8	0	4	4	0

Data extracted 24 March 2025

¹ Fatalities include missing persons.

Definitions

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

Marine occurrence

- any accident or incident associated with the operation of a ship
- any situation or condition that the Board has reasonable grounds to believe could, if left unattended, induce an accident or incident described above.

Marine accident

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

Accident aboard ship

- a person is killed or sustains a serious injury as a result of
 - boarding, being on board or falling overboard from the ship, or
 - coming into direct contact with any part of the ship or its contents;

Shipping accident

- the ship
 - sinks, founders or capsizes,
 - is involved in a collision (includes strikings and contacts),
 - sustains a fire or an explosion,
 - goes aground, or
 - sustains damage that affects its seaworthiness or renders it unfit for its purpose,
 - is missing or abandoned.

Marine incident

- a person falls overboard from the ship, or
- the ship
 - makes unforeseen contact with the bottom without going aground,
 - fouls a utility cable or pipe, or an underwater pipeline,
 - is involved in a risk of a collision,
 - sustains a total failure of
 - the navigation equipment if the failure poses a threat to the safety of any person, property or the environment,

- the main or auxiliary machinery, or
 - the propulsion, steering, or deck machinery if the failure poses a threat to the safety of any person, property or the environment;
- all or part of the ship's cargo shifts or falls overboard, or
 - is anchored, grounded or beached to avoid an occurrence,
- a crew member whose duties are directly related to the safe operation of the ship is unable to perform their duties as a result of a physical incapacitation which poses a threat to the safety of persons, property or the environment;
- there is an accidental release on board or from the ship consisting of a quantity of dangerous goods or an emission of radiation that is greater than the quantity or emission levels specified in Part 8 of the *Transportation of Dangerous Goods Regulations*.

Serious injury

- (a) a fracture of any bone, except simple fractures of fingers, toes or the nose;
- (b) lacerations that cause severe hemorrhage or nerve, muscle or tendon damage;
- (c) an injury to an internal organ;
- (d) second or third degree burns, or any burns affecting more than 5% of the body surface;
- (e) a verified exposure to infectious substances or injurious radiation; or
- (f) an injury that is likely to require hospitalization.

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

Miscellaneous

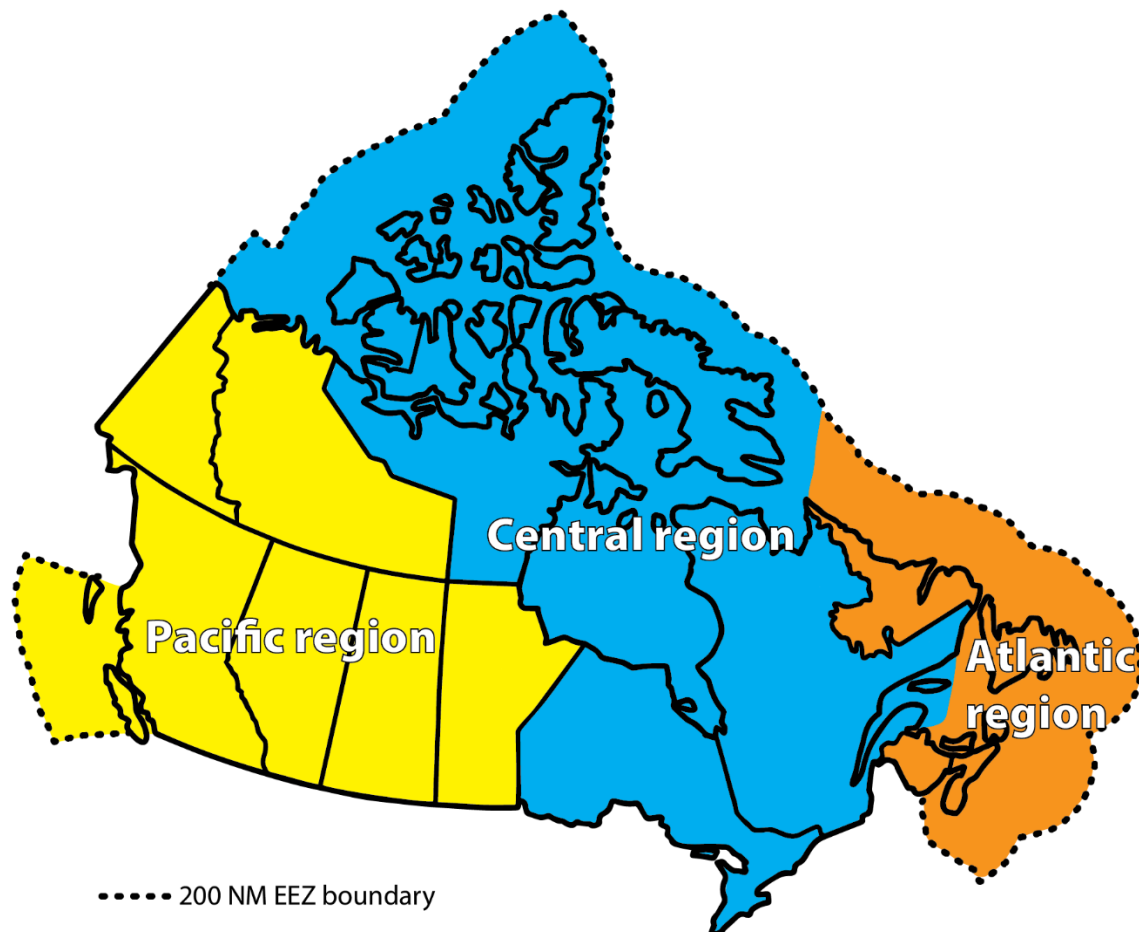
Gross tonnage (GT)

A measure of vessel capacity, including the spaces within the hull, and enclosed spaces above deck available for cargo, stores, fuel, passengers and crew, with certain exclusions.

Movement

A vessel's travel segment between ports or a length of 1 km or more within a port harbor, with at least one port being a domestic port.

TSB regional offices' areas of responsibility



Pacific Region's area of responsibility consists of the provinces of British Columbia, Alberta, Saskatchewan, and Manitoba, the Yukon and the Northwest Territories south of the 70th parallel, as well as the waters adjacent to these provinces and territories out to the Exclusive Economic Zone (EEZ) 200 NM boundary (or out to another State's maritime boundary).

Central Region's area of responsibility consists of the provinces of Ontario and Quebec (including the Magdalen Islands), the territory of Nunavut, and the Northwest Territories north of the 70th parallel, as well as James Bay, Hudson Bay, the St. Lawrence Seaway, and the Great Lakes waterways up to the Canada–U.S. border.

Atlantic Region's area of responsibility consists of the provinces of New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador, as well as the waters adjacent to these provinces out to the EEZ 200 NM boundary (or out to another State's maritime boundary).