

2. The situation and trends of accidents involving small passenger ships

Based on accident investigation reports published from October 2008 (when the JTSB was established) to January 2024, Figure 1 shows the incidence of passenger ship accidents among all vessel types, Figure 2 displays the incidence of accidents involving small passenger ships as a percentage of all passenger ships, and Figure 3 illustrates trends in accident types for small passenger ships.

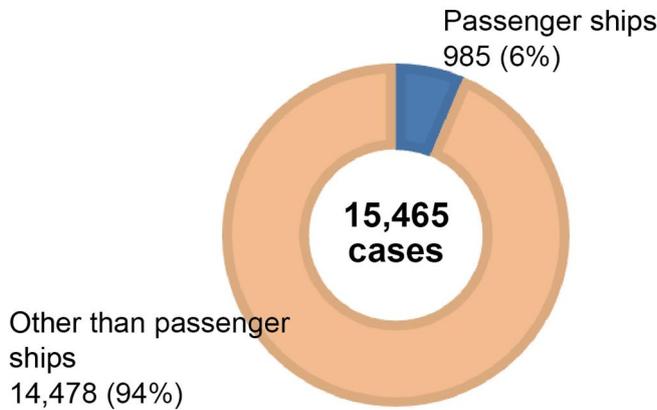


Figure 1 Proportion of accidents involving passenger ships among all vessel types

- Among all vessel types, passenger ship accidents account for about **6%**.
- Over approximately 15 years, a total of **985 accidents** have occurred, averaging about 65 per year. Although the nature and severity of these accidents vary, reducing them is crucial for ensuring passenger safety.

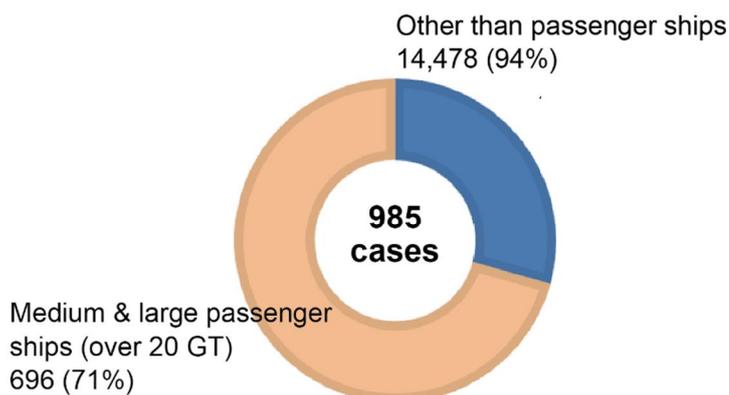


Figure 2 Proportion of accidents involving small passenger vessels among all passenger ships

- Small passenger ships account for about **29%** of all passenger ship accidents.
- With a total of **289 accidents** involving small passenger ships, a reduction is desirable.

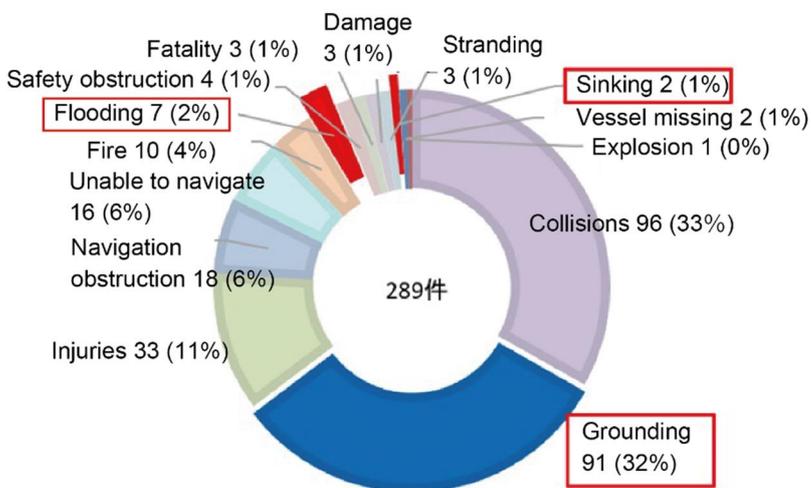


Figure 3 Trends in accident types for small passenger vessels

- Among accident types in small passenger vessels, collisions, in which factors such as vessel type and operating area contribute little, account for about **33%**.
- Accidents caused by factors related to **the characteristics of the operational area** (such as weather, sea conditions, and the seabed) include “**grounding**,” which accounts for about **32%** (nearly equal to collisions) with 91 cases and may cause severe secondary damage (e.g., hull damage). Additionally, there were 7 cases of “**flooding**” and 2 of “**sinking**,” both posing high risks to vessels and lives.

Reference (Definitions of accident types)

- Grounding : When a vessel mounts an underwater feature (e.g., a coast or reef)
- Stranded : When a vessel’s hull contacts a sandy seabed without causing damage to the vessel or crew/passengers
- Safety obstruction : When dangerous tilting (e.g., from improper loading) creates an imminent risk of capsizing
- Navigation obstruction : When events like engine failure increase risk, even without immediate danger

Of the two “sinking” accidents shown in Figure 3, one was the passenger ship sinking off the west of the Shiretoko Peninsula in April 2022 (hereafter, the “Shiretoko passenger ship sinking accident”).

Because a small passenger vessel sinking in severe weather poses an extremely high risk to lives, it is essential for operators to continuously implement preventive measures while fully understanding the **operating area's characteristics and associated risks**.

3. The characteristics of the operational areas

Following the Shiretoko passenger ship sinking accident, the Shiretoko Passenger Ship Sinking Accident Countermeasures Study Committee (under the Ministry of Land, Infrastructure, Transport and Tourism) issued "Comprehensive Safety and Security Measures for Passenger Ships" in December 2022, recommending measures tailored to “each company's and operating area's unique conditions.” Likewise, the JTSB’s report stresses the need for prevention measures based on “operational area characteristics.”

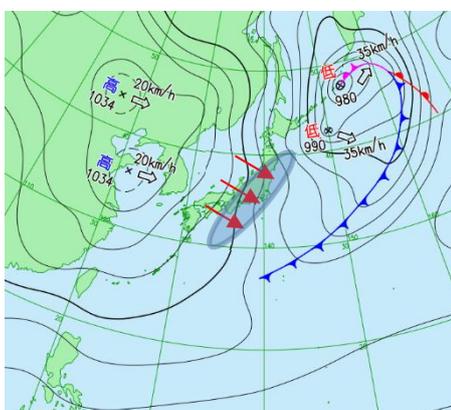
To ensure safe navigation, masters and crew must fully understand and master their vessel’s inherent traits and handling quirks, such as hull structure and operability, and gain firsthand knowledge of the features and risks of sea where operators sail their own ships. This principle also is applied to safety managers who is responsible for the safety of overall their business and operation managers who is responsible for overall operational management under the management system.

Below are representative examples of the characteristics of passage area (namely, operational risk factors which influence essentially on the safety of navigation) that small passenger vessel operators should understand to ensure safe operation.

(1) Risks from meteorological and sea conditions

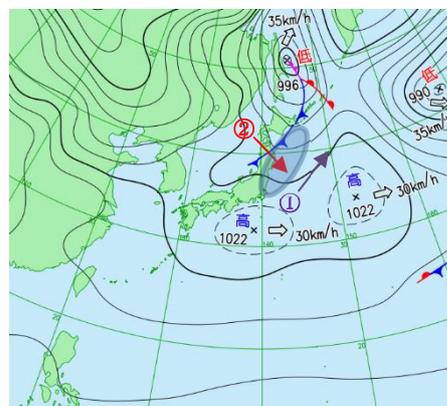
1) Open-ocean areas

i) Meteorological influences such as “monsoons” and “developed low-pressure systems with cold fronts” pose a flooding/sinking risk



(Figure 4: Example of pressure configuration during **winter monsoon gusts**)

Source: Japan Meteorological Agency website



(Figure 5: Example of pressure configuration after a **cold front**)

Source: Japan Meteorological Agency website