

Fishing Vessel Yong Yusing No. 18 Major Marine Occurrence

Executive Summary

At approximately 1650 on 30 December 2020, the Suao-registered fishing vessel Yong Yusing No. 18 (Yong Yusing), with a gross tonnage of 99 and fishing vessel registration No. CT4-2678, carrying one Taiwanese master and nine Indonesian crew members, for a total of 10 persons on board, lost communication while operating approximately 527 nautical miles northeast of Midway Atoll, Hawaii. On 31 January 2021, the Coast Guard Administration (CGA) Patrol Vessel No. 8 boarded Yong Yusing to conduct evidence collection and investigation, but none of the 10 crew members were found on board. Subsequently, the vessel owner arranged for a companion fishing vessel to tow Yong Yusing back to Taiwan. On 8 March 2021, the wreckage of Yong Yusing returned to Port of Su'ao.

In accordance with the Transportation Occurrence Investigation Act, Taiwan, and the definition of major transportation occurrences specified therein, the Taiwan Transportation Safety Board was the independent agency in charge of investigating the marine accident. The organizations and agencies invited to participate in the investigation included the Maritime and Port Bureau (MPB) of the Ministry of Transportation and Communications, CGA of the Ocean Affairs Council and Fisheries Agency, Council of Agriculture.

After comprehensive investigation and analysis of the factual data, a total of 7 findings and 3 safety recommendations were obtained.

The finding related to probable causes are as follows:

1. An extraordinary occurrence is assessed to have taken place on board

Yong Yusing between 1000 and 1100 Taiwan time on 30 December 2020. The likely period during which the crew members and the liferaft went missing was between 1000 on 30 December 2020 and 2 January 2021. The disappearance was likely associated with an explosive cyclone.

2. Based on satellite observations and meteorological simulation analysis, Yong Yusing is assessed to have encountered an explosive cyclone in its fishing area, with wind force reaching Beaufort Scale Force 11 or above and significant wave heights likely exceeding 9 meters.
3. Subsequent examination of the master's cabin found 15 lifejackets remaining onboard, indicating that none of the crew members were likely wearing lifejackets at the time of the occurrence.

The findings related to risk are as follows:

1. The hull of Yong Yusing was constructed of fiberglass-reinforced plastic (FRP). Its structural strength was insufficient to withstand repeated impacts from the heavy swell generated by the explosive cyclone. The vessel was subjected to severe rolling, pitching, and lateral motions caused by wave action, resulting in extensive structural damage, damage to the Automatic Identification System (AIS) antenna, abnormalities in the electrical power supply system, and collapse of the primary port-side structure of the wheelhouse.
2. While operating in the occurrence area, Yong Yusing was suddenly impacted by an explosive cyclone, causing a marked increase in wind force and sea state. There is no evidence indicating how the watchkeeping crew used the weather facsimile receiver to obtain meteorological information, or whether unstable weather conditions affected satellite signal reception and prevented the vessel from receiving weather information.

3. There is insufficient evidence to determine why Yong Yusing did not depart the occurrence area despite the approach of the explosive cyclone. It is possible that, while engaged in longline fishing operations, the vessel encountered the developing cyclone threat and, being unable to complete line-hauling operations in time, was subsequently overwhelmed by heavy swell and unable to leave the area.

The other findings are as follows:

1. During the period of the extraordinary occurrence, Yong Yusing's Emergency Position-Indicating Radio Beacon (EPIRB) did not transmit any distress signal.
2. The original vessel inspection record maintained by the MPB of the Ministry of Transportation and Communications did not include equipment installed on Yong Yusing, including satellite navigation equipment, a weather facsimile receiver, an Emergency Position-Indicating Radio Beacon (EPIRB), a Search and Rescue Radar Transponder (SART), a Navigational Telex (NAVTEX) receiver, and an Inmarsat satellite communication system. This record was inconsistent with the vessel's actual equipment configuration. In August 2022, the Maritime and Port Bureau subsequently provided a corrected vessel inspection record for the occurrence vessel.
3. The vessel position and speed data recorded by Yong Yusing's voyage recorder contained missing entries and did not comply with the required recording interval of one data entry every three minutes.

Safety Recommendations

To Fisheries Agency, Council of Agriculture

1. Strengthen training for deep-sea fishing vessel crew members in the

proficient use of various life-saving appliances and distress alerting equipment, in order to reduce the risks faced by deep-sea fishing vessels encountering severe weather conditions.

2. Coordinate and cooperate with relevant domestic and international authorities and organizations to assess the provision of meteorological observation and forecast information required for operations by personnel engaged in Taiwan's distant-water fisheries, thereby enhancing the operational safety of deep-sea fishing vessels.

To Maritime and Port Bureau of the Ministry of Transportation and Communications

1. Ensure strict compliance with the Vessel Equipment Regulations by conducting proper inspections of all life-saving appliances and distress alerting equipment on board deep-sea fishing vessels, in order to reduce the risks faced by such vessels when encountering adverse weather conditions.

Note: The final report of this occurrence investigation is published in Chinese. To facilitate understanding for non-Chinese readers, the Executive Summary has been translated into English. While every effort has been made to ensure accuracy, discrepancies may occur. In the event of any inconsistency, the Chinese version shall prevail.