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#### ORIGINAL ARTICLE

# Large-scale helicopter rescue of cruise passengers and freighter crew off the coast of Norway in stormy weather

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#### ABSTRACT

During a storm on the 23<sup>rd</sup> of March 2019, southbound Viking Sky was crossing the notorious Hustadvika bay off Norway with 1373 (915 passengers, 458 crew) aboard when power was lost and the ship drifted towards the shore. Mayday was called at 14:15. When the dropped anchors caught and one engine had started, the ship was about 100 m from the rocky coast. Helicopter evacuation was started at 15:30, but was slightly delayed around 19:00 when 9 crewmembers from a nearby powerless freighter, Hagland Captain, had to be airlifted to safety. The helicopter rescue from Viking Sky was called off at mid-day on the 24<sup>th</sup> of March. Using its own engines the ship arrived in Molde at 16:20 with 436 passengers and 458 crewmembers. In all, 479 passengers, many of them elderly and three seriously injured, had been airlifted off the ship one-by-one in rough weather by a relay of 6 helicopters, making this one of the most remarkable helicopter rescue operations ever.

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Key words: helicopter rescue, helivac, search and rescue, passenger ship, cargo ship, cruise ship medicine

### INTRODUCTION

Helicopter evacuation (helivac) of a single person from a cruise vessel even under ideal circumstances in davlight and calm weather entails hazards for all involved. The decision to helivac is never taken lightly and when it must be, there is always an atmosphere of nervous excitement aboard.

On the 23<sup>rd</sup> of March 2019 a cruise ship lost power off the Norwegian coast during a fierce storm and started drifting towards shore. This triggered a major helivac operation and images from the rescue spread widely in the media and on social networks. The continuous news coverage was sometimes confusing and conflicting.

This report aims to give a brief overview of the chain of events surrounding the rescue operation by using selected Internet sources.

## MATERIALS AND METHODS

The report is based on international news coverage of the rescue during the period 23 March - 07 April 2019.

Information from a basic Google search of "Viking Sky Rescue" was supplemented with selected searches in available international and Norwegian sources when clarification was considered necessary (see references [1-16]).

# RESULTS

THE INCIDENT

The main attraction of a 12-day cruise along the coast of Norway at this time of year is to see the Northern Lights (aurora borealis). The Norwegian-registered Viking Sky (gross tonnage of 47,800) had left the northern city of Tromsø, Norway, where she was christened in 2017, and was bound for the southern city of Stavanger. There were 1,373 persons (915 passengers; 458 officers, staff and crew) aboard. The crew was multinational, while the passengers were mostly an English-speaking mix of elderly American, British, Canadian, New Zealand and Australian citizens. When the ship was passing Hustadvika bay, known for shipwrecks due to fierce weather and shallow waters dotted with reefs, the ship

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lost power (see map – Fig. 1). The ship's four engines shut down in the midst of a storm that heaved up waves as high as 50 feet and wind blowing at 24 m/s (86 kph/54 mph).

Plants and furniture slid across the floors with each tilt of the ship. Ceiling panels fell, and seawater crashed through doors and broken windows. Both passengers and crew reported later that they feared for their lives, but the crewmembers remained calm and there were no signs of panic aboard at any time.

On Saturday 23<sup>rd</sup> of March 2019 at 14:15 *Viking Sky* issued a mayday call. As the bouncing ship drifted, the crew dropped her two anchors to keep her in place. When the anchors finally caught and the crew had been able to restart one engine, the ship was only about 100 m from hitting offshore rocks.

#### THE PASSENGER RESCUE OPERATION

At 15:00 it was decided that all aboard should be evacuated. The dangerously high swells meant that the ship's lifeboats could not be safely used and also compelled two purpose-built vessels operated by the Norwegian Society for Sea Rescue to turn back. So the Captain and Norwegian authorities decided to airlift individual passengers to a rescue centre ashore, using a total of six helicopters. Helivac started around 15:30. Flying in the dark, each helicopter airlifted 10–15 persons at the time; slowly winching them up one-by-one from the erratically moving ship. Among the first passengers landed were three with serious injuries.

#### A SECOND MAYDAY CALL

Just before 19:00 a second vessel, the general cargo ship *Hagland Captain* (gross tonnage 2,984) with a crew of nine, suffered engine failure and started drifting towards the coast some five nautical miles away from *Viking Sky*. Evacuation from the cruise ship was then to some extent delayed because two of the rescue helicopters had to be diverted. The crewmembers of the freighter were told to jump into the frigid water one by one to be picked up by rescuers. The ship was at that time anchored; with part of her timber deck cargo lost. The crew evacuation was uneventful.

#### THE CRUISE SHIP RESCUE

Helivacs from Viking Sky went on throughout the night. On Sunday the 24<sup>th</sup> of March at 05:00 three of the four engines were working and at 08:00 tugboats were ready, but the helivacs continued. The captain stopped the evacuation before noon, after about half of the ship's passengers had been lifted off. The ship was headed for port, using her own engines. She arrived at the port city of Molde at 16:20, 26 hours after the mayday signal was issued, accompanied by two supply ships and one tug assist vessel. On arrival 436



Figure 1. Map of Norway. Hustadvika bay is located between Kristiansund and Molde (http://toursmaps.com/molde-norway -map.html)

guests and 458 crewmembers were still remaining on the ship while in all 479 passengers had been airlifted to safety.

#### **MEDICAL CONCERNS**

All of the passengers and crewmembers survived, though some passengers were injured on board. The two local hospitals, in Molde and Kristiansund (see map – Fig. 1), received a total of 26 passengers. Twelve were treated as outpatients, while 15 were admitted. Three persons were considered seriously injured; one of them was transferred to Haukeland University Hospital in Bergen. According to *The Norwegian Red Cross*, even those who weren't physically harmed had been "traumatised by the experience" and required care on shore.

#### DISCUSSION

Ships losing engine power along the Norwegian coast is not unusual. More than hundred such cases have been reported just since January 2018 but in most cases the problems were fixed quickly by the ship's crew. The Hustadvika bay is considered a particularly challenging area for seafaring in bad weather. As this emergency situation demonstrated, the regional rescue services were prepared and well trained. Still, successfully airlifting almost 500 persons ship-to-shore during a fierce storm in about 18 hours ( $\approx$  1 person rescued every 2 min) will go down in history as one of the most impressive civilian maritime helivacs ever. The simultaneous blackout of the nearby freighter was an extra challenge, not least because its nine crewmembers had to be airlifted from the water.

Was the decision to evacuate passengers by helicopters a right one? An external expert (Jan Verloop/FleetMon) stated, "Rescuers were in very dire straits indeed and had to make the choice: whether to launch highly dangerous airlift by helicopters, or wait and pray for lucky escape. I strongly believe that the decision to launch evacuation by helicopters was justified, right, and responsible". He further expressed admiration for "the professional skills and outstanding bravery of the Norwegian Rescue helicopter teams".

The importance of a competent *ship crew* in emergency situations should not be underestimated: they dropped anchors and thereby managed to stop the ship from hitting the rocks, they restored power first to one and subsequently to all four engines and got the ship moving again, and they calmed down the very scared passengers. Passengers told reporters afterwards of their deadly fear, but uniformly praised the crew and all involved in the rescue operation for being calm, comforting and professional. The mandatory crew training and frequent drills paid off.

Following preliminary investigations, the *Norwegian Maritime Authority* stated shortly after the incident that relatively low oil levels were the "direct cause" of engine failure. They were within set limits, but the heavy seas in Hustadvika bay probably caused movements in the tanks so large that the supply to the lubricating oil pumps stopped. This triggered an alarm, which in turn shortly thereafter caused an automatic shutdown of the engines. Following the incident, Viking Ocean Cruises have inspected the levels on all their sister ships and are revising the procedures to ensure that this issue cannot be repeated. When questioned during a Parliament session, the prime minister of Norway reported that a similar largescale rescue operation in the more northern parts of the Norwegian coast and around Svalbard would not have been possible with today s resources. Solutions must be found quickly since all-year cruising in these areas continues to increase.

The cruise industry try to avoid bad publicity and near-disasters might therefore not always get the attention needed to identify and correct necessary system errors.

# **CONCLUSIONS**

This massive rescue operation was noticed worldwide, and evaluations will follow. However, debriefings should also include the challenges that might have occurred if the ship had hit the rocks, aiming at thoroughly updated contingency plans for cruise ships and for coastal rescue services.

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