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LIBERIA MARITIME AUTHORITY

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Marine Advisory: 24/2026

Subject: **PREVENTION OF FATALITIES AND SERIOUS INJURIES DURING WEATHER DECK OPERATIONS IN HEAVY WEATHER – RISK ASSESSMENT, VOYAGE PLANNING, WORK AUTHORIZATION, AND SAFE ACCESS CONTROLS**

Ref:

(a) SOLAS Chapter IX
(b) ISM Code Sections 1.2.2, 6, 7, 8 and 10
(c) Liberian Marine Notice INS-001
(d) Liberian Marine Notice MLC-005/3.3
(e) ILO Code of Practice: Accident Prevention on Board Ship at Sea and in Port

Dear Shipowners / Operators / Masters / Officers and Crew:

The purpose of this Marine Advisory is to reinforce Safety Management System (SMS) requirements and operational controls associated with personnel access to exposed weather decks during adverse weather conditions.

Recent marine casualty investigations conducted by the Administration have identified multiple fatalities and serious injuries involving crew members exposed to heavy seas, large waves, and dangerous vessel motions while undertaking inspections, securing arrangements, or other work activities on forecastle and weather decks.

These casualties demonstrate recurring deficiencies in risk assessment, decision-making, work authorization, heavy weather preparation, and implementation of safety controls intended to prevent exposure to avoidable risks.

This Advisory highlights regulatory obligations, identifies recurring safety deficiencies, summarizes recent casualty cases, and outlines actions necessary to prevent recurrence.

Weather Deck Casualty Overview

The Administration has reviewed multiple casualties involving fatalities and serious injuries that occurred while vessels were navigating in rough weather conditions.

These incidents involved personnel proceeding to exposed weather decks to conduct inspections, verify equipment condition, check securing arrangements, or investigate reported issues while the vessels remained underway in significant seas and swell conditions.

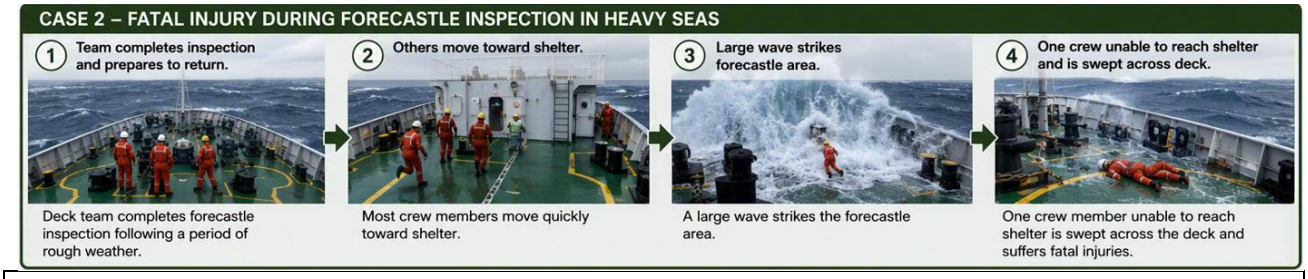
In each case, crew members were exposed to sudden wave impacts, green water on deck, or hazardous vessel motions, resulting in traumatic injuries and loss of life.

Marine Casualty Summaries

Case 1 – Fatal Injury during Inspection of Forecastle Equipment

A deck team proceeded forward to inspect securing arrangements and equipment condition during rough weather conditions. While addressing a loose securing arrangement, a large wave broke over the bow and swept across the forecastle. Two crew members sustained serious injuries after being thrown against ship structures. One crewmember later died from injuries sustained during the event.

Case 2 – Fatal Injury during Forecastle Inspection in Heavy Seas



A deck team was authorized to inspect the vessel's forecastle following a period of rough weather. While preparing to return to the accommodation, a large wave struck the forecastle area. Although other personnel reached shelter, one crewmember was unable to do so and sustained fatal injuries after being swept across the deck and into ship structures.

Case 3 – Multiple Casualties while Investigating Water Ingress

Following repeated bilge alarms, personnel proceeded to the forward area to investigate the source of seawater ingress while the vessel remained underway in rough sea conditions. After completing the inspection, personnel were apparently struck by a large wave while securing the area. One crewmember died and two others sustained injuries requiring helicopter evacuation and medical treatment ashore.

Key Safety Failures Identified

Investigations identified the following recurring deficiencies:

- Personnel exposed to weather deck hazards during rough sea conditions.
- Non-essential inspections being conducted while vessels remained underway in adverse weather.
- Inadequate evaluation of whether the planned task was necessary at the time.
- Failure to postpone work until environmental conditions improved.
- Risk assessments that did not adequately account for actual weather conditions, vessel motion, and wave impacts.
- Inadequate implementation of additional controls identified during risk assessment.
- Failure to adequately secure equipment before the onset of heavy weather.
- Insufficient consideration of the risk posed by large or unexpected waves.
- Inadequate monitoring and supervision of personnel working in exposed locations.
- Inadequate control of access to forecastle and weather deck areas during heavy weather.
- Failure to ensure all safety measures and work controls were fully implemented before personnel proceeded on deck.

Flag Administration Requirements and Best Practices

The Administration has reviewed recent fatalities and serious injuries occurring during weather deck operations and notes that exposure of personnel to heavy weather hazards remains a significant risk factor.

In accordance with SOLAS, the ISM Code, and applicable Liberian Marine Notices, Shipowners, Operators, Masters, and Officers are reminded that hazard identification, risk assessment, and implementation of effective control measures are mandatory requirements for all operations affecting personnel safety.

Review and Implement Risk-Based Procedures

Ensure the SMS adequately addresses hazards associated with:

- Accessing forecastles during heavy weather.
- Operations on exposed weather decks.
- Inspection of securing arrangements during adverse weather.
- Investigation of equipment defects or alarms occurring in heavy weather.
- Work near bow areas susceptible to green water and wave impact.
- Emergency response involving access to exposed deck areas.

Procedures should clearly identify circumstances where access is prohibited and conditions under which work should be postponed.

Heavy Weather Preparation

- Ensure all equipment, stores, mooring arrangements, lashings, and deck fittings are inspected and secured prior to entering expected heavy weather.
- Verify watertight and weathertight integrity before weather deteriorates.

- Conduct voyage-specific reviews when heavy weather is forecast.
- Consider whether inspections can be delayed until weather conditions improve.
- Minimize the need for personnel exposure to weather deck hazards while underway.

Control of Weather Deck Access

- Restrict access to exposed weather deck areas during adverse weather except when necessary for the immediate safety of the vessel or persons onboard.
- Require documented risk assessment before authorizing access.
- Ensure Master approval is obtained before personnel proceed onto exposed weather decks during heavy weather.
- Maintain continuous communication with personnel working on deck.
- Ensure personnel have immediate access to shelter and safe retreat routes.

Personal Protective Equipment and Additional Safety Measures

- Ensure appropriate PPE is provided and used.
- Verify safety harnesses and lifelines are utilized whenever identified by risk assessment or company procedures.
- Confirm personnel understand emergency withdrawal procedures.
- Establish designated lookout and monitoring arrangements when personnel are working in exposed locations.
- Verify that all mitigating measures identified during the risk assessment are implemented before work commences.

Crew Awareness and Safe Practices

- Reinforce that no task should proceed if identified risks cannot be reduced to an acceptable level.
- Ensure personnel understand the dangers associated with green water on deck, vessel motion, and unexpected wave impacts.
- Encourage personnel to exercise stop-work authority when conditions change or risks increase.
- Promote immediate reporting of unsafe conditions and concerns regarding weather deck operations.

Supervision, Training, and Oversight

- Include heavy weather deck safety in onboard training programs.
- Reinforce officer responsibilities for evaluating weather-related risks before authorizing work.
- Conduct toolbox talks addressing:
    - wave impact hazards;
    - vessel motion hazards;
    - escape routes;
    - communication arrangements;
    - emergency response procedures.
- Include weather deck access controls in audits, inspections, drills, and safety meetings.

Required Actions to Prevent Recurrence

1. Review SMS procedures governing access to weather decks during adverse weather.
2. Conduct risk-based assessments before authorizing personnel to proceed to exposed deck areas.
3. Ensure heavy weather securing activities are completed prior to entering forecast heavy weather.
4. Postpone non-essential inspections and repairs until conditions improve.
5. Implement effective communication and monitoring arrangements for personnel working on deck.
6. Ensure all mitigation measures identified during risk assessments are implemented and verified.
7. Circulate lessons learned throughout the fleet and maintain records of corrective actions.

The Administration reminds all operators that fatalities and serious injuries associated with weather deck operations during heavy weather are preventable. Strict compliance with Safety Management System requirements, effective heavy weather preparations, robust risk assessment processes, and strong control of personnel access to exposed deck areas are essential to prevent recurrence of these casualties.

For more information, please contact the Investigations Department at investigations@liscr.com.

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